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Spring Showcase for Research and Creative  
Inquiry

Office of Student Research

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4-19-2023

## Spring 2023 Student Showcase for Research & Creative Inquiry Program

Office of Student Research

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# SPRING 2023

STUDENT SHOWCASE FOR

## RESEARCH & CREATIVE INQUIRY

Longwood University's campus-wide student showcase is open to all who wish to attend. Students will present their projects in the form of posters, oral presentations, and performances.

**WEDNESDAY · 19 APRIL 2023 · 8 A.M. — 5:30 P.M.**



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## Acknowledgements

### **Student Showcase Organizing Committee**

Amorette Barber, Chair  
Bob Barnwell  
Kerri Cushman  
Steven Hoehner  
Jennifer Hutchinson  
Alison King  
Sarah Porter  
Timothy Ritzert  
Mary Tackett  
Yulia Uryadova  
Lauretta Werner  
Jessi Znosko

**The members of the Student Showcase Organizing Committee would like to thank the following offices and organizations on campus for support:**

Academic Affairs  
Cormier Honors College  
Digital Education Collaborative  
Greenwood Library  
College of Graduate and Professional Studies  
University Center and Student Activities

## **Overview Schedule**

### **Welcoming Remarks and Keynote Address**

#### **Rotunda – Virginia Room**

9:00-9:30 A.M.- Welcoming Remarks- Dr. Larissa Smith, Provost and Vice President for Academic Affairs

Keynote Address- Dr. Erin Waggoner, Assistant Professor of Communication Studies  
Co-Director, Women, Gender, and Sexuality Studies Minor

### **Oral Presentations- Morning Sessions**

#### **Rotunda – Virginia Room**

9:45-11:15 A.M.- Biology 488: Senior Capstone in Biology

#### **Rotunda – Room 116**

9:45-11:45 A.M.- Cormier Honors College for Citizen Scholars and English 461: Senior Seminar

#### **Rotunda – Room 115**

9:45-11:15 A.M.- Independent Research

### **Performances**

#### **Communication Studies and Theatre Arts Center- Room 101**

10:00-11:00 A.M.- Theater 448: Integrated Arts Theater

11:15-11:30 A.M.- Theater 215: Voice and Speech

### **Junior Show**

#### **Bedford Gallery 11:00 A.M. – 1:00 P.M.**

#### **Awards 11:30 A.M.**

Studio Art and Graphic and Animation Design Programs

### **Poster Presentations- Morning Sessions**

#### **Blackwell Ballroom, 9:45 – 10:45 A.M.**

Education, Environmental Science, Health and Physical Education, Integrated Science, Nursing, Physics,  
Psychology

#### **Blackwell Ballroom, 11:00 – 12:00 P.M.**

Biology, Cormier Honors College for Citizen Scholars, Nursing

# Award Ceremony for *Incite* and Longwood Excellence in Research and Inquiry Awards

## **Rotunda – Virginia Room**

12:15-1:00 P.M.- Welcoming Remarks- Dr. Roger Byrne, Dean of Cook-Cole College of Arts and Sciences

Presentation of *Incite* Awards- Dr. Larissa Tracy, Professor of English, Editor of *Incite*

## Oral Presentations- Afternoon Sessions

### **Rotunda – Virginia Room**

1:15-4:00 P.M.- Biology 251: Introduction to Ecology and Evolution

### **Rotunda – Room 116**

1:15-3:30 P.M.- PRISM Research

3:45-4:30 P.M.- Longwood Senior Thesis Program

### **Rotunda – Room 115**

1:15-3:15 P.M.- Spanish 341: Spain: Civilization, Literature, and Artistic Expressions from Prehistory to 1700

3:30-4:30 P.M.- Spanish 351: Early Latin American Civilization and Culture: Prehistory to 1800

### **Rotunda – Room 108**

1:15-2:45 P.M.- Biology 404: Immunology and Biology 473: Comparative Biomechanics

### **Bedford – Room 111**

1:00-2:00 P.M.- Art 385: Critical Making

### **Bedford – Room 211**

2:15-4:00 P.M.- Graphic and Animation Design 462: Senior Professional Seminar

## Poster Presentations- Afternoon Sessions

### **Blackwell Ballroom, 1:15 – 2:15 P.M.**

Environmental Science, Geography, Political Science, Nursing

### **Blackwell Ballroom, 2:30 – 3:30 P.M.**

History, Nursing, Race and Ethnic Studies, Sociology

### **Blackwell Ballroom, 3:45 – 4:45 P.M.**

Chemistry, Health and Physical Education, Independent Research and Internships, Nursing



## Welcome and Keynote Address

9:00 a.m. – 9:30 a.m.  
Rotunda- Virginia Room

**9:00 am-** Welcome by Dr. Larissa Smith, Provost and Vice President for Academic Affairs

**9:10 am-** Keynote Address by Dr. Erin Waggoner, Assistant Professor of Communication Studies  
Co-Director, Women, Gender, and Sexuality Studies Minor



A jack of all trades (and master of two), Erin B. Waggoner (pronouns she/her/hers) is an Assistant Professor in the Communication Studies department. Since 2018, she has primarily taught media-based courses related to production and analysis. She also serves as co-chair of the department curriculum committee and produces an LGBTQ+ Film Festival in the Spring for Longwood and the surrounding community.

In her first year, Waggoner was presented with the prestigious honor of Blackwell Scholar and has piloted and developed several classes for the Civitae core curriculum. Additionally, she was the proud recipient of a CHI commendation for her work developing the LGBTQ+ and Media course. In the Spring semester, Waggoner guides students in her LGBTQ+ and Media class (a Civitae perspectives course) to develop short films to be shown at the Longwood LGBTQ+ Film Festival.

Prior to Longwood, Waggoner taught at numerous universities and colleges on the east coast, including the University of Connecticut and several colleges in the central Kentucky area. In a past life, she was an English professor (Masters from Marshall University) who taught primarily composition and film analysis. With her professional background and interest in the production aspect of media, Waggoner pursued her Masters in Communication Leadership at Gonzaga University and PhD in Communication at University of Connecticut. Overall, she has seven college degrees, including graduate work in Communication, English, Servant Leadership, and College Instruction. Beyond academics, Waggoner has also held numerous jobs in the media and public relations fields. She is also a former recording artist and local touring musician. She also worked at Walt Disney World, dressed up as a pizza slice for Papa John's, and worked as a photography assistant and developer. With lots of different jobs over the years, Waggoner has some tales to tell.

## Award Ceremony for *Incite* and Longwood Excellence in Research and Inquiry Awards

**12:15 P.M. – 1:00 P.M.**  
Rotunda- Virginia Room

Please join us as we acknowledge and celebrate our students who have gone above and beyond in their pursuit of research and creative inquiry! The awards ceremony will include the winners of the *Incite* Journal of Undergraduate Scholarship awards, and students who are being recognized with the Longwood Excellence in Research and Inquiry Award.

Students who have been recognized with an award are noted by the colored ribbons on their name badges.

### **The different colors of the Award Recipient ribbons indicate the following achievements:**

*Dark Blue*- Presented research at a scholarly conference or had a performance or exhibition of creative work outside of Longwood University

*Light Blue*- Received external funding to support an independent research and inquiry project

*Red*- Published an article in a peer-reviewed scholarly journal

*Green*- Completed a Senior Thesis Project at Longwood University

*Yellow*- Published in *Incite*, the undergraduate research journal at Longwood University

**Inclusive Excellence Symposium on Diversity, Equity, Inclusion, and  
Belonging**  
**9:00 a.m. – 3:30 p.m.**

**Welcoming Remarks and Keynote Address**  
**Rotunda- The Virginia Room**  
**9:00-9:30 A.M.**

Welcoming Remarks- Dr. Larissa Smith, Provost and Vice President for Academic Affairs

Keynote Address- Dr. Erin Waggoner, Assistant Professor of Communication Studies  
Co-Director, Women, Gender, and Sexuality Studies Minor

**BIOL 488- Senior Capstone in Biology, Oral Presentations**  
**Rotunda – Virginia Room**  
**9:45 – 11:15 a.m.**

Faculty mentor, Dr. Adam Franssen

9:45-10:00

Heidi Parker-Combes, Cassandra Poole, Coleman Taylor  
*Restructuring the accommodation process at Longwood University*

10:00-10:15

Jacqueline Amaya Hernandez, Samari Gibson, Taylor Murphy  
*Advocating for proper diagnosis of adolescents with ADHD in the Prince Edward County*

10:15-10:30

Isabelle Villarreal, Alexis Henry, Virginia Tam  
*Educating Elementary School Administration and Staff on Neurodiversity to Ensure Success of Neurodiverse Students*

10:30-10:45

Delaney McMahon, Hailee Banks, Virginia Marshall, Xavier Holman  
*Benefits of a Neurodiverse Workplace*

10:45-11:00

Tajayda Arrington, Davice Jones, and Rebecca Mills  
*Our Neurodiversity Desert: Solving the Absence of a Community Based Resource for Neurodivergent Children*

11:00-11:15

Lloyd Dominguez, Amari Riddick, Jamie Slaughter, and Kylee Wright  
*The limitations vs the advantages of athletes who have Tourette Syndrome*

## **Inclusive Excellence Research Projects**

**Rotunda- Room 115  
9:45 a.m. - 10:00 a.m.**

Osiris Ruff, (Faculty sponsor, Dr. Sean Barry)  
*Camp Almodóvar*

## **Cormier Honors College Research Projects**

**Rotunda- Room 116  
10:35 a.m. - 10:50 a.m.**

Kalliope Ratliff, (Faculty sponsors, Dr. Hannah Dudley Shotwell and Dr. Shayla Walker)  
*Racial and Ethnic Justice in the Media*

## **Performances**

**Communication Studies and Theatre Arts Center- Room 101  
11:15 a.m. - 11:30 a.m.**

Raine Bence, Junior Franks, Anna Hall, Maggie Kittrell, Cierra Yuille (Faculty sponsor, Dr. Joyce Sweet)  
*Maya Angelou--Truly a Phenomenal Woman*

## **Spain: Civilization, Literature, and Artistic Expressions from Prehistory to 1700**

**Rotunda- Room 115  
2:00 p.m. - 3:15 p.m.**

2:00-2:15

Paul Espinoza.

*¿Cómo construimos a un héroe? Desde el campo de batalla hasta un campo de fútbol*

2:15-2:30

Stormie Foley

*Representations of Women in the Literature of Medieval Spain*

2:30-2:45

Osiris Ruff

*The Usefulness of Camp: Responding to a Spanish Society in Transition*

2:45-3:15

Christina White

*Bartolomé de Las Casas: ¿El Defensor de Los Indígenas y el Matador de Los Africanos?*

## **Poster Session II- Cormier Honors College for Citizen Scholars**

**11:00 - 12:00 p.m.**

Faculty Mentor, Dr. Jennifer Miscek

Abby Marple, Kenney Lundeen, (Faculty sponsor, Dr. Jennifer Miscek)

*How Are Characters with Disabilities Portrayed in Children's Literature?*

## **Poster Session IV- Introduction to Race and Ethnic Studies**

**2:30 - 3:30 p.m.**

Faculty mentors, Dr. Hannah Dudley-Shotwell and Dr. Shayla Walker

Posters 27-33

Mary Martino

*Impact of the Black-White Binary in Modern Media*

Sydney Thompson, Eliot Dix

*Representation of Race and Ethnicity in Prime Time Television: A Media Analysis of Fox and NBC*

Ijane Wynn

*The effects of the Strong Black women schema and how it alters the lives of Black women compared to White women*

Dionna Charity

*Diversity in STEM*

## **Poster Session IV- Seminar in United States History- Reconstruction**

**2:30 - 3:30 p.m.**

Faculty mentor, Dr. David Coles

Posters 34-43

Harrison Ludwig

*Motivations of Radical Republicans in Congress during Reconstruction*

Jordyn Bryant

*Reconstruction Era's impact on the political involvement of African Americans*

Lucy Klisz

*Lincoln's Plans for Reconstruction and How They were Altered By His Assassination*

Larry Grant Jr.

*The Impeachment of Andrew Johnson*

Caitlyn Morley

*The Ku Klux Klan: Reconstruction vs. The Jazz Age*

Gretchen Yoder

*The Effects of Reconstruction and Disenfranchisement on African Americans at the Polls*

Madison Harris

*The Position of African-American Women Due to the Fifteenth Amendment*

Megan Harrigan

*Race Relations in South Carolina, 1867-1877*

Jay Holmes

*The Freedmen's Bureau*

Taylor Bauschatz

*The Compromise of 1877*

## **Theater 448 – Integrated Arts Theater, Live Performances** **CSTAC 101**

Faculty mentor, Dr. Ronda Scarrow

10:00-10:30

Molly Ashcraft, Ashlyn Baker, Ryane Barlow, Liesl Bergel, Chloe Curry, Emily Dankenbring, Justin Elliott, Carly Hicks, Maddie Nickerson, Megan Odenwelder, Rebecca Regan, Sarah Roquemore, Samantha Scraba, Genesis Simmons, Brooke Snider, Ashley Vago

*There is Always Room to Integrate the Arts*

10:30-11:00

Ryan Barnebee, Case Bohannon, Adrienne Donohue, Caroline Fritz, Madison Glattfelder-Quizon, Greta Hahn, Haeley Hall, Grace Hong, Rachel Kraft, Makayla Lewis, Allison McSweeney, Karina Naccarato, Alexis Price, McKenzie Ross, Gwyneth Swan, Kenzie Verlander

*Getting Visual in the Classroom While Moving and Grooving*

## **Theater 215 – Voice and Speech, Live Performances** **CSTAC 101**

Faculty mentor, Dr. Joyce Sweet

11:15-11:30

Raine Bence, Junior Franks, Anna Hall, Maggie Kittrell, Cierra Yuille

*Maya Angelou--Truly a Phenomenal Woman*

### **Junior Art Show**

**11:00 a.m. – 1:00 p.m.**

**11:30a.m.- Awards Ceremony**

Bedford Gallery

Please join the department of Theatre, Art, Graphic and Animation Design for the opening reception of the Junior Show. Held in Longwood's Bedford Gallery, this yearly exhibition highlights the work of our junior class students in the Studio Art, and Graphic and Animation Design programs. Come by the Bedford Atrium from 11:00a.m.-1:00 pm to help us celebrate our students' achievements in Art and Design!

**BIOL 488 – Senior Capstone in Biology, Oral Presentations**  
**Rotunda – Virginia Room**  
**9:45 – 11:15 a.m.**

Faculty mentor, Dr. Adam Franssen

9:45-10:00

Heidi Parker-Combes, Cassandra Poole, Coleman Taylor  
*Restructuring the accommodation process at Longwood University*

10:00-10:15

Jacqueline Amaya Hernandez, Samari Gibson, Taylor Murphy  
*Advocating for proper diagnosis of adolescents with ADHD in the Prince Edward County*

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Isabelle Villarreal, Alexis Henry, Virginia Tam  
*Educating Elementary School Administration and Staff on Neurodiversity to Ensure Success of Neurodiverse Students*

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Delaney McMahan, Hailee Banks, Virginia Marshall, Xavier Holman  
*Benefits of a Neurodiverse Workplace*

10:45-11:00

Tajayda Arrington, Davice Jones, and Rebecca Mills  
*Our Neurodiversity Desert: Solving the Absence of a Community Based Resource for Neurodivergent Children*

11:00-11:15

Lloyd Dominguez, Amari Riddick, Jamie Slaughter, and Kylee Wright  
*The limitations vs the advantages of athletes who have Tourette Syndrome*



## **Cormier Honors College, Oral Presentations**

**Rotunda 116**

**9:45 – 11:00 a.m.**

9:45-10:00

Serenity Allen, (Faculty sponsor, Dr. Alecia Blackwood)

*The Light Behind Aggressive Parenting*

10:00-10:20

Rachel Cannon, (Faculty sponsor, Dr. Shawn Smith)

*Adaptation and Inspiration: Shakespearean Tropes in Modern Media*

10:20-10:35

Kylie Casey and Kylie Rinker, (Faculty sponsor, Dr. Scott Grether)

*Media's portrayal of Roe v Wade protests throughout the decades.*

10:35-10:50

Kalliope Ratliff, (Faculty sponsors, Dr. Hannah Dudley Shotwell and Dr. Shayla Walker)

*Racial and Ethnic Justice in the Media*

## **English 461- Senior Seminar, Oral Presentations**

**Rotunda 116**

**11:00 – 11:40 a.m.**

11:00-11:20

Kassie Lee, (Faculty sponsor, Dr. Sean Barry)

*The Recollection of Countercultural in Jenkins Reid's Daisy Jones & the Six*

11:20-11:40

Ashley Wilson, (Faculty sponsor, Dr. Sean Barry)

*What's at the end of Minecraft? The ambiguous genres and genders of Julian Gough's "End Poem"*

## Independent Research, Oral Presentations

Rotunda 115

9:45 – 11:15 a.m.

9:45-10:00

Osiris Ruff, (Faculty sponsor, Dr. Sean Barry)

*Camp Almodóvar*

10:00-10:15

Kristen Wilkins, (Faculty sponsor, Dr. Amorette Barber)

*Chimeric PD1 Expressing T cells as a therapy for Pediatric Osteosarcoma and Rhabdomyosarcoma*

10:15-10:30

Kendall Magee, Emily King, and Michelle Amaya-Alfaro, (Faculty sponsor, Dr. Chris Bjornsen)

*Social Media Use and Attention Dysregulation*

10:30-10:45

Gabriel Proudfoot, (Faculty sponsor, Dr. Chris Bjornsen)

*Social media use and self-concept dysregulation.*

10:45-11:00

Rachael Sapp, Maria Riascos, (Faculty sponsor, Dr. Chris Bjornsen)

*Social Media Use, Personality, and Relationship Satisfaction*

11:00-11:15

Kendyl Titus, (Faculty sponsor, Dr. Shayla Walker)

*Mental Health and Social Work Education: Identifying the Gaps*

## **ART 385 – Critical Making, Oral Presentations**

**Bedford 111**

**1:00 – 2:00 p.m.**

Faculty mentor, Dr. Angela Bubash

Maggie Cornelius, Kaitlin Hardt, Destiny Hunt, Audrey MacMeekin, Carleigh Reiffer, Hannah Smith,  
Connor Thompson

*Critical Making Pecha Kucha*

## **GAND 462 – Senior Professional Seminar, Oral Presentations**

**Bedford 211**

**2:15 – 4:00 p.m.**

Faculty mentor, Dr. Keith Cummings

2:15-2:30

Regan J. House

*Posted Mortem Jewelry*

2:30-2:45

J. Michael D. Woodard Jr.

*Boundless Designs*

2:45-3:00

Heath Wood

*Why not play a little?*

3:00-3:15

Sara Grayson

*The Hospitable Chickens*

3:15-3:30

Taniya Wyche

*Tanuki Rush*

3:30-3:45

Jacar McNeil

*Stage Door/Feel Like a Fraud?*

3:45-4:00

Madison Clark

*Sensitive-Senior Thesis Animation*

# BIOL 251 – Introduction to Ecology and Evolution, Oral Presentations

Rotunda – Virginia Room

1:15 – 4:00 p.m.

Faculty mentor, Dr. Mark Fink

1:15-1:30

Amanda Cedeno, Saad Khan, and Mackenzie Jerabek

*Don't Fall In: Analyzing Animal Biodiversity Through Pitfall Traps at Lancer Park*

1:30-1:45

Ethan Dobbins, Taylor Pulley, Jais McClurkin

*What's in that water? The exploration of the abundance and diversity of aquatic macroinvertebrates in various water sources at Lancer Park*

1:45-2:00

Javier Roldan, Kavan Hicks, Bradley Pugh

*When a Tree Falls in The Forest: Invertebrate Diversity in Decaying Trees*

2:00-2:15

Sarah Schuckert, Erica China, Angelina Scotece

*And there were Mayflies! Oh my god, there were Mayflies: The Correlation of Water Quality and Aquatic Macroinvertebrate Biodiversity*

2:15-2:30

Sydney Jones, Madison Carter, Kexin Li

*More than meets the Eye: Terrestrial Macroinvertebrate Richness in Leaf Litter at Varying Distances from a Water Source*

2:30-2:45

Ashley Seiders, Gabrielle Quaresma, Kenya Carrillo Hernandez

*Caught on Camera: Avian Diversity and Foraging Patterns in Rural and Urban Areas*

Faculty mentor, Dr. Ben Campbell

3:00-3:15

Dylan Duke, Casey Mann, Matthew Wright

*Animal activity based on distance from water source*

3:15-3:30

Alicyn Lee, Andrew Schaefer, Lauren Vasquez

*Microorganisms found in Farmville waterways*

3:30-3:45

Julia Boisvert, Kenzie Kushner, Mattie Smith

*Insect biodiversity in natural vs. man-made environments*

3:45-4:00

Drew Adams, Harvey Aileo, Savannah Moody

*The impact of soil compaction on plant germination*

## **Perspectives on Research in Science and Mathematics (PRISM)**

**Rotunda 116**

**1:15 – 3:30 p.m.**

1:15-1:30

Kimberly Farrey, Claire Bain, (Faculty sponsor, Dr. Meg Thompson)

*Mental Health in College Student Athletes*

1:30-1:45

Julia Novaes, (Faculty sponsor, Dr. Steven Hohner)

*An extremal property of symmetric decreasing rearrangements*

1:45-2:00

Ryan Urban, Alec Judd Vidanes, (Faculty sponsor, Dr. Jeffrey Ledford)

*Polyhyperbolic Splines*

2:00-2:15

Anna Fox, Dakota Smith, (Faculty sponsor, Dr. Sanish Rai)

*Extracting occupancy information from sensor data using machine learning*

2:30-2:45

Kassidy Owens, (Faculty sponsor, Dr. Jonathan White)

*Synthesis of cationic Pt drug derivatives and characterization of their cellular targets*

2:45-3:00

Bianca Minter, Ashleigh Mann, (Faculty sponsor, Dr. Kathy Gee)

*Quantifying Legionella in Rainwater Harvesting Systems*

3:00-3:15

Abigail Sommer, (Faculty sponsor, Dr. Dina Leech)

*Comparing the sensory ecology of larval fish from lakes of different watercolor*

3:15-3:30

Joshua Mealy, (Faculty sponsor, Dr. Julian Dymacek)

*Nocturnal Flight Call Identification*

## **Biology, Oral Presentations**

**Rotunda 108**  
**1:15 – 2:45 p.m.**

### **BIOL 404 - Immunology**

Faculty mentor, Dr. Amorette Barber

1:15-1:30

Bianca Minter, Virginia Tam, Victoria Walden

*Diagnosis of Immunodeficiency with Hyper-IgM Syndrome Type 1*

1:30-1:45

Kylee Wright, Jammie Mcmurtry

*Diagnosis of Bare Lymphocyte Syndrome Type II*

1:45-2:00

Cassandra Poole, Zoe Averett

*The case of the missing immune receptor - diagnosing an IFN- $\lambda$  receptor deficiency*

2:00-2:15

Tajayda Arrington, Rodney Clark, Skylar Irvin, Melanie Rowland

*Diagnosis of Chronic Granulomatous Disease (CGD) In Teen Boy*

### **BIOL 473 – Comparative Biomechanics**

Faculty mentor, Dr. Brandon Jackson

2:15-2:30

Lilian Jubb and Jacqueline Amaya Hernandez

*The effects of autotomy on locomotion stability in brown marmorated stink bugs (*Halyomorpha halys*)*

2:30-2:45

Kira Edens, Alayna Palamar, Coleman Taylor

*The biomechanics and locomotion behind hind leg jumping power in different species of cricket*

## Spanish, Oral Presentations

Rotunda 115  
1:15 – 4:30 p.m.

### SPAN 341 – Spanish Civilization, Literature, and Art

Faculty mentor, Dr. Javier Fernández Urenda

1:15-1:30

Emilio Salgado Garcia

*España: Gastrocultura La importancia Musulmana*

1:30-1:45

Melanie Jensen

*Social Structures of the Middle Ages and renaissance according to Spanish literature*

1:45-2:00

Mia Arrieta

*Witchcraft and the Transition to Modern Science from the Enlightenment Period in Spain*

2:00-2:15

Paul Espinoza.

*¿Cómo construimos a un héroe? Desde el campo de batalla hasta un campo de fútbol*

2:15-2:30

Stormie Foley

*Representations of Women in the Literature of Medieval Spain*

2:30-2:45

Osiris Ruff

*The Usefulness of Camp: Responding to a Spanish Society in Transition*

2:45-3:15

Christina White

*Bartolomé de Las Casas: ¿El Defensor de Los Indígenas y el Matador de Los Africanos?*

## SPAN 351 – Early Latin America Pre-1800

Faculty mentor, Dr. Renee Gutiérrez

3:30-3:50

Sarah Donahue and Leslie Flores

*Las dos caras de la moneda: El oro en la economía transatlántica de las Españas*

3:50-4:10

Rachel Cannon, Zoë Maxwell

*Las mujeres varoniles: Monjas, autores, y su proto-feminismo*

4:10-4:30

Miguel Diaz-Montealegre, Luna Prieri

*De Huitzilopochtli a Jesucristo: La evangelización mexicana (el siglo XVI hasta hoy)*

## Longwood Senior Thesis, Oral Presentations

**Rotunda 116**

**3:45 – 4:30 p.m.**

3:45-4:00

Catharine Forst, (Faculty sponsor, Dr. Laura Jimenez)

*Burnout and Overtraining Are Not Present in Longwood's Women's Soccer Athletes*

4:00-4:15

Leah Richardson, (Faculty sponsor, Dr. Charles Repp)

*The Differences in Psychological and Philosophical Therapy on Moral Injury*

4:15-4:30

Cassandra Poole, (Faculty sponsor, Dr. Amorette Barber)

*The Effect of Bisphenol A (BPA) Substitutes on CD4+ T Cell Immunity*



**Poster Session I 9:45 – 10:45 a.m.**  
**Blackwell Ballroom**

**EDUC 245 – Human Growth and Development**

Faculty mentor, Dr. Aftab Khan

Posters 1-11

Kristen Willoughby

*Does divorce affect family relationships*

Paxton McDonald

*The Effects of Over Testing Students*

Casey Mann, Cliff Whitlock

*Maternal drug abuse and effects on cognitive and socioemotional development in children*

Tiffany Work

*The effect growing up surrounded by parental substance misuse has on a child's development*

Austin Burnett, Maegan Pickral

*The Effects of Parental Depression on the Social and Emotional Development of Children*

Lucas Taves

*Effects of Divorce on Child Development*

Kevin Patel and John Bultje

*Impact of social and physical development.*

Liv Reid

*Cognitive and Social Development in Correlation with Eating Habits*

Katie Browne

*Development of self and social understanding*

**ENSC 201 – Integrated Environmental Investigations**

Faculty mentor, Dr. Ken Fortino

Posters 12-15

Caroline Avery, Amanda Beville, and Gabriella Giannelli

*The Concentration of Microplastics affects the Birth Rate, Death Rate, and Population Growth of Daphnia magna.*

Joel King, Dylan Duke, Pierson Barnabei, Savannah Moody,

*The impacts of la nina on the fishing industry*

Royce Coleman, Lucy Ellis, Helena Loucas, Grace Smith

*The impact of urban landscape features on wind patterns and CO<sub>2</sub> concentrations*

Ella Puckett, Jack Van Straten, and Caleb Swecker

*Determination of different carbon stocks in a temperate forest*

### **ISCI 121 – Entering Research II**

Faculty mentor, Dr. Melissa Rhoten

Posters 16-19

Madison Carter, Ja'Mea Henderson, Jessica Patish, Zoe Sawyer

*Is that water polluted?*

Erica China, Bethany Comer, Angelina Scotece, Kaynia Winn

*How do nitrates and phosphates affect algal growth?*

Taylor Balovich, Kara Branch, Brianna Edgar, Timothy Slater

*Suminoe oysters and the Chesapeake Bay: A Case Study*

### **NURS 360 – Introduction to Research and Evidence Based Practice**

Faculty mentor, Jennifer Hutchinson, PhD, RN

Posters 20-25

Tricia Cimbal, Laney Pitcock

*Respirator pneumonia and COVID*

Casey Wilkinson, Aislinn Garcia

*COPD - High flow vs. Low Flow Oxygen Therapy*

Alexys Rowe, Seth Ratliff

*In patients with major depressive disorder/ depression, how does combination therapy compare to pharmacologic exclusive plans for reducing depressive symptoms?*

Erin Salzman, Kasey Clemons

*In a hospital setting, how do registered nurses working an 8 hour shift versus a 12 hour shift affect nurse burnout and work associated errors?*

Ayanna Ford, Katelyn Grundy

*Among nurses after the COVID-19 pandemic, how would having adequate nurse staffing decrease the burnout rate of nurses when compared to nurses who are using more traditional interventions to reduce the nursing burnout rate?*

## PHYS 223 – University Physics Lab II

Faculty mentor, Dr. Kenneth Pestka

Posters 26-41

Avery Smith

*Statistical Thermodynamics in Rolling Dice*

Ashley Cook

*Dice Related to Thermodynamics and Entropy*

Alec Corwin

*Hubble Law*

Tydru Light

*Drag Forces*

Rebecca Taylor

*Calculating Drag Force*

Ava Davis

*Optics*

Ryan Urban

*RC Time Constant*

Bryson Talbert

*Statistical Mechanics, Thermodynamics, and Dice*

Amelia Carlile

*Optics*

Michael Everman

*Optics and the Law of Refraction*

Kevin Warunek

*Hubble's Law*

Riley McDonald

*The Hubble Relationship*

Andrew Short

*RC Circuits*

Matthew Cecka

*RC Time Constants*

Maxwell E. Rucker

*Drag Forces*

## **PSYC 461 – Psychology Senior Seminar**

Faculty mentor, Dr. Stephanie Buchert

Posters 42-50

Tanea A. Doswell, Jadyr R. Eaton, Amaya N. Wright

*The Measurement of Performance in the Presence of Team Empowerment through Communication and the Availability of Resources*

Alyssa L. Gibson, Danielle M. Whittington, Korynna A. Anderson

*The Effect of Medium and Misinformation in False Memory Implantation*

Eli C. Caldwell, Caitlyn D. Freeman, Leah E. Richardson

*The Purpose of a Cog in a Machine: A Study on Eudaimonic Well-Being*

Lindsey D. Hay, Anaya N. Jennings, Precious I. Pulliam

*The Influence of Attachment Styles and Mindfulness Intervention on Subjective Well-Being*

Annie E. Harris, Isabella M. Jontz, Natalie E. Russell

*How Team Empowerment Influences Self-Efficacy in a Group Work Setting*

Erica P. Feuerhelm, Megan R. King, Alayna S. Palamar

*The Effects of Lighting and Music on Anxiety in the Classroom*

Gabriella B. Baker, Kelijah S. Fields, Leah D. Safi

*Social media influence on self esteem*

Marissa A. Freeman, Natasha T. Martin, Elizabeth A. Wilder

*The Effect of Vocabulary and Gender on Memory Recall and Recognition*

Janelle M. Broaddus, Carrie A. Flickinger, Hannah E. Seymour

*Does Amount of Time Spent on TikTok Have an Influence on Self-Esteem?*

## **HPEP 402 Research Methods in Health & Physical Education**

Faculty mentor, Dr. Amanda Blaisdell

Poster 51

Leigha Hill

*Epilepsy and Quality of Life in Women*

**Poster Session II 11:00 a.m. - 12:00 p.m.**  
**Blackwell Ballroom**

**BIOL 250 – Introduction to Genetics and Cell Biology**

Faculty mentor, Dr. Katie Pennington

Posters 1-20

Ja'mea Henderson, Kara Branch

*SNPs PCR and Gel Electrophoresis for Curly hair Phenotype*

Zoey Graybeal, Matt Harvey, Abby Squires

*SNP PCR Blue/Brown Eyes*

Kassidy Owens, Sarah Schuckert

*Phenotype Presentation of Blue/Brown eyes SNPBH*

Kaylee Coker, Bethany Comer

*Bitter or Soapy?*

Lauren Vasquez, Matthias Borneff

*Finding the difference within our SNPBH Phenotype*

Jessica Patish, Kaynia Winn

*Evaluation of Genetic SNPS*

Kirsten Eberly, Breann Norwood

*Cilantro Aversion*

Amanda Cedeno, Saad Khan

*Investigating the Relationship Between the Phenotype and Genotype of Single Nucleotide Polymorphism C: Aversion to Cilantro*

Ashleigh Mann, Zoe Sawyer

*Analysis of DNA from cheek samples to determine genotype with the locus blue/brown eyes (SNPBH)*

Rachel Danzitz, Jais McClurkin

*Cilantro Aversion & SNP rs2741762*

Madison Campeau, Grace Cohen

*Determining Genotype of SNPBH through Polymerase Chain Reactions*

Breann Norwood, Kirsten Eberly

*Cilantro aversion*

Victoria Matheson, Fayth Julius  
*Curly hair genotype on personal DNA*

Riley Boggs, Emily Woytanis  
*Truth Behind Brown and Blue Eyes*

Julia Boisvert, Lauren Sechriest  
*PCR and SNP on Blue/Brown eyes*

Jaedyn Colon, Borhan Errafay  
*Blue/Brown Eyes SNP rs12913832*

Samantha Collins, Amanda Doty, Jasmine Gullixon  
*Examining the Genotype of the rs713598 and rs12913832 Genes*

Kiersten Witte and Lynn Clemons-Jenkins  
*Some Like It Bitter: Analyzing the TAS2R38 Gene*

### **Honors BIOL 250 – Introduction to Genetics and Cell Biology**

Faculty mentor, Dr. Consuelo Alvarez  
Posters 21-25

Madison Smith, Trinity Luxeder, Nick Duellman  
*SNP Genotyping*

Ashley Seiders, Olivia Rouse, Maggie Chapin  
*Relationship Between Eye Color and Photic Sneeze Reflex*

Maria Papas, Kendra DeFilippo, Taylor Balovich  
*What's hiding in your genes?*

Anaaya Monroe, Samantha Ruano, Julianne Smith  
*The Race For SNPs*

### **Cormier Honors College Posters**

Posters 26-36

Caitlin Wiley, (Faculty sponsor, Dr. Robert Marmorstein)  
*SSH Hijacking*

Louis Iampaglia, (Faculty sponsor, Dr. Robert Marmorstein)  
*Steganography: The Art of Hiding Data*

Dionna Charity, (Faculty sponsor, Dr. Robert Marmorstein)  
*Implementing a Command-and-Control Attack*

Jackson Ornoff, (Faculty sponsor, Dr. Robert Marmorstein)  
*Dino War*

Emily Cate Smith, (Faculty sponsor, Dr. Dawn Schwartz)  
*How to Prevent Tax Evasion?*

Alayna Palamar, (Faculty sponsor, Dr. Brandon Jackson)  
*The Biomechanics of Athletic Movement and Performance*

Mackenzie Griffith, Anna Barrett, Kiersten Witte, (Faculty sponsor, Dr. Tim Coffey)  
*Big Heads and Balance: Postural Control in College Mascots*

Abby Marple, Kenney Lundeen, (Faculty sponsor, Dr. Jennifer Miskec)  
*How Are Characters with Disabilities Portrayed in Children's Literature?*

Kendall Wieckert, (Faculty sponsor, Dr. Jennifer Miskec)  
*Understanding Adaptations via Roald Dahl's Matilda*

Grace Bailey, (Faculty sponsor, Dr. Alison King)  
*Speech Perception in Deaf Children*

## **NURS 230 – Foundations of Nursing Practice**

Posters 37-57

Faculty mentor, Dr. Pamela Crowder

Amya Williams, Abigail Gill, Jayden Haley  
*How does social media impact our health*

Chelsea Stith, Mary Tursic, Stephanie Simmons, Gabrielle Sehlhorst  
*Patient Safety*

Jillian Ratliff, Liesel Saur, Avery Goodlin  
*Nursing and physician shortages that lead to never events.*

Grace Dorgan, Olivia Wydner, Emma Weber  
*How Distractions Effect the Work Ethic of Nurses*

Austin Glockner, Jacki Ramey, Sonya Owen  
*The Effects of different materials on skin breakdown*

Emma Culver, Constanza Mangieri, Dana Phillips  
*Prevalence of UTIs in Geriatric Patients*

Ryleigh Mahanes, Taylor Fifer, Kaelyn Moore  
*Insufficient Staffing in the Healthcare field*

Teri Miller, Makenzie Hayes, Alexis Funk  
*How do we prevent the most common medication errors?*

Anisha Marable, John Schroeder, Emily Robinson  
*Best Practice Among Long Term Care Facilities In Regards To Resident Mental Wellbeing*

Cayden Normandeau, Grace Lewis, and Taylor Sheaffer  
*Alternative use of Briefs*

Faculty mentor, Dr. Elizabeth Parker

Benjie Abuan, Jordan Cooke, Rylee Franklin  
*Medication Cart Administration Errors*

Anna Brautigam, Tinsley Abbott, and Abigail Giles  
*How is pain assessed and decreased in patients diagnosed with dementia?*

Gabrielle Drewry, Taylor Moore, Riley Dillon  
*Evidence Based Practice in Nursing*

Katelyn Hinegardner, Emily Nelson, Emily Sutphin  
*Readmission to Hospitals*

Gabriella Zolkowski, Sarah Pomfrey, Madeline Mollner  
*Evidence Based Practice of Telehealth*

Sydney Loonam, Krista Bass, Abigail Livingstone, Emily Harwood  
*The Effects of Mental Health on Long Term Care Residents Physical Health and Wellbeing.*

Alexis Beasley, Jodi Pool, Madison Clegg  
*Improved Nutrition for Dementia Patients with Music*

Emma Gibbs, Gracie Trainum, Gabrielle Echard  
*Hospital Acquired Ventilator Associated Pneumonia*

Jacob Mays, Kylie Quick, Samantha Proffitt  
*Effect of Music Therapy on The Cognitive Function of Dementia Patients*

Bailey Goldman, Cassie Beck  
*Compassion Fatigue in Healthcare Settings*



**Poster Session III 1:15 – 2:15 p.m.**  
**Blackwell Ballroom**

**NURS 440 – Managing Safety and Quality Outcomes**

Faculty mentor, Dr. Kim Little

Posters 1-16

Alyssa Austin

*Change in the Neuroscience Telemetry Unit*

Tori Heller

*Change Project: ICU Delirium*

Caitlin Szalay

*An Environment of Healing*

Georgia Gagliardi

*ICU Delirium a Problem: Let's Bring Change*

Chloe Amos

*Postpartum Hemorrhage and The Use of The Jada System*

Sara E. Stevens

*Patient Privacy in Correlation to Honesty*

Madyson Hunley

*Skin to Skin contact post C-Section*

Isabel Rosche

*Decreasing Environmental Stimuli for Premature Infants*

Brooke Buchanan

*The Impact of Nursing Staff Wearing Tracker Badges in the Hospital Setting*

Grace Puleo

*The Lack of Religious Resources in an Emergency Setting*

Kaylee Eckert

*Use of Clinical Practice Flowsheets in a Rural Emergency Department*

Rebecca Long

*Fall Prevention*

Claire Briggs

*Moving Registered Nurse Shift Reports to the Bedside*

Anna Mack

*Smart Pumps Reduce Medication Administration Errors & Increase positive patient outcomes*

Trevor Sehlhorst

*Improving Patient Outcomes Following Cardiac or Respiratory Arrest*

**POSC 461 – Senior Seminar**

Faculty mentor, Dr. Scott Cook

Posters 17-27

Sarah Cline

*Social Media and Presidential Impeachments*

Sydney Thompson

*Location is Key: How Does the Location of Recruiting Offices Affect the Percentage of Black Americans in the Military?*

Mary Levush

*The Influence of Gender on Second Amendment Attitudes*

Amber Bruce

*Do students at Longwood University think their Votes in elections matter?*

Kayla Gurley

*What causes some states the requirement of a concealed carry permit while other's do not?*

Shahmique Cromwell

*Gender in the Military*

Canaan Key

*Support for freedom of speech: partisan or much deeper?*

Landon Tapscott

*The Effects of Voter-ID*

Riley Davis

*TBD*

Kayla Gurley

*What causes some states the requirement of a concealed carry permit while other's do not?*

## ENSC 402 – Environmental Decision Making

Faculty mentor, Dr. Chris Labosier

Posters 28-31

Randolph Zerick, Miguel Diaz, Matthew Wright

*Finding the Facts About Short and Long Term Effects of Large Scale Solar Farms*

Phil Anderson, Nadia Mullins, Jerry Dunford

*Structured Decision Making (SDM) Process for Controlling the Invasive Spotted Lantern Fly in Virginia*

June Bollinger, Danielle Clarke-Bradley, Jacob Davis, Christian Michael

*Reducing Longwood's Single-Use Plastic Consumption: A Structured Decision-Making Process*

## GEOG 275 – Introduction to GIS

Faculty mentor, Dr. Kathy Gee

Posters 32-44

Ella Puckett

*Factors Implementing Virginia's Land Use*

Lucy Ellis

*Relating shoreline change to seabird populations*

Ashleigh Watkins

*Impacts of Climate Change on Coral Reefs in Southeast Asian Seas and the Pacific Ocean*

Hannah Harrington

*Factors Contributing to the Creation of Ancient Roman Cities*

Jack Van Straten

*Analysis on the Access of Greenspace to Minority Communities in Washington DC*

Caleigh Waddell

*Virginia's Lost History: Analyzing Delisted Historic Sites for Future Preservation Efforts*

Caroline Avery

*Flood Risk Assessment of Farmville, Virginia.*

Ciaran Rivera

*How Wealth Correlates with Fertility Rates*

Caleb Swecker

*Factors that Influence the Virginia Opossum's Expanding Range*

Jackson Ornoff  
*Saving the Spruce*

Glenn, Kelly  
*Prehistoric Settlement Patterns in France*

Kailyn Westbrook  
*The Relationship Between Wildfire Occurrences and Geographic Phenomena in California*

**GEOG 354 – Hydrology**

Faculty mentor, Dr. Ravi Darwin Sankar

Poster 45

Savannah Moody  
*An Evaluation of Flood Risk Farmville*

## Poster Session IV 2:30 – 3:30 p.m.

Blackwell Ballroom

### NURS 440 – Managing Safety and Quality Outcomes

Faculty mentor, Dr. Kim Little

Posters 1-16

Madison Pribble

*Nursing Competency on Insulin Drips in Labor and Delivery*

Haley Bendall

*Safety in the Emergency Department*

Trevor Leonard

*Efficacy of Curoc Caps in IV Infection Reduction*

Jessica Faulk

*Personal Protection Equipment*

Abigayle Cunningham

*Nurse Staffing*

Rebecca Keough

*Benefit of Implementing a Difficult Venous Access Team at Hospitals*

Leah Eick

*For postoperative patients, does the use of daily interdisciplinary team huddles reduce the risk of poor patient outcomes and medical errors compared to not having regular team huddles?*

Caroline Trueman

*Change Project*

Kayla Knotts

*Standardizing End-of-Shift Report in Nursing*

Lauren Mohrhusen

*Recruitment and Retention of Staff Nurses at Mary Immaculate Hospital*

Seth Seward

*Nursing Staffing Ratios: How Can We Move Forward?*

Emily McGuire

*Improving Emergency Department Triage Through Nurse Badge Buddies*

Cassandra Sutton

*The Importance of Infection Control in the Emergency Room Setting*

Stephanie Bunce  
*The Importance of Wireless Telemetry Boxes for Patients*

Macy Franchebois  
*The Lifesaving Effects of Copper*

### **SOCL 461 – Sociology Senior Seminar**

Faculty mentor, Dr. Jake Milne  
Posters 17-26

Nyliah Dalton and Kaelin Marsili  
*Program Analysis of Department of Juvenile Justice*

Evelyn Schulman and Cierra White  
*Program Analysis of Standardized Testing Laws*

Nick Carlo and Nathan Boyle  
*Policy Analysis of the Sports Medicine Licensure Clarity Act*

Sophia Douglas, and Angela D'Isidoro  
*Policy Analysis of The Humane Cosmetics Act of 2021*

Jack Lamb, Eliot Dix, Dylan Wilkinson  
*Policy Analysis of Healthy Hunger-Free Kids Act*

Caitlyn Mottley, Laya Young  
*Policy Analysis of Red Flag Laws*

Annaii Estes and Aiyana Henson  
*Program Analysis of Parent Advocacy Coalition for Education Rights*

Michael Christmas, Samuel Perry  
*Policy Analysis of the Workforce Innovation and Opportunity Act*

Christina Carter, Mallory Davis  
*Program Analysis of the Justice and Mental Health Collaboration Program*

### **RAES 201- Intro to Race and Ethnic Studies**

Faculty mentors, Dr. Hannah Dudley-Shotwell and Dr. Shayla Walker  
Posters 27-33

Mary Martino  
*Impact of the Black-White Binary in Modern Media*

Sydney Thompson, Eliot Dix

*Representation of Race and Ethnicity in Prime Time Television: A Media Analysis of Fox and NBC*

Ijaneé Wynn

*The effects of the Strong Black women schema and how it alters the lives of Black women compared to White women*

Dionna Charity

*Diversity in STEM*

### **HIST 407 - Seminar in United States History— Reconstruction**

Faculty mentor, Dr. David Coles

Posters 34-43

Harrison Ludwig

*Motivations of Radical Republicans in Congress during Reconstruction*

Jordyn Bryant

*Reconstruction Era's impact on the political involvement of African Americans*

Lucy Klisz

*Lincoln's Plans for Reconstruction and How They were Altered By His Assassination*

Larry Grant Jr.

*The Impeachment of Andrew Johnson*

Caitlyn Morley

*The Ku Klux Klan: Reconstruction vs. The Jazz Age*

Gretchen Yoder

*The Effects of Reconstruction and Disenfranchisement on African Americans at the Polls*

Madison Harris

*The Position of African-American Women Due to the Fifteenth Amendment*

Megan Harrigan

*Race Relations in South Carolina, 1867-1877*

Jay Holmes

*The Freedmen's Bureau*

Taylor Bauschatz

*The Compromise of 1877*

## HIST 414 - History of Capitalism

Faculty mentor, Dr. Gregory Mole

Posters 44-53

Nathan McClimans

*Andrew Carnegie & The Steel Foundation of Twentieth Century America*

Louisa Michie

*European vs Ottoman Guilds*

Jerome Unser

*Analysis of extraction vs. settler colonies*

James Pelina

*History of Resale Goods: Appraising, Sales, Markets*

Henry Branch

*The Decline of the Swedish East India Company*

Benton McFadden

*History and Evolution Banking during the Medieval Era*

Joseph Coward

*How trade evolved alongside of America*

Joseph Jones

*The 2008 economic crisis: studies in causes*

Mitchell Carey

*The South Sea Bubble*



## Poster Session V 3:45 - 4:45 p.m.

Blackwell Ballroom

### NURS 440 – Managing Safety and Quality Outcomes

Faculty mentor, Dr. Kim Little

Posters 1-16

Katie Cole

*Decrease Exposure Risk to Blood-Borne Pathogens Within The Healthcare Field*

Annie Elliott

*Internship to Nursing Change Project: Why implementing turn teams would improve patient health outcomes*

Rebecca Arrington

*Consistency in Monitoring and Treatment of Heart Failure Patients*

Hailey Marin

*Prioritization of Care within the "Care Space" area in the Emergency Department*

Genna Dumville

*In hospitalized patients, are patients that practice sleep hygiene having better health outcomes compared to patients that do not practice sleep hygiene?*

Kathryn Kelly

*Importance of Sedation on Intubated Infants*

Anna Schmied

*Improving the Triage Process in Emergency Departments*

Ashley Ford

*Implementing Sensory Stimulation for Clients with Dementia to Improve Patient Outcomes in the Hospital Setting*

Michaela Corker

*Improving patient-centered care to better serve the patient population*

Ashlyn Seymour

*Medication Side Effect Education Prior to Patient Discharge*

Isabella Kohama-Flores

*Nursing Issue: Nursing Shortage*

Kayla Oberfeld  
*Change Project: Poor Communication Amongst Healthcare Professionals*

Morgan Tharpe  
*Change Project: Johnston-Willis Oncology*

Melissa Schlosser  
*The Importance of Two Patient Identifiers in Medication Administration*

Decker McKean  
*High Nurse: Patient Ratios*

### **HPEP 402 Research Methods in Health & Physical Education**

Faculty mentor, Dr. Amanda Blaisdell

Posters 17-25

Kyleigh Cox  
*Eat Well to Perform Well*

Abigail Torbinski  
*The Impact of Screen Time on Adolescent Health*

Reyna Cartagena  
*The Effects of Sociocultural and Socioeconomic Factors on The Teenage Pregnancy Rates in the Latino Community*

Jacob Barker  
*Exploring the Correlation Between Adolescent Aerobic Exercise Levels and Brain Health Later in Life*

Mitchell Rothermel  
*The Poor Sleep Habits of College Students: Can They be Improved?*

Alyssa Petruzzello  
*Side Effects in Women with PCOS who are Actively Trying to Lose Weight Vs. Not Actively Trying to Lose Weight*

Benjamin Barnes  
*The effect of coping mechanisms and therapy on first responders dealing with work related trauma.*

## Chemistry Posters

Posters 26-35

Caroline Verhappen (Faculty sponsor, Dr. Sarah Porter)

*The Experimental Investigation of the Chemical Composition of Energy Drinks using HPLC*

Taylor Clarke (Faculty sponsor, Dr. Sarah Porter)

*Validation of third-party lab results of the commercially available selective androgen receptor modulator (sarm) rad-140 and investigation unique validation methods*

Tinsae Alem (Faculty sponsor, Dr. Sarah Porter)

*The Detection and Quantification of Opioid Traces Using Infrared Spectroscopy*

John Bohannon, Hannah Knights, Caroline Verhappen (Faculty sponsor, Dr. Sarah Porter and Dr. Melissa Rhoten)

*Extraction of Natural Pigments From Vegetable Samples: Two Methods*

John Bohannon, Hannah Knights, and Caroline Verhappen (Faculty sponsor, Dr. Sarah Porter and Dr. Melissa Rhoten)

*Analysis of Vitamin C and Antioxidant Capacity by Three Different Methods*

John Bohannon, Emily Grabic, Mack Lenhart (Faculty sponsor, Dr. Sarah Porter)

*Chemistry Meets Art: Analysis of African Art at the LCVA*

Jammie McMurtry, Antonio Brown (Faculty sponsor, Dr. Sarah Porter)

*Analysis of Petroleum Pollution Along the Virginia Shoreline*

Victoria Walden (Faculty sponsor, Dr. Andrew Yeagley)

*Investigating the Biofilm Regulatory Properties of Gallate Esters*

Saad Khan (Faculty sponsor, Dr. Andrew Yeagley)

*Synthesis of Various Branched Gallate Ester Derivates Toward Investigating the Structure-Activity Relationships*

## Independent Research Project Posters

Posters 36-50

Quinn Kehoe, Amanda Cedeno, Xavier Holman, Skylar Irvin, (Faculty sponsor, Dr. Katie Pennington)

*Cell Cycle progression of PTOV-1 and 14-3-3*

Skylar Irvin, and Amanda Cedeno, (Faculty sponsor, Dr. Katie Pennington)

*Exploring the Regulation of PTOV1 Gene Expression Functions*

Delaney McMahan, Hailee Banks, Joshua Bain, (Faculty sponsor, Dr. Adam Franssen)

*Epigenetic consequences of poor parenting can be partially ameliorated by environmental enrichment in a rat model*

Joshua Bain, Hailee Banks, Delaney McMahon, Alayna Palamar, and Kiersten Witte, (Faculty sponsor, Dr. Adam Franssen)

*Epigenetic consequences of poor parenting can be partially ameliorated by environmental enrichment in a rat model*

Isabelle Villarreal, (Faculty sponsor, Dr. Dale Beach)

*Comparison of Quantitative PCR Methods: Probe vs. Intercalating Dye*

Ashleigh Mann, Bianca Minter, (Faculty sponsor, Dr. Dale Beach, Dr. Kathy Gee)

*Development of Legiolert Assay for Analyzing Legionella Concentrations in Large-Volume Samples*

Danielle Clarke-Bradley, Grace Smith, (Faculty sponsor, Dr. Dina Leech)

*Investigating Connections Between Algae, Oxygen, and "Dead Zones" in the Waters Near Longwood's Baliles Center for Environmental Education at Hull Springs*

Lucy Ellis, (Faculty sponsor, Dr. Kenneth Fortino)

*Patterns in metabolic activity in a small, human-constructed pond*

Helena Loucas, (Faculty sponsor, Dr. Kenneth Fortino)

*Comparison of environmental factors and macroinvertebrate community structure in small, human-constructed ponds*

Maxwell E. Rucker, (Faculty sponsor, Dr. Kenneth Pestka)

*Modeling in FEMAP*

Emily Farmer, Grey Cheatham, Caleigh Waddell, (Faculty sponsor, Dr. Brain Bates)

*The Sanders Site: A Dan River Phase Site Ceramic Assemblage Examined*

Patrick Berry, Luke Arcement, Maria Gyurik, and Thomas Wiles, (Faculty sponsor, Dr. Brain Bates)

*Lithic from the Sanders Site: Analysis & Interpretations*

Skyler Jones, (Faculty sponsor, Dr. Rhonda Walker)

*Morphology and how it used to understand words*

Eric Young, (Faculty sponsor, Dr. Jeffrey Ledford)

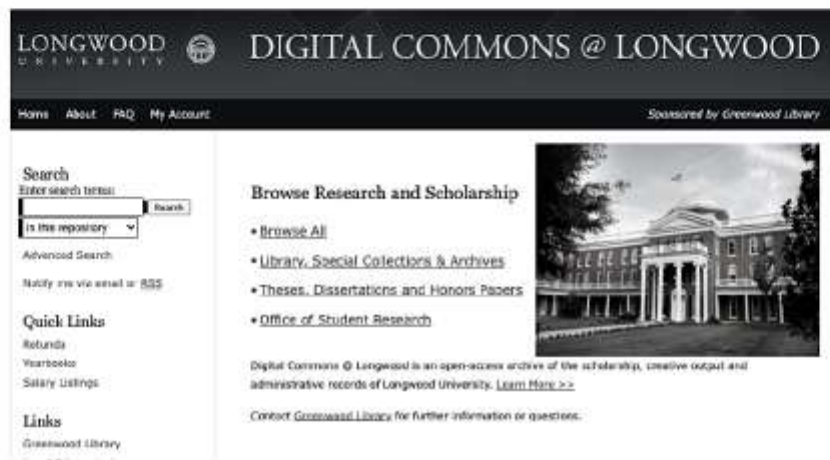
*Exploration in Signal Reconstruction: Fourier Transform*



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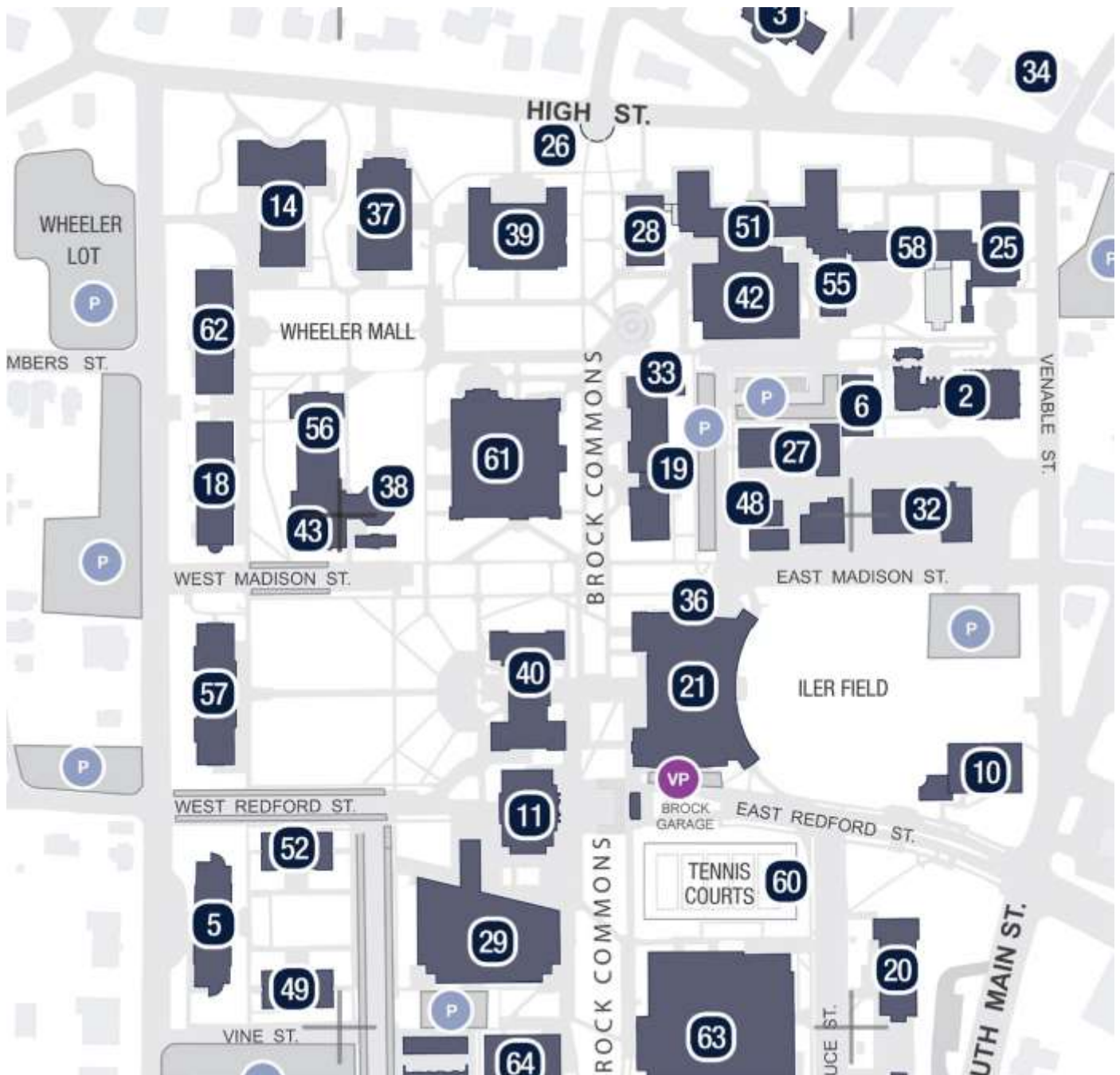
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