Welcome to the UNH Undergraduate Research Conference

Thank you for joining us for UNH’s 23rd annual Undergraduate Research Conference. Featuring the innovative and cutting-edge research of students across every discipline, the URC is a highlight of the academic year and a wonderful display of talent at our Durham and Manchester campuses.

In addition to sharing our students’ academic excellence, the URC reflects the dedication of our faculty mentors, whose research and teaching expertise are the hallmarks of a great UNH education. As students work with faculty to develop projects, they also build important life skills in problem solving, project management and teamwork — qualities that will serve them well as they graduate and pursue successful careers.

We encourage you to explore our students’ engaging final projects and presentations, many of which represent years of hard work, inquiry and experimentation. It is even more inspiring to know that more than 1,600 undergraduates rose to the challenge in 2022, our first in-person URC since 2019, and that they persevered despite the disruptions of COVID-19.

Our URC students and the dedicated faculty and staff who support them define the Wildcat community at its very best. Whether you visit a poster session, an oral presentation or a hands-on demonstration, we think you will be as impressed and as proud as we are. We’re delighted to welcome you to the URC, and always appreciate your support for New Hampshire’s flagship public university.

Best regards,

James W. Dean Jr.
President

Wayne Jones
Provost and Vice President for Academic Affairs
Welcome to the 23rd annual celebration of academic excellence at the University of New Hampshire! The URC embodies UNH’s mission to offer students a discovery-based education by encouraging inquiry, exploration, and deeper immersion in their fields of study. Student presenters represent disciplines from across the academic spectrum, reflecting the breadth and depth of undergraduate research and scholarship at UNH.

At the Hamel Center for Undergraduate Research, our core mission is to provide resources and financial support for the research, scholarly, and creative projects of UNH students. Our additional role as the administrative home of the URC enables us to broaden our commitment to supporting and showcasing all stages of the research process – including the final stage of communicating research findings to the wider public. For many UNH students, the URC is their first opportunity to present their work to a broad audience. The URC is thus vital in giving students practice in public speaking, communicating complex ideas to a general audience, and developing a deeper understanding of their subject areas. Such experience prepares students to pursue graduate study and to establish and be successful in meaningful careers.

This year, we are delighted to be returning to in-person events for the first time since URC 2019. This spring, more than 1,600 students – mentored by over 360 faculty members and other research advisers – will present their research and scholarship at 20+ URC events on the Durham and Manchester campuses, including symposia, panel and poster sessions, performances, and prize competitions. Despite the challenges and disruptions of the COVID-19 pandemic over the past two years, these students have persevered in pursuing their research, scholarly, and creative goals. Thanks to the resourcefulness, creativity, and spirit of our UNH community, our students have continued to excel.

In addition to recognizing our students’ achievements, we also want to recognize the many members of the UNH community whose dedication and enthusiasm are critical to making the URC possible. You will find their names in the acknowledgements at the back of the book. The partnerships between – and shared investment of – students, faculty, staff, and administrators not only ensure the success of the URC but also demonstrate the strength of the UNH community. Thank you for joining us in celebrating our students’ remarkable scholarship!

Paul C. Tsang, Ph.D.
Director, Hamel Center for Undergraduate Research
Professor of Molecular, Cellular, and Biomedical Sciences

Molly Doyle, Ph.D.
Administrative Director, Hamel Center for Undergraduate Research

Amanda Leger, M.A.
URC Coordinator, Hamel Center for Undergraduate Research
URC 2022 Contents

Calendar of Events 4
Campus Map 5

Friday, April 15 Events
Student Composers’ Concert 6

Tuesday, April 19 Events
UNH Manchester URC Oral Presentations 6

Wednesday, April 20 Events
Interdisciplinary Science and Engineering (ISE) Symposium 6
University-Wide Undergraduate Sustainability Research Symposium 15
The Naked Arts—Creativity Exposed! (Act I) 17
UNH Manchester URC Poster Presentations 18

Thursday, April 21 Events
UNH Manchester URC Cinema Arts Day 20
Paul J. Holloway Prize Innovation to Market Competition (Charles and Miriam Nelson Poster Competition) 21
History Department URC 21
The Naked Arts—Creativity Exposed! (Act II) 22
Philosophy Department URC 22

Friday, April 22 Events
All Colleges Undergraduate Research Symposium Welcome Breakfast 22
All Colleges Undergraduate Research Symposium
Oral Presentations, Session A 22
Poster Presentations, Session A 24
Oral Presentations, Session B 26
Poster Presentations, Session B 27
Oral Presentations, Session C 30
Paul College of Business and Economics URC
Poster Session I 32
Oral Session I 33
Oral Session II 33
Poster Session II 34
Oral Session III 35
Poster Session III 37
UNH Manchester URC Engineering Technology Day, Senior Project Presentations 38
The Naked Arts—Creativity Exposed! (Act III) 38
Paul J. Holloway Prize Innovation to Market Competition (Bud Albin Challenge Round) 39
College of Health and Human Services (CHHS) Grimes Award Competition 39
Psychology Department George M. Haslerud URC 40
Languages, Literatures, & Cultures (LLC) Department URC 40
Honors English URC 41
Senior B.A. & B.F.A. Exhibition and Preview Reception 41

Saturday, April 23 Events
College of Life Sciences and Agriculture (COLSA) URC
Oral Presentations 42
Poster Presentations 42
Paul College of Business and Economics First-Year Innovation and Research Experience (FIRE) URC 46

Wednesday, May 4 Events
Ann Manchester Kelley Nursing Inquiry Day 51

Wednesday, May 11 Events
Paul College of Business and Economics
Paul J. Holloway Prize Innovation to Market Competition (Championship Round) 51

Additional Features
Acknowledgments 52
Student Index 53
### URC 2022 Calendar

**FRIDAY, APRIL 15**

8-10 p.m.  
**Student Composers’ Concert**  
Paul Creative Arts Center,  
Bratton Recital Hall (8)

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**TUESDAY, APRIL 19**

9 a.m.-12 p.m.  
**UNH Manchester URC, Oral Presentations**  
88 Commercial Street, Room 201, Manchester

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**WEDNESDAY, APRIL 20**

9 a.m.-4 p.m.  
**Interdisciplinary Science and Engineering (ISE) Symposium**  
Hamel Recreation Center (1)

9 a.m.-4 p.m.  
**University-Wide Undergraduate Sustainability Research Symposium**  
Memorial Union Building, Rooms 330 and 332 (5)

12-2 p.m.  
**The Naked Arts – Creativity Exposed! (Act I)**  
Paul Creative Arts Center, Museum of Art (8)

3:30-6 p.m.  
**UNH Manchester URC, Poster Presentations**  
88 Commercial Street, Room 201, 6th Floor, and Student Commons, Manchester

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**THURSDAY, APRIL 21**

10 a.m.-12 p.m.  
**UNH Manchester URC, Cinema Arts Day**  
88 Commercial Street, Room 456, Manchester

12-2 p.m.  
**Paul College of Business and Economics Paul J. Holloway Prize Innovation to Market Competition, Charles & Miriam Nelson Poster Competition**  
Paul College (7)

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**FRIDAY, APRIL 22**

12-3 p.m.  
**History Department URC**  
Memorial Union Building, Rooms 332, 334, and 340 (5)

12:40-2 p.m.  
**The Naked Arts – Creativity Exposed! (Act II)**  
Paul Creative Arts Center, Museum of Art (8)

4-7 p.m.  
**Philosophy Department URC**  
Hamilton Smith Hall, Room 210 (2)

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**SATURDAY, APRIL 23**

8:15 a.m.-12 p.m.  
**College of Life Sciences and Agriculture (COLSA) URC**  
Memorial Union Building, Granite State Room and MUB Theater II (5)

9 a.m.-2 p.m.  
**Paul College First-Year Innovation and Research Experience (FIRE) URC**  
Paul College (7)

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**WEDNESDAY, MAY 4**

2-5 p.m.  
**Ann Manchester Kelley Nursing Inquiry Day**  
Health Science Simulation Center (3)

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**WEDNESDAY, MAY 11**

12:30-5 p.m.  
**Paul College of Business and Economics Paul J. Holloway Prize Innovation to Market Competition, Championship Round**  
Paul College, Room G75 and Great Hall (7)

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**URC 2022 Calendar**

All events are free and open to the public.  
(Building numbers are bold and in parentheses.)
Student Composers’ Concert

Friday, April 15
8–10 p.m.
Paul Creative Arts Center, Bratton Recital Hall

The UNH Student Composers’ Concert is an annual event that features the music of undergraduate and graduate students of the Music Department. The music is newly composed, and is almost exclusively performed by fellow music students.

Adviser: Michael Annicchiarico

Wesley Coffin
Music
Matrimony & Journey of a Duckling

Kyle Cook
Music

Amanda White
Music
Hello!

UNH Manchester Undergraduate Research Conference

Oral Presentations

Tuesday, April 19
9 a.m.–12 p.m.
88 Commercial St., Room 201 Manchester

The UNHM URC Oral Presentations feature formal scholarly presentations and/or multimedia presentations reflecting the students’ research interests.

Autumn Bedell
Homeland Security, Public Service and Nonprofit Leadership
Hannah Chisholm
Politics and Society
Angela Fuentes
Public Service and Nonprofit Leadership
Alexandra Twitchell
Psychology
Jacob Young
Humanities
Community Wellness—Improving the Quality of Student Life at UNH Manchester
Adviser: Lisa Enright

Maria Corniel
English Teaching
The Systematic Indoctrination of Germany’s Youth
Adviser: Sonic Woytonik

William DeSilva
Biological Sciences
Camden Lynch
Pamella Lais Mozzer
Abeer Shabaka
Kira Smith
Vishnu Soni
Neuropsychology
Changes in Student Life during the COVID-19 Pandemic: A Survey
Adviser: Nicholas Mian

Emily Persson
Biotechnology
The Righteous among the Nations
Adviser: Sonic Woytonik

Joshua Puzzo
Communication Arts
Stories of the Holocaust: A Look into the Bialystok Uprising and Haika Grosman
Adviser: Sonic Woytonik

David Reynolds
Computer Information Systems
Wannsee Conference
Adviser: Sonic Woytonik

Jordan White
American Sign Language (ASL)/English Interpreting
Deaf People and the Holocaust
Adviser: Sonic Woytonik

Kelsey Wynn
Analytics and Data Science
Music of the Holocaust: Performances by Prisoners
Adviser: Sonic Woytonik

Interdisciplinary Science & Engineering (ISE) Symposium

Poster Presentations

Wednesday, April 20
9 a.m.–4 p.m.
Hamel Recreation Center

The ISE Symposium welcomes and encourages scientific presentations from undergraduate students in all colleges and departments. The event features undergraduate research that contributes to or benefits from an interdisciplinary science and engineering perspective.

Biology

Group Leader: Vicki Jeffers

Jaxson Libby
Biochemistry, Molecular and Cellular Biology
Emma Tobbe
Bioengineering
Developing a Tumor-on-Chip Platform for Cancer Drug Discovery
Advisers: Linqing Li, Sarah Walker
Harrison Parent  
Biochemistry, Molecular and Cellular Biology  
Targeting the BCL6 Transcription Factor in Ovarian Cancer  
Adviser: Sarah Walker

Emily Pratt  
Biochemistry, Molecular and Cellular Biology  
Targeting STAT3 in Triple Negative Breast Cancer  
Adviser: Sarah Walker

**Chemical Engineering**  
**Group Leader:** Young Jo Kim

Ellen Blackwell  
Bioengineering  
Engineering Macromolecular Hydrophobicity to Induce LCST and Microstructures in Biomaterials  
Adviser: Linqing Li

Eli Duggan  
Bioengineering  
Optimization of Anti-HIV Monoclonal Antibody to Improve Neutralization Breadth and Potency  
Adviser: Brandon DeKosky

Samuel Mercer  
Chemical Engineering  
Enhancement of Plasmonic Au Catalysts for Photocatalytic Methane Conversion  
Adviser: Nan Yi

**Civil and Environmental Engineering — Design**  
**Group Leaders:** Majid Ghayoomi, Anthony Puntin

Michael Beaudoin  
Civil Engineering  
Rehabilitation of Lafayette Brook Bridge  
Advisers: Yashar Eftekhar Azam, Julie Whitmore

Nick LaBrecque  
Timothy LaPorte  
Matthew Miloro  
Nicholas Prescott  
Civil Engineering  
Stage Road Bridge over Nighthawk Hollow Brook, Gilmanton, NH  
Adviser: Fei Han

Joseph Rebeiro  
Connor Schott  
Logan Stevens  
Jacob Sullivan-Hasson  
Civil Engineering  
Whitney Road Extension  
Adviser: Anthony Puntin

Haley Brown  
Dan Bukunt  
Michael Libby  
Christopher Piekarski  
Sean Van Scy  
Civil Engineering  
Narragansett Bay Campus (NBC) Pier Reconstruction  
Adviser: Majid Ghayoomi

Jack Callinan  
Civil Engineering, Sustainability  
John Regan  
Maxwell Regan  
Joshua Taranto  
Civil Engineering  
UNH North Drive Underpass  
Adviser: Kyle Kwiatkowski

Nathan Clegg  
Jamie Murphy  
Nicholas Walsh  
Civil Engineering  
Tyren Hartford  
Civil Engineering, Sustainability  
UNH 2021 Newmarket Waterfront Improvement Project  
Advisers: Matthew Low, Tyler Renz

Megan Cramton  
Environmental Engineering  
Conner Gill  
Jacob McIntire  
Tanner Valhouli  
Noah Wilcox  
Civil Engineering  
King Street Commons Development  
Adviser: Anthony Puntin

Sierra Dahl  
Jack Meade  
Nicholas Munroe  
Tess Priest  
Payton Surprenant  
Civil Engineering  
Lee, NH - NH 125 over Little River Bridge Replacement & Traffic Control Plan  
Advisers: Jo Sias, Samuel White

Gregory Chase  
Rebecca Dean  
Jeffrey Edwards  
Patrick Potter  
Catherine Rieger  
Civil Engineering  
Albacore Park Expansion  
Adviser: Kenneth Flesher
Civil and Environmental Engineering — Research

Group Leaders: Majid Ghayoomi, Anthony Puntin

Jasper Anderson
Allison Bickford
Justin Durant
Benjamin Spencer
Civil Engineering
Best Management Practice in Highly Urbanized Henry Law Park - Dover, NH
Advisers: James Houle, Gretchen Young

Will Baldwin
Cole Gorham
Benjamin Guertin
Elizabeth Gunn
Nathan Raffa
Mechanical Engineering
Wildler Byrne
Environmental Engineering
Miles Libby
Jacob Roberts
Civil Engineering
The Green Standards Net Zero Home
Adviser: Felix Devito

Callie Beard
Lindsay Guertin
Maev Richardson
Environmental Engineering
Environmental Engineering
PFAS in Vermont Background Soils
Advisers: Paula Mouser, Harrison Roakes

Sara Berg
Environmental Engineering.
Sustainability
Megan Cramton
Environmental Engineering
Decision Making for Drinking Water Emergency Planning and Response in New Hampshire
Adviser: Weiwei Mo

Sarah Boisvert
Bailey Jones
Devon Mexcur
Environmental Engineering
UNH Sewer Line Evaluation Capstone
Advisers: Jason Kreil, Ken Mavrogeorge, Adam Moskal, Paula Mouser, Kellen Sawyer

Alexis Eaton
Environmental Engineering,
Sustainability
The Fate and Transport of 17-beta Estradiol, 17-alpha Ethinyl Estradiol, and Estrone in Wastewater Treatment
Adviser: Paula Mouser

Christopher Keohan
Environmental Engineering
August Murray
Civil Engineering
Infrastructure Management for Cities of Tomorrow
Advisers: Eshan Dave, Weiwei Mo

Devan Sack
Civil Engineering
A Resilience Assessment of Wash Projects in Eastern Africa
Adviser: Kyle Kwiatkowski

Connor Schott
Civil Engineering
An Examination of Effective Length Factors in Moment Frames
Adviser: Raymond Cook

Computer Science — Applications

Group Leaders: David Benedetto, Matthew Plumlee

Razz Alkalay
Nick Moreschi
Nicolas Spezzano
Information Technology
Air Traffic Visualiser
Adviser: Radim Bartos

Alesandra Bernardini
Killian Cowan
Alexander Mercedes
Computer Science
Roads of the Sea
Adviser: Christos Kastrisios

Anna Botts
Nick Braga
Connor Harrington
Chafik Nadim
Information Technology
UNH Sales Center — Contact/Event Management Solution (1)
Adviser: David Benedetto
Timothy Clocksin
William Lee
Computer Science
Cameron Day
Matty Hartman
Information Technology
Albacore VR Submarine Exhibit
Advisers: Matthew Plumlee, Patricia Violette

Jiacheng Ding
Computer Science
Ryan Foley
Nas Tber
Information Technology
DegreePath
Adviser: David Benedetto

Gabby Germany
Daniel McCarthy
Computer Science
NextStep Health Feature Development
Adviser: David Benedetto

Elvis Hidalgo
Information Technology
Elijah Johnson
Daniel Kirichok
Computer Science
SPAITR Interactive Map
Adviser: David Benedetto

Nicholas Ippedico
Steven Saing
Information Technology
Jennifer Nachateo
Information Technology, Justice Studies
UNH Sales Center (Input)
Adviser: David Benedetto

Isabel Beaulieu
Modeling Seafood Takeout Trends
Advisers: Philip Ramsey, Easton White

Nicholas Bridges
Joey Neleber
Alex Valhos
Computer Science
Jacob Easterling
Analytics and Data Science
SPAITR Data Processing
Adviser: David Benedetto

Mallory Cashman
Analytics and Data Science
SPAITR: Event Detection in Sports-Related Sensor Data with Machine Learning
Adviser: Laura Dietz

Tobey DiMambro
Ashley Roy
Analytics and Data Science
Gersi Doko
Kendall Hixon
Computer Science
NextStep HealthTech Data Analysis
Adviser: David Benedetto

Jeffrey Fernandes
Maximillian Hennessey
Computer Science
Benjamin Grimes
Li Qi Li
Information Technology
PiRail
Adviser: David Benedetto

Daniel Mattson
Computer Science
Reinforcement Learning Applied to the Isles of Shoals Smart Grid
Adviser: Marek Petrik

Computer Science — Systems
Group Leaders: David Benedetto, Matthew Plumlee

Paul Ackels
Computer Science
NextStep HealthTech Cybersecurity Team
Adviser: David Benedetto

Patrick Doherty
Connor Murphy
Jason Waleryszak
Jason Worden
Computer Science
WIBL (Wireless Inexpensive Bathymetry Logger)
Advisers: Brian Calder, Matthew Plumlee

Riley Glover
Cole Stukel
Isaiah Tauscher
Information Technology
SilverTech Elastic Stack Build
Adviser: David Benedetto

Jacob Harrison
Jonathan Nelson
Christian Pribyl
Computer Science
Experiment Automation for an Electrochemical Sensor
Adviser: Matthew Plumlee

Adam Judge
Reid Leclerc
Cameron Scott
Zhouhai You
Computer Science
Automated Foosball Goalie Project
Adviser: Matthew Plumlee

Justin Moening
Trevor Morrison
Joseph Pilote
Ryan Tremblay
Information Technology
OS Monitoring
Adviser: David Benedetto

Selena Richards
Computer Science
Utilizing Yumi Robot and 3D Human Model to Assist Physical Therapy Patients
Adviser: Momotaz Begum

Zachary Taylor
Computer Science
Risk Factors Identification for Work-Related Musculoskeletal Disorders with a Wearable Motion Tracking System
Advisers: Diliang Chen, Dongpeng Xu
Earth Sciences

Group Leader: Thomas Lippmann

Natalie White
Environmental Sciences
Controls on Carbon Gas Fluxes from a Temperate Forest Soil
Adviser: Ruth Varner

Natalie White
Environmental Sciences
Using QGIS to Create Road Networks in 3 States of Interest, to Show COVID-19 Data and Issues Occurring
Adviser: Michael Palace

Ritwik Baral
Environmental Sciences
Using QGIS to Create Road Networks in 3 States of Interest, to Show COVID-19 Data and Issues Occurring
Adviser: Michael Palace

Serena Butler
Earth Sciences
Environmental and Societal Impacts of a Potential Yellowstone Eruption on New England
Adviser: Joseph Licciardi

Angelica Dziurzynski
Earth Sciences, Marine, Estuarine and Freshwater Biology
Assessing Controls of Methane and Carbon Dioxide Emissions from a Temperate Reservoir
Adviser: Ruth Varner

Angelica Dziurzynski
Earth Sciences, Marine, Estuarine and Freshwater Biology
Assessing Controls of Methane and Carbon Dioxide Emissions from a Temperate Reservoir
Adviser: Ruth Varner

Arielle Kotulak
Environmental Sciences
Using Glacial Striations on Bedrock to Determine Ice Flow Behavior during the Last Deglaciation in the New Hampshire Seacoast Region
Adviser: Joseph Licciardi

Arielle Kotulak
Environmental Sciences
Using Glacial Striations on Bedrock to Determine Ice Flow Behavior during the Last Deglaciation in the New Hampshire Seacoast Region
Adviser: Joseph Licciardi

Marvin Kuryala
Environmental Sciences
Analysis of Northeast Weather Data
Adviser: J. Matthew Davis

Anthony Nguyen
Environmental Sciences
Estimating Historical River Channel Change in New England
Adviser: Anne Lightbody

Sophia Smith
Chemistry
Investigation of the Surface Tension of Salt Water Solutions to Better Understand Sea Salt Aerosols
Adviser: Margaret Greenslade

Emma Thibodeau
Earth Science
A Look into Ocean Acidification Effects on Mussels
Adviser: Christopher Hunt

Declan Cutler
Electrical Engineering
The Design, Development, and Testing of a Choice/Serial Reaction Time Apparatus for EEG Data Collection & Analyses
Adviser: Wayne Smith

Matthew DiBiase
Computer Engineering
Digital Guitar Effects Pedal
Adviser: Richard Messner

Joseph Donavan
Noah Mulgrew
Bryle Rivera

Joseph Donavan
Noah Mulgrew
Bryle Rivera

Christopher Boyer
Electrical Engineering
Beat Frequency Oscillator Metal Detector
Adviser: Nicholas Kirsch

Christopher Boyer
Electrical Engineering
Beat Frequency Oscillator Metal Detector
Adviser: Nicholas Kirsch

Luke Bradley
Electrical Engineering
Colman Stolberg
Electrical Engineering
Airborne Wind Turbine
Adviser: John LaCourse

Luke Bradley
Electrical Engineering
Colman Stolberg
Electrical Engineering
Airborne Wind Turbine
Adviser: John LaCourse

Liwei Chen
Computer Engineering
Gesture Recognition by Flexible EMG Sensor Array
Adviser: Diliang Chen

Liwei Chen
Computer Engineering
Gesture Recognition by Flexible EMG Sensor Array
Adviser: Diliang Chen

Sydney Chock
Gabriella Liano
Electrical Engineering
KRILL Development: U.S. Navy’s Unpiloted Underwater Vehicle (UUV)
Advisers: Wayne Smith, May-Win Thein

Sydney Chock
Gabriella Liano
Electrical Engineering
KRILL Development: U.S. Navy’s Unpiloted Underwater Vehicle (UUV)
Advisers: Wayne Smith, May-Win Thein

Matthew Corso
Electrical Engineering
Nathanael Frisch
Computer Engineering
Biomechanical Electricity Generator for the Knee Joint
Adviser: John LaCourse

Matthew Corso
Electrical Engineering
Nathanael Frisch
Computer Engineering
Biomechanical Electricity Generator for the Knee Joint
Adviser: John LaCourse

Nature’s Potential
Adviser: John LaCourse
Marc Tausanovitch
Electrical Engineering
Design of a Discrete Operational
Audio Amplifier
Adviser: John LaCourse

Sen Wang
Electrical Engineering
Real-Time Monitoring of Diabetics’
Retinopathy Using Wearable Devices
Adviser: MD Shaad Mahmud

Hunter Wells
Computer Engineering
Removing Physical Presence Requirements
for a Remote and Automated World
Adviser: Qiaoyan Yu

**Innovation Scholars**

Group Leader: Timothy Carlin

Emerald Bell
Mechanical Engineering

Kevin Terwilliger
Adam Vogler
Computer Science

How the Date Changes Ratings
Adviser: Kyle Ouellette

Anne Berg
Kelsea Carmichael
Ocean Engineering

Molly Derrigan
Chemical Engineering

Catherine Selby
Environmental Engineering

Monitoring Flood Severity within a
Coastal Community: Developing a
Waterproof Housing for a Thermistor and
Pressure Sensor
Advisers: Savannah DeVoe, Diane Foster

Zachary Bialous
Abigail Pierce
Tatum Vansicklen
Jackson Weber
Mechanical Engineering

Adam Elsner
Information Technology

3D Printed Remote Controlled Car
Powered by Sensors and Microcontrollers
Adviser: Brad Kinsey

Alana Burch
Megan Sorette
Computer Science

Twitter for You: Correlation between
Trending Data & Major Events
Adviser: Kyle Ouellette

Will Callery
Kristian Lane
Matthew McMahan
Alex Mills
Mechanical Engineering

Winglet Effectiveness for Small Scale
Applications Based on Winglet Scale and
Angle of Attack
Advisers: Brad Kinsey, Ivaylo Nedyalkov

Cole Capobianco
Patrick Jackson
Connor Powley
Environmental Engineering

Brooklyn Wallace
Bioengineering

Artemia salina Survivability in Lowered
pH Conditions
Adviser: Kieran Curran

Seth Chartier
Zachary Drew
Max McKenney
Matthew Redard
Mechanical Engineering

Timothy Rybecky
Computer Science

Off-Road Electric Skateboard with Trailer
Adviser: Brad Kinsey

Nathan Chasse
Analytics and Data Science

Isabelle Hu
Mechanical Engineering

Matthew Laflamme
Computer Science

Correlating Sentiment with Journal
Article Success
Adviser: Kyle Ouellette

Nathan Facteau
Mechanical Engineering

Electromagnetic Forming of
Aluminum Bottles
Adviser: Brad Kinsey

Trevor Federico-Grome
Undeclared

Amelea Hauer
Avery Wilson
Earth Sciences

Samantha Pearson
Physics

Analysis of the Value of Regenerating
Woodlands for Biodiversity
Adviser: Kieran Curran

Nicholas Gacharna
Chemistry

Morgan Smith
Undeclared

Corey Zima
Ocean Engineering

Innovation Scholars Ocean Engineering
Section: Circuitry Group
Advisers: Savannah DeVoe, Diane Foster

Kathleen Hanson
Mechanical Engineering

Kelsey Purnomo
Civil Engineering

Manufacturing Center ScrapBot
Adviser: Brad Kinsey

Katherine Harpster
Neuroscience and Behavior

Analyzing Misinformation with Twitter
Advisers: Laura Allen, Sarah Creer

Jacob Lewis
Mechanical Engineering

In-Situ Resource Utilization for In-Space
Manufacturing
Adviser: Brad Kinsey

Murray McKay
Anna Miller
Ocean Engineering

Parker Reed
Computer Engineering

Owen Tolve
Environmental Engineering

Innovation Scholars: Ocean &
Environmental Sensing WIMP
Weather Station
Advisers: Savannah DeVoe, Diane Foster
Durga Raja  
Environmental Engineering  
Scarlett Roberts  
Ocean Engineering  
Dougray Thoreen  
Mechanical Engineering  
Wave Buoy  
Advisers: Savannah DeVoe, Diane Foster

**Mechanical Engineering — Competition and Clubs**

Group Leaders: Juan Bautista, Anthony Puntin

Jaret Armstrong  
Robbie Dowst  
Anthony Ferraro  
Gregory Keeler  
Jeffrey Leach  
Edward McLellan  
Jackson Perry  
Brian Schwab  
Mechanical Engineering  
*UNH Precision Racing*  
Adviser: Todd Gross

Ryan Baer  
Undeclared  
Douglas Breault  
Ben Brockway  
Spencer Brush  
Devon Bushey  
Jason Cagney  
Ruicong Feng  
Caroline Flood  
Stephen Heirtzler  
Thomas Oliver  
Mechanical Engineering  
*UNH Precision Racing*  
Adviser: Todd Gross

**Mechanical Engineering — Industry**

Group Leaders: Juan Bautista, Anthony Puntin

Mohamed Altamimi  
Ryan Olson  
Alana Pettaway  
Mechanical Engineering  
*Machine Process Health Monitoring*  
Adviser: Todd Gross

Joseph Batal  
Ryan Dumais  
Andrew Stimpson  
Anthony Woodhouse  
Mechanical Engineering  
*Automated Cartridge Changer for Hypertherm Plasma Cutting Torch*  
Advisers: Brian Currier, Brad Kinsey, Terence O’Neil

Matthew Batal  
Kyle Preble  
Russ Somphonlug  
Andrew Trasatti  
Lexi Yerardi  
Mechanical Engineering  
*Timberland Dynamic Outsole*  
Adviser: Todd Gross

Justin Berube  
Mya Levy  
David Luby  
Cody Sullivan  
Mechanical Engineering  
*Pontoon Boat Helipad*  
Advisers: Nathan Laxague, Karl Leinsing, Christopher White

Orrin Bliss  
William Fernandes  
Jacob Lorden  
Mechanical Engineering  
*Automating an F3T Incremental Forming Machine*  
Advisers: Nathan Daigle, John Roth

Christopher Hazen  
Mechanical Engineering  
*3D Printed Casting Molds*  
Advisers: Craig Haskell, John Roth
Shea Malloy
Elizabeth Saucier
Mechanical Engineering
Pipe Drilling Automation for PVC Oyster Sorting Machines
Adviser: John Roth

Lucas Mostoller
Michael Peters
Markos Starz
Nicholas Zsofka
Mechanical Engineering
Mechanical Study of Reciprocating Firing Pin Assembly
Adviser: Juan Carlos Cueva Bautista

Ben Seprosevo
Mechanical Engineering
Closed Door Machining
Adviser: Todd Gross

Luke Cava
Christian Lamers
Eric Langley
Mechanical Engineering
Investigating the Current Hernia Mesh Designs
Adviser: Nikhil Padhye

Orion Clachar
Mechanical Engineering
Automated Prosthetic Leg
Adviser: Diliang Chen

Patrick Earley
Mechanical Engineering
Maria Skidmore
Chemical Engineering
Composite Bioink for Improved Biocompatibility and Mechanical Stability of 3D Printed Tissue-like Structures
Adviser: Kyung Jae Jeong

Adison Hicks
Mechanical Engineering
Kicker-Sticker
Advisers: Iryaio Nedyalkov, Viktoriaiya Staneva

Christian Workman
Mechanical Engineering
Wire Electrical Discharge Machining Power Supply Design
Adviser: May-Win Thein

Samantha Brady
Matthias Page
Ocean Engineering
Marco Carattini
Nicholas Hatfield
Zoology
Ella Caughran
Biology
Design and Construction of a Recirculating Flume for Lumpfish Adhesion Strength Testing
Advisers: Elizabeth Fairchild, Tracy Mandel, Shelby Perry

Joseph Camobreco
Alex Charest
Mechanical Engineering
Andrew LePage
Ocean Engineering
Brendan Reagan
International Business and Economics
Devan Sack
Meaghan Wiggins
Civil Engineering
Tori Swee
Environmental Engineering
Coastal Wave Powered RO System
Advisers: Erin Bell, Chelsea Kimball, Weiwei Mo, M. Robinson Swift, Martin Wosnik

Benson Cao
Computer Science
Gavin Cherella
William Conner
Ocean Engineering
Amanda Conner
Caroline Russell
Mechanical Engineering
Shelly Lancaster
Wildlife and Conservation Biology
Heather Nelson
Anthropology, Zoology
Marine and Naval Technological Advancements for Robotic Autonomy: Ghost Unpiloted Performance Platform Submersible
Adviser: May-Win Thein

Mechanical Engineering — Research

Group Leaders: Juan Bautista, Anthony Puntin

Ruben Abounaja
Colin Gilmore
Jack Kennefick
Alex Robacker
Chase Wescott
Mechanical Engineering
Kayak Roof Load Assist
Adviser: Todd Gross

Maxim Begin
James Descoteau
Derek Elwell
Christian Workman
Mechanical Engineering
Kayak Loading System
Adviser: Todd Gross

Connor Buckley
Noah Cleary
Colin Mower
Emily Peacock

Thomas Splagounias
Mechanical Engineering
Recirculating Water System for Water Droplet Machining Process
Advisers: Brad Kinsey, Benjamin Mitchell

Ocean Engineering

Group Leader: M. Robinson Swift

Jessie Barker
Matthew Radzelay
Christopher Redard
William Seguin
Mechanical Engineering

Jenna Ehnot
Ocean Engineering
Patrick McKinnon
Computer Science

Andrew Weeks
Computer Science, Engineering Physics
Marine and Naval Technological Advancements for Robotic Autonomy: Autonomous Surface Vehicle
Adviser: May-Win Thein
Lindsay Cartmell  
Biology  
Alexis McGarry  
Mechanical Engineering  
Katie Swenson  
Ocean Engineering  
Adviser: M. Robinson Swift  

Sydney Chock  
Gabriella Liano  
Electrical Engineering  
Jack Hamilton  
Marguerite Kennish  
Brendan Ulrich  
Mechanical Engineering  
Jeffrey Pitts  
Noah Wilder  
Computer Science  
Marine and Naval Technological Advancements for Robotic Autonomy: Unpiloted Underwater Vehicle  
Adviser: May-Win Thein  

Jenna Ehnot  
Ocean Engineering  
Seasonal Variation in Elastic Moduli of American Beachgrass, Ammophila breviligulata  
Adviser: Tracy Mandel  

Jake Greenland  
Marine, Estuarine and Freshwater Biology  
Anthony Lee  
Sarah Leighton  
Aidan Thayer  
Ocean Engineering  
Jack Schreiber  
Mechanical Engineering  
Redesign of Channeled Whelk Traps for Improved Selective Harvesting  
Advisers: Elizabeth Fairchild, Mary Kate Munley  

Liz Hauschild  
Rose Walker  
Ocean Engineering  
Acoustic Monitoring of Floating Offshore Wind Turbines  
Advisers: Jerica Nolte, Tom Weber, Martin Wosnik  

Drew Kelley  
Liam Morrison  
Matthew Walter  
Ocean Engineering  
Underwater Web Camera  
Adviser: Easton White  

Katie Swenson  
Ocean Engineering  
A Platform Design for the Analysis of the Distribution and Abundance of Fish and Investigate the Relation to Seabirds  
Adviser: Tom Weber  

Physics — Experimentation and Instrumentation  
Group Leader: Ningyu Liu  
Lihy Buchbinder  
Physics  
Characterizing Insulating States in TaS2 with Atomic Adsorbates  
Adviser: Shawna Hollen  
Jeffrey Campbell  
Engineering Physics  
BEEPS Mass Spectrometer Redesign  
Adviser: Marc Lessard  
Kayden Dube  
Physics  
A Virtual Reality Environment for 3D Reconstructions of Magnetic Reconnection Events Observed by the Magnetosphere Multiscale Mission  
Adviser: Matthew Argall  
Christopher Howard  
Ida Eleonora Olsmats  
Engineering Physics  
Modeling a Flux Gate Magnetometer  
Adviser: Matthew Argall  
Ryan Murphy  
Physics  
Impact of Thinner Carbon Foils in IMAP-Lo on Measuring the Neon to Oxygen Ratio of the Solar System  
Adviser: Nathan Schwadron  

Samuel Poisson  
Engineering Physics  
Andrew Weeks  
Computer Science, Engineering Physics  
Venusian Atmospheric Interplanetary CubeSat Concept (V-ATOMICCC)  
Adviser: James Clemmons  

Physics — Theory, Modeling, and Data Analysis  
Group Leader: Ningyu Liu  
Payson Dunn  
Classics, Physics  
Fractal Modeling of Sprites in Earth’s Upper Atmosphere  
Adviser: Ningyu Liu  

Anastasia Marchuk  
Physics, Russian  
Low-Frequency Waves Due to Newborn Interstellar Pickup He+ Observed by the Ulysses Spacecraft  
Adviser: Charles Smith  

Gavin Riley  
Physics  
Generally Covariant Theory of Conserved Multipole Charges  
Adviser: David Mattingly  

Jessica Roberts  
Classics, Physics  
Placing Constraints on Fuzzy Dark Matter Properties  
Advisers: Nathan Musoke, Chanda Prescod-Weinstein  

Joseph Shields  
Physics  
A Review of Monte Carlo Methods and Their Application in Medical Physics for Simulating Interactions of Ionizing Radiation  
Adviser: Karl Slifer  

Amanda Wester  
Physics  
Investigating Signs of Orbital Decay in Exoplanetary Systems  
Adviser: John Gianforte
University-Wide Undergraduate Sustainability Research Symposium

Oral Presentations

Wednesday, April 20
9 a.m.–4 p.m.
Memorial Union Building, Rooms 330 and 332

Students from all disciplines present research on a broad range of sustainability challenges — addressing environmental stewardship, social well-being, and economic vitality to meet our present needs, while ensuring the ability of future generations to meet their needs. Undergraduates doing sustainability research who present at this Symposium are automatically considered for the new UNH Sustainability Awards.

Emily Abrusci
Environmental Conservation and Sustainability

Nathan Brennan
Business Administration
Grey-t Water
Adviser: Ian Grant

Jeffrey Allen
Business Administration, Management, Sustainability

Emma Farnham
Economics, Finance

Amanda Kelly
Management, Sustainability

Jillian Lawrence
Marketing
B-Impact Clinic: Goods That Matter
Adviser: Erin Allgood

George Anderson
Environmental Sciences
Melissa Duggan
Edyn Winter
Business Administration
Maddie Strange
Environmental Engineering
B-Impact Clinic: Lucky and Me
Advisers: Erin Allgood, Sarah Glatt

George Anderson
Environmental Sciences
Hallie Saracina
Environmental Engineering
Assessing Waste Management at the University of New Hampshire with the Post-Landfill Action Network's Atlas Assessment
Adviser: Jennifer Andrews

Eric Berry
Marketing, Sustainability

Spencer Blake
Environmental Conservation and Sustainability, Sustainability

Jack Callinan
Tyren Hartford
Civil Engineering, Sustainability

Nate Richard
Finance, Sustainability

Catherine Wardinski
Marine, Estuarine and Freshwater Biology, Sustainability
Carbon Capture and Utilization (CCU)
Adviser: Cameron Wake

Maggy Biega
Anthropology, Sustainability

Kate Cone
Marketing, Sustainability

Gillian Reynolds
Spanish, Sustainability

John Rooney
Communication, Sustainability

Gabrielle Sott
Communicating the Connections between Climate Change, Human Health, and Sustainability: Team 1
Adviser: Semra Aytur

Caitlin Borges
Sustainability, Zoology

Megan Caruso
Recreation Management and Policy, Sustainability

Kaitlin Griffin
Information Systems and Business Analytics, Sustainability

Bryce Lacombe
Environmental and Resource Economics, Sustainability

Morgan McKenney
Information Systems and Business Analytics, Sustainability

Grace O’Connor
Business Administration, Sustainability
Waste Tracking: Understanding Different Types of Waste Data at UNH and Discovering How to Best Track, Utilize, and Showcase Data
Adviser: Jade Chalkley

Kyana Burgess
Anthropology, Sustainability

Kylee Casner
Sustainability, Undeclared

Justine Cassel
Marine, Estuarine and Freshwater Biology, Sustainability

Taylor Grant
Sustainability, Sustainable Agriculture and Food Systems

Amanda Kelly
Management, Sustainability
Communicating the Connections between Climate Change, Human Health, and Sustainability: Team 2
Adviser: Semra Aytur

Daisy Burns
Economics, Sustainability

Isabella Cruz-Krahm
Forest Technology

Tyler Distefano
Political Science

Kaelli Gehrung
Public Service and Nonprofit Leadership
until Student Consultant Presentation: B-Impact Clinic
Advisers: Erin Allgood, Susan Kaplan
Grace Cannon
Marketing, Sustainability
Jillian Locke
Sustainable Agriculture and Food Systems
Jason Plant
Entrepreneurial Studies
UNH B-Impact Clinic EmVision
Project Highlight
Adviser: Erin Allgood
Grace Cannon
Marketing, Sustainability
Cassandra Hollasch
English
Communication in Sustainability: An Important Effort to Spread Awareness on Sustainability Issues and Solutions
Advisers: Jade Chalkley, Cathy Meyer
Isabel Cole
Sustainable Agriculture and Food Systems
The Four R's: A Framework to Evaluate the Environmental Impact of Environmental Research
Adviser: Adam Wymore
Laura Davies
Undeclared
An Analysis of Ben & Jerry's Sustainability Practices
Adviser: Fiona Wilson
Erin Donahue
Nursing
An Analysis of Companies Fueling the Renewable Energy Industry
Adviser: Fiona Wilson
Ian Dudgeon
Genetics
An Analysis of Carbon Markets
Adviser: Fiona Wilson
Jill Durkin
Economics, Finance
Boloco Team B-Impact Clinic
Adviser: Erin Allgood
Alexis Eaton
Environmental Engineering, Sustainability
Sustainability Advocates Internship Projects
Adviser: Jade Chalkley
Sydney Gendreau
Environmental and Resource Economics, Sustainability
Kaitlin Houle
Sustainability, Wildlife and Conservation Biology
Ethan McDonough
Clay Webber
Political Science, Sustainability
Sophie Ropp
Economics, Sustainability
Exploring Natural Climate Solutions for UNH
Adviser: Jennifer Andrews
Samuel Gobeil
Analytical Economics, Sustainability
Kaitlin Griffin
Sydney Weisensee
Information Systems and Business Analytics, Sustainability
Kira Nolan
Marketing
B-Impact Clinic: Relyco
Adviser: Erin Allgood
Chloe Gross
Environmental Conservation and Sustainability
Regional Composting
Adviser: Jennifer Andrews
Brooke Healy
Wildlife and Conservation Biology
Sustainability with Pollinators: Bee Campus USA
Adviser: Jade Chalkley
Briella Hirsch
Management
Eryn Pierce
Accounting
Emma Wick
Philosophy, Sustainability
Sarah Wilkinson
Analytical Economics, Sustainability
Jenna d'Arcy
Community and Environmental Planning Peer-to-Peer Education in the Sustainability World
Advisers: Jade Chalkley, Erin Hale
Tyler Johnson
Bioengineering
An Analysis of GSK's Sustainability Practices
Adviser: Fiona Wilson
Elias Longa
Political Science
An Analysis of American Airlines' Sustainability Practices
Adviser: Fiona Wilson
Anthony Lotane
Economics, Philosophy
How the Development of the Hybrid Motor Creates Value for Toyota and Society
Adviser: Fiona Wilson
Naomi Lueckel
Wildlife and Conservation Biology
An Analysis of How Sustainable Agriculture Practices Are Being Used in the Food Industry
Adviser: Fiona Wilson
Anna Madden
English
An Analysis of Tom's of Maine's Sustainability Practices
Adviser: Fiona Wilson
Ana O'Neil
Health Management and Policy, Spanish
An Analysis of Moderna's Sustainability Practices
Adviser: Fiona Wilson
Matt Oriente
Information Systems and Business Analytics, Sustainability
An Analysis of Bonds
Adviser: Fiona Wilson
Liam O'Toole
Colby Sherwin
Business Administration
An Analysis of Companies Fueling the Renewable Energy Industry
Adviser: Fiona Wilson
Alexander Ousback
Mathematics
An Analysis of the Solar Industry
Adviser: Fiona Wilson
University-Wide Undergraduate Sustainability Research Symposium

Poster Presentations

Wednesday, April 20
9 a.m.–4 p.m.
Memorial Union Building, Rooms 330 and 332

Students from all disciplines present research on a broad range of sustainability challenges — addressing environmental stewardship, social well-being, and economic vitality to meet our present needs, while ensuring the ability of future generations to meet their needs. Undergraduates doing sustainability research who present at this Symposium are automatically considered for the new UNH Sustainability Awards.

EcoGastronomy Capstone Poster Presentations

Adviser: Dan Winans

Jordan Bohan
Ecogastronomy, Marketing
Good, Clean, and Fair Food Careers

Tanner Drake-Deese
Ecogastronomy, Sustainable Agriculture and Food Systems
Sensory and Sustainability: Food Pairing and Brewing Practices

Madison Herman
Ecogastronomy, Nutrition
Exploring EcoGastronomy through UNH Dining

Annah Santarosa
Ecogastronomy, Hotel and Hospitality Management
Turning the Tables: An Analysis and Guide to Sustainable Food Service

The Naked Arts—Creativity Exposed! (Act I)

Wednesday, April 20
12–2 p.m.
Paul Creative Arts Center, Museum of Art

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

Madison Albanese
Fine Arts
Madi’s Mixed Media
Adviser: Julee Holcombe

Haley Dewsnup
Studio Art
Undercurrents
Adviser: Julee Holcombe

Natalie Eberhardt
Music
The Queer Politics of Aaron Copland’s Music in the 21st Century
Adviser: Rose Pruiksma

Grant Gilbert
Fine Arts
Divine Cataclysms
Adviser: Liese Zahabi

Caleb Hoell
English
Novel Presentation and Excerpts
Adviser: Clark Knowles
UNH Manchester Undergraduate Research Conference

Poster Presentations

Wednesday, April 20
3:30–6 p.m.
88 Commercial St., Room 201, 6th Floor, and Student Commons Manchester

The UNHM URC Poster Presentations showcase students’ independent research and internship projects, service learning activities and civic engagement projects in the learning lab of the city of Manchester.

Abrar Al Zawar
Biology
STEM Teaching Fellows: Creating Videos to Increase K-12 Student Knowledge on the Function of the Human Body
Adviser: Patricia Halpin

Roya Ardehali
Public Service and Nonprofit Leadership
Why Do Some High School Seniors Choose to Go to College and Others Choose to Go Directly to Work and How Does This Differ by Gender?
Adviser: Stephen Pimpare

Annie Montanus
English Literature
How to Create and Destroy a God
Adviser: Thomas Payne

Shannon Roy
Theatre
Mental Health Matters: Dance Movement Therapy
Adviser: Gay Nardone

Emily Shafritz
Theatre
Spectra: Kaleidoscopic Experience through Art in Living Color
Adviser: Tom Alsip

Emily Baker
Delaney Cote
Lydia Kokx
Kaitlyn Tevepaugh
Parker Baumann
Julia Castimore
Kendall Hawkom
Biology
HEK Cell Transfection of RFP Plasmid and Characterization of RFP Protein
Adviser: Won Hyuk Suh

Parker Baumann
Biology
Observing Secondary Metabolite Production on Differential Media
Adviser: Suzanne Cooke

Autumn Bedell
Homeland Security, Public Service and Nonprofit Leadership

Angela Fuentes
Sabrina Rahme
Hebatullah Shabaka
Communication Arts
HB478 Relative to Treatment of PFAS Contaminants in the Drinking Water of the Merrimack Village Water District
Adviser: Stephen Pimpare

Brandon Casey
Biological Sciences
The Microbial Diversity over the Changing Seasons
Adviser: Suzanne Cooke

Taylor Ceci
Biological Sciences
MLA and AMES Testing in Genetic Toxicology
Adviser: Kristen Johnson

Meghana Chintamaneni
Brianna Sullivan
Biotechnology
Joel Osterman
Biological Sciences
Optimization of Bacterial Production of mCherry
Adviser: Won Hyuk Suh

Sarah Cole
Biological Sciences
The Byproduct of Sedimentation: Testing Water Treatment Sludge for Novel Antibiotics
Adviser: Suzanne Cooke

Shoshawna Cook
Biological Sciences
Food Safety
Adviser: Patricia Halpin

Michelle Cullen
Hunter Dupuis
Dawn Khiev
Biotechnology
GFP Transfection Efficiency Comparison Study Using RVM and HEK Cells
Adviser: Won Hyuk Suh

Michelle Cullen
Biotechnology
Water Sampling at Manchester Water Works
Adviser: Suzanne Cooke

Jacob D’Onofrio
Undeclared
Nazi Propaganda
Adviser: Sonic Woytonik

Isabella Darling
Biological Sciences
The Effects of Co-Culture on Antibiotic Producing Bacteria
Adviser: Suzanne Cooke

Ethan De Angelis
Public Service and Nonprofit Leadership
Do the Individuals in the Homeless Community Remain Static Due to the Factors of a Common Mental Illness?
Adviser: Stephen Pimpare

Kaitlyn Douillard
Biological Sciences
Ian Hatton
Kari-Lynn Knight
Kira Smith
Vishnu Soni
Neuropsychology
Making Bright Objects Disappear: A Study of Motion-Induced Blindness
Advisers: Joseph LaBarre, John Sparrow
Hunter Dupuis  
Sadie Vezina  
Matthew Woodworth  
Biotechnology  
Investigating Bioink Formulations  
Incorporating Peptides and Their  
Biocompatibility Utilizing Human  
Neural Progenitor or Stem Cells  
Adviser: Won Hyuk Suh

Hunter Dupuis  
Anya Kurtenbach  
Biotechnology  
RVM Cells Differentiated on SLA Print  
Resin vs. McGel Crosslinked Structure  
Adviser: Won Hyuk Suh

Michael Evers  
Isaah Gray  
Rayhan Khan  
Chance Spinney  
Recreation Department  
Adviser: James Ramsay

Lauren Ferraro  
Neuropsychology  
Dementia and Music Therapy  
Adviser: Alison Paglia

Eric Frederic  
Psychology  
Antisemitism: Past and Present  
Adviser: Sonic Woytonik

Angela Fuentes  
Public Service and Nonprofit Leadership  
Holocaust Refugees in Latin America  
Adviser: Sonic Woytonik

Gabrielle Garneau  
International Affairs, Political Science  
Does Collective Bargaining Impact Fair  
Wages in Maine’s Public Sector Unions?  
Adviser: Stephen Pimpare

Thomas Gerton  
Biotechnology  
Internship at Advanced Solutions  
Life Sciences  
Adviser: Suzanne Cooke

Thomas Gerton  
Dianne Moschitta  
Biotechnology  
RVM Cultured on Electrospun  
Fibers vs. Polystyrene Surface  
Adviser: Won Hyuk Suh

Emma Giberson  
Dawn Khiev  
Biotechnology  
RVM Cells Cultured on Bioprinted Dots of  
Methacrylated Hyaluronan/Gelatin  
Adviser: Won Hyuk Suh

Monique Gingras  
Fardeen Siddiqui  
Shoshana Trudel  
Raunak Vijay  
Biotechnology  
Isolation and Identification of Borreliella  
burgdorferi Bacterial Viruses from New  
Hampshire Ixodes Scapularis  
Adviser: Kyle MacLea

Tejaswini Gouni  
Biological Sciences, Biotechnology,  
Genetics  
Raymond Miller  
Jessica Ricard  
Biotechnology  
The Effect of Antibacterial Agent  
Concentration on GFP Production  
Adviser: Won Hyuk Suh

Ian Harris  
Melanie Stahley  
Matthew Woodworth  
Biotechnology  
Developing New Protocols to Test the  
Cytocompatibility of Peptide-Based Bioink  
Utilizing Human Neural Stem Cells  
Adviser: Won Hyuk Suh

Abigail Harris  
Lauren Martins  
Public Service and Nonprofit Leadership  
HB1468 Relative to the Legalization of  
Cannabis  
Adviser: Stephen Pimpare

Nadine Jailaubekova  
Biotechnology  
False Holocaust Memoirs and the  
Misrepresentation of Historical Events  
Adviser: Sonic Woytonik

Fidel Mkabela  
Bioengineering  
Nanopore Sequencing of Ureaplasma  
miroungigenitalium and Ureaplasma  
zalophigentialium  
Adviser: Kyle MacLea
Ryan Johnson
Neuropsychology
The Role of Medical Killings during the Holocaust
Adviser: Sonic Woytonik

Nadia Keokominh
Biotechnology
Holocaust Influencers: Posers at Auschwitz
Adviser: Sonic Woytonik

Elvira Kibarova
Biological Sciences
My Experience as a Medical Scribe
Adviser: Patricia Halpin

Kari-Lynn Knight
Neuropsychology
Child Life Specialist: A Work of Heart
Adviser: Nicholas Mian

Madison Kriete
Public Service and Nonprofit Leadership
Does Drinking Alcohol Frequently in College Impact a Student’s Academic Performance?
Adviser: Stephen Pimpare

Anya Kurtenbach
Biotechnology
Analyzing Effects of FOXN2 Transcription Factor Downregulation by Performing qPCR for Gene Expression and Western Blot for Protein Expression for Pancreatic Cancer Cell Lines
Adviser: Kristen Johnson

Isabelle Laizure
Ofori Mensah
Dianne Moschitta
Biotechnology
Bacterial Production of GFP
Fusion Proteins
Adviser: Won Hyuk Suh

Benjamin Madore
Undeclared
Ravensbrück: The Largest Concentration Camp For Women
Adviser: Sonic Woytonik

Megan Maher
Biological Sciences
The Importance of Analytical Research in the Field of Science
Adviser: Suzanne Cooke

Davis Miller
Bryan Robbins
Matthew Winders
Public Service and Nonprofit Leadership
HB1264 Establishing Ranked-Choice Voting for State Primary Elections and Municipal Elections
Adviser: Stephen Pimpare

Joel Osterman
Biological Sciences
Novel Antibiotics in Bryophyta
Adviser: Suzanne Cooke

Allison Pham
Biotechnology
The Disconnect in the Use and Purpose of the Syllabus between Faculty and Students is REAL
Adviser: Patricia Halpin

Hayden Rangel
Bioengineering
Aya Raouf
Biotect
RVM Cells Cultured on Different Laminin Product Absorbed Surfaces
Adviser: Won Hyuk Suh

Jessica Ricard
Biotechnology
Restroom Sanitation Investigation
Adviser: Cheryl Wood

Naeleh Sapienza
Andrew Wasylyna
Matthew Woodworth
Biotechnology
GFP vs. RFP Production in Bacterial Cells
Adviser: Won Hyuk Suh

Stephanie Slaybe
Public Service and Nonprofit Leadership
How Does Childhood Trauma Affect the Mental Health Status of UNH Manchester Students?
Adviser: Stephen Pimpare

Kaitlyn Tevepaugh
Public Service and Nonprofit Leadership
Are Schools Equipped to Help Students with Managing Mental Illness?
Adviser: Stephen Pimpare

Alexander Wachenfeld
Computer Science
German Medical Experiments in Concentration Camps Influence Military Advancements
Adviser: Sonic Woytonik

Tristen Witkowski
Neuropsychology
Virtual Reality Integration in Neuropsychology Education
Adviser: Daniel Seichepine

UNH Manchester URC
Cinema Arts Day

Thursday, April 21
10 a.m.–12 p.m.
88 Commercial St., Room 456
Manchester

The UNHM Communication Arts program has a production track in which students complete introductory and advanced coursework in video production, scriptwriting, audio production, film aesthetics, and documentary production. The student films and scripts illustrate student work at different stages in the curriculum.

Catherine Hevey
Communication Arts
How a Global Pandemic Has Affected an X-Ray Technologist
Adviser: Anthony Tenczar

Bailey Jamieson
Communication Arts
Musicopia
Adviser: Anthony Tenczar

Christopher Saunders
Communication Arts
Pretty in Pink
Adviser: Anthony Tenczar

Christopher Saunders
Communication Arts
Robbery Gone Awry
Adviser: Carol Fisher
Christopher Saunders
Communication Arts
*The King of Trash*
Adviser: Carol Fisher

Christopher Saunders
Communication Arts
*What Lies Beneath*
Adviser: Anthony Tenczar

Cameron Schuyler
Communication Arts
*A Video Essay of a Hero’s Journey: The Perfect Formula for Great Storytelling*
Adviser: Anthony Tenczar

Cameron Schuyler
Communication Arts
*Checkmate*
Adviser: Anthony Tenczar

Cameron Schuyler
Communication Arts
*MALACHI*
Adviser: Anthony Tenczar

Cameron Schuyler
Communication Arts
*Paper Race*
Adviser: Anthony Tenczar

Hebatullah Shabaka
Communication Arts
*The Documentary of Us*
Adviser: Anthony Tenczar

Robert Skaff
Communication Arts
*Morning Deliveries*
Adviser: Anthony Tenczar

Robert Skaff
Communication Arts
*The Tales of Peregrine the Thief, Lorelei the Mischievous, and Bio Futures the Corporation*
Adviser: Anthony Tenczar

Peter T. Paul College of Business and Economics
Paul J. Holloway Prize Innovation to Market Competition

Charles & Miriam Nelson
Poster Competition

Thursday, April 21
12–2 p.m.
Paul College

This poster competition gives all teams entered in the Holloway Prize Innovation to Market Competition an opportunity to showcase their research into entrepreneurship. Teams have three minutes to present their business idea, followed by three minutes of Q&A with the judges.

History Department Undergraduate Research Conference

Thursday, April 21
12–3 p.m.
Memorial Union Building

The History Department hosts several panels of undergraduate history majors who present research projects from their academic classes, research seminars, independent research projects, and Honors theses. The History Undergraduate Research Conference provides History students with the opportunity to share their work with fellow students, professors, and families.

MUB, Room 336
20th Century History

Kasey Birth
History
*The Women Who Fought with Glory: Varying Perceptions and Experiences of the Women Airforce Service Pilots, Women’s Army Corps, and Army and Navy Nursing Corps of World War II*
Adviser: Marion Dorsey

Sawyer Rogers
History, Political Science
*Irish-American Reaction to the League of Nations*
Adviser: Nicoletta Gullace

Julie Sulva
History, Recreation Management and Policy
*The Issues of German Immigration to the United States during the Holocaust*
Adviser: Janet Polasky

MUB, Room 338
Intolerance and Language

Zoie Haskell
History, International Affairs, Women’s and Gender Studies
*Rhetoric about Islam and Its Lingering Effects on American Muslims and Arabs*
Adviser: Svetlana Peshkova

Jocelyn Palethorpe
History, Psychology
*Irish Language*
Adviser: Nicoletta Gullace

Ryan Saputo
Classics, History
*Barbarians & Heretics: Anti-Greek and Anti-Latin Sentiments in Crusade-Era Chronicles, 1095-1204 CE*
Adviser: David Bachrach
MUB, Room 340

Society and Social Movements

Julianne Edwards
Educational Studies, History
Captain America and Social Movements
Adviser: Jason Sokol

Michael Munroe
History
The Mexican Revolution and Transnational Movement
Adviser: Lucy Salyer

Sawyer Rogers
History, Political Science
The State and Nature of Social Capital: Using Kensington, NH as a Lens
Adviser: Elizabeth Carter

Philosophy Department Undergraduate Research Conference

Thursday, April 21
4–7 p.m.
Hamilton Smith Hall, Room 210

The Philosophy Department URC is a mosaic of concise and meaningful student presentations, varying from such philosophical topics as applied ethics, language theory, and social justice. Standard presentations predominantly last fifteen minutes and are subsequently followed by a brief Q&A period.

Andrew Meyer
Analytical Economics, Philosophy
The Role of Coherence in a System of Rationality
Adviser: Paul McNamara

Kieran Newcomb
Philosophy, Psychology
The Significance of the Principle of Sufficient Reason for Leibniz’s Cosmological Argument
Adviser: Willem deVries

Emma Wick
Philosophy, Sustainability
The Effect of Reading Literary Fiction on the Enhancement of Sympathy
Adviser: Charlotte Witt

Jacob Zercher
Mathematics, Philosophy
Audi and Fumerton on the Plausibility of Justification via Implicit Beliefs
Adviser: Paul McNamara

All Colleges Undergraduate Research Symposium

Welcome Breakfast

Friday, April 22
9–9:30 a.m.
Memorial Union Building, Granite State Room

This informal gathering gives students, faculty, and attendees an opportunity to visit with each other before experiencing the large university-wide event that follows: the All Colleges Undergraduate Research Symposium.

All Colleges Undergraduate Research Symposium

Oral Presentations, Session A

Friday, April 22
9:30–10:40 a.m.
Memorial Union Building

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.
MUB, Room 334

**China: Establishing a New Global Economic Order?**
Adviser: Lawrence C. Reardon
Moderator: Brandon Lalonde

_Surya Ari_  
Political Science  
_Silk behind Steel: Domestic Agenda Fueling China's Belt and Road Initiative_

_Benjamin Johns_  
History  
_Troubling Tides: China's Territorial Claims in the South China Sea_

_Carson King_  
Political Science  
_The Economics of the South China Sea Dilemma_

_Alex Quitongan_  
Political Science, Psychology  
_Chinese Food Quality and Agricultural Outsourcing_

_Jaden Smith_  
Business Administration  
_Containing Capitalism: China's Special Economic Zones_

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MUB, Room 336

**Human Rights and Discrimination**
Moderator: Michael Cole

_Emory Bayer_  
International Affairs, Political Science  
_Using Humanitarian Parole as a Method of Immigration_
Adviser: Jen Spindel

_Andrei Chirila_  
International Affairs  
_China's Seventy Years of Sinicizing Tibet_
Adviser: Lawrence C. Reardon

_Natalie Fosberg_  
French, International Affairs  
_Solving Overpopulation: China’s One-Child Policy_
Adviser: Lawrence C. Reardon

_Gabrielle Garneau_  
International Affairs, Political Science  
_China’s State-Sponsored Discrimination and Human Rights Abuses_
Adviser: Lawrence C. Reardon

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MUB, Room 332

**Human Security and the Freedom from Want and Fear**
Moderator: Heather Austin

_Nour AlHajjiri_  
International Affairs, Political Science  
_The Effects of Israeli Occupation on Palestinian Economy_
Adviser: Elizabeth Carter

_Brenda Mendoza_  
International Affairs, Linguistics  
_An Analysis of Missing and Murdered Indigenous Women_
Adviser: Fredrik Meiton

_Alissa Reitter_  
Civil Engineering, International Affairs  
_The Unnoticed Side of International Aid_
Adviser: Smita Lahiri

_Jasmine Taudvin_  
English/Journalism, International Affairs  
_International News Coverage of the Parkland Shooting_
Adviser: Fredrik Meiton

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MUB, Room 302

**Multidisciplinary Session I**
Moderator: Andrew Ferris

_Lauren Ainscow_  
Sociology  
_Motherhood and Incarceration_
Adviser: Ryan Gibson

_Anya Bond_  
Biomedical Science  
_Research and Design for a Website on Dental Phobias_
Adviser: Molly Campbell

_Arianna Coletti_  
Anthropology  
_TikTok: A Platform for Appreciation or a Modern and Digital Plague?_
Adviser: Sara Withers

_Ezra Coyne_  
Environmental and Resource Economics, International Affairs  
_Maori in New Zealand_
Adviser: Fredrik Meiton

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_MUB, Room 330_  

**Commentary: Published Papers in Communication**
Moderator: R. Michael Jackson

_Thomas Butt_  
Communication  
_Cloud Rhetoric — Digital Populism of Thaksin Shinawatra_
Adviser: Kate Zambon

_Emily Desormier_  
Communication  
_‘Um Mundo Novo’ or Just More of the Same for Brazil Post-Olympics?_
Adviser: R. Michael Jackson

_Madeline Graf_  
Communication  
_Are Humans an Invasive Species? How the Development of Our World Has Continuously Encroached on Wildlife_
Adviser: R. Michael Jackson

_Lily Neher_  
Theatre  
_The Resurrection of Yik Yak_
Adviser: Kevin Healey

_Ashley White_  
Communication, Women’s and Gender Studies  
_Tiger King: A Case Study in Environmental Media Representation and Effects_
Adviser: Joseph Terry

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Kegan Messmer
Linguistics, Russian
X-Bar Conjunction Theories in English and Russian Compared
Adviser: Sean Madigan

Sawyer Rogers
History, Political Science
The State and Nature of Social Capital: Using Kensington, NH as a Lens
Adviser: Elizabeth Carter

MUB, Room 338
National Security, Technology, and Economic Statecraft
Moderator: Maingi Solomon

Tanner Crockett
International Affairs, Russian
How Russia Projects Its Insecurities through Its Geopolitics
Adviser: Smita Lahiri

Steven Davis
Homeland Security, International Affairs
The Troubles in Northern Ireland
Adviser: Fredrik Meiton

Autumn Goldenberg
International Affairs, Sociology
Land Grabs in Latin America: How Land Acquisition and Expropriation Have Come to Favor the Elite, and How This Affects Markers of Development
Adviser: Smita Lahiri

Mel Nagashima
Communication, International Affairs
Automation: Friend or Foe?
Adviser: Smita Lahiri

Ethan Steuer
International Affairs, Political Science
U.S. Counterterrorism Strategy towards Islamic Terrorism
Adviser: Fredrik Meiton

MUB, Room 340
The Role of Culture, Identity, and Norms in International Affairs
Moderator: Smita Lahiri

Madeline Ferland
German, International Affairs
Alternativ für Deutschland’s Support for Russia: A Threat to Western Political Ideology in Europe?
Adviser: Fredrik Meiton

Michael Katsiris
Homeland Security, International Affairs
How Christian Life as Well as Culture Was Changed in and around Constantinople Directly before and after the Ottoman Siege of the City
Adviser: Fredrik Meiton

Olivia Marnell
English, International Affairs
Affective Citizenship: Deconstructing Britain’s Deprivation Orders through Law and Literature
Adviser: Smita Lahiri

Thomas McDonough
International Affairs, Political Science
Cultural Diplomacy as a Means of Establishing Soft Power
Adviser: Smita Lahiri

Kate Persson
English, International Affairs
Importance of Language in Migrant Integration: A Comparative Analysis of Germany’s and Sweden’s Language Policies and Their Effects on Compulsory Education Graduation Rates and Conversely Unemployment Rates within their Migrant Populations
Adviser: Fredrik Meiton

Emma Pryor-West
International Affairs, Political Science
The Breaking of British Nationalism: The Scottish Case
Adviser: Smita Lahiri

All Colleges Undergraduate Research Symposium

Poster Presentations, Session A

Friday, April 22
9:30–10:40 a.m.
Memorial Union Building, Granite State Room

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

Saba Awan
Aidan Birmingham
Jordan Bussiere
Michael Cushing
Ethan Lynch
Alison Moore
Patrick Smeltzer
Homeland Security
Facility Assessment
Adviser: James Ramsay

MUB, Room 321
Transnational Governance Dilemmas
Moderator: Funso Afolayan

Sophia Litle
English, International Affairs
Immigration Policy
Adviser: Fredrik Meiton

Cameron Magner
Communication, International Affairs
Overfishing in the South China Sea
Adviser: Fredrik Meiton
Abigail Battles
Community and Environmental Planning
What Is the Public Opinion on Immigration in the United States?
Adviser: Dante Scala

Will Bauer
Alyssa Hall
Psychology
Kaleb Ducharme
Neuroscience and Behavior
How Does Affective Framing Influence Comprehension?
Adviser: Caitlin Mills

JP Blasi
English
Mental Health in Athletics
Adviser: Molly Campbell

Elza Brechbuhl
Communication, Women's and Gender Studies
Collegiate Hookup Culture and Monogamy: The Spectrum of Non-Platonic Relationships in Contemporary Popular Film
Adviser: Stephanie Harzewski

Hannah Brinkman
Political Science
How Much Trust Does Gen Z Have in News Outlets?
Adviser: Dante Scala

Alex Carbone
Nursing
Implementing Daily Schedules to Prevent Episodes of Agitation in Pediatric Patients Boarding in the Emergency Department with Behavioral Health Diagnoses
Advisers: Kerry Nolte, Anne Meginniss

Yifang Chang
German, Psychology
Spatial Frequency Effects on Local Stereo Acuity
Advisers: Andrew Kitt, Sofia Lombardo, John Sparrow, William Stine, Rebecca White

Elizabeth Christy
Neuroscience and Behavior
The Effects of a Single Bout of Acute Aerobic Exercise on Alpha and Beta Oscillations in Recognition Memory
Advisers: Ronald Croce, Robert Ross

Rachel Courter
Communication Sciences and Disorders
Assessing How Adults Produce and Understand the Melody and Rhythm of Speech
Adviser: Jill Thorson

Haylee Crowle
Animal Science
Noise Pollution and Its Effect on Mate Quality Choice of Cricket, Teleogryllus commodus
Adviser: Jessica Briggs

Adam Dapolite
International Affairs, Political Science
Losing Faith: European Distrust in Their National Election Process
Adviser: Dante Scala

Jon Dickinson
Political Science
Do People Favor Equity or Equality?
Adviser: Dante Scala

Brandon Elias
Economics
Close to Blue, Vote for Blue
Adviser: Dante Scala

Madison Ferrie
Political Science
The United Nations as Seen by the Eastern World
Adviser: Dante Scala

Harrison Flagg
Management
Kimberly Yuen
Occupational Therapy
Give the People What They Want: Quantitative Decision Making for Entertainment Venues
Adviser: Peter Zaimes

Julia Gregorio
Nursing
Review of Age-Related Trends of Infection among People Hospitalized for Infections with Concurrent Substance Use
Adviser: Kerry Nolte

Travis Grimm
Political Science
United States and Its Relationship with Global Affairs
Adviser: Dante Scala

Carson Hansford
Political Science
Attitudes toward Government Response to COVID-19
Adviser: Dante Scala

Katherine Harpster
Neuroscience and Behavior
Analyzing Misinformation with Twitter
Advisers: Laura Allen, Sarah Creer

David Hart
Nursing
Nursing Student Self-Efficacy in Clinical Skills, Levels of Anxiety, and Utilization of Alternative Education Experiences during the COVID-19 Pandemic
Adviser: Kerry Nolte

Julia Kiburis
English, Homeland Security
Olivia McCabe
Matthew Robison
Homeland Security
Trevor Mills
Allison Mozzicato
David Thurston
Emily Yetton
Homeland Security, Justice Studies
HLS Capstone Final Project: Youth Human Development Center
Adviser: James Ramsay

Megan Knuettel
Social Work
The Dual Pandemic: COVID-19, Systemic Racism, and College Student-Athletic Mental Health
Adviser: Tarkington Newman

Sarah Krein
Nursing
A Comparison of Perceptions of Labor Support before and during the COVID-19 Pandemic
Adviser: Alyssa O’Brien

Isabella Livingston
Educational Studies, Human Development and Family Studies
Variables That Affect Parents’ Goals for Visiting a Children’s Museum
Adviser: Jill Trumbell
Meghan Lotti  
Nursing  
*Gender Related Trends among People Hospitalized for Infections with Concurrent Substance Use*  
Adviser: Kerry Nolte

Aislinn Low  
Neuroscience and Behavior  
*Take a Chance on Me: How Motivation, Risk Perception, and Personality Enter into Choices about Interpersonal Relationships*  
Adviser: John D. Mayer

Laura Lynch  
Nutrition  
*Exploring the Impact of COVID-19 on Food Security among New Hampshire Communities*  
Adviser: Jesse Stabile Morrell

Jamie Mater  
Psychology  
*The Troubled Teen Industry and Its Effects: An Oral History*  
Adviser: Robert Eckstein

Miah Munro  
Psychology  
*Understanding the Personality of a Coworker*  
Adviser: John D. Mayer

August Murray  
Civil Engineering  
*Climate Change and the Future of the New Hampshire Ski Industry*  
Adviser: Sean McLaughlin

Brittney Nalesnik  
Biomedical Science  
*Prevalence of Vaping and the Association with Cardiometabolic Risk in College Students*  
Adviser: Jesse Stabile Morrell

Kieran Newcomb  
Philosophy, Psychology  
*The Intersection of Adverse Childhood Experiences, Caregiver Closeness, and Substance Use in 14-15 Year-Olds in the United States*  
Adviser: Kimberly Mitchell

Simon Quinn  
Political Science  
*Climate Change*  
Adviser: Dante Scala

Grace Roy  
Health Management and Policy  
Tele-ACT and Recreational Therapy: Adapting Acceptance and Commitment Therapy for Telehealth Delivery to Support People with Chronic Pain during the COVID-19 Pandemic  
Adviser: Semra Aytur

Cecilia Toner  
Justice Studies, Psychology  
*Police Burnout and Alcohol Use*  
Adviser: Kimberly Mitchell

Mya Urena  
Neuroscience and Behavior  
*Subjective and Physiological Measurements of the Psychedelic Virtual Reality Experience*  
Adviser: Caitlin Mills

Ryan Vona  
Political Science  
*Americans’ Attitudes toward Increased Migrant Encounters and Immigration Policy*  
Adviser: Dante Scala

Sarah Waleryszak  
Nutrition  
*Challenges and Barriers Associated with Food Security during COVID-19 among UNH Students*  
Adviser: Jesse Stabile Morrell

Aidan Walsh  
Genetics  
*Illuminating the Ancestry of Native American DNA Segments Using Genetic and “Paper Trail” Genealogy*  
Adviser: Thomas Davis

Patrick Walsh  
Political Science  
*Swing Voters in U.S. Presidential Elections*  
Adviser: Dante Scala

Kieran Newcomb  
Philosophy, Psychology  
*The Intersection of Adverse Childhood Experiences, Caregiver Closeness, and Substance Use in 14-15 Year-Olds in the United States*  
Adviser: Kimberly Mitchell

Simon Quinn  
Political Science  
*Climate Change*  
Adviser: Dante Scala

All Colleges Undergraduate Research Symposium

**Oral Presentations, Session B**

**Friday, April 22**

10:50 a.m.–12 p.m.  
**Memorial Union Building**

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

**MUB, Room 330**

### Honors Research in Communication and Commentary: Published Papers

**Moderator: R. Michael Jackson**

Jake Connolly  
Communication: Business Applications  
*Public Monuments in Changing Societies and Political Orders*  
Adviser: Lawrence Prelli

Sara Donatello  
Communication  
*Equity vs. Equality: How Differing Viewpoints Choose to Portray History*  
Adviser: Kate Zambon

Merrimac Moran  
Communication, Women's and Gender Studies  
*The Orgasm Gap: What Role Does the Patriarchy Play in the Bedroom?*  
Advisers: R. Michael Jackson, Tamsin Whitehead

Max Oxendine  
Communication  
*TikTok: A New Source of Labor*  
Adviser: Lin Zhang
Megan Switzgable  
Communication, Educational Studies  
*How the Media Frames Mental Health and Social Media: A Case Study of the Facebook Whistleblower*  
Adviser: Nora Draper

**MUB, Room 302**

**Multidisciplinary Session II**

Moderator: Liz Fowler

Haylie Bjorklund  
Emma Campion  
Alexandra Shapazian  
Educational Studies, Psychology  
Aleigha Hilberg  
Educational Studies, English Teaching  
Maclane Jennison  
Educational Studies, History  
Nicole Jutras  
Analytical Economics, Educational Studies, International Affairs  
Isabella Livingston  
Kaylie Longua  
Educational Studies, Human Development and Family Studies  
Haley Lubliner  
Educational Studies, Zoology  
Rebecca McGee  
Educational Studies, Recreation Management and Policy  
Angela Moquin  
Educational Studies, Finance  
James Silveria  
Educational Studies, Spanish  
Megan Switzgable  
Communication, Educational Studies  
*UNH Community Awareness and Accessibility of Academic Resources at the University*  
Adviser: Barbara Peterson

**MUB, Room 334**

**Problems behind the Potemkin Village**

Adviser: Lawrence C. Reardon

Moderator: Louise Buckley

Nour AlHajjiri  
International Affairs, Political Science  
*How Urbanization in China Impacts the Workforce*  
Samuel Davies  
Political Science  
*Crisis in China’s Housing Market*  
Connor George  
Political Science  
*Ready to Burst: Origins of the South Korean Housing Bubble*  
Juhyung Jin  
Economics, International Affairs  
*China’s Culture Appropriation and South Korea*  
Caroline Sweet  
Communication, International Affairs  
*Nothing In, Nothing Out: The Censorship of Chinese Media*

**MUB, Room 338**

**The Cost to Become a Global Economic Hegemon**

Adviser: Lawrence C. Reardon

Moderator: Marina Cardoso-Vianna-Vaz

Adam Dapolite  
International Affairs, Political Science  
*The End of the Line: China’s Use of the Veto in the UN Security Council*  
Ella Davis  
International Affairs, Italian Studies  
*China’s Environment Problem*

Peter Mulvey  
Political Science  
*Determinants of Wealth Inequality in China*  
Finn Wegmueller  
German, International Affairs  
*The Challenge of China’s Unemployed*  
Equeen Xaviera  
International Affairs, Political Science  
*U.S.-China Trade War: Historical Analysis*

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**All Colleges Undergraduate Research Symposium**

**Poster Presentations, Session B**

Friday, April 22  
10:50 a.m.–12 p.m.  
Memorial Union Building, Granite State Room

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.

Emily Abrusci  
Environmental Conservation and Sustainability  
Nathan Brennan  
Business Administration  
*Grey-t Water*  
Adviser: Ian Grant

James Allen  
Sociology  
*Hate Crimes versus Domestic Terrorism*  
Adviser: Lisa Jones

Andrew Almeida  
Exercise Science  
*Vascular Health in Adults: An Analysis of Nitric Oxide, Flow-Mediated Dilation, and LDL-C*  
Adviser: Deborah Feairheller
Ian Ayer  
Christopher Martinez  
Biochemistry, Molecular and Cellular Biology, Biomedical Science  
Does Prostaglandin F2alpha Have an Effect on the Expression of the Angiogenic Inducer, CCN1, in Tumor Ovarian Granulosa Cells?  
Adviser: Paul Tsang

Odin Bickford  
Nursing  
Knowledge Gaps: Addressing the Need for Palliative Care Education for University Students  
Adviser: Michele Lovell

Jacob Blair  
Ryan Bobbitt  
Daniel Differ  
Cole Jenkins  
Justin Johansen  
Gregory Minichielo  
Laura Moore  
Homeland Security  
Risk Mitigation at the Portsmouth Fire Department  
Adviser: James Ramsay

Lindsey Broadhurst  
Psychology  
Amir Robertson  
Psychology, Women’s and Gender Studies  
Hannah Sheets  
Neuroscience and Behavior  
The Relationship between Emotional Granularity and Mental Health  
Adviser: Jolie Wormwood

Julia Cantore  
Political Science  
What Causes Political Polarization in the United States and Why Are People More Polarized than Others?  
Adviser: Dante Scala

Kaylee Casner  
Sustainability, Undeclared  
How are COVID-19 Vaccines Being Advertised? A Content Analysis of COVID-19 Social Media Posts Made by Select State Health Departments  
Adviser: Nena Stracuzzi

Maria Chouinard  
French  
Supporting the Oral Language Development of Young Dual Language Learners: Perspectives of EL Teachers in NH  
Adviser: Judy Sharkey

Nicholas Colabatistto  
Political Science  
Public Perception of Labor Unions  
Adviser: Dante Scala

Isabel Conners  
Genetics, Political Science  
Views on the Death Penalty Respective to Views on Government Involvement  
Adviser: Dante Scala

Ethan Crossman  
Geography, Linguistics  
Migration and Taiwanese Hokkien’s Geographical Distribution of Lexicon Items  
Adviser: Tu Lan

Morgan Daly  
Exercise Science  
Comparing Vascular Function to Years of Service in Firefighters Using Analysis by Flow-Mediated Dilation and Nitric Oxide  
Adviser: Deborah Feairheller

Talia Davis  
Political Science  
Partisanship and Freedom of Speech  
Adviser: Dante Scala

Matthew Demarest  
Political Science  
How Do People’s Political Ideologies Change for Social versus Economic Policies?  
Adviser: Dante Scala

Kaylyn Dickinson  
Georgia Gempler  
Emily Komerska  
Neuroscience and Behavior  
The Dynamics of Perceptual Filling-In and Motion-Induced Blindness during Binocular Rivalry  
Advisers: Sofia Lombardo, John Sparrow, William Stine, Dan Swift, Erika Wells, Rebecca White

Cerys Eldred  
Nursing  
Nurse’s Perceptions of Their Role Utilizing Eat, Sleep, Console in the Management of Neonatal Abstinence Syndrome  
Adviser: Alyssa O’Brien

Haylee Foster  
Biology  
Public Health Literacy: Essential for an Educated Citizenry  
Advisers: Semra Aytur, Rosemary Caron

Madeline Graf  
Communication  
Attitudes toward Immigration  
Adviser: Dante Scala

Jake Greenland  
Marine, Estuarine and Freshwater Biology  
Anthony Lee

Sarah Leighton  
Aidan Thayer  
Ocean Engineering  
Jack Schreiber  
Mechanical Engineering  
Redesign of Channeled Whelk Traps for Improved Selective Harvesting  
Advisers: Elizabeth Fairchild, Mary Kate Munley

Jesse Gushee  
Philosophy  
Opinions of Individuals on Immigration in the United States  
Adviser: Dante Scala

Jackie Harris  
Earth Sciences, Women’s and Gender Studies  
Zoie Haskell  
History, International Affairs, Women’s and Gender Studies  
Bethany Ott  
Human Development and Family Studies  
Caitlin Turner  
Sociology, Women’s and Gender Studies  
Tokenism in UNH Social Media  
Adviser: Avary Thorne

Maeve Healy  
Exercise Science  
Recognizing the Role of Women in Public Health  
Adviser: Semra Aytur
Kiely Hoyt
Biomedical Science
*The Effects of Estradiol on the Angiogenic Factor CCN1 in Human Tumor Granulosa Cells*
Advisers: Donnelly Hutchings, Paul Tsang

Gail Humphreys
Political Science
*How Gender Affects Attitudes toward Immigration*
Adviser: Dante Scala

Taylor Italia
Megan Miller
Madison Owens
Psychology
*The Embodied Mind: The Relationship between Sensitivity to Body Sensations and Mental Health*
Advisers: Ewa Kochanowska, Jolie Wormwood, Jaime Young

Reka Ivanyi
Ryan Patterson
Biology
*Supports and Barriers Faced by Community College Transfer Students*
Adviser: Melissa Aikens

Kylee Jedraszek
Justice Studies, Sociology
*Conducting an Osteobiography: Analyzing Unidentified Remains*
Adviser: Les Fitzpatrick

Sabrina Kadariya
Health Management and Policy
*Planning a Participatory Research Project on Environmental Justice in Manchester, New Hampshire*
Adviser: Semra Aytur

Lily Kalman
Emily Pearson
Justice Studies, Psychology
*Investigating Transgender Homicides*
Adviser: Robert Eckstein

Carley Kanter
Nursing
*Confidence and Inclusion of LGBTQ+ Health-Related Content in University Curriculum*
Adviser: Kristen Clark

Megan Kelley
Noah Ryder
Skyler Tautkus
Psychology
*Increment and Decrement Effects in Motion-Induced Blindness*
Advisers: Sofia Lombardo, John Sparrow, William Stine, Dan Swift, Erika Wells, Rebecca White

Chloe Kilelly
Nursing
*The Association between Knowledge and Confidence Related to LGBTQ+ Health Topics among University Educators*
Adviser: Kristen Clark

Charlotte Kiselevitz
Erin Luckern
Psychology
*The Theme of Self Integrated in Children's Books across Age Groups*
Adviser: Laura Allen

Marc Laferriere
Community and Environmental Planning
*Federal Budget Spending and Minority Representation in Politics*
Adviser: Dante Scala

Andrew Lagos
Psychology
Luke Whissel
Linguistics
*Examination of the Reading Experiences of Bilinguals*
Advisers: Laura Allen, Puren Oncel

Rebecca Leary
Nursing
*Addressing Patient Education Pertaining to Substance Use Risk Factors in the New Hampshire Perinatal Population*
Advisers: Kerry Nolte, Alyssa O'Brien

Jaxson Libby
Biochemistry, Molecular and Cellular Biology
*Developing a Tumor-on-Chip Platform for Cancer Drug Discovery*
Advisers: Linqing Li, Sarah Walker

Patricia Louis
Nursing
*Analyzing Family Stress in America: A Look at Maternal Stress during the COVID-19 Pandemic*
Adviser: Alyssa O'Brien

Steve MacDonald
Political Science
*Political Polarization*
Adviser: Dante Scala

Daniel Magelinski
Jayda Vazquez
Psychology
*Tessa-Francesca Reid*
Human Development and Family Studies, Psychology
*Embodied Affect: Bodily Awareness and Affective Experience in Daily Life*
Advisers: Alexandra Ecker, Jolie Wormwood

Hannah Marland
Political Science
*Linkage between Sex Education and Abortion Beliefs*
Adviser: Dante Scala

Ashanti Maronie
Anthropology
*Resolving a Cold Case Homicide: Extraction and Sequencing of DNA from a Blood Card*
Adviser: Amy Michael

Jamie Mater
Psychology
*The Troubled Teen Industry and Its Effects: An Oral History*
Adviser: Robert Eckstein

Virginia Mercier
Social Work
*CPYD (Critical Positive Youth Development) Focused Coach Education*
Adviser: Tarkington Newman

Erik Montoya
Health Sciences
*Is Anticipated Body Positioning Associated with Impact Magnitudes in Youth Lacrosse? A Pilot Study*
Adviser: Trish Kelshaw
<table>
<thead>
<tr>
<th>Name</th>
<th>College/Major</th>
<th>Topic</th>
<th>Adviser</th>
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<tbody>
<tr>
<td>Christopher Mottola</td>
<td>Computer Science</td>
<td>Parallelized Partial Differential Equation Solvers for Fast Fourier Transform Library</td>
<td>John Gibson</td>
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<td>Eman Nkounkou</td>
<td>Neuroscience and Behavior</td>
<td>Evolutionary Biology of Sensory Receptors and Pathway Components in Cnidaria</td>
<td>David Plachetzki</td>
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<td>Kyle Nord</td>
<td>Anthropology, Classics</td>
<td>Pirating Sunken Ships: Why Underwater Archaeological Sites Need Our Protection</td>
<td>Alexandre Martin</td>
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<td>Nicole Oberholtzer</td>
<td>Neuroscience and Behavior</td>
<td>Does Prior Concussion History Predict Concussion Incidence in Middle School Athletes?</td>
<td>Michelle Martell</td>
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<td>Harrison Parent</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
<td>Targeting the BCL6 Transcription Factor in Ovarian Cancer</td>
<td>Sarah Walker</td>
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<td>Braian Powtak</td>
<td>Homeland Security</td>
<td>Social Media Use and Party Affiliation Correlation</td>
<td>Dante Scala</td>
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<tr>
<td>Anthony Quiles</td>
<td>Political Science</td>
<td>Sweet Emotion: How Does National Mood Affect Voter Turnout?</td>
<td>Dante Scalares</td>
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<tr>
<td>Jack Ryan</td>
<td>Political Science</td>
<td>Knowledge of State-Level American Government among Rural and Urban Populations</td>
<td>Dante Scala</td>
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<tr>
<td>Lara Santos</td>
<td>Environmental Conservation and Sustainability</td>
<td>Impacts of Roads on Predator Presence in Southeastern New Hampshire</td>
<td>Rem Moll</td>
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<tr>
<td>Benjamin Scanlan</td>
<td>Justice Studies, Psychology</td>
<td>Consequences of Juvenile Detainment</td>
<td>Ellen Cohn</td>
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<td>Zakiya Scott</td>
<td>Biomedical Science</td>
<td>Phototransduction, Evolution and Sensory Abilities of Cnidaria</td>
<td>David Plachetzki</td>
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<tr>
<td>Emily Soule</td>
<td>Economics, Political Science</td>
<td>The Opioid Crisis In New Hampshire: Public Opinion vs. Number and Nature of Bills Introduced to the State Legislature</td>
<td>Dante Scala</td>
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<td>Hailey Stevens</td>
<td>Nursing</td>
<td>Quality of Life and Symptom Sharing among Women with Athletic Urinary Incontinence</td>
<td>Kerry Nolte</td>
</tr>
<tr>
<td>Michaela Stoncius</td>
<td>Chemistry, Political Science</td>
<td>The Relationship between Feelings on Non-Christian Religions and U.S. Foreign Relations</td>
<td>Dante Scala</td>
</tr>
<tr>
<td>Nick Suga</td>
<td>Political Science</td>
<td>Attitudes towards the Legalization of Marijuana</td>
<td>Dante Scala</td>
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<tr>
<td>Patrick Walsh</td>
<td>Political Science</td>
<td>Swing Voters in U.S. Presidential Elections</td>
<td>Dante Scala</td>
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<tr>
<td>Jackson Weinbeck</td>
<td>Political Science</td>
<td>How Americans Vote Based on Their Income</td>
<td>Dante Scala</td>
</tr>
<tr>
<td>Ali Whitman</td>
<td>Occupational Therapy</td>
<td>Sensory Scouting: An Investigation of Supports for Sensory Needs of Children in Local Businesses</td>
<td>Sarah Smith</td>
</tr>
<tr>
<td>Nour AlHajjiri</td>
<td>International Affairs, Political Science</td>
<td>Japanese Economic Miracle</td>
<td>Dante Scala</td>
</tr>
<tr>
<td>Carly Brady</td>
<td>International Affairs, Sociology</td>
<td>Gender Inequality in Japan</td>
<td>Dante Scala</td>
</tr>
<tr>
<td>Harrison Clark</td>
<td>Political Science</td>
<td>Causes and Consequences of Japan’s Aging Population</td>
<td>Dante Scala</td>
</tr>
<tr>
<td>Eadie Pitino</td>
<td>International Affairs, Political Science</td>
<td>Trading with the Enemy: The Complexities of Sino-Japanese Economic Ties</td>
<td>Dante Scala</td>
</tr>
<tr>
<td>Chloe Schnitt</td>
<td>English, History, International Affairs</td>
<td>Japan’s Declining Role on the International Stage</td>
<td>Dante Scala</td>
</tr>
</tbody>
</table>
Multidisciplinary Session III

Moderator: Kate Gaudet

Emily Abrusci  
Environmental Conservation and Sustainability  
Adviser: Ian Grant

Nathan Brennan  
Business Administration  
Grey-t Water  
Adviser: Ian Grant

Sarah Bell  
Sociology  
Changing Perceptions of Masculinity and Femininity in America  
Adviser: Catherine Moran

Kyana Burgess  
Anthropology, Sustainability  
Exploring Race, Sex, Age, and Geographic Location Discrepancies in Missing Persons Reports: The Northern New England Perspective  
Adviser: Amy Michael

Tu Anh Duong  
History  
Competing Visions of Race in American History  
Advisers: Kurk Dorsey, Jeffrey Frenkiewich

Jamie Mater  
Psychology  
The Troubled Teen Industry and Its Effects: An Oral History  
Adviser: Robert Eckstein

Brenna Niziak  
Justice Studies, Psychology  
The Need for Guidance: Depression as a Mediator between Parental Monitoring and Delinquency  
Adviser: Ellen Cohn

Politics, Religion and Literature in the Pre-Modern World

Moderator: R. Scott Smith

Mackenzie Gauthier  
Nursing  
Women in Movement: My Family’s Oral History of the Italian Resistance  
Adviser: Anna Wainwright

Maggie Joyce  
Classics, History  
The Vocabulary of Sacred Spaces in Pausanias  
Adviser: Stephen Trzaskoma

Chloe Kofman  
Italian Studies, Religious Studies  
Chi Sono: An Exploration of Jewish Food in Italy with a Dash of Personal Identity  
Adviser: Anna Wainwright

AJ O’Neil  
Classics, Information Technology  
The Capitolium of Ostia Antica: Building a 3D Visual Experience  
Adviser: R. Scott Smith

Camden Roy  
Classics, Italian Studies  
Calling up the Dead: Translating the Footnotes to Odysseus’ Underworld Journey  
Adviser: R. Scott Smith

Thomas Vachon  
Classics  
Theater, the Demos, and the Polis: Theater’s Influence on Athenian Society in “The Frogs”  
Adviser: Stephen Trzaskoma

Ukraine Today, Taiwan and Myanmar Tomorrow?

Moderator: Thomas McDonough

Zachary Francis  
Political Science  
China’s Struggle for Dominance in the South China Sea

Marc Giudice  
International Affairs, Political Science  
Tug of War: The Use of Force in Disputed Territory

Michelle Lee  
Computer Science, International Affairs  
Myanmar Conflict: The Underwhelming International Response

Ronan Pleszkoch  
History, International Affairs  
Taiwan’s Struggle for Sovereignty

Colin Scully  
Political Science  
Obstacles to Taiwanese Independence
**Peter T. Paul College of Business and Economics Undergraduate Research Conference**

**Poster Session I**

**Friday, April 22**

9–10:30 a.m.

Paul College, Rooms G35, G45, and Great Hall

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

**ECON 774: Bachelor of Arts in Economics**

Adviser: Reagan Baughman

- **Ian Bellino**
  Economics, Justice Studies
  *How Taxes Affect Entrepreneurship and Investment*

- **Jacob Brancato**
  Economics
  *Effects of Economic Policy on Use of Plastics*

- **Tasha Bui**
  Economics
  *Sugar-Based Taxes: First They’re Sweet, Then They’re Sour*

- **Christopher Cole**
  Economics
  *Effects of Increasing Student Loan Debt on Home Ownership*

- **Ryan Dixon**
  Economics
  *Economic Consequences of Aggressive Antitrust Policy*

- **Matthew Gillespie**
  Economics
  *The Factors That Impact Economic Growth in Developing Countries*

- **John Helmanis**
  Economics, Finance
  *Student Loans and Their Effects on Asset Accumulation*

- **Geumsol Hwang**
  Economics
  *The Effect of Education Background on Wage of American Workers: Analysis of Wage Gap According to Educational Background*

- **Shane Kelley**
  Economics
  *The Roots of the Puerto Rican Financial Crisis and the Road to Recovery*

- **Evan McParland**
  Economics, Finance
  *Does the Corporate Income Tax Kill Investment?*

- **Fabiana Paolini**
  Economics, Italian Studies
  *The Effects of China’s Aging Population on Economic Growth*

- **Kaitlyn Price**
  Economics, Neuroscience and Behavior
  *Moral Hazard: A Driver of Rising Health Care Costs?*

- **Andrew Schiller**
  Economics
  *The Economic Effects of Cancelling Student Debt*

- **Greg Scott**
  Business Administration, Economics
  *COVID-19’s Unprecedented Impact on U.S. Firms*

- **Samuel Shepard**
  Economics
  *The Impact of Big Tech on the American Economy: Is an Antitrust Policy Appropriate?*

- **Carter Snow**
  Economics
  *The Effects of the Gig Economy on U.S. Workers*

- **Emily Soule**
  Economics, Political Science
  *Universal Basic Income: A Response to Job Automation?*

- **Derek Tammaro**
  Economics
  *The Gender Pay Gap and Economic Inequality*

**ECON 775: Bachelor of Science in Analytical Economics**

Adviser: Aziz Saglam

- **Jack Becker**
  Analytical Economics
  *School Funding and Student Achievement*

- **Benjamin Swift**
  Analytical Economics
  *How Taxes Affect Entrepreneurship and Investment*

- **Henry Lavoie**
  Analytical Economics, German
  *School Funding and Student Achievement*

- **Ian Berens**
  Analytical Economics
  *School Funding and Student Achievement*

- **Tristan Pavarini**
  Analytical Economics
  *School Funding and Student Achievement*

- **Eric Ciarla**
  Analytical Economics, Philosophy
  *School Funding and Student Achievement*

- **Alina Wright**
  Analytical Economics
  *School Funding and Student Achievement*

- **Benjamin Clement**
  Analytical Economics
  *School Funding and Student Achievement*

- **Diego Smith**
  Analytical Economics
  *School Funding and Student Achievement*

- **Nathaniel Cohen**
  Analytical Economics
  *School Funding and Student Achievement*

- **Sean Patrick Flynn**
  Analytical Economics
  *School Funding and Student Achievement*

- **Briggs Haugen**
  Analytical Economics
  *School Funding and Student Achievement*

- **Abram Rock**
  Analytical Economics
  *School Funding and Student Achievement*

- **Is Bitcoin Price Correlated to the Stock Market?**

- **Nathaniel Cohen**
  Analytical Economics
  *School Funding and Student Achievement*

- **Sean Patrick Flynn**
  Analytical Economics
  *School Funding and Student Achievement*

- **Briggs Haugen**
  Analytical Economics
  *School Funding and Student Achievement*

- **Abram Rock**
  Analytical Economics
  *School Funding and Student Achievement*
Peter T. Paul College of Business and Economics Undergraduate Research Conference

Oral Session I
Friday, April 22
9:30–11 a.m.
Paul College, Room G25

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

The Mel Rines Student Angel Investment Fund
Advisers: Laura Hill, Jeffrey Sohl

Kelsie Dawe
Ellie Johnston
Finance

Peter T. Paul College of Business and Economics Undergraduate Research Conference

Oral Session II
Friday, April 22
10–11:30 a.m.
Paul College, Room G85

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

Advisers: Stephen Ciccone, Ahmad Etebari
Emma Battistelli
Thomas Berthasavage
Mark Borak
Zachary Broder
Kelley Burzlaff
Joe Chavez
Aran Cherouvis
Patrick Cotton
Jacob Emerson
Jack Flanagan
Jack Gillis
Carolyn Hoadley
Jared Jessemnan
Fazla Karim
Christopher Natola
Johanne Nichols
Kyle Polito
James Randazzo
Allie Reyes
Aidan Rolfe
Maiah Seul
John Standish
Evan Vogler
Mckenna Wilson
Finance
Sarah Blampied
Accounting, Finance
Benjamin Clement
Olivia Graves-Witherell
Samuel Hussey
Diego Smith
Cameron Taatjes
Analytical Economics
Patrick Fleming
Management
Cole Giannasca
Jason Plant
Luke Stradley
Entrepreneurial Studies
Adam Gray
Economics, Finance
Conor Jowett
Jae Yun
Accounting
Joseph Lampe
Cameron Marshall
Economics
Andrew Meyer
Analytical Economics, Philosophy
Chloë Villemure
Information Systems and Business Analytics
Sarah Wilkinson
Analytical Economics, Sustainability
Peter T. Paul College of Business and Economics
Undergraduate Research Conference

Poster Session II

Friday, April 22
11 a.m.–12:30 p.m.
Paul College, Room G35, G45, and Great Hall

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

Eco-Gastronomy
Adviser: Dan Winans

Jordan Bohan
Ecogastronomy, Marketing
Good, Clean, and Fair Food Careers

Tanner Drake-Deese
Ecogastronomy, Sustainable Agriculture and Food Systems
Sensory and Sustainability: Food Pairing and Brewing Practices

Madison Herman
Ecogastronomy, Nutrition
Exploring EcoGastronomy through UNH Dining

Annah Santarosa
Ecogastronomy, Hotel and Hospitality Management
Turning the Tables: An Analysis and Guide to Sustainable Food Service

Kendra Spencer
Ecogastronomy, Nutrition
Exploring Gleaning: Education Campaign for Gather

Britt Wicander
Ecogastronomy, Philosophy
Analyzing the Sustainability of Intentional Living Communities

Multidisciplinary/Honors Thesis

Daniel Andrews
Accounting, Finance
The Effects of the COVID-19 Pandemic on Audit Quality and Timeliness
Adviser: Md Safayat Hossain

Jenna Barrows
Accounting, Information Systems and Business Analytics
The Effect of Work Location on Employee Job Acceptance
Adviser: Yunshil Cha

Sarah Blampied
Accounting, Finance
Income Inequality Has Been Expanding over the Decades: What Are the Main Contributing Factors?
Adviser: John Hasseldine

Emily Bolognino
Economics, Justice Studies
The Effect of Infertility Treatment on Female Labor Supply in the United States
Adviser: Reagan Baughman

Sydney Boulander
Management
How Team Climate Influences Creativity, Collaboration, and Productivity
Adviser: Vanessa Druskat

Zachary Broder
Finance
How BHB Pest Elimination Will Dominate the Pest Control Industry
Adviser: Lee Mizusawa

Anders Brucker
Business, Finance
Stability of Reward Tokens
Adviser: Jun Li

Timothy Campbell
Economics
How Can Becoming a Tax Haven Benefit a Nation?
Adviser: Andrew Seal

Elizabeth Dion
Accounting, Finance
Executive Compensation Gap for Women: Examining the Implications of the California Board Composition Mandate
Adviser: Steve Irlbeck

Maria Eduarda Dos Santos Koch
Accounting
Expanded Audit Reports: The Effects of Critical Audit Matters on Investors and Firms
Adviser: Le Emily Xu

Jill Durkin
Economics, Finance
A Choice Experiment to Determine Consumer Preference for EVs in New England
Adviser: Scott Lemos

Harrison Flagg
Management

Kimberly Yuen
Occupational Therapy
Give the People What They Want: Quantitative Decision Making for Entertainment Venues
Adviser: Peter Zaimes

Kathleen Flath
Finance
The Value of Impact Investing
Adviser: Richard Kilbride

John Helmanis
Economics, Finance
Should Cryptocurrency and NFTs be Taken as Collateral?
Adviser: Richard Kilbride

Nicole Jutras
Analytical Economics, Educational Studies, International Affairs
Impact of Vocational Education on Wages in Germany
Adviser: Reagan Baughman

Noah Lapointe
Management, Marketing
Paying Attention: The Effects of Different Social Media Posts on Consumers
Adviser: Justin Pomerance

Thurston Mann
Economics, German
The Effects of COVID-19 on the Bicycle Supply Chain: An Investigation into the United States Bicycle Imports
Adviser: Loris Rubini

Cameron Marshall
Economics
The Velocity of Monetary Policy
Adviser: Michael Goldberg
Andrew Meyer
Analytical Economics, Philosophy
The Health Cost of Anthropogenic Pollution
Adviser: Bradley Herring

Rebecca Milbury
Information Systems and Business Analytics, Marketing
Examining UNH Paul College’s Brand Image in Students and Faculty
Adviser: Diane Devine

Nicholas Mokas
Accounting
The Need for Technology in Higher Education’s Accounting Curriculum
Adviser: Jonathan Nash

Liam Morrissey
Analytical Economics
How Can We Bee Helpful? An Analysis of Pesticide and Commercial Pollinator Use
Adviser: Stephanie Brockmann

Alexis Pimental
Finance
Criminal Behavior within the Youth and How These Factors Affect Business Development
Adviser: Luciana Echazu

Ashley Pineault
Finance
Better Investment: Bitcoin or Ethereum?
Adviser: Michael Hanlon

Ethan Pollet
Information Systems and Business Analytics
A Different Type of Virus: How Has the COVID-19 Pandemic Affected Data Breaches and Ransomware?
Adviser: Jing Wang

Lucas Schnare
Finance
Developments of Cryptocurrency and Its Growing Role in Our Financial System
Adviser: Zhaozhao He

Joslyn Villavicencio
Management
Examining the Effectiveness of Video Marketing Based on Consumer Attitudes: Differences between Gen Z and Baby Boomers
Adviser: Thomas Gruen

Jessica Walsh
Business Administration
Privacy Paradox: The Impact a Health Crisis Has on Individual Views Regarding Privacy and Data Collection
Adviser: Ermira Zifla

Sarah Wilkinson
Analytical Economics, Sustainability
ESG Disclosure in STARS Rated University Endowments
Adviser: Wenjuan Xie

Hannah Wirth
Information Systems and Business Analytics
Experiential Learning versus Microcredentials: Educational Needs of Undergraduate Students and Working Professionals
Adviser: Scott Lemos

Brahim Yatim
Economics, Political Science
The Real Cost of Mining: How Digging for Rare Earth Metals Could Pose a Greater Cost than Electric Vehicles Can Save
Adviser: Bruce Elmslie

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Peter T. Paul College of Business and Economics Undergraduate Research Conference

Oral Session III
Friday, April 22
11:30 a.m.–1 p.m.
Paul College, Rooms 175, 225, and 235

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

Marketing Workshop Presentations
Adviser: Peter Masucci

Rye Alley
Management, Marketing
Ladd-Patrick Fagerson
Ethan Gennell
Marketing
Lauryn Murray
Nathan Walker
Finance, Marketing
Michela Ur
Information Systems and Business Analytics, Marketing
Super Secret Ice Cream: Design and Develop Marketing Programs to Grow Awareness of and Increase Business for This Bethlehem, NH, Woman-Owned Start-Up Company

Kaitlyn Antonides
Travis Arnold
Jill Broom
Kevin McGrath
Shania Robinson
Samuel Taub
Marketing
Trevor Cardin
Finance, Marketing
Wright Collective: Research, Design, and Develop Marketing Programs to Increase Awareness of and Engagements for This York, Maine, Fundraising Consulting Services Company

Marco Bernasconi
Daniel Wilhelmy
Finance, Marketing
Ian Daly
Elizabeth Liberta
Sarah McIlroy
Marketing
Caitlin Diver
Management, Marketing
Rebecca Milbury
Information Systems and Business Analytics, Marketing
Bring Back the Trades: Design and Develop Marketing Programs Aimed at Increasing Awareness for This Rye, NH, Non-Profit Organization That Provides Incentives and Scholarships to Young People to Learn a Trade
Eric Berry  
Marketing, Sustainability  
Abby Dansreau  
Hotel and Hospitality Management, Marketing  
Katelyn Howe  
Information Systems and Business Analytics, Marketing  
Kira Nolan  
Kendrick Shaw  
Donald Willeman  
Marketing  
Outdoor New England: Research, Design, and Develop Marketing Programs to Increase Awareness of and Generate New Business for This Franklin, NH, Retailer of Outdoor Equipment, Primarily for Water-Based Sports  
Jordan Bohan  
Ecogastronomy, Marketing  
Thomas Costa  
Madison Litka  
Hanna Manca  
Andrea Price  
Marketing  
Andrew McIntosh  
Marketing, Spanish  
Allegiant Physical Therapy: Research, Design, and Develop Marketing Programs Aimed at Increasing Awareness of and New Clients for This Durham, NH, Physical Therapy Practice  
Tanner Brown  
Katharine Hawkinson  
Colton Krasinski  
Anna Pysz  
Marketing  
Michael Dambach  
Noah Lapointe  
Management, Marketing  
The Nest Family Cafe: Research, Design, and Develop Marketing Programs to Help Launch and Grow Awareness for This New Family-Oriented Start-Up Coffee Shop Business Located in Londonderry, NH  
Megan Bufagna  
Dylan Degen  
Liam Fay  
Curtis Grundy  
Reid Kirkpatrick  
Daria Kuznetsova  
Nicholas Meeker  
Marketing  
iWorx Systems: Research, Design, and Develop Marketing Programs Aimed at Increasing Awareness of and Attracting New Customers to This Dover, NH, Supplier of Scientific Laboratory Equipment for Physiology Teaching and Research  
Brooke Burdon  
Emily Dysart  
Matthew Havey  
Deisry Huliselan  
Marketing  
Paul Hernandez  
Finance, Marketing  
Emily O’Keefe  
Austin Wentzel  
Management, Marketing  
Your Oil Tools: Research, Design, and Develop Marketing Programs Aimed at Increasing Awareness of and Generating New Business for This Hooksett, NH, Supplier of a Wide Range of Essential Oil Products  
Benjamin Cappiello  
Calvin Kobylinski  
Finance, Marketing  
Cameron McNally  
Lily Scott  
Brook Soucy  
Marketing  
Kemal Warouw  
Management, Marketing  
Service Federal Credit Union: Research, Design, and Develop Marketing Programs Aimed at Increasing Awareness of and Attracting New Customers to This Portsmouth, NH, Financial Services and Banking Business  
Adam Costa  
Emma Zupo  
Marketing  
Libby Hart  
Economics, Marketing  
John King  
Management, Marketing  
Matthew O’Neill  
Finance, Marketing  
Zachary Suozzo  
Information Systems and Business Analytics, Marketing  
Lillian Montalto Signature Properties International: Research, Design, and Develop Digital Marketing Programs Aimed at Expanding Awareness of and Clients for This Andover, MA, Distinctive Properties Real Estate Company  
Stephen Cote  
Kayla Edminster  
Ariana Horne  
Brendyn Marsh  
Nicole Petry  
Joseph Viola  
Marketing  
NewVo Interiors: Design and Develop Marketing Programs Aimed at Increasing Online Awareness of and New eCommerce Business for This Manchester, NH, Supplier of Office Furniture  
Tristan Crone  
Justin Diamantopoulos  
Tanner Mills  
Marketing  
Alicia Hanlon  
Management, Marketing  
Adena Rothbard  
Information Systems and Business Analytics, Marketing  
Tori Rothwell  
Entrepreneurial Studies, Marketing  
The Memorial Union Building (MUB) at UNH: Design and Develop Marketing Programs to Grow Awareness of and Increase Use of Facilities and Programs at the MUB on the UNH Durham Campus
### Peter T. Paul College of Business and Economics Undergraduate Research Conference

**Poster Session III**

**Friday, April 22**

**1–2:30 p.m.**

**Paul College, Great Hall**

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from judges.

**Economics of Sports**

**Adviser: James Wible**

- **Ian Berens**
  Analytical Economics  
  *The Labor Market of the New England Revolution*

- **Brendon Bussiere**
  Finance  
  *Chelsea and Their Labor Department*

- **Colin Byrne**
  Economics, Finance  
  *Labor Market of Rally Car Racing*

- **Michael Clow**
  Finance  
  *Firm Side of the Philadelphia Union*

- **Joey DeSimone**
  Economics  
  *Boston Bruins and How They Operate*

- **Sean Patrick Flynn**
  Analytical Economics  
  *Labor Analysis of the Boston Red Sox*

- **Natalie Gagnon**
  Finance  
  *Los Angeles Angels*

- **Adam Gray**
  Economics, Finance  
  *The Economics of the New England Patriots*

- **Libby Hart**
  Economics, Marketing  
  *The LA Rams — SoFi Stadium*

- **Paul Holloway**
  Entrepreneurial Studies, International Business and Economics  
  *The Economics of Formula 1 Teams*

- **Ryan Johnson**
  Economics  
  *Cincinnati Bengals and Their Labor Market*

- **Wesley Kunin**
  *The Anaheim Ducks and Their Labor Market*

- **Benjamin MacKillop**
  Economics, Political Science  
  *The Economic Impacts of the Ultimate Fighting Championship*

- **Fabiana Paolini**
  Economics, Italian Studies  
  *A Microeconomic-Labor Analysis of the Los Angeles Lakers NBA Franchise*

- **Jacob Parilla**
  Management  
  *The Vegas Golden Knights and Their Firm*

- **Henry Piacquad**
  Economics  
  *The Cleveland Browns and Their Labor Market*

- **Clara Richards**
  Economics  
  *Gender Inequalities in Sports and the Economics behind It*

- **Greg Scott**
  Business Administration, Economics  
  *The Economics behind the Red Sox*

- **Bryce Shaw**
  Analytical Economics  
  *The Boston Bruins and Their Labor Market*
Kyle Sheehan  
Economics, Finance  
*Boston Celtics as a Win-Maximizing Franchise*

Colin Sprague  
Analytical Economics  
*The Toronto Maple Leafs and Their Labor Market*

Dylan Stiles  
Statistics  
*A Labor Analysis of the Tampa Bay Rays Franchise*

Adam Wilkinson  
Environmental and Resource Economics  
*The Chicago Bulls and Their Firm’s Economics*

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**UNH Manchester URC Engineering Technology Day**

**Senior Project Presentations**

**Friday, April 22**  
9 a.m.–4 p.m.  
88 Commercial St., Room 201  
Manchester

The UNHM Engineering Technology Program presents its annual Senior Project Presentations day. This event is the culmination of an academic year effort where full-time seniors formally present their projects to peers, faculty members, representatives and technical advisers of sponsoring companies, and special guests.

Adviser: Robert Arredondo

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Logan Audsley  
Patrick Baker  
Andrew Kraemer  
Joren Schamel  
Mechanical Engineering Technology  
*UNHM VEX U Robotics Competition Team UNHM-1*

Stephen Dunleavy  
Jason Kephart  
Electrical Engineering Technology  
*Carl Mills*

Anh Nguyen  
Mechanical Engineering Technology  
*UNHM VEX U Robotics Competition Team UNHM-5*

Colby Hammond  
Connor Skane  
Electrical Engineering Technology  
*Marina Ngalula*

Joshua Shevlin  
Electrical Engineering Technology, Mechanical Engineering Technology  
*UNHM VEX U Robotics Competition Team UNHM-2*

Troy Lovecky  
Mohammed Sukkar  
Electrical Engineering Technology  
*Elizabeth Marcoux*

Andrew Snitgen  
Mechanical Engineering Technology  
*UNHM VEX U Robotics Competition Team UNHM-4*

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**The Naked Arts—Creativity Exposed!**

**Act III**

**Friday, April 22**  
12:15–1:25 p.m.  
Memorial Union Building, Theatre I

This event exposes the inner creative process of artists working in various disciplines. Presenters will describe the process, research, and other creative aspects undertaken to bring an artistic creation from initial inspiration to the stage or gallery. This may include a performance or excerpts from their work to illustrate their creative scholarship.

Victoria Dean  
Art: Art History  
*Both Sides of the Easel: Impressionism and Women*  
Adviser: Susan Wager

Megan Linehan  
Theatre  
*Growth through Pain*  
Adviser: Gay Nardone

Serenity Morris  
Theatre  
*Salim Salim, Set Design and Research*  
Adviser: Szu-Feng Chen

Cathryn Scanlon  
Accounting  
*Pieces*  
Adviser: Clark Knowles
FRIDAY 4/22

Peter T. Paul College of Business and Economics
Paul J. Holloway Prize
Innovation to Market Competition

Bud Albin Challenge Round

Friday, April 22
1-4 p.m.
Paul College, Rooms G85, 115, 135, and 175

The Bud Albin Challenge acts as the Semi-Final Round of the Holloway Prize Innovation to Market Competition. Twenty teams present their business concepts to a panel of industry judges. From here, six will be selected to move on to the Championship Round.

College of Health and Human Services (CHHS) Grimes Award Competition

Friday, April 22
1-4 p.m.
Pettee Hall, Rooms 106, 114, and G02

Jack and Marianna Grimes and family, all UNH graduates, endowed the funds for this celebration of excellence in undergraduate research. The oral presentation competition includes finalists who have been selected by CHHS faculty after rigorous scientific review of written proposals.

Elizabeth Christy
Neuroscience and Behavior
The Effects of a Single Bout of Acute Aerobic Exercise on Alpha and Beta Oscillations in Recognition Memory
Advisers: Ronald Croce, Robert Ross

Rachel Courter
Communication Sciences and Disorders
Assessing How Adults Produce and Understand the Melody and Rhythm of Speech
Adviser: Jill Thorson

Maison D’Amelio
Biomedical Science
The Effects of Post-Meal Walking on Daytime Blood Pressure in Young Adult Women
Adviser: Michael Brian

Megan Knuettel
Social Work
The Dual Pandemic: COVID-19, Systemic Racism, and College Student-Athletic Mental Health
Adviser: Tarkington Newman

Virginia Mercier
Social Work
CPYD (Critical Positive Youth Development) Focused Coach Education
Adviser: Tarkington Newman

Kersten Mercurio
Occupational Therapy
Life after the Intensive Care Unit: Understanding Patient Needs and Experiences
Advisers: Jamme Morency, Vidya Sundar

Grace Roy
Health Management and Policy
Tele-ACT and Recreational Therapy: Adapting Acceptance and Commitment Therapy for Telehealth Delivery to Support People with Chronic Pain during the COVID-19 Pandemic
Adviser: Semra Aytur

Kristen Sinagra
Health Sciences
Children with Attention Deficit/Hyperactivity Disorder Have a Greater Likelihood of Comorbid Depression
Adviser: Trish Kelshaw

Hailey Stevens
Nursing
Quality of Life and Symptom Sharing among Women with Athletic Urinary Incontinence
Adviser: Kerry Nolte

Ali Whitman
Occupational Therapy
Sensory Scouting: An Investigation of Supports for Sensory Needs of Children in Local Businesses
Adviser: Sarah Smith
## Psychology Department
### George M. Haslerud Undergraduate Research Conference

**Friday, April 22**  
1–4 p.m.  
McConnell Hall, Room 220

The George M. Haslerud URC, named for the late Professor Emeritus of Psychology, recognizes and celebrates undergraduate research conducted by Honors psychology students. Students present their original research projects before an audience of UNH faculty, staff, graduate students, fellow undergraduates, and friends and family.

**Madison Bouchard Liporto**  
Justice Studies, Psychology  
**Affective Forecasting and Mood Disorder Symptoms: How Clinical Symptoms Relate to the Prediction of Future Emotions**  
Adviser: Jolie Wormwood

**Maggie Crean**  
Psychology  
**Hypothetical Emotional Behaviors across the Life-Span**  
Adviser: Michelle Leichtman

**Imane Defaa**  
Psychology  
**The Role of Epistemology in Discourse Comprehension**  
Adviser: Laura Allen

**Molly Hodgson**  
Psychology  
**Comparing the Trajectories of Low and High Baselines of Youth Delinquency**  
Adviser: Lisa Jones

**Paxton Morley**  
Justice Studies, Psychology  
**COVID-19 Rule Following and Rule Violating Behaviors and Vaccine Hesitancy/Willingness: Do Anxiety, Depression, Anger and Belief in COVID-19 Vaccine Myths Make a Difference?**  
Adviser: Ellen Cohn

**Miah Munro**  
Psychology  
**Understanding the Personality of a Coworker**  
Adviser: John D. Mayer

**Morgan Parrish**  
Psychology  
**Student Experiences during COVID-19 Pandemic**  
Adviser: Pablo Chavajay

**Elizabeth Phelps**  
Justice Studies, Psychology  
**Just Give Me a Reason: Expanding the Legal Socialization Model to Accommodate Personal Intelligence**  
Adviser: Ellen Cohn

**Aubrey Porter**  
Psychology  
**EEG Patterns of Motor Memory Consolidation Depend on Practice Structure: A Comparison between Variable and Repetitive Practice Schedules**  
Adviser: Ronald Croce

**Morgan Thomas**  
Psychology  
**Vicarious Memories Between Parents & Children: Examining the Impact of Subjective Well-Being and the Presence of the Reminisce Bump**  
Adviser: Michelle Leichtman

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## Languages, Literatures, & Cultures (LLC) Department
### Undergraduate Research Conference

**Friday, April 22**  
1–5 p.m.  
Murkland Hall, Room G17

The Department of Languages, Literatures, and Cultures (LLC) hosts an undergraduate research conference comprised of oral and poster presentations.

**Olivia Balabanis**  
International Business and Economics, Spanish  
**Spanish Movie**  
Adviser: Jaume Marti-Olivella

**Ethan Crossman**  
Geography, Linguistics  
**Migration and Taiwanese Hokkien’s Geographical Distribution of Lexicon Items**  
Adviser: Tu Lan

**Bernadette Farmer**  
Economics, Spanish  
**Migration in NH: Expanding Linguistic and Cultural Bonds, La Bitácora de Bernadette**  
Adviser: Mauricio Pulecio

**Harrison Flagg**  
Management  
**Retratos de Visibilidad: Shedding Light on Hispanic Culture and Presence in New Hampshire**  
Adviser: Lori Hopkins

**Peter Gerhard**  
Spanish  
**Acquisition of a Second Language for Spanish Speakers in an English-Based Education System**  
Adviser: Mauricio Pulecio
Peter Gerhard
Spanish
*Spanish Film*
Adviser: Jaume Marti-Olivella

Zoie Haskell
History, International Affairs, Women’s and Gender Studies
*Rhetoric About Islam and Its Lingering Effects on American Muslims and Arabs*
Adviser: Svetlana Peshkova

Augustin Korsh
Psychology, Spanish
*Spain’s Economic Crisis and the New Political Scene*
Adviser: Jaume Marti-Olivella

Bryn Larkin
Management, Spanish
¡El color, El Amor, La Ropa - Ay! (El impacto de Pedro Almodóvar)
Adviser: Carmen Garcia-Rasilla

Seth Mandravelis
French, German, Humanities
*A Polyglot’s Handbook*
Adviser: Holly Cashman

Gillian Reynolds
Spanish, Sustainability
*Cafe and Cultura: Coffee as a Vehicle for Shared Culture*
Adviser: Holly Cashman

James Silveria
Educational Studies, Spanish
*Dual-Immersion Bilingual Education in New Hampshire*
Advisers: Holly Cashman, Lori Hopkins

Emily Zaleski
Spanish
*Indigenous Identity in Latin America*
Adviser: Lori Hopkins

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**Honors English Undergraduate Research Conference**

**Friday, April 22**

2–3:30 p.m.

**Hamilton Smith Hall, Room 205**

To complete Honors-in-English, students must conduct a semester-long research project, culminating in a 30-40 page senior thesis. The Honors English Undergraduate Research Conference provides these students and students in the linguistics program with the opportunity to share their work with their fellow students, professors, and families. The presentations include poetry, autobiographical writing, journalism, and scholarship on literary texts from several different centuries.

**Tara Hohn**

English Teaching, History
*Shakespeare’s Deviation from His Predecessors: Aligning Romeo and Juliet with Italian Renaissance Marriage Culture*
Adviser: Douglas Lanier

**Katie Hoppler**

Economics, English/Journalism
*Budapest Spring 2022 Travel Writing*
Adviser: Tom Haines

**Olivia Marnell**

English, International Affairs
*To the Farthest Ports of the Rich East: Exploring and Writing Salem, Massachusetts*
Adviser: Sue Hertz

**Kaitlin Miller**

English Teaching
*Exploring Educators’ Perceptions of Legislation about Discrimination*
Adviser: Alecia Magnifico

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**Senior B.A. & B.F.A. Exhibition and Preview Reception**

**Friday, April 22**

4–6 p.m.

**Paul Creative Arts Center, Museum of Art**

This annual show celebrates the achievements of graduating art students from the UNH Department of Art and Art History.

**Madison Albanese**

Fine Arts
*Madi’s Mixed Media*
Adviser: Julee Holcombe

**Luccas Booth**

Fine Arts
*Layered Space*
Adviser: Brian Chu

**Lorna Bostwick-Pope**

Fine Arts
*Biomorphic Boxcar*
Adviser: Julee Holcombe

**Haley Dewsnap**

Studio Art
*Undercurrents*
Adviser: Julee Holcombe
COLSA Undergraduate Research Conference

Oral Presentations

Saturday, April 23
8:15–10 a.m.
Memorial Union Building, Theatre II

Student presentations at the COLSA URC are based on research conducted in any of the departments within the College of Life Sciences and Agriculture. Registrants will be notified by the COLSA URC committee if they are selected for an oral presentation.

Lindsay Cartmell
Biology
Alexis McGarry
Mechanical Engineering
Katie Swenson
Ocean Engineering
Adviser: M. Robinson Swift

Anna Metzler
Biomedical Science
Looking at the Effects of M0-, M1- and M2-Polarized Macrophages on Waldenstrom Macroglobulinemia Cell Viability and Proliferation
Adviser: Sherine Elsawa

Harrison Parent
Biochemistry, Molecular and Cellular Biology
Targeting the BCL6 Transcription Factor in Ovarian Cancer
Adviser: Sarah Walker

Dominick Tavares
Nutrition
Understanding the Division 1 Athlete’s Understanding of Nutrition
Adviser: Kevin Pietro

COLSA Undergraduate Research Conference

Poster Presentations

Saturday, April 23
10:10 a.m.–12 p.m.
Memorial Union Building, Granite State Room

Student presentations at the COLSA URC are based on research conducted in any of the departments within the College of Life Sciences and Agriculture. Research ranges from field studies to molecular biology to genomics studies.

Ly Andruk
Wildlife and Conservation Biology
Location, Location, Location: Common Tern (Sterna hirundo) Nest Site Selection in the Gulf of Maine
Advisers: Aliya Caldwell, Elizabeth Craig

Chiara Antonioli
Biomedical Science
The Role of Histone Variants in Regulating Gene Expression in the Protozoan Parasite Toxoplasma gondii
Adviser: Vicki Jeffers

Alexa Aubrey
Brighid Lamprey
Genetics
Population Structure and Dispersal of Prairie Warblers in the Central and Eastern United States
Adviser: Adrienne Kovach

Ian Ayer
Christopher Martinez
Biochemistry, Molecular and Cellular Biology, Biomedical Science
Does Prostaglandin F2alpha Have an Effect on the Expression of the Angiogenic Inducer, CCN1, in Tumor Ovarian Granulosa Cells?
Adviser: Paul Tsang

Karina Babina
Biomedical Science
Inactivation of Corticostriatal Pathway and Connections to Associative Learning through Nicotine Stimulus in Sprague Dawley Rats
Adviser: Sergios Charntikov

Nadire Bek
Biomedical Science
The Accumulation of Anticoagulant Rodenticides in Lynx rufus from New Hampshire, New Jersey, and New York, USA
Advisers: David Needle, Inga Sidor

Julie Bobyock
Environmental Sciences
Investigating the Impacts of Active Layer and Permafrost Microbial Community Interaction in a Changing Climate through 3-Week Incubation
Adviser: Jessica Ernakovich

Caitlin Borges
Sustainability, Zoology
Arsenic in the Bolles Avian Collection: Developing a Best Practice for Handling Specimens Treated with Historical Taxidermy Methods
Adviser: Janet Anderson

Sarah Bourgoin
Biochemistry, Molecular and Cellular Biology
Does HIF1a Influence Transcription Factor STAT3 in High Grade Serous Ovarian Cancer
Adviser: Sarah Walker

Bethany Bussey
Biomedical Science
Natural Disease Suppressiveness of Wood Fiber Substrates
Adviser: Anissa Poleatwich

Suzannah Buzzell
Wildlife and Conservation Biology
The Effect of Forest Degradation on the Population Distribution of Mammals in the Bartlett Experimental Forest, New Hampshire
Adviser: Rem Moll

Shayla Callahan
Biomedical Science
Glaucoma in Dogs
Adviser: Inga Sidor
Lindsay Cartmell  
Biology  
Alexis McGarry  
Mechanical Engineering  
Katie Swenson  
Ocean Engineering  
Adviser: M. Robinson Swift  

Justine Cassel  
Marine, Estuarine and Freshwater Biology, Sustainability  
Cyanobacteria Monitoring in Brackish Lakes Using Phycoerythrin, Phycocyanin and Size Fraction Analysis  
Adviser: James Haney  

Emily Chen  
Environmental Sciences  
Impact of Drought Stress on Oak Stomatal Size and Density at Thompson Farm, NH  
Adviser: Heidi Asbjornsen  

Madeleine Clement  
Evelyn Proctor  
Biochemistry, Molecular and Cellular Biology  
Reese Yeatman  
Biomedical Science  
Investigating the Roles of PRMT5-Mediated Epigenetic Regulations of RBPs and Histone  
Adviser: Jingwei Cheng  

Isabel Cole  
Sustainable Agriculture and Food Systems  
The Four R's: A Framework to Evaluate the Environmental Impact of Environmental Research  
Adviser: Adam Wymore  

Isabella Collamati  
Wildlife and Conservation Biology  
Effects of Aging on the Reproductive Success of Female Saltmarsh Sparrows (Ammospiza caudacutus)  
Adviser: Adrienne Kovach  

Haylee Crowle  
Animal Science  
Noise Pollution and Its Effect on Mate Quality Choice of Cricket, Teleogryllus commodus  
Adviser: Jessica Briggs  

Alyssa Daigle  
Environmental Conservation and Sustainability  
Katherine Denneh  
Biology  
Effect of Lake Air and Water Temperature on Toxic Aerosols  
Advisers: Hailey Carter, James Haney, Amanda McQuaid  

Olivia Deblos-Hill  
Biomedical Science  
Tracking and Identifying Sources of Bacterial Fecal Contamination in Northern New England: The Significance of Avian and Human Sources  
Adviser: Stephen Jones  

Victoria Denovellis  
Neuroscience and Behavior  
EEG Brainwave Pattern of App23 Mice (an Alzheimer’s Disease Mouse Model) under Anesthesia  
Adviser: Xuanmao Chen  

Brendan Deschenes  
Biomedical Science  
Allelic Exchange of binK in Vibrio fischeri  
Adviser: Cheryl Whistler  

Maxim Desjardins  
Biology  
Root and Soil Carbon Responses to Long-Term Warming  
Adviser: Serita Frey  

Christi Donatelli  
Biomedical Science  
The Alterations of Gene Expression in the Cactus Mouse (Peromyscus eremicus) Due to Dietary Changes  
Adviser: Matthew MacManes  

Angelica Dzirzynski  
Earth Sciences, Marine, Estuarine and Freshwater Biology  
Assessing Controls of Methane and Carbon Dioxide Emissions from a Temperate Reservoir  
Adviser: Ruth Varner  

Cheyenne Elliott  
Animal Science  
Anticoagulant Rodenticide Accumulation in Free-Ranging Fishers (Pekania pennanti) from Maine, USA  
Adviser: David Needle  

Sarah Fasanaro  
Animal Science  
Potential Loss of Lysine from Various Rumen Protected Lysine Products When Mixed with a Total Mixed Ration  
Adviser: Nancy Whitehouse  

Abigail Ferreira  
Neuroscience and Behavior  
Mitchell Norris  
Marine, Estuarine and Freshwater Biology  
Influence of Surface Tension on Production of Toxic Aerosols  
Adviser: James Haney  

Olivia Fortin  
Zoology  
Secilya Williams  
Wildlife and Conservation Biology  
Relative Energy Content of Stream Macroinvertebrates and Their Potential Value as a Food Source to Brook Trout  
Adviser: Nathan Furey  

Sydney Gendreau  
Environmental and Resource Economics, Sustainability  
Sustainability in the New England Ski Industry  
Advisers: John Halstead, Cameron Wake  

Rachael Girroir  
Animal Science  
Determining Plasma Methionine or Lysine Concentrations for Lactating Holsteins Supplemented with 12 g/d and 24 g/d of Methionine from Infusion or a RP-Met Supplement Using the In Vivo Plasma Dose-Response Method  
Adviser: Nancy Whitehouse  

Marley Gonsalves  
Marine, Estuarine and Freshwater Biology, Sustainability  
Interactions between Emiliania huxleyi, HHQ, and Emiliania huxleyi Virus  
Adviser: Elizabeth Harvey  

Anna Gray  
Animal Science  
Supplementation of Sodium Butyrate in Postweaned Limit-Fed Heifer Diets: Effects on Coccidia Counts  
Adviser: Peter Erickson
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Title</th>
<th>Advisers</th>
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<tbody>
<tr>
<td>Jason Hansen</td>
<td>Biomedical Science</td>
<td>Relationship between α-Defensins, Gut Microbiome, and Glycemic Status in Bhutanese Refugees</td>
<td>Sherman Bigornia, Maria Carlota Dao</td>
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<td>Analyzing Misinformation with Twitter</td>
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<td>Ellie Hult</td>
<td>Genetics</td>
<td>Use of Hybrid Genes to Investigate the Function of Protein Phosphatase 2A in Arabidopsis thaliana</td>
<td>Estelle Hrabak</td>
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<td>Em Irvine</td>
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<td>Predation Driven Phenotypic Plasticity in a Daphnia laevis/Chaoborus americanus System</td>
<td>Istvan Miko</td>
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<td>Delaney Jean</td>
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<td>Processing Soil Cores from Adams Point in Durham, NH to See the Effect of TLP on the Salt Marsh</td>
<td>Gregg Moore</td>
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<td>Maeve Kelley</td>
<td>Wildlife and Conservation Biology</td>
<td>Mapping Landscape Connectivity for Conservation of the Endangered Blanding’s Turtle in New Hampshire</td>
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<td>Trevor Massey</td>
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<td>Kiara Muca</td>
<td>Biomedical Science</td>
<td>Comprehensive Avian Pathology Results of Zoo New England Submissions to the New Hampshire Veterinary Diagnostic Laboratory (2011-2021)</td>
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Biochemistry, Molecular and Cellular Biology  
Targeting the BCL6 Transcription Factor in Ovarian Cancer  
Adviser: Sarah Walker

Valerie Pascetta  
Biochemistry, Molecular and Cellular Biology  
Watching Conformational Changes of a Single Hemoglobin upon Oxygen Binding  
Adviser: Krisztina Varga

Demetrius Phofolos  
Neuroscience and Behavior  
Comparative Analysis of Dominant Halophyte Species’ Percent Cover at Two Massachusetts Salt Marshes Following Mosquito Ditch Remediation  
Adviser: David Burdick

Emily Pratt  
Biochemistry, Molecular and Cellular Biology  
Targeting STAT3 in Triple Negative Breast Cancer  
Adviser: Sarah Walker

Caterina Roman  
Sustainable Agriculture and Food Systems  
Influence of Reducing Tomato Fruit Load on Fruit Size, Quality and Yield  
Adviser: Rebecca Sideman

Savannah Salvage  
Neuroscience and Behavior  
Meta-Analytic Connectivity Modeling of Psychopathic Inmate and Non-Inmate Functional Brain Networks  
Adviser: Donald Robin

Lara Santos  
Environmental Conservation and Sustainability  
Impacts of Roads on Predator Presence in Southeastern New Hampshire  
Adviser: Rem Moll

Samantha Schultz  
Genetics  
Investigating the Effects of STAT3 as a Drug Target in Breast Cancer Cells  
Adviser: Sarah Walker

Alexander Searing  
Environmental Sciences  
Impacts of Storm Events on Sediment Mobilization into Streams and Rivers  
Adviser: Wilfred Wollheim

Audrey Sharp  
Animal Science  
Using Social Media for Developing an Animal Advocacy Toolkit  
Adviser: Vanessa Grunkemeyer

Natalie Smith  
Biomedical Science  
Genetic Diversity of Free-Ranging Fishers (Pekania pennanti) in the Northeastern United States  
Adviser: David Needle

Charles Staff  
Zoology  
Evolutionary Novelies in the Male Terminalia of Mining Bees (Hymenoptera: Andrenidae)  
Adviser: Istvan Miko

Samantha Swartz  
Genetics  
Determining the Essentiality of Key Transcription Binding Proteins in Toxoplasma gondii through the Tetracycline Off Inducible Knockdown System  
Adviser: Vicki Jeffers

Catherine Taylor  
Environmental and Resource Economics  
Landscaping with Native Plants: Are Private Landowners Interested?  
Adviser: Kelly Giraud

Massle Thach  
Biomedical Science  
Diagnostics and Disease Surveillance of Managed New Hampshire Honey Bees (Apis mellifera) with Emphasis on Varroa destructor and Nosema spp.  
Adviser: Colleen Monahan

Vladimir Tkachev  
Neuroscience and Behavior  
Comparing the Performance of Glutamate Sensors with Conventional Electrophysiology in Vitro Using Hippocampal Slices  
Advisers: Arturo Andrade, Edward Song

Ari True  
Biomedical Science  
The Novel Erythropoietin (EPO)-Regulated Adaptor Protein, “C1ORF186/RHEX”, Modulates the EPO-Dependent Proliferation of Human Erythroid Progenitor Cells  
Adviser: Don Wojchowski

Megan Tyler  
Biomedical Science  
The N-Terminal Region of Cone Phosphodiesterase-6 Catalytic Subunits Enhances Dimerization of Its Regulatory Domains  
Adviser: Rick Cote

Sarah Waleryszak  
Nutrition  
Challenges and Barriers Associated with Food Security during COVID-19 among UNH Students  
Adviser: Jesse Stabile Morrell

Aidan Walsh  
Genetics  
Illuminating the Ancestry of Native American DNA Segments Using Genetic and “Paper Trail” Genealogy  
Adviser: Thomas Davis

Catherine Wardinski  
Marine, Estuarine and Freshwater Biology, Sustainability  
Microplastics in the Hampton-Seabrook Estuary: Analyzing Trends and Comparing Methodologies in Sample Collection  
Advisers: Hanna Mogensen, Gregg Moore

Lauren Welch  
Genetics  
An Optimized Technique for Single Larva DNA Extraction to Observe MSX in Crassostrea virginica  
Advisers: Bonnie Brown, Alyssa Stasse

Natalie White  
Environmental Sciences  
Controls on Carbon Gas Fluxes from a Temperate Forest Soil  
Adviser: Ruth Varner
Olivia Williams
Biomedical Science
Screening Ocean Samples from Georgia for the Presence of MSX and Dermo Using PCR and qPCR Methods
Adviser: Elizabeth Harvey

Sophia Zaslow
Zoology
The Relationship between Performance and Coloration in Eastern Red-Backed Salamanders (Plethodon cinereus)
Adviser: David Steinberg

Peter T. Paul College of Business and Economics
First-Year Innovation and Research Experience (FIRE) URC

Poster Presentations & Oral Presentations
Saturday, April 23
9 a.m.–2 p.m.
Paul College

FIRE is an integrated, team-based, and game-like experience for first-year Paul College students. Through a series of challenges, students develop business plans that are presented at this year-end finale, which features poster and oral presentations on students’ business plans and concludes with a “Grand Challenge Round.”

Grand Challenge: Energy

Team: Anotha 1
Adviser: Robert Horgan
George Acuil
Emory Bachand
Hailey Deming
Charles Greenberg
Brennan Hynes
Olivia Kennedy
Ethan Leary
Mykyle Merrill
Anthony Moussalli
Gabriel Rock
Sydney Shaw
Andrew Soden
Madison Vangellow
Macey White
Business Administration
Marisa Armer
Jackson Cooney
Matthew Falvey
William Finn
Brayden LaDue
Jordyn LeMay
Undeclared

Team: Laser Sharks
Adviser: Cameron Taatjes
Ryan Astrologo
Drew Bircher
Sean Bradley
Kyle Burditt
Mary Condon
Brendon Cruz
Jaelin Cummings
Alexander Cutter
Will Donaldson
Aidan Dormady
Mathew Fitzpatrick
Aiden Giarnese
Kyle Heidt
Jamie Keep
Jason Lee
Stephen Mague
Ryan O’Malley
Sam Townsend
Colby Walsh
Analytical Economics
Madison Lucas
Undeclared

Team: Stratton Oakmont
Adviser: Emma Zupo
Dylan Barriero
Nathan Brennan
Chloe Doyon
Ryan Drouin
Asa Fiske
Nia Garland
Nicolas Jacobs
Ethan Lyons
Andrew Mahoney
Maddy Mahoney
Mckenna Murphy
Gaia Palamara
Connor Pelletier
Jessica Plumser
Jack Sullivan
Erica Waters
Business Administration
Maurgan McGrath
Undeclared

Team: Claudia’s Crew
Adviser: Claudia Fox
Natalie Campbell
Aliana Carbone
Aidan Chane
Anna Cleary
Tanner Cole
Erik Collins
Liam Devlin
Shannon Flaherty
Brayden Kearns
James Lilley
Morgan Maiani
Nikitas Menounos
Jake Rowe
Nathan Spires
Colin Wallace
Business Administration
Robert Cronin
Cameron Sweeney
Grace Townsend
Undeclared
Team: Sturdy Thurdy
Adviser: William Demers
Molly Caplette
Jaedon Cliche
Josiah Coulombe
Jessica Daigle
Ethan Gaffney
David Laing
Joseph Lambert
Ryan Mason
Donny Paglia
Tyler Peck
Gwyneth Poetsch
Samuel Ricketts
Isabella Sambuaga
Mason Steele
Michael Willard
Business Administration
Caitlin Finneran
Nicholas Peters
Undeclared

Team: Two Fire
Adviser: Maria Eduarda Dos Santos Koch
George Cheney
Emma Donovan
Nolan Heggie
Ethan Hirsch
Taylene Lavertue
Tiffany Marrotte
Nathan Meeker
Connor Moore
Nicholas Morana
Owen Paul
Hunter Pelletier
Catie Shannon
Brendan Snocker
Business Administration
John Ecklund
Gracie Jordan
Jacob Robertson
Abigail Yekelchik
Undeclared

Grand Challenge: Entertainment

Team: Devine Nine
Adviser: Madison Shatzer
Jason Abramson
Caroline Barrett
Max Burke
Catherine Casey
Liam Cody
Robert Doherty
Dylan Driscoll
Madison Fleming
Kaile Krenzer
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- Declan Tolley
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- Samuel Napitupulu
- Undeclared
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Victoria Fluet
Kenneth Frommer
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Abigail Lombardi
Kyle McManus
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Brandon Murphy
Makenzie Ryan
Jordan Smith
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Sebastian Casey
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Laura Karpa
Shea Larkin
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Aidan Morneault
Ava Napolitano
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Caitlynn Lessard
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Makenzie Ryan
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Business Administration
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Mason Simione
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Ann Manchester Kelley Nursing Inquiry Day

Wednesday, May 4
2–5 p.m.
Health Science Simulation Center

This event features scholarly presentations by undergraduate Honors students and Graduate Program students in Nursing.

Peter T. Paul College of Business and Economics
Paul J. Holloway Prize
Innovation to Market Competition

Championship Round

Wednesday, May 11
12:30–5 p.m.
Paul College, Room G75 and Great Hall

This competition takes students out of the classroom and into the real world. Students are required to research and prepare strategies for commercializing new products and services, which they present to a panel of industry judges. Prizes are awarded for the most feasible and fundable approaches for starting, acquiring, or expanding a business venture.
Acknowledgments

The UNH Undergraduate Research Conference has grown to become a signature event at the University and one of the largest and most diverse conferences of its kind. Bringing the URC to fruition each year is the result of a collaborative network of many community members across campus. Here, we acknowledge these individuals and campus units and thank them for helping to make the 2022 URC happen.

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Thanks to the 2022 URC Planning Committee (as well as the many individuals who served on subcommittees):
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Szu-Feng Chen and Tom Payne, The Naked Arts—Creativity Exposed!
Leslie Curren and Pam Wildes, COLSA URC
Molly Doyle and Amanda Leger, All Colleges Undergraduate Research Symposium
Andrew Earle, Paul College Holloway Prize Competition
Elisabeth Farrell, University-Wide Undergraduate Sustainability Research Symposium
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Subrena Smith, Philosophy Department URC

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<table>
<thead>
<tr>
<th>Student Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbott, Avery</td>
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<tr>
<td>Abele, Kaitlyn</td>
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<td>Abounaja, Ruben</td>
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2022 UNDERGRADUATE RESEARCH CONFERENCE • 53
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<td>48</td>
</tr>
</tbody>
</table>

2022 UNDERGRADUATE RESEARCH CONFERENCE • 55
Hart, David 25
Hart, Libby 36, 37
Hartford, Tyren 7, 15
Hartman, Matty 9
Hartmann, Michael 48
Haskell, Zoie 21, 28, 41
Hatfield, Nicholas 13
Hatton, Ian 18
Hauer, Amelea 11
Haugen, Briggs 32
Hauschild, Liz 14
Havey, Matthew 36
Hawkinson, Katharine 36
Hawkom, Kendall 18
Hayes, Emma 47
Hayes-Hunsicker, Max 19
Hazen, Christopher 12
Heafey, Leah 47
Healy, Brooke 16
Healy, Erin 50
Healy, Maeve 28
Heaney, Owen 48
Heed, Madeleine 49
Heely, Mitch 7
Heidt, Kyle 46
Heinze, Adam 48
Heintzler, Stephen 12
Helmanis, John 32, 34
Hemond, Joshua 10
Hennessey, Maximillian 9
Herman, Brayden 49
Herman, Madison 17, 34
Hernandez, Paul 36
Heusser, Sophia 48
Hevey, Catherine 20
Hickman, Matthew 37
Hicks, Adison 13
Hidalgo, Elvis 9
Hidalgo, Joshua 50
Hilberg, Aleigha 27
Hirsch, Briella 16
Hirsch, Ethan 47
Hixon, Kendall 9
Hoadley, Carolyn 33
Hoadley, Madision 19
Hobson, Samantha 19
Hodgson, Molly 40
Hodzic, Leja 19
Hoell, Caleb 17
Hohn, Tara 41
Holland, Justin 50
Hollasch, Cassandra 16
Holloway, Paul 37
Holmes, Benjamin 48
Holt, Justin 50
Hoppler, Katie 41
Horne, Ariana 36
Horvat, Andrew 50
Houle, Kaitlin 16
Howard, Christopher 14
Howe, Katelyn 36
Hoying, Jonathan 19
Hoyt, Kiley 29, 44
Hu, Isabelle 11
Huliselam, Deisy 36
Hull, Ellie 44
Humphreys, Gail 29
Huntley, Charles 48
Hurley, Erin 50
Hussey, Samuel 33
Hwang, Geumsol 32
Hynes, Brennan 46
Ingalls, Kevin 12
Ippedico, Nicholas 9
Irving, Em 44
Italia, Taylor 29
Ivanyi, Reka 29
Jackson, Patrick 11
Jacobs, Nicolas 46
Jacques, Colby 8
Jailaubekova, Nadin 19
Jamieson, Bailey 20
Janelle, Spencer 12
Jaquith, Gabe 8
Jean, Delaney 44
Jedraszek, Kylee 29
Jenks, Cole 28
Jennison, Maclane 27
Jensen, Sarah 49
Jerome, Jacob 19
Jessemman, Jared 33
Jin, Juhong 27
Johansen, Justin 28
Johns, Benjmain 23
Johnson, Elijah 9
Johnson, Ryan 20
Johnson, Ryan 37
Johnson, Tyler 16
Johnston, Ellie 33
Jonathan, Justine 33
Jones, Bailey 8
Jones, Madison 47
Jones, Matthew 48
Jordan, Gracie 47
Jowett, Conor 33
Joyce, Maggie 31
Judge, Adam 9
Jutras, Nicole 27, 33, 34
Kadariya, Sabrina 29
Kajunski, Christopher 48
Kalman, Lily 29
Kanter, Carley 29
Kapantais, Victoria 8
Kaplan, Harrison 50
Karic, Ervin 19
Karin, Fazla 33
Karp, Laura 50
Karwie, Sarah 48
Katsiris, Michael 24
Katumba, Christian 50
Kavanagh, Charlie 49
Keane, Cara 50
Kearns, Brayden 46
Keeler, Gregory 12
Keep, Jamie 46
Kelley, Drew 14
Kelley, Maeve 44
Kelley, Megan 29
Kelley, Shane 32
Kelly, Aidan 23
Kelly, Amanda 15
Kempskie, Kyle 49
Kennedy, Carolyn 44
Kennedy, Olivia 46
Kennedy, Jack 13
Kernish, Marguerite 14
Kenny, Samantha 50
Keohane, Christopher 8
Keokominh, Nadia 20
Kephart, Jason 38
Kerivan, Alexander 49
Khadka, Mihir 9
Khalil, Dylan 49
Khan, Rayhan 19
Khiev, Darwin 18, 19
Kibarova, Elvira 20
Kiburis, Julia 25
Kikelly, Chloe 29
Kilson, Hunter 10
Kimball, Matthew 12
King, Carson 23
King, John 36
King, Nicole 7
Kirichok, Daniel 9
Kirkpatrick, Reid 36
Kislevitz, Charlotte 29
Knight, Kari-Lynn 18, 20
Knightsly, Christian 49
Knuettel, Megan 25, 39
Kobylianski, Calvin 36
Kofman, Chloe 31
Kokx, Lydia 18
Kolber, Ella 50
Komorska, Emily 28
Komoto, Megumi 49
Korsh, Augustin 41
Kotulak, Arielle 10
Kraemer, Andrew 38
Krasinski, Colton 36
Kreell, Samuel 49
Krein, Sarah 25
Krenzer, Kaile 47
Kriete, Madison 20
Kris, Lindsay 51
Krosky, Samuel 50
Kunin, Wesley 37
Kurtenbach, Anya 19, 20
Kuryala, Marvin 10
Kuznetsova, Daria 36
LaBrecque, Nick 7
LaCasse, Kathryn 50
Lacombe, Bryce 15
LaDue, Brayden 46
LaFerriere, Marc 29
LaFlamme, Jarret 12
Latlammle, Matthew 11
LaFrancois, Sarah 47
Lagos, Andrew 29
Lageze, Oliver 47
Laing, David 47
Laazure, Isabella 20
Lambert, Joseph 47
Lambert, Wesley 8
Lamers, Christian 13
Lamprey, Brightid 42
Lamy, Jayden 49
Lancaster, Shelly 13
Landry, Brady 50
Lane, Kristin 11
Langley, Eric 13
LaNigra, Graham 47
Lapointe, Noah 34
LaPorte, Timothy 7
Lariviere, Josh 10
Larkin, Bryn 41
Larkin, Shea 50
Larkin, Tyler 49
LaRosa, Christian 38
LaSalle, Jackson 50
Lavertue, Taylene 47
<table>
<thead>
<tr>
<th>Name</th>
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</tr>
</thead>
<tbody>
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<td>18, 20</td>
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<td>16, 50</td>
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<td>26</td>
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<td>Paganis, Nikolas</td>
<td>48</td>
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<td>47</td>
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<td>46</td>
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<td>Palamara, Gaia</td>
<td>46</td>
</tr>
<tr>
<td>Palethorpe, Jocelyn</td>
<td>21</td>
</tr>
<tr>
<td>Paolini, Fabiana</td>
<td>32, 37</td>
</tr>
<tr>
<td>Parc, Tom</td>
<td>12</td>
</tr>
<tr>
<td>Parent, Harrison</td>
<td>7, 30, 42, 45</td>
</tr>
<tr>
<td>Parilla, Jacob</td>
<td>37</td>
</tr>
<tr>
<td>Parks, Ryan</td>
<td>47</td>
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<td>40</td>
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<td>49</td>
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<td>46</td>
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