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Inquiry

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Spring Student Showcase for Research and Creative Inquiry Program (2022)

Office of Student Research

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SPRING STUDENT SHOWCASE FOR
RESEARCH
& CREATIVE
INQUIRY

WEDNESDAY · 20 APRIL 2022 · 9 A.M. — 5:00 P.M.

Spring Showcase for Research and Creative Inquiry 2022

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Acknowledgements

Student Showcase Organizing Committee

Amorette Barber, Chair
Bob Barnwell
Kristen Boyle
Mark Hamilton
Steven Hoehner
Jennifer Hutchinson
Kat McClesky
Sarah Porter
Timothy Ritzert
Marsha Rutledge
Mary Tackett
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

Spring Student Showcase 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- Ms. Shayla Betts, Assistant Professor of Social Work
Founding Co-Director, U.S. Race and Ethnic Studies Minor

Oral Presentations- Morning Sessions

Rotunda – Virginia Room

9:45-10:45 A.M.- Women's and Gender Studies 115: Gender, Culture, Representation
11:00-12:00 P.M.- Inclusive Excellence Independent Research

Rotunda – Room 116

9:45-11:00 A.M.- Longwood Senior Thesis Program
11:15-12:15 P.M.- Biology 488: Senior Capstone in Biology

Rotunda – Room 115

9:45-12:00 P.M.- Independent Research

Rotunda – Room 108

11:00-12:00 P.M.- Cormier Honors College for Citizen Scholars

Bedford – Room 111

11:00-12:00 P.M.- Art 385: Critical Making

Performances

Communication Studies and Theatre Arts Center- Room 101

10:00-11:15 A.M. THEA 488 and THEA 402

Poster Presentations- Morning Sessions

Blackwell Ballroom, 9:45 – 10:45 A.M.

ART, BIOL, ISCI, NURS, PSYCH

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

BIOL, CHEM, EDUC, NURS, SOCL

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

Rotunda – Virginia Room

12:15-12:45 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 Medieval Literature, Editor of *Incite*

Oral Presentations- Afternoon Sessions

Rotunda – Virginia Room

1:00-2:30 P.M.- Communication Studies 380: LBGTQ+ and the Media

2:45-4:00 P.M.- Interdisciplinary Science 361: Protecting Life on Earth

Rotunda – Room 116

1:30-2:45 P.M.- Biology 404: Immunology

3:00-4:00 P.M.- Biology 251: Introduction to Ecology and Evolution

Rotunda – Room 115

1:00-3:30 P.M.- PRISM Research Students

Poster Presentations- Afternoon Sessions

Blackwell Ballroom, 1:00 – 2:00 P.M.

Cormier Honors College for Citizen Scholars
BIOL, ENSC, HIST, HPEP, PHYS

Blackwell Ballroom, 2:15 – 3:15 P.M.

Independent Research and Internships
HIST

Junior Show

Bedford Gallery 2:30 – 5:00 P.M.

Studio Art and Graphic and Animation Design Programs

Free parking will be available to visitors in the Brock Parking Garage.

Mask Policy

As the oral presentations will be occurring in classroom spaces in a situation similar to a class, masks are required during the oral presentation sessions.

It is recommended that masks be worn during the poster sessions.

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 Shayla Betts, Assistant Professor of Social Work at Longwood University



Shayla Betts is an Assistant Professor of Social Work at Longwood University. She joined Longwood in 2018 as the Visiting Assistant Professor of Social Work. In the Visiting role, she organized and facilitated a week-long screening of the documentary film "I Am Not Racist, Am I?" She became a Blackwell Scholar by presenting her current research on the development of a mentoring program with a state senatorial office and she engaged in curriculum development by creating a new social work mental health elective to be offered to students. In 2019, she joined Longwood faculty as an Assistant Professor.

Before coming to Longwood, Ms. Betts engaged in clinical social work practice in various fields including educational settings, acute psychiatric hospitalization, and with a private practice agency. Ms. Betts earned her Bachelor of Social Work (BSW) and Master of Social Work (MSW) degrees from Virginia Commonwealth University. She became a Licensed Clinical Social Worker (LCSW) in 2017. She is currently pursuing a Ph.D. in Transformative Social Change through Saybrook University where she is studying race relations and racial justice with a focus on racial identity. Her areas of research interest include race relations, mental health, and self-care.

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

12:15 P.M. – 12:45 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

Red- Published an article in a peer-reviewed scholarly journal or received external funding to support an independent research and inquiry project

Green- Completed a Senior Thesis Project at Longwood University

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

Professional Presentation and Conference Attendance Etiquette Guidelines

Professional Presentation

- If possible, arrive at least 15 minutes early to set up your presentation.
- Business attire is required.
- Cell phones are not to be seen or heard. This is a professional development opportunity and should be treated as such.
- Speak clearly and slowly and loud enough to be heard and understood.
- Keep track of time. Begin on time and end on time.
- Thank your audience for attending.

Conference Attendance

- You should wear professional attire.
- Please enter the session on time to not distract the presenters.
- You should stay until the presentation is over to not disrupt the presentation.
- Wait until a session is over before entering a room. You should enter and leave the room between presenters, not while a presenter is speaking or answering questions.
- Remain present and engaged by actively listening and asking questions.
- Avoid cell phone use.
- Be mindful of the number of people at a poster presentation at one time. Please allow space for all attendees to view posters.

Inclusive Excellence Symposium on Diversity, Equity, Inclusion, and Belonging

9:45 a.m. – 3:15 p.m.

WGST 115: Gender, Culture, Representation

9:45 a.m. – 10:45 a.m.

Rotunda- The Virginia Room

Students will be sharing their experiences with information gatekeeping and information literacy through their Wikipedia Biography project, which tasked them with research and development of information on persons who have contributed to Women, Gender, and Sexuality studies and issues. This semester long project has had students analyzing, researching, writing, and coding contributions to their assigned persons' Wikipedia pages. Through these eight projects, students will present their research, their contributions, and their challenges with whether their well-documented and researched information was deemed acceptable to add onto the Wikipedia page for their person.

Nicole Ardovino, Ashley Rebehn

Reagan Kanagawa, Emily Vinson, Jaden Pone

Isabel Reilly, Claire Parker, Laura Barrett

Jenna Lankford

Jasmyn Glaze, Diana Domenech, Abby Livingstone

Kendall Magee, Mia Ragland, Tucker Marshall

Kassidy Sheppard, Kennedy Lundeen, Joselyn Sanders

Jacob Shope, Shannon Mullalley

Phoenix Braughton, Stacey Appelt, McKenzie Proffitt

Keeli Mancino, Kennedy Giroux

Inclusive Excellence Research Projects

11:00 a.m. - 12:05 p.m.

Rotunda- The Virginia Room

11:00-11:20

Kylie Casey, (Faculty sponsor, Dr. Sean Ruday)

Diversity in the classroom through literature

11:20-11:35

Makayla Jennings, (Faculty sponsor, Dr. Ryan Stouffer)

The Tall Black Stranger: The History and Impact of Black Cowboys

11:35-11:50

Brandon Harrell, (Faculty sponsor, Dr. Melissa Kravetz)

Women's Roles in Nazi Resistance

11:50-12:05

Ashlee Ratliff, (Faculty sponsor, Dr. Erica Brown-Meredith)

Diversity and the Creation of Academic Excellence

COMM 380: LGBTQ+ and the Media

1:00 p.m. - 2:30 p.m.

Rotunda- The Virginia Room

Students will be sharing their short documentary segments they produced, which will be included in the full-length documentary *Queer Farmville: Honoring LGBTQ+ Rural History* at the LGBTQ+ Film Festival on May 2, 2022 in Wygal Auditorium from 6-9pm. During this panel event, students will present their videos and engage in a conversation with the audience about the project and how this service-learning and place-based assignment provided them with more perspective of the LGBTQ+ community and issues.

Abby Birchmeier, Kayley DeVivi, Kaitlyn Harris, Vega Overstreet, DeShane Short

Julian Davis, Hannah Osaro, Brianna Pisa, Madalyne Sober, Alexis Williams

Joshua Kodi, Justin Ratanataya, Floor Shouten, Tyler Tarkenton

Kendal Clapham, Janae Ross, Molly Smith, Cole Taylor, Joshua Ware

Hanna Bailey, Tori Booth, Michaela Caniglia, Caydee Wightman, George Woodruff

Ainsley Cummings, Sean Gibbons, Brie Jolliff, Danaysha Shaw, Gretchen Yoder

Cassie Barber, Kayli Glauner, JR Leo, Grace Royal, Emma Wade

Jackson Barclay, Trevin Bowles, Jamila Cromartie, Leah Richardson, Emily Ruckart

Madison Levine, Cole Pillow, Adriana Shipp, Mariel Terry, Reese Vandell

Brooke Crump, Juliet Green, Sid March, Isis Vrolijk, Kyla Ward

Poster Session IV – History 407- African American Women’s History

2:15 – 3:15 p.m

Faculty Mentor, Dr. Letoshia Foster

Posters 1 – 9

Joseph Jones

The nature of African American slave ownership

Nora Davis

Born into Slavery: The Role of Motherhood and the Institution of Childhood in Slave Communities in the United States

Todd Britt

The Death of the Midwife: The battle of African American medical women for legitimacy in the new medical world

Sydney Dorn

A Historical Account of Resistance: Enslaved Women's Opposition to Masters

Brianna Davis

The Impact of Youth Activism in African American Women History with Special Reference to Barbara Johns

Courtney Grady

The History of Elk Hill in Goochland County

Jacob Farmer-Rylands

“I Speak of Wrongs”: The Exclusion of African-American Women from the Cult of Prohibition

William Towe

African American Women as Feminist

Spring Student Showcase Oral Presentations and Performances

Longwood Senior Thesis Program Presentations

9:45 – 11:00 a.m.

Rotunda 116

9:45-10:00

Marcia Reeves, (Faculty sponsor, Dr. Andrew Yeagley)

Synthesis and evaluation of gallate esters as alternatives to traditional parabens

10:00-10:15

Brianna Cervantes, (Faculty sponsor, Drs. Amorette Barber and Andrew Yeagley)

How Gallate Esters Alter T Cell Immunity

10:15-10:30

Stephanie Willis, (Faculty sponsor, Dr. Amorette Barber)

Costimulatory Domains Alter the Efficacy and Safety of Chimeric Antigen Receptor-expressing Gamma Delta T cells

10:30-10:45

Cecily Hayek, (Faculty sponsor, Dr. Wade Znosko)

The Effects of Impaired Water on Zebrafish Muscle Development and Startle Responses

10:45-11:00

Kaleigh Beale, (Faculty sponsor, Dr. Sarah Porter)

The Analysis and Remediation of Excess Fluoride in Drinking Water in Isle of Wight County, VA

Independent Research Projects

9:45 a.m. – 12:00 p.m.

Rotunda 115

9:45-10:00

Cassandra Poole, Amanda Shemro, Carlton Jerry Dunford III, (Faculty sponsor, Dr. Sujan Henkanaththegedara)

The potential impacts of *Faxonius ozarkae* - an emergent invasive crayfish species - on the native crayfish of Virginia

10:00-10:15

Lance Chappell, (Faculty sponsor, Dr. Dina Leech)

Connections between River Discharge, Turbidity, and E. coli concentrations in the Appomattox River, Farmville, VA

10:15-10:30

Kelsey English, (Faculty sponsor, Dr. Dina Leech)

Ecological Restoration and Water Quality at the Baliles Center at Hull Springs

10:30-10:45

Brooke Dippold, (Faculty sponsor, Dr. Melanie Marks)

The Economics Major: Who Offers it and What do They Expect of Students?

10:45-11:00

Hailee Banks, Amanda Palmer, (Faculty sponsor, Dr. Katie Pennington)

14-3-3 and PTOV1 Interaction Influences Cancer Phenotypes - Prostate Cancer

11:00-11:15

Mu'minah Fulani, (Faculty sponsor, Dr. Timothy Ritzert)

Mindfulness Meditation on Cognition

11:15-11:30

Toni Mauck, (Faculty sponsor, Dr. Chris Bjornsen)

Social Media Use and Body Image

11:30-11:45

Andrew Brittingham, (Faculty sponsor, Dr. Cristina Crego)

An Examination of Coping Mechanisms Amid the Covid-19 Pandemic Utilizing the Five Factor Model

11:45-12:00

Camryn Ridpath, (Faculty sponsor, Dr. Ian Danielsen)

An Alternative Approach to Teaching Youth with Emotional and Behavioral Disorders

Cormier Honors College for Citizen Scholars Projects

11:00 a.m. – 12:00 p.m.

Rotunda 108

11:00-11:15

Marjorie Looby, (Faculty sponsor, Dr. Rhonda Brock-Servais)

The Evolving Perceptions of Motherhood in Middle-Grade Fantasy Novels

11:15-11:30

Mallory Davis, (Faculty sponsor, Dr. Javier Fernández)

How the Enlightenment Influenced Spanish Society

11:30-11:45

Joely Clawson-Keeton, (Faculty sponsor, Professor Sue Carter)

Treatment of the Elderly in Different Civilizations Over Time

ART 385 – Critical Making

11:00 a.m. – 12:00 p.m.

Bedford 111

Faculty Mentor, Angela Bubash

Elisha Hill, Maggie Dodge, Rachel Arrington, Sarah Hall, Hailee Fry, Kat Leonard, and Samantha Taylor
Critical Making in Art PechaKucha

Biology 488 – Senior Capstone in Biology

11:15 a.m. – 12:15 p.m.

Rotunda 116

Faculty Mentor, Dr. Adam Franssen

11:15-11:30

Angelina Sherba, Sheila Garcia, and Alyandra Lee

Preventative measures to decrease mountain runoff in Virginia

11:30-11:45

Kyle Hiatt, and Diego Sifuentes Ramierz

How proactive food and water conservation at Longwood University could help combat the effects of the growing threat of worldwide, national, and local-scale global warming

11:45-12:00

Brianna Cervantes and Sophie Kidd

Climate Change as a Threat to Food Security in the United States

Perspectives on Research in Science and Mathematics (PRISM)

1:00 – 4:00 P.M.

Rotunda 115

1:00-1:15

Randolph Zerick, Jerry Dalton, (Faculty sponsor, Dr. Sujan Henkanaththegedara)

Life History and Ecology of the State Protected Chowanoke Crayfish (*Faxonius virginianensis*)

1:15-1:30

Carlton Dunford, Randolph Zerick, (Faculty sponsor, Dr. Sujan Henkanaththegedara)

The potential impacts of *Faxonius ozarkae* - an emergent invasive crayfish species - on the native crayfish *Faxonius virginianensis*

1:30-1:45

Jammie McMurtry, (Faculty sponsor, Dr. Jonathan White)

Cell culture studies of lipid-functionalized platinum (ii) compounds

1:45-2:00

Brandon Walters, Nicolas Freeman, (Faculty sponsor, Dr. Steven Hoehner)
Volume and surface area maximization of polytopes inscribed in a sphere

2:15-2:30

Kylie Gannon and Nina Hederich, (Faculty sponsor, Dr. Timothy Ritzert)
Mental Health Stigma in College Students

2:30-2:45

Gabriella Bustillos and Kylie Levine, (Faculty sponsor, Dr. Meg Thompson)
The Effect of an Interactive Concussion Education Program on the Rate of Concussions Reported in Region 8 High Schools

2:45-3:00

Dionna Charity, and John Eddy, (Faculty sponsor, Dr. Julian Dymacek)
Automatic Nocturnal Flight Call Identification

3:00-3:15

Taylor Clarke, (Faculty sponsor, Dr. Andrew Yeagley)
Screening of gallate esters for multiple antibacterial properties

3:15-3:30

Jack Van Straten, (Faculty sponsor, Dr. Ravi Sankar)
Quantifying shoreline change along Lower Machodoc Creek (Virginia) using satellite observations and 3D drone imagery

Biology 404 - Immunology

1:30 – 3:00 p.m.

Rotunda 116

Faculty Mentor, Dr. Amorette Barber

1:30-1:45

Tristana Foster, Amy Helms, and Davice Jones
Patient with a Mutation of the Interferon Gamma Receptor 1 Deficiency presenting *Mycobacterium avium intracellulare* infection

1:45-2:00

Alayna Palamar, Amari Riddick, and Diego Sifuentes
Diagnosis of an infant with major histocompatibility complex II deficiency

2:00-2:15

Taylor Murphy, Briana Scott, and Alyandra Lee
An Analysis and Diagnosis of an Unidentified Complement Immunodeficiency

2:15-2:30

Elizabeth Putzig, Kiley Clark, and Katelin Savage
Chronic Granulomatous Disease: Diagnosis and Treatment Options

2:30-2:45

Layne Fadely, Cecily Hayek, Isabella Riccoboni and Angelina Sherba
Diagnosing Immunodeficiency Hyper IgM in 5-Year-Old Male Patient

Biology 251 – Introduction to Ecology and Evolution

3:00 – 4:00 p.m.

Rotunda 116

Faculty Mentor, Dr. Dina Leech

3:00-3:15

Shannon Francis, Peyton Eid, Danielle Clarke-Bradley, and Joel King
Algal Bioassay at Lancer Park Pond: An Investigation of Eutrophication

3:15-3:30

Kristen Wilkins, Victoria Walden, Molli White
E. coli in Slow vs. Fast Moving Water

3:30-3:45

Abigail Sommer, Brooke Bonner, Jack Kloeppe
Algae and Zooplankton Types in the Lancer Park Pond

3:45-4:00

Randolph Zerick, Emma Leighton, Ebony Arauz Tellez, Ellie Colangelo
Biodiversity and Water Quality of Vernal Pools

ISCI 361 – The Changing Climate of Our Home

2:45 – 4:00 p.m.

Rotunda- Virginia Room

Faculty Mentor, Dr. Sujan Henkanathegedara

2:45-3:00

Tyler Kurtz, Brooke Tidwell, Anna Barrett
There is No Planet B: An Overview of Global Climate Change

3:00-3:15

Peri Kraft, Cassidy Whetstine, and Makayla Kraetsch
Virginia Climate Change Sucks and Here's Why

3:15-3:30

Isabella Jontz, James Nelson, Julia Koenig
Poor vs. Rich: The Socio-economical and Political Aspects of Climate Change

3:30-3:45

Kensington McLoone, Alexandria Reiss, Kiersten Witte
Feeling the Heat: Ecological Impacts of Global Warming and Climate Change

3:45-4:00

Madison Dierdorf, Nathan McClimans

Combating Climate Change: How to Mitigate Global Climate Change

Theater Performances

10:00 a.m. – 11:15 a.m.

CSTAC 101

Faculty Mentor, Dr. Ronda Scarrow

10:00-10:30

Kelly Park, Kyleigh Cox, Kendall Halstead, Jaelynn Edwards, Sydney Milstead, Ashley Foster, Briauna Mancuso, Maggie Findley, Anna Rhodes, Jordan West, Grace York, Kourtney Thompson, Maggie Dewberry, and Ceily Thomas

Saved By The Arts

10:30-11:00

Hannah Jennings, Sadie Craft, Caitlyn Cripe, Candice Jackson, Lee Makins, Crystal Mobley, Danielle Parton, Micaila Tait

The Miraculous Journey of Edward Tulane

11:00-11:15

Hannah Jennings

Salem Witch Trial Monologue

Junior Art Show

2:30 p.m. – 5:00 p.m.

Bedford Gallery

Faculty Mentor, Angela Bubash

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 2:30-5 pm to help us celebrate our students' achievements in Art and Design!

Spring Student Showcase Posters – Blackwell Ballroom

Poster Session I – Art/ISCI, Biology, Nursing, Psychology

9:45 a.m. – 10:45 a.m.

Biology 250 – Introduction to Genetics and Cell Biology

Faculty Mentors, Dr. Consuelo Alvarez and Dr. Katie Pennington

Posters 1-11

Jammie McMurtry, Nathan O'Dell

The Use of Green Fluorescence Protein in Cancer Research

Helena Loucas, Grace Smith

The influence of *Bacillus thuringiensis* toxin genes on the mating behaviors of *Sciropophaga incertulas* and *Chilo suppressalis*

Megan LaTulipe and Anna Holloway

DNA Sequencing in Forensics

Matthew Fitzer, Emma Thompson

Amplifying DNA using PCR to determine if the sequence contains pGLO & Transforming pGLO in *E. coli*

James Rakes, and Anthony Anderson

Selection of pGLO when introduced into the *E.coli* bacteria

Emma Leighton, Peyton Eid

GFP expression in transformed *E.coli*

Ellie Colangelo, Maroussia Walckiers

Characterization of GFP for Detection of Diseases

Ebony Arauz Tellez, Cara O'Beirne, and Lucy Ellis

Characterizing GFP and Comparing its Expression in Two Plasmids

Cara O'Beirne, Ebony Arauz Tellez, Lucy Ellis

Synthetic Biology and its Importance in the Science Field

Kristen Wilkins, Christian Higgins

Using Green Fluorescent Protein as a Biomedical Marker

Biology 360 – Developmental Biology

Faculty Mentor, Dr. Adam Franssen

Posters 12-15

Delaney McMahon, Layne Fadley, Taylor Murphy, Lloyd Dominguez
The Effect of Water Quality on Early Development in Daphnia

Diego Sifuentes, Xavier Holman, Melanie Rowland
Environmental effects of regeneration of planaria

Amanda Palmer, Tajayda Arrington, Charles Curbeam
The Effects of Overcrowding on three fruit-fly genotypes

Psychology 461 – Seminar in Psychology

Faculty Mentors, Dr. Timothy Ritzert and Dr. Eric Laws

Posters 16 – 25

Camryn Butler, Kacy Lloyd, Akila Smith
The Role of a Syllabus on the Perception of Professor Friendliness

Madison E. Finch, Rebekah A. Godfrey, Tamara M. Washington
Zoomin' or Roomin': How Speech Anxiety Affects Students in Different Modalities of Instruction

Peyton Chase, Mary Findley, Gracyn Rawls
Effects of Sexual Orientation on Stigma Towards Individuals with Mental Illness

Anna Pyles, Cameron Johnson and Mackenzie Bolen
Effects of a First-Person Narrative on Mental Illness Stigma and Compassion

Bridget Canderelli, Muminah Fulani, and Elizabeth Powers
Mindfulness Meditation Training and Student Affect

David Diffie, Toni Mauck, and Casey Rose
Effects of Social Media Context on Perceptions of Trustworthiness

Juliana Fahy, Abigail Janney, Haley Stables
The Effects of Wearing Masks During In-person and Virtual Interactions on Friendship Formation and Deception Detection

Matthew T. Gregory, Olivia L. Johnson, and Mya L. Souvandara
The Impact of Partial Reinforcement Schedules of Compliments on Confidence and Word Search Behavior

Victoria Adame, Sophia Löscher, Gabriel Proudfoot

The Effects of Gain and Loss Message Framing on Environmental Attitudes and Future Environmental Behaviors

Nursing 230 – Foundations in Nursing Practice

Faculty Mentors, Dr. Pam Crowder and Dr. Elizabeth Parker

Posters 26 – 47

Melody Crawford, Laney Pitcock, Ilaria Russell

Why Pre-packaged Wipes Should Be Used in Healthcare Facilities Rather Than Wash Cloths

Faith Thomas, Emily Bennett, Chanceton Follett

Childhood Obesity

Brentley Bomar, Lauren Cerretani, Jared Mitchell, and Kayla Puentes

Is Turning a Patient the Best Way to Prevent Pressure Injuries?

Chloe Morris, Rachel Rego, and La'Diamond Jones

Use of Noninvasive Blood Pressure Monitors

Kathryn Oylear, Caroline Fairbanks, and Aislinn Garcia

Occupational, psychological, and physical impacts of nursing burnout

Samia Alshammaa, Abby Roller, Erin Salzman

Pros and Cons of Tube Feedings at Night Vs During the Day

Madelyn Pitcher, Ayanna Ford, and Kaleigh Ritz

Preventing Ventilator-Associated Pneumonia

Sylvia Cook, Macie Maxwell, Hailey Harris

Infection Control

Laura Byram, Lexi Morris, Laura Nichols, Lindsey Lipscomb

Nurse to patient ratio and how it affects patient safety

Eliana Draper, Natalie Yellowitz, Joely Clawson-Keeton

History and affects of restraints

Paige Crawford, Cassidy Ghoild, Molly Godwin, Toryn Green

Aseptic vs Clean Technique

Abby Blevins, Alexys Rowe, Jordyn Kepler

The Effects of Aromatherapy on Anxiety and Depression

Adam Story, Victoria Oakey, Brianna Watkins
CAUTI Prevention in Hospital

Caroline Faulkner, Abigail Martin, and Jacob Ryan
The Use of Pitocin in Labor and Delivery

Abigail Torbinski, Hanah Ayoub, and Seth Ratliff
Oxygen Use in Patients with COPD

Kirsten Clark, Elizabeth Fugate, Jacynda Ellison, Casey Wilkinson
why the seasonal influenza vaccine is beneficial

Katelyn Grundy, Asana Nambiema, Olivia Fitzgerald, Lauren Lynch, and Aliyah Abasy
Maternal Mortality: Prevention of Pregnancy Related Diseases

Kasey Clemons, Tricia Cimbale, and Maddison Guest
The Opioid Epidemic and its Negative Impacts on the Clinical Nursing Practice and Patient Care

Shanya Boyd, Rebecca Chung, Anastasia Edwards, Ke'asia Nichols
Safe Staffing in Longterm Care Facilities

Madison Herdon, Sophia Stemen, and Sarah Mack
Music Therapy for Dementia

Art/Integrated Science 340 – Environmental Activism

Faculty Mentors, Dr. Mark Fink and Kelly Nelson
Posters 48 – 51

Holden Allen, Mikayla Schuetz, Dustin Woodall
A War Beyond Sides: Armed Conflicts and Their Implications for Ecosystems, Resources, and Humans

Caroline Verhappen, Ariel Oglesby, Angela Shelton
Illegal hunting and its effects on the elephant population

Dylan Scordellis, Hope Willingham, Imecka Anderson-Jenkins, Alyce Laverty
The Positive and Negative Effects of Energy Sources and its Role in Climate Change

Erin Gould
Urban Ecology: The Effects of Our Cities

Poster Session II – Biology, Chemistry, Education, Nursing, Sociology
11:00 a.m. – 12:00 p.m.

Sociology 460 – Senior Seminar in Sociology

Faculty Mentor, Dr. Jake Milne
Posters 1-13

Destiny Brown, Ryan Tingen

A Policy Analysis of the Clean Air Act

Trey Tiffany, Hunter Gilliam

An Analysis of The NCAA Name, Image and Likeness Policy

Taylor Harris and Owen Ludlow

A policy analysis of the Occupation Safety and Health Act

Victoria Potter and Heather Cowan

A Policy Analysis of Capital Punishment of Connecticut and North Carolina

Jake Green and Emma Sweeney

Policy Analysis of Capital Punishment

Grace Bertaux, Sidney McLamb

A Policy Analysis of The Family and Medical Leave Act

Jayden Cawthorne, Ehze Hollingsworth, Beverly Redman

A Policy Analysis of the Robert T. Stafford Disaster Relief and Emergency Assistance Act

Raygan Lukowsky and Mackenzie Mitchell

A Policy Analysis of the Family Medical Leave Act

Tyler Mahone, John Parrish

Policy Analysis of Major League Baseball Steroid Policy

Abby Roach and Clayton Vinson

A Policy Analysis of National Environmental Policy Act

Maria Nunez, Kelly Corcoran

Policy Analysis of Family Unification Program

Danesha Mason, Yenci Reyes

A Policy Analysis of the Zero-Tolerance Immigration Policy Under the Trump Administration

Education 245 – Human Growth and Development

Faculty Mentor, Dr. Aftab Khan

Posters 14 – 27

Teri Burrell

Social Influences from Teachers to Their Students with Disabilities

Katelyn Boffi, Amelia Harvey

Authoritarian parenting effects on children

Lydia Bowen, Karlene Kelly

Son and Father Gene Connections; Daughter and Mother Gene Connections.

Abby Marple and Kennedy Lundeen

The Impacts of Moving Via a Child's Development

Corinne Knapp

Sports at a Young Age

Morgan Lam

The Effect of Divorce on Child Development

Mackenzie Tuck and Emma McCrickard

Lack of Parental Involvement

Lindsay Byrd, Eva Clawson-Keeton

The Effects of Parenting Style on Children with Attention Deficit Hyperactivity Disorder.

Erin Hudgins

Differences of Raising the First Child from the Second.

Danielle Harker

Single parents affects on children

Reghan Pabst, Nicolas Freeman

The Residual Effects on Being Considered "Gifted"

Kaylee Ramsey, Julia Nuckols, Courtney Yates

Effects of Single-Parent Households on Childhood Development

Morgan Nottingham

The Impact an Adopted Parent Has on a Child's Life

Nursing 360 – Introduction to Research and Evidence Based Practice

Faculty Mentor, Professor JoAnn Davis

Posters 28 – 33

Grace Puleo and Gabriella Young

In older adults with impaired mobility, how can the risk of CAUTI infections be decreased compared to mobile patients during the length of a required foley catheter?

Georgia Gagliardi and Caitlin Szalay

Are fetuses with prenatal care less likely to experience complications during the newborn phase than fetuses without prenatal care?

Ashdin Clayton

In late preterm neonates born between 34-37 weeks in the delivery room, what are the benefits of delayed cord clamping compared to immediate clamping?

Jessica Faulk, Ashley Ford, Kerry Williams

Nurse to Patient Ratio

Anaya Jennings, Isabella Kohama-Flores

What is the best birthing position for women of childbearing age?

Biology 324 - Genetics

Faculty Mentor, Dr. Dale Beach

Posters 34 – 38

Alexis Henry, Tucker Marshall, Arjhane' White, Katelin Savage

The affects of Flo9 gene Deletion of English ale yeast strain WLP002

Kira Edens, Bianca Minter, Elizabeth Whitehead, and Mackenzie Woody

Flocculation levels in beer yeast strain WLP002 after the gene deletion of FLO1

Cassandra Poole, Erin Axeman, Heidi Parker-Combes

Fermentation and Flocculation: does the FLO11 gene play a role in the flocculation of brewer's yeast (*S. cerevisiae*)?

Jamie Slaughter, Isabelle Villarreal, Linden Czeizinger, & Maya Smith

Promoter swap of targeted yeast strain & its change in Flocculation level- How does flocculation impact your favorite beer?

Chemistry

Posters 39 – 47

Tinsae Alem, Taylor Clarke, Hannah Knights, Makayla Kraetsch, Jammie McMurtry, and Caroline Verhappen, (Faculty sponsor, Dr. Sarah Porter, Mack Lenhart, and Emily Grabiec)

Chemistry meets art: Instrumental analysis at the Longwood Center for the Visual Arts

Hannah Knights, Makayla Kraetsch, (Faculty sponsor, Dr. Sarah Porter)

The analysis of curcumin in turmeric using absorbance and fluorescence spectroscopy

Tinsae Alem, Taylor Clarke, (Faculty sponsor, Dr. Sarah Porter)

The Analysis of Capsaicin Using Liquid Chromatography and Cyclic Voltammetry

Jammie McMurtry and Caroline Verhappen, (Faculty sponsor, Dr. Sarah Porter)

The Analysis of Phenolic Compounds in Olive Oil Using Chromatography

Adam Gyori, Miguel Diaz, (Faculty sponsor, Dr. Sarah Porter)

Microplastics and Their Impacts on Humans and the Environment

Keana Jones and Mia Arrieta, (Faculty sponsor, Dr. Sarah Porter)

A look into the adverse effects excess NO_x species have on the environment.

Taylor Clark, Mikayla Kraetsch, James Rakes, (Faculty sponsor, Dr. Sarah Porter)

Ammonia as Fuel; How it works and is it better?

Mia Arrieta, Kaleigh Beale, Keana Jones, James Rakes, Marcia Reeves, (Faculty sponsor, Dr. Benjamin Topham)

Carbon-capture methods to mitigate climate change effects

Delaney McMahon, (Faculty sponsor, Dr. Jonathan White)

Enhancing the Antitumor Effect of Doxorubicin with Photosensitive Metal–Organic Framework Nanoparticles against Breast Cancer: Article Summary & Research Proposal

Isabelle Villarreal, (Faculty sponsor, Dr. Jonathan White)

Developing a Novel Anticancer Gold(III) Agent to Integrate Chemotherapy and Immunotherapy: Article Summary & Research Proposal

Marcia Reeves, (Faculty sponsor, Dr. Jonathan White)

PEGylated Nanoscale Metal–Organic Frameworks for Targeted Cancer Imaging and Drug Delivery: Article Summary & Research Proposal

**Poster Session III – Biology, Environmental Science, Health/Physical Education,
History, Physics, and Cormier Honors College**
1:00 p.m. – 2:00 p.m.

Environmental Science 201 - Integrated Environmental Investigations

Faculty Mentor, Dr. Kenneth Fortino

Posters 1 – 4

Matthew Harvey, David Johnson, Savannah Moody, Matthew Wright
Dams Reduce Downstream Biodiversity

Jacob Davis, Nina Hederich, Kailyn Westbrook
The Bacterial and Fungal Abundance Differs from Forest to Agricultural Sites

Jerry Dunford, Nadia Mullins, Mary Spengler
Concrete riverbanks can cause loss of sediment along riverbanks

Physics 470 – Advanced Physics Laboratory II

Faculty Mentor, Dr. Tim Holmstrom

Posters 5 – 8

Kyle Councill
Coulomb Balance

Tyler Ott
Magnetic Susceptibility

Rianne Woudsma
Torsional Oscillator

Biology 488 – Senior Capstone in Biology

Faculty Mentor, Dr. Mark Fink

Posters 9 - 20

Elizabeth Putzig
"Tooth" be Told: How oral health impacts the rest of your body

Cecily Hayek
Stopping COVID-19 Through New Vaccine Protocols for Zoo Animals

Katelin Savage

Is STR sequencing utilizing microfluidic devices the most efficient method of Forensic analysis?

Kiley Clark

The Genetic Link to Bipolar Disorder

Briana Scott

Safe Alcohol Dosage While Being Pregnant

Jeri Tyler

Impacts of Food on Mental Health Via the Gut-Brain Axis

Layne Fadely

Determining if Assisted Reproductive Technology has benefitted Endangered Animals through Increased Populations

Erin Axeman

Raw Meat Diets vs. Commercial Kibble Diets for Dogs

Stephanie Willis

The Future of Cancer Immunotherapies

Hunter Croom

The Impact of human society on animal behavior and adaptation

Chelsea Griffin

The Correlation of Diet and Attention Deficit Hyperactivity Disorder

HPEP 402 – Research Methods Health and Physical Activity

Faculty Mentor, Dr. Amanda Blaisdell

Posters 21 – 26

I-Mecka Anderson-Jenkins

Managing the Mental Illness Rate in Adolescence

Aliyah Abasy

Self Rated Health Validity and Implication on College Students in the Digital Age

Jameka Elliott

Why Are Women Underrepresented as Head Coaches in Sports?

Chris McKenna

Characteristics of Youth Camps That Encourage Weight Loss

Ethan Mckinney

What exercise helps with mental disorders?

History 415 – Gender and Sexuality During the World Wars

Faculty Mentor, Dr. Melissa Kravetz

Posters 27 - 39

Hailey Belote

Sexual Violence in the Fall of Berlin

Caitlyn Morley

Relics of Japanese-American Internment Camps: Generational Trauma Amongst Asian-American Women from the 1940's to Present Day

Sydney Dorn

Women POWs: Nurses Imprisoned in the Philippines

Kaitlyn Walker

Medical Experiments Against Women in Auschwitz

Gillian Detrick

Reactions to Working Women in World War I

Jordyn Bryant

The use of gendered propaganda aimed towards women during the First World War.

William Towe

The Loss of Nurses Femininity in World War I

Juliana Bianco

Prisoners of War and Occupying Soldiers in Relationships with Women in Germany During and After World War II

Ethan Ryan

Same-Sex Desiring Men in The Holocaust

Isaac Samuels

Being a woman in Nazi Germany

Logan Berrier

Masculinity, Locked Up

Noah Reeves

Shell Shock & Soldiers: The Shattering of Masculinity

Cormier Honors College for Citizen Leaders

Posters 40 – 55

Kylie Casey, (Faculty sponsor, Dr. Matthew Lucas)

Social Benefits of Students with Hearing Impairments or Deafness Participating in Recess

Joshua Bain, (Faculty sponsor, Dr. Eric Laws)

The Effect of Aphantasia on Visual Memory Retention – Prosectus

Brady Hurlich, (Faculty sponsor, Dr. Chris Jones)

The Allocation of Time Spent at a Surface, Deep, and a Transition Level of Mathematics Instruction

Rebecca Foley, (Faculty sponsor, Dr. Sean Ruday)

The History of Writing: A Culturally-Relevant Approach in Education

Emily Steffenhagen, (Faculty sponsor, Dr. Elif Guler)

Concept, Culture, and Creativity of Professionalism

Kensington McLoone, (Faculty sponsor, Dr. Matthew Lucas)

Social, Physical, and Emotional Benefits of Recess for Students with Crohn's Disease

Kira Pierce, (Faculty sponsor, Dr. Steven Hoehner)

Dynamics of HIV Infection

Kyra Valovick, (Faculty sponsor, Adam Paulek)

A Survey of Sgraffito Pottery

Lindsey Hottinger, (Faculty sponsor, Dr. Hannan Sadjady Naeeni)

How has the COVID 19 pandemic affected the supply and demand for Garden Centers?

Jacob Barker, (Faculty sponsor, Dr. Tena Ewing)

Parkinson's Disease and Exercise: Steps into a Hopeful Future

Brodie Glanden, (Faculty sponsor, Dr. Heather Lettner-Rust)

All Devils are Here: A Generic Criticism of Book Covers

Anne Patterson, (Faculty sponsor, Dr. Scott Cook)

Longwood Looks to Past Models of State Education for Guidance

Poster Session IV – History and Independent Study (various disciplines)

2:15 – 3:15 p.m

History 407 – African American Women’s History

Faculty Mentor, Dr. Letoshia Foster

Posters 1 – 9

Joseph Jones

The nature of African American slave ownership

Nora Davis

Born into Slavery: The role of Motherhood and the Institution of Childhood in Slave Communities in the United States

Todd Britt

The Death of the Midwife: The battle of African American medical women for legitimacy in the new medical world

Sydney Dorn

A Historical Account of Resistance: Enslaved Women's Opposition to Masters

Brianna Davis

The Impact of Youth Activism in African American Women History with Special Reference to Barbara Johns

Courtney Grady

The History of Elk Hill in Goochland County

Jacob Farmer-Rylands

“I Speak of Wrongs”: The Exclusion of African-American Women from the Cult of Prohibition

William Towe

African American Women as Feminist

Independent Research Projects

Posters 10 – 35

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

Macro-Invertebrate Diversity and Abundance in Relation to Variation in Local Bodies of Water

Isabelle Villarreal, Katelin Savage, and Mackenzie Woody, (Faculty sponsor, Dr. Dale Beach)

Genetic detection of bacteria in water collection systems

Alexis Henry and Heidi Parker-Combes, (Faculty sponsor, Dr. Dale Beach)

Examining bacteria found in rainwater collection systems through Next Generation Sequencing

Lucy Ellis, (Faculty sponsor, Dr. Kenneth Fortino)
Relating Bird Diversity to Local Weather Data

Jeri Tyler, Delaney McMahon, and Erin Axeman, (Faculty sponsor, Dr. Adam Franssen)
Understanding How Loss of Enrichment Affects Maternal Behavior

Diego Sifuentes, (Faculty sponsor, Dr. Erin Shanle)
Using Synthetic biology to tag DNA damage response proteins

Kyle Hiatt, (Faculty sponsor, Dr. Bjoern Ludwar)
Scanning electron microscopic analysis of developmental speed's effect on symmetry in *Drosophila melanogaster*: New findings

Briana Scott, (Faculty sponsor, Dr. Erin Shanle)
Testing the role of *wfs1* in calcium regulation

Diego Sifuentes, (Faculty sponsor, Dr. Bjoern Ludwar)
Using the scanning electron microscope to identifying pest found in the greenhouse, using unique mechanism.

Jeri Tyler and Dr. Jonathan White, (Faculty sponsor, Dr. Jonathan White)
Investigation of the DNA binding proclivities of small, outer-sphere-modified platinum(II) complexes

Tinsae Alem, (Faculty sponsor, Dr. Benjamin Topham)
Designing Single Molecule Diodes

Ross Bechtle, (Faculty sponsor, Dr. Binaya Adhikari)
Do plant specimens in the Harvill-Stevens Herbarium represent all Virginia counties equally?

Nina Hederich, (Faculty sponsor, Dr. Kenneth Fortino)
The Effects of Algal Abundance on Dissolved Oxygen Concentrations in a Man-made Pond.

Rian Blakesley and Jason Seagraves, (Faculty sponsor, Dr. Kathy Gee)
Quantifying E-coli in Rain Barrels at Longwood's Environmental Education Center

Bethany Alvarez, (Faculty sponsor, Dr. Kenneth Fortino)
Evidence of a Relationship Between pH and Salinity in a Tributary of the Potomac River Estuary

Ariel Oglesby, (Faculty sponsor, Dr. Kenneth Fortino)
Limited Nutrient Limitation in a Constructed Stormwater Pond

David Pack, (Faculty sponsor, Dr. Steven Hoehner)
An extremal property of the sphere related to mean width

Kaylee Faecke, (Faculty sponsor, Dr. Leah Shilling-Stouffer)
Exploration of the Basic Skills Math Quiz for MATH 171

Madison Nuckols, Gregg Harbaugh-Schattenkirk, Iain Byers, (Faculty sponsor, Dr. Gregg Harbaugh-Schattenkirk)

Scheduling Your Way to the Top

Kaylee Faecke, (Faculty sponsor, Dr. Gregg Harbaugh-Schattenkirk)

Comparing different rankings of teams' abilities, through the use of a proxy to measure players ability.

Rose Gerena, (Faculty sponsor, Dr. Adam Blincoe)

Guide to Arguing Political Philosophy

Shannon Smith, (Faculty sponsor, Dr. Timothy Ritzert)

Affects of Attachment on Emotion Regulation

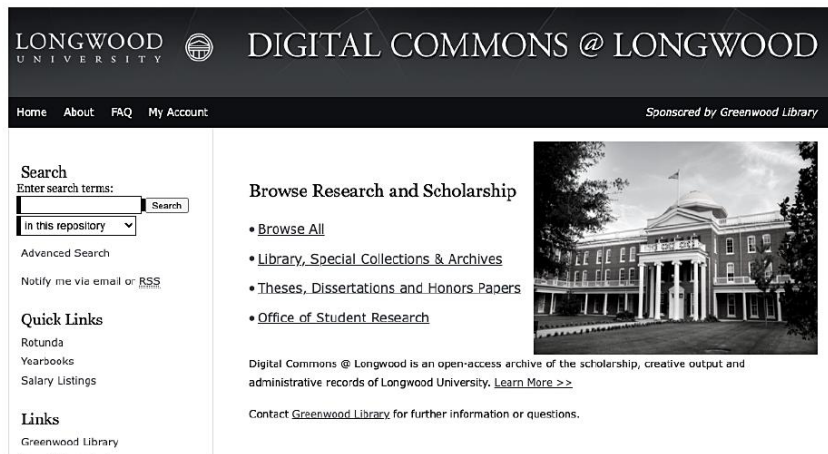
Payton Davenport, (Faculty sponsor, Dr. Cristina Crego)

The role of personality on reproductive and sexual health knowledge

We Help Share Your Research

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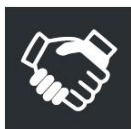
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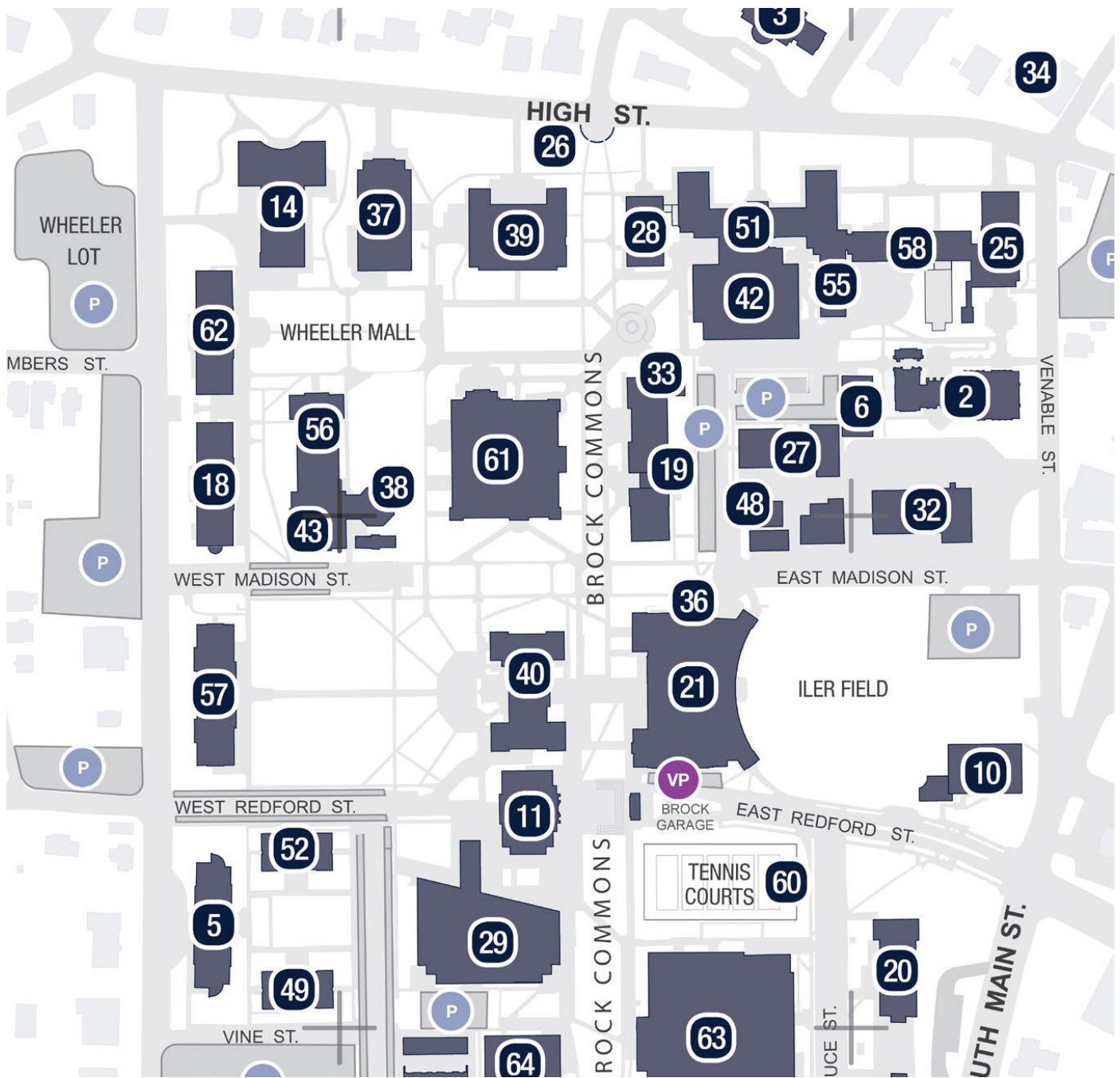
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