



Breaking Barriers to Achievement: How Higher Education Can Help More Students Succeed
Jennifer I.O. Enaboakpe, Freshman Academic Advisor, Girard School of Business
Higher Education Master's Program



RESEARCH
& CREATIVE
ACHIEVEMENT
C O N F E R E N C E

2 0 2 4



THURSDAY, MAY 2, 2024



MERRIMACK COLLEGE



I want to welcome you to explore this year's

MERRIMACK COLLEGE RESEARCH & CREATIVE ACHIEVEMENT CONFERENCE

The Research and Creative Achievement conference is a celebration of student research and creative endeavors. Drawing upon our Augustinian roots of seeking truth through inquiry and dialogue, this annual conference provides an opportunity for both graduate and undergraduate students to showcase their efforts in expanding knowledge within and across academic disciplines.

Successful academic research requires curiosity, creativity and a willingness to go where the evidence leads. These projects exemplify such efforts. These projects are the fruits of sustained and meaningful collaboration with faculty and fellow students and are often the capstone of a baccalaureate or master's degree program. Many of these projects are informed by and through community partnerships that serve to enrich the scholarship, research and creative activity of our students and faculty. These partnerships are critical to strengthening our institutional mission of fostering civic responsibility, addressing societal issues and contributing to the public good.

We are excited to celebrate our student researchers, faculty collaborators and mentors who have shown resilience in a complicated and challenging time, as it serves as a testament to perseverance, resourcefulness and creativity. Their efforts highlight the importance and value of meaningful inquiry. On behalf of Merrimack College, I applaud the excellent student and faculty scholarship represented here and take great pride in their accomplishments.

- John "Sean" Condon, Ph.D.
Provost and Senior Vice President for Academic Affairs



ACKNOWLEDGEMENTS

The completion of this undertaking could not have been possible without the assistance and participation from so many whose names may not all be enumerated. Their contributions are sincerely appreciated and gratefully acknowledged. We would especially like to express deep appreciation to the faculty and community partners who supported and mentored student research creative achievement during this academic year.

We would like to acknowledge the Office of the Provost, the Office of Marketing and Communications, McQuade Library, the MACK Print Center, and the RCAC committee for going above and beyond in their support for the 2024 Research & Creative Achievement Conference.



SCHEDULE OF EVENTS

Thursday, May 2, 2024

VISUAL AND PERFORMING ARTS STUDENT EXHIBITION

Rogers Center for the Performing Arts & McCoy Gallery

12-1:30 P.M.

Senior Capstone Projects take place in the senior year of study. They are designed to explore a passion with intensity, take the shape of a large experiential project, or complete a research topic written thesis. Projects are designed to challenge your comfort zone. They are publicly celebrated through performance, exhibition, publication, and oral presentation.

STUDENT RESEARCH & CREATIVE WORK

Multi Purpose Room, Sakowich Center

3:30 - 5 P.M.

Undergraduate and Graduate Student Poster Session and Multimedia Presentations

EAST CAMPUS CAPSTONE DESIGN & RESEARCH PRESENTATIONS

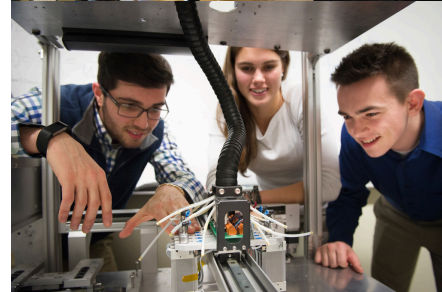
East Campus, 510 & 530 Turnpike St.

4-5 P.M.

School of Engineering & Computational Sciences students will present on capstone projects in Computer and Data Science, Civil Engineering, and Mechanical Engineering. Mechanical Engineering students will give presentations sharing their work competing in the VEX U Robotics Competition.



Note: This program is subject to change.





12:00 P.M.

VISUAL AND PERFORMING ARTS ANNUAL STUDENT EXHIBITION

GRAPHIC DESIGN

Cailey Brickett
Saving Hallows Eve

Grace Dauley
Finn & Buddy's Path to Forever

Declan Hurley
Massachusetts State Flag Redesign

Wesley Matthews
Boxcars

Josh McCarthy
Eastern Coast Raid & Plunder

Abigail O'Keefe
The Danu

Jeffrey Palermo
Ermojay



To learn more about the projects, visit the [VPA Students Capstone Website](#).

MUSIC

Emily Eaton
"Where We Belong" Experiencing Mackapella

Drew Leuci
One and the Same

Emily Matheson
Resilience: Forged in Metal

ART & ART HISTORY

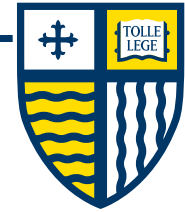
Oliver Williams
Mindful Arts

THEATER ARTS

Kristina McCarthy
Bringing Audiences Back into the Theatre in a World Shaped by the Pandemic



3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: GIRARD SCHOOL OF BUSINESS

UNDERGRADUATE STUDENTS

Caroline Applin, James Comeau, Michael McLaughlin, Tyler Mitchell
Starbucks Marketing Analysis
[GSB-06](#)

Clare Bowen, Anthony Clapp, Kyle Donahue, Rori Donaldson, Emma Festa, Lucas Gammal, Marissa Kobelski, Maddie Lorenz, Rebecca Rau, William Saunders, Jasmine Syriac, Ariam Tavarez, Taiya Wohr
What's the Effect of Service?: A Multidimensional Assessment of the Relationships Between Merrimack College Students' Service Learning Participation and Comprehension of Social Justice Curriculum
[GSB-03](#)

Abigail Cieri
Kohl's Capstone Project
[GSB-04](#)

Jason Ciulla
Correlations Between Economic Inequality and Gender Inequality
[GSB-10](#)

Meghan Clifford, Cameron Strong
Merrimack Equity Fund
[GSB-11](#)

Sophia Elkhaouli, Elina Khoury, Catrina Madden, Chrysovalantou Papadopoulos
One Wish Project Marketing Strategy
[GSB-08](#)

Peter Faulkner, James Katsikis
Financial Plan Capstone
[GSB-02](#)

Sedona Gillard, James Kritzas, Abigail Magee, Chloe Newell
The Overarching Analysis of Oats Overnight: A New Target and Segmentation
[GSB-09](#)

Maxim Lussier
Multi-Factor Investment Strategy
[GSB-01](#)

Emma Panarella
Under Armour
[GSB-05](#)

Shannon Smith
Best Workout Fitness Center
Advertisement and Promotional Plan
[GSB-07](#)



3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: WINSTON SCHOOL OF EDUCATION & SOCIAL POLICY

UNDERGRADUATE STUDENTS

Bruno Auzec

Internship: Middlesex Sheriff's Office
[WSESP-52](#)

Stori Babineau

Internship: Lowell Court Service Center
Massachusetts Trial Court
[WSESP-62](#)

Charlotte Elizabeth Bernhardt Covas

Citizens for Juvenile Justice: Helping At
Risk Youths
[WSESP-54](#)

Tucker Carlisle

Massachusetts State Police Internship
[WSESP-49](#)

Cameron Carr

Burlington Police Department Internship
[WSESP-53](#)

Matthew Connelly

Internship: Rockport Police Department
[WSESP-60](#)

Aidan Cook

The Importance of Driver Safety
[WSESP-44](#)

Jahaida Gabriel

Internship: Lawrence Court Service Center
[WSESP-55](#)

Alexa Harrington

Burlington Police Department Internship
[WSESP-50](#)

Thomas Hemmendinger

Massachusetts Association of Defence
Lawyers
[WSESP-64](#)

Jakobi Holiday

Reading Police Department Internship
[WSESP-56](#)

Rosselyn Lima

Lawrence Police Department Internship
[WSESP-47](#)

Joanna Londi

Atwood & Cherny Law Firm
[WSESP-45](#)

Sara MacGaffey

Merrimack College Police Department
Student Security
[WSESP-61](#)

Teddy McCarthy

Court Service Center
[WSESP-63](#)

Ryan Mikulski

Salem, New Hampshire Police Department
Internship
[WSESP-48](#)

Bennet Morrill

Internship: Laconia Police Department
[WSESP-51](#)

Nolan Neil

Internship: Clinton Police Department
[WSESP-46](#)

Shea Robertson

Reducing Recidivism through Education in
Prison and Jail: A Directed Study
[WSESP-24](#)

John Robinson

Manchester by the Sea Police Department
Internship
[WSESP-57](#)

Kelly Sacramone

Lawrence Court Service Center Internship
[WSESP-58](#)

Luke Sheehan

Merrimack College Police Department
Student Security Internship
[WSESP-59](#)

3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: WINSTON SCHOOL OF EDUCATION & SOCIAL POLICY

GRADUATE STUDENTS

Stephen Adagwuni

Immigrants and International Students
Status and How That Affects their Mental
Health in College: A Systematic Literature
Review

[WSESP-41](#)

Nicole Baddour

Long-Term Parental Opioid Misuse and
the Effects on Their Offspring: A
Systematic Literature Review

[WSESP-34](#)

Madison Baumann

How Pull-Out Services Can Affect the
Self-Esteem of Adolescent Female
Students Diagnosed with ADHD

[WSESP-32](#)

Gabriella Barbuto

A Case for Changing the Age of Majority
From 18 to 22 Years of Age in
Massachusetts: A Systematic Literature
Review

[WSESP-29](#)

Callie Coady

Perceptions of English Language Learners
in an Urban High School of Postsecondary
Access and Achievement

[WSESP-01](#)

Tiffany Coogan

What is the Relationship Between Student
Loan Debt and Mental Health?: A
Systematic Literature Review

[WSESP-42](#)

Justin Cordeiro

Let's Finally Talk About Groups

[WSESP-04](#)

Kayleigh Crocker

Effective Prosocial Treatment
Interventions for Autism Spectrum
Disorder: A Systematic Literature Review

[WSESP-31](#)

Gabriella DeGrazia

Suicide Risks in School Age Children
Assessment and Protocols

[WSESP-30](#)



3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: WINSTON SCHOOL OF EDUCATION & SOCIAL POLICY

GRADUATE STUDENTS (continued)

Victoria Delannoy

Evaluating the Efficacy of Play Therapy Intervention: Enhancing Emotional Identification and Expression in 5th Grade Students

[WSESP-10](#)

Alaina DiBlasi

Self Efficacy and Confidence Levels in New Master's of Social Work Graduates

[WSESP-26](#)

Julia Fader-Laskin

The Impact of Extracurricular Activities on School Connectedness Outcomes Among Ninth Grade Students

[WSESP-12](#)

Kerry Farrell

Developing Social Problem-Solving Skills in Elementary Students

[WSESP-17](#)

Shanelle Fernandez

Enhancing Accountability in School Counseling: A Survey of Practices and Perspectives in Massachusetts

[WSESP-07](#)

Kadyn Germain

What Support School Counselors and Social Workers would like from the MA Department of Elementary and Secondary Education and Massachusetts School Counseling Association

[WSESP-05](#)

Domenica Hudy

The Implementation of Harm Reduction Strategies in Eating Disorder Treatment: A Systematic Literature Review

[WSESP-35](#)

Aubine Kalisa

Enhancing Student Success: A Study of Counseling Classroom Lesson Structure and Delivery

[WSESP-09](#)

Christina Keith

Naloxone In School Settings: A Systematic Literature Review

[WSESP-28](#)

Victoria Kelliher

What Do School Counselors Actually Do?: A Review of Massachusetts School Counseling Staff's Perceptions on Evaluation, Supervision, and Stakeholders

[WSESP-08](#)

Cameron Lankenau

School Counseling Staff Time Spent vs. Preferred Time Allocation

[WSESP-02](#)

Brooke Lonergan

Anxiety and Depression in Grade Three Students: Effects of Cognitive Behavioral Therapy

[WSESP-14](#)

Erin Mackey

Exploring the Relationships between Interracial Adoption, Adoptees' Identity Development and Mental Health: A Systematic Literature Review

[WSESP-37](#)

Christine Maggio

Ibogaine: Benefits and Barriers in the Treatment of Opioid Addiction: A Systematic Literature Review

[WSESP-36](#)

Faith May

Improving Social Skill of Grade Two Students

[WSESP-15](#)

Rosmary Medrano

Mental Health Outcomes Among Latinx Immigrants in the United States: A Systematic Literature Review

[WSESP-40](#)

3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: WINSTON SCHOOL OF EDUCATION & SOCIAL POLICY

GRADUATE STUDENTS (continued)

Morgan Messina

Intersections Between Childhood Maltreatment and Social Functioning in Adolescents: A Systematic Literature Review

[WSESP-38](#)

Benjamin L. Miele

Challenges & Opportunities for Police-Mental Health Intervention Programs

[WSESP-27](#)

Tamara Mondesir

Students Perceptions of an Alternative High School Education in Massachusetts

[WSESP-21](#)

Marykate Mulcahy

Exploring School Connectedness in Grade Nine: The Influence of Extracurricular Activities

[WSESP-19](#)

Joshua Page

Effectiveness of Student Support Program for 7th graders

[WSESP-16](#)

Michael Preston

Key Principles of Successful Partnerships: A Qualitative Case Study of a University-Community Partnership During the Pandemic

[WSESP-25](#)

Yismark Ponce

What is the Difference in Roles if Any Between School Counselors and School Adjustment Counselors?

[WSESP-11](#)

Candace Proulx

Cognitive Behavioral Therapy with High School Students

[WSESP-22](#)

Matthew Rinaldi

Alternative Treatments for Combat Veterans Diagnosed with Post Traumatic Stress Disorder (PTSD): A Systematic Literature Review

[WSESP-43](#)

Racheal Rodimak

Attachment Style in LGBTQ Couples

[WSESP-39](#)

Antonia Rosati

Early College: Student Perspectives

[WSESP-13](#)

Sasha Sammis

Sharing: Are Pre-kindergarten Students Capable?

[WSESP-23](#)

Kyle Sherrick

Participant and Employee Perception of Northeast Arc's Day Program

[WSESP-18](#)

Molly Staunton

Are We Prepared? An Analysis of School Counseling Staff Sense of Readiness to Provide Services for Students and What Training They Would Like to See Offered

[WSESP-06](#)

Meghan Sullivan

Development of a Reentry Protocol for Students Returning From Extended Absenteeism

[WSESP-20](#)

Jessica Vangos

Empowering 4th Grade Students: Exploring the Impact of an Eight-Week Intervention Program on Sense of Self, Self-Esteem, and Self-Confidence

[WSESP-03](#)

Sophia E. White

Effective Interventions in Psychoeducation Groups for Family Caregivers of People Living with Dementia: A Systematic Literature Review

[WSESP-33](#)

3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: SCHOOL OF ARTS & SCIENCES

UNDERGRADUATE STUDENTS

Marissa Balbino

Why Do They All Look Right Through Me?
A Glass Child's Manifesto

[SAS-20](#)

Sophia Beland

Expanding Knowledge of Plastic
Alternatives Through Mycelium-Based
Packaging

[SAS-07](#)

Ashley Bodenrader

Investigating Antifungal Activity of
Photorhabdus laumondii
Against *Candida albicans*

[SAS-11](#)

Joseph Cappadona

How Can Practitioners in the Criminal
Justice System Better Respect World
Religions

[SAS-36](#)

Madison Cerpa

Do Students Memorize More Words While
Studying and Listening to a Specific Music
Genre?

[SAS-38](#)

Gianna Cioto

The Effects of COVID-19 on College
Students Mental Health

[SAS-40](#)

Hannah DeKarski, Kaitlyn Koza

Flowing Justice: Advocating for Universal
Access to Clean Water

[SAS-23](#)

Kat Di Bari

ERA Now?: The Trials of the Equal Rights
Amendment

[SAS-17](#)

Skylar DiMartino

Biolog Identification of Bacteria Isolated
from the Merrimack River

[SAS-12](#)

Jenna Dubrule, Erin Katzbek

Assessment of Climate Vulnerabilities in
King and Queen County, VA

[SAS-32](#)



3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: SCHOOL OF ARTS & SCIENCES

UNDERGRADUATE STUDENTS (continued)

Kyle Durgin, Caleigh Millett

Measuring Catechins in Tea with HPLC and
Fluorescence Spectroscopy

SAS-30

Sedona Gillard

A Temporal Variation in the Distribution of
Megaptera novaeangliae on the Gulf of
Maine and its Possible Correlation to
Warming Waters

SAS-25

Logan Green

Climate Vulnerabilities in Bronx County, NY

SAS-33

Kaéla Harrigan, Marissa Pacheco

Black Women and Health Disparities

SAS-21

Megan Hayes

Climate Catastrophes: Violating the Rights
of Climate Refugees

SAS-22

Austin Higinbotham

An Introduction to General Relativity

SAS-14

Liz Johnson

Swipe Left on Diet Culture: Social Media's
Influence Exposed

SAS-18

Riley Keene

Emotion Regulation and Cognitive
Reappraisal

SAS-34

Erin Lincoln, Kajal Purohit

Understanding Silver Nanoparticle
Translocation and Elemental Interactions in
Lycopersicon esculentum

SAS-06

**Katelyn Mann, Ryann Young, Laura
Kurdziel*, Allison Seitchik***

The Impact of Sleep Efficiency on Mood

SAS-01

Kristina McCarthy

Bringing Audiences Back into the Theatre
in a World Shaped by the Pandemic

SAS-15

Michaela Niceforo, Autumn Vance

Field-based Study of Menstrual Cycle
Phase on Sleep, Light Exposure, and
Performance in Young Women

SAS-35

Gracie O'Leary

Eyes of a Prisoner and Eyes of a Priest:
Religious Conversion in Two Perspectives

SAS-37

Nathan Persampieri

How People take Accessibility for Granted
on College Campuses

SAS-19

Allyson Qualley

Isolation and Identification of Poly(3-
hydroxybutyrate) Degrading Bacteria

SAS-10

Allison Reeb

1:1 Inclusion Complex of β -cyclodextrin
and Fluorene

SAS-31

John Wizboski

Moderation

SAS-16

3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: SCHOOL OF ARTS & SCIENCES

GRADUATE STUDENTS

Katherine Aste, Itzel Guzman
Synthesis of Phase Transfer Catalysts
based on Cinchonidine Derivatives
[SAS-09](#)

**Daniel Ayanian, Alexis Byrne, Alexis
Cugno, Jaidyn Gross, Brian Reilly**
Understanding Where Microplastics are
Located and their Concentration in the
Lamprey River
[SAS-26](#)

Alexa Bergeron
Anti Inflammatory and Antioxidant Effects
of Kaempferol on Breast Cancer Cell Lines
MCF-7 and MDA-MB-231
[SAS-04](#)

**Alexa Bergeron, Emmalee Foley,
Josephine Modica-Napolitano**
Antioxidant Effects of (-)-Epigallocatechin
Gallate on Breast Cancer Cells
[SAS-05](#)

Havilland Clark
Quantifying Anthropogenic Compounds in
the Merrimack River
[SAS-39](#)

Colby Currier, Aidan Gibbs
Rivers of Resistance: Unveiling Threat of
Antibiotic Resistance in the Merrimack
River Valley
[SAS-13](#)

**Yasmin Davis, Ben McDonnell, Katelyn
Smalley, Carlos Viteri**
Investigating the Effects of
Environmentally Realistic Herbicide and
Pharmaceutical Exposure on Aggressive
Behaviors in the Siamese fighting fish,
Betta splendens
[SAS-24](#)

Thavary Hay
Synthesis and Evaluation of Metal-
Organic Framework, HKUST-1
[SAS-02](#)

Nicholas Iacovella
Exploring a Novel Treatment Strategy
that Simultaneously Inhibits Both
Pathways of ATP Production in Human
Breast Adenocarcinoma Cells
[SAS-29](#)

Erin Millette, John Vets
Synthesis of Aryl Piperidines for CNS
Disorders
[SAS-08](#)

Kajal Purohit, Erin Lincoln
Silver Nanoparticles Translocation and
Impact on *Lycopersicon esculentum*
[SAS-03](#)

Carlos Reyes
Investigating the Cytotoxic and Metabolic
Effects of Secondary Plant Metabolites on
Two human Breast Adenocarcinoma Cell
Lines
[SAS-28](#)

Maureen Rosenthal
Improving IVF Fertilization Rates Through
Timed Exposures and EmbryoLove
Mediums
[SAS-27](#)

Amanda Schiavone
Controlling the Interactions of Silver
Nanoparticles Using Systematically Varied
Reaction Parameters
[SAS-41](#)

3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: SCHOOL OF ENGINEERING & COMPUTATIONAL SCIENCES

UNDERGRADUATE STUDENTS

Kaila Bloom, Emma Capaldi, Sharayu Josh
Path Following Drone Using Virtual
Breadcrumbs
[SECS-01](#)

Kaila Bloom, Emma Capaldi, Sharayu Josh
Reverse Engineering a Microplate
Incubator Shaker
[SECS-02](#)

**Anika Booth, Lydia Melaschenko, Alec
Pettit, Skye Tucker**
Merrimack Monopoly through MATLAB
[SECS-05](#)

**Erik Dean, Chris Moriarty, Nicholas
Tessitore**
Monopoly: Boston Landmarks
[SECS-06](#)

**Madison Gant, Zach O'Connell, Chris
Rincon**
Darwin-op2: An Assistive Household Robot
[SECS-08](#)

Lydia Melaschenko
Extending and Applying the Concepts of
Vector Calculus
[SECS-03](#)

**Eagan Olson, John Ryan, Trey
Tankersley, Nick Tessitore**
Children Robot Interaction for Reading,
Literacy, and Library Patronage
[SECS-04](#)

GRADUATE STUDENTS

**Joseph Chalhoub, Sadegh Asgari*, Kaveh
Moradi*, Farzane Asgari***
Joint Finance-Based Scheduling in
Construction: Internal Interest Rate
Approach
[SECS-07](#)



4:00 P.M.



EAST CAMPUS CAPSTONE DESIGN & RESEARCH PRESENTATIONS: SCHOOL OF ENGINEERING & COMPUTATIONAL SCIENCES

Anthony Allain, Samuel Barresi, Ethan Pattern, Antoni Piasscik
VEX University and College Competition
[530 Turnpike St.](#)

Connor Beevers, Joshua Blais, Leudybert Lora Cruz, Andrew McDermott, Ben Santeufemio
Engineering Pioneers: 20% Design of a New MBTA Blue Line Station at Government Center
[530 Turnpike St.](#)

Harrison Bell, Arthur Got, Gage Johnson, Natalie Nemes, Colin Rahaman
VEX University and College Competition
[530 Turnpike St.](#)

Samuel Barresi, Kaitlyn Foley, Ava Pepin, Augie Syracuse
Let's Innovate: Merrimack's Premier Product Innovation Club
[530 Turnpike St.](#)

Ian Branconnier, Arden Dioslaki, Barbara Hume, Peter Salib, Dylan Wells
Fourfront Engineering: 20% Design of a New MBTA Blue Line Station at Government Center
[530 Turnpike St.](#)

Mark Case, Moses Mwaura, Trym Kyvag
TM2 Technologies
[510 Turnpike St.](#)

Mike Chankhour, Eric DeFelice, Justin Hankins, Ray Ivers, Vayolet Ovalle, John Russo
BCE Associates: 20% Design of a New MBTA Blue Line Station at Government Center
[530 Turnpike St.](#)

Caroline Collins, Matthew Gilliland, Rachel Kunz
Physical Activity and Cigarette Smoking in Adults Living with HIV
[510 Turnpike St.](#)

Derek Costello, Alexander Elguezabal
Spotify Emotions Analyzer: Predicting Song Lyric Emotions with BERT LLM
[510 Turnpike St.](#)

Antonio Craveiro, Brianna Van Hecke
Computer Science and Data Science Department Website
[510 Turnpike St.](#)

Antonio Craveiro, Michael Daly, Danny Farhart, William Hancock, Gabriella Zola
Doc-Talk, Apology & Disclosure Simulator
[510 Turnpike St.](#)

Michael Daly, Owen Enestvedt, Sean Kelley
Peer Review Website, "Peer"
[510 Turnpike St.](#)

Arden Dioslaki
Assessment of Sediment Thicknesses in the Central and Eastern U.S. (CEUS) for Earthquake Hazards
[530 Turnpike St.](#)

Daisy Dolan, Matt Donnelly, Aidan Gilwee, Adassa Medor, Ray Mullin
DGM Engineering: 20% Design of a New MBTA Blue Line Station at Government Center
[530 Turnpike St.](#)

Colin Dottor, Mitch Guinan, Zach Marzano, Shane Soares
VEX University and College Competition
[530 Turnpike St.](#)

Christian Grenier, Teghan Inglis, Neil Letellier, Kira Mazur, Ben Miller
VEX University and College Competition
[530 Turnpike St.](#)

Matt Haskins, Matt Lanney, Zach O'Connell, Gihana Pruitt, Brady Waterman
VEX University and College Competition
[530 Turnpike St.](#)

4:00 P.M.



EAST CAMPUS CAPSTONE DESIGN & RESEARCH PRESENTATIONS: SCHOOL OF ENGINEERING & COMPUTATIONAL SCIENCES

Nicholas Lombardo, Connor McBrien,
Nicholas Petersen, Sharbel Saab, Isaiah
Thomas
VEX University and College Competition
530 Rm 105



Kira Mazur
Ergonomic Design of Physical Therapy
Tools With Focus on Clinician Safety
530 Rm 101



3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: SCHOOL OF NURSING & HEALTH SCIENCES

UNDERGRADUATE STUDENTS

Ashley Doyle, John Kircaldie
Exercise and Alzheimer's Disease
[SNHS-02](#)

Kaleigh Gibney
Housing Discrimination: History, Health
Implications, and Approach to Address It
[SNHS-01](#)

**Kaleigh Gibney, Lyanne Murphy, Evelyn
Ocegueda, Olivia Stefanik**
Role of Succinate Dehydrogenase in T Cell
Inflammation
[SNHS-34](#)

**Kaleigh Gibney, Lyanne Murphy, Evelyn
Ocegueda, Olivia Stefanik**
Everolimus Attenuates T Cell Inflammation
by Augmenting Redox Regulation
[SNHS-35](#)

Kara Kilroy
Wealth Makes Health
[SNHS-36](#)

Kaitlyn Murphy
It's Not Just "Black and White": A
Literature Review of Maternal Health
Disparities in the United States
[SNHS-05](#)

GRADUATE STUDENTS

Jenna Bednarz
The Gut Microbiome and Health
Disparities: A Narrative Review
[SNHS-03](#)

Benjamin Berube
Low Level Laser Therapy
[SNHS-08](#)

Laurel Breen
Athlete Wellness Intervention Program
[SNHS-15](#)

Nathaniel Caron
Open Latarjet Procedure
[SNHS-32](#)

Jorge L. Pizarro Colon
The Science & Benefit Behind Gait
Analysis of the Lower Body
[SNHS-29](#)

Megan Connelly
Osteochondral Autograft Transfer System
(OATS Procedure): Focus on Femoral
Condyle Lesions
[SNHS-19](#)

Alexandria DiPerri
Chronic Exertional Compartment
Syndrome: A Case Study
[SNHS-25](#)

Julie Edson
Wolff-Parkinson White Syndrome: A Case
Report
[SNHS-30](#)

Mackinzie Edwards
Matrix-Induced Autologous Chondrocyte
Implantation (MACI) for the Treatment of
Symptomatic, Full-Thickness Articular
Cartilage Defects of the Knee: A Case
Report
[SNHS-17](#)

Molly Goulart
Melanoma: A Case Report
[SNHS-31](#)

Dylon Grzenda
Optimizing Return to Play Following
Tommy John Return Surgery
[SNHS-28](#)

Alexis Hutchins
Bent Bone: A Case Study
[SNHS-07](#)

Patricia Inirio
Bridge Enhanced ACL Restoration (BEAR)
Implant: A Case Study
[SNHS-22](#)

3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: SCHOOL OF NURSING & HEALTH SCIENCES

GRADUATE STUDENTS (continued)

Sarah Lama

Chronic Exertional Compartment Syndrome Treatment Options: Fasciotomy vs Botox
[SNHS-24](#)

Samantha LiPetri

Anti-Gravity Treadmill Rehabilitation in Collegiate Cross Country Runner With a Tibial Stress Reaction: A Case Study
[SNHS-23](#)

Siobhian Lowman

TENEX Procedure for Achilles Tendonitis
[SNHS-33](#)

Lauren McKenney

Hip Arthroscopy with Laparoscopic Inguinal Hernia Procedure on a Collegiate Football Player: A Case Study
[SNHS-16](#)

Madison Merritt

Lower Extremity Exertional Compartment Syndrome: A Case Report
[SNHS-18](#)

Elecia Miller, Saori Mikami, Lincoln Ninneh, Eleanor Shonkoff*, Elaine Ward
Equity- and Community-Based Approaches to Nutrition, Physical Activity and Breastfeeding Support: Evaluating the City of Lawrence CDC REACH Project
[SNHS-04](#)

Isabella Ozga

Effectiveness of PRP Injections and BFR Training for Patellar Tendinopathies: A Case Study
[SNHS-13](#)

Hanjun Park

Active Recovery Concussion Protocol
[SNHS-12](#)

Anna Perrotti

Concussion Clinical Profiles Screen: A Case Report
[SNHS-26](#)

Gianna Sciarappa

Re-Tear of ACL Graft with Lateral Extra-Articular Tenodesis Procedure: A Case Study
[SNHS-11](#)

Kaitlyn Seeley

Post-Concussive Development of Postural Orthostatic Tachycardia Syndrome in Endurance Athletes
[SNHS-14](#)

Nick Seeto

Return to Sport for a Collegiate Athlete With RED-S: A Case Report
[SNHS-21](#)

Danielle Sheehan

Avulsion Fracture of the External Oblique: A Case Report
[SNHS-27](#)

Abigail Sleeper

Ehlers-Danlos Syndrome: A Case Report
[SNHS-06](#)

Molly Stockfisch

The Interprofessional Diagnosis and Rehabilitation of Cervical Disc Herniation, a Case Study
[SNHS-20](#)

Caitlin Victor

UCL Repair by Internal Brace in a College Baseball Pitcher; A Case Report
[SNHS-09](#)

Cameron Wheelock

Sports Psychology; Case Report
[SNHS-10](#)

3:30 P.M.



UNDERGRADUATE AND GRADUATE STUDENT RESEARCH POSTERS: TALKS & MULTIMEDIA PRESENTATIONS

UNDERGRADUATE STUDENTS

WINSTON SCHOOL OF EDUCATION & SOCIAL POLICY

Natalie Belton, Taylor Rong
Sound, Vibration, and Waves
[WSESP-71](#)

**Tyler Bertocchi, Emily Concannon,
Meghan Tully**
Light and Sound with Second Grade
[WSESP-72](#)

Katie Brooks, Isabella Conti
Exploring the Properties of Materials
[WSESP-73](#)

Katherine Caldwell, Rebecca Foley
How to Engage Students in Lessons
Learning About Habitats!
[WSESP-67](#)

Kirsten Carlson, Sophie Stetson
Teaching Erosion: A Unit for 2nd Grade
[WSESP-68](#)

Celia Casale, Caitlin Henaghan
Sound with Second Graders
[WSESP-65](#)

Abigail Daly, Kevin (Pearl) Zou
What Is Sound?
[WSESP-74](#)

Nora Devlin, Elizabeth Roy
Exploring Plants and Animals to Compare
Diversity of Life in Different Habitats!
[WSESP-66](#)

Margaret Franz, Cassandra Lewis
Enlightening Second Graders
[WSESP-70](#)

Kylie Pucci, Emma Rogorzenski
What are the Effects of Wind and Water
on Earth?
[WSESP-69](#)

LilyKate Rodgers, Julianna Paluzzi
Movements and Flowing of Water
[WSESP-75](#)

GIRARD SCHOOL OF BUSINESS

Elric Ford
EPA's Mishandling of 9/11 Ground Zero
Cleanup
[GSB-12](#)





Breaking Barriers to Achievement: How Higher Education Can Help More Students Succeed

Jennifer I.O. Enaboakpe, Freshman Academic Advisor, Girard School of Business
Higher Education Master's Program

Importance of the Topic

Main Findings

Strategies to Overcoming these Barriers

The COVID-19 pandemic has disrupted traditional modes of teaching and learning, leading to a need for more flexible and resilient systems. Higher education has faced universities to rapidly shift to remote and blended learning models, which has required significant investments in technology and infrastructure. Institutions have had to adjust learning and assessment methods to better accommodate remote learning and to help to grapple with issues of student engagement and academic success.

The growing cost of higher education has made it less accessible to many students. Rising tuition costs, combined with other expenses like housing and textbooks, have made higher education unaffordable for many students. This has led to calls for more equitable and equitable systems of higher education as well as models of understanding and skill development.

The growing demand for higher education as more jobs require postsecondary education. As the job market becomes increasingly competitive, more employers are requiring postsecondary education or advanced degrees for even entry-level positions. Students are also seeking to enhance their skills and knowledge throughout their careers, leading to a growth in online and flexible learning options, as well as the emergence of new models of higher education such as micro-credentials and bootcamps.

The increasing recognition of the importance of diversity, equity, and inclusion in higher education. As institutions work to address systemic racism and discrimination, there is growing emphasis on the need to create more welcoming and inclusive environments for students from diverse backgrounds. This includes addressing issues of diversity and equity among faculty and staff, as well as providing resources for underrepresented students.

The current state of higher education is one of change and challenge. Institutions navigate a range of challenges and opportunities are growing with the effects of the pandemic. To make education more affordable and to create more inclusive and equitable systems, higher education will need to continue to evolve and play an essential role in the future.

Mentoring and Academic Support Programs: These programs provide students with personalized support, guidance, and resources to help them navigate the academic and social challenges of college.

Culturally Sensitive and Inclusive Pedagogy: This involves incorporating diverse perspectives and experiences into the curriculum and creating a welcoming and inclusive classroom environment.

Affirmative Action and Diversity Initiatives: These programs aim to increase the representation of underrepresented groups in higher education by providing targeted admissions and recruitment efforts and financial aid support.

Institutional Commitment to Diversity: This involves creating a campus climate that values and celebrates diversity, promoting inclusivity and equity, and addressing issues of bias and discrimination.

Community and Family Engagement: These programs involve engaging families and communities in the education of students of color, providing them with support and resources, and fostering a sense of belonging and connectedness.

Emphasize Career Readiness and Workforce Preparation: Students are more likely to persist and succeed if they see the relevance of their education to their future careers. Colleges and universities can help students prepare for the workforce by offering internships and job placement programs, career counseling services, and opportunities for professional development and networking.

Embrace Active Learning Strategies: Research shows that active learning strategies, such as problem-based learning, collaborative learning, and experiential learning, can improve student engagement, knowledge retention, and critical thinking. Colleges and universities can incorporate these strategies into their curricula to promote deeper learning and help students develop important skills.

References

- Berry, M. (1986). The loss of the university. *Santa Clara Review*.
- Alvares, Z., & Teak, T. L. (2020). *Cultural Awareness: Preparing Higher Education Professionals for the Future of Racial Justice in Education*. Boston: Palgrave MacMillan.
- Phares, M. (2006). Does active learning work? A meta-analysis of the research. *Journal of Engineering Education*, 85(5), 591-597.
- Strathern, T. L., & Sorell, M. C. (2010). The challenge of educating the students of color at predominantly white institutions: A review of the research literature. *Review of Educational Research*, 80(2), 240-274. doi:10.3102/0031820709352099



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