



University of  
New Hampshire

Spring 2016



# Undergraduate Research Conference

A UNIVERSITY-WIDE CELEBRATION OF RESEARCH, SCHOLARSHIP  
AND CREATIVITY

---

# URC 2016

## A welcome to participants and attendees

---



MARK W. HUDDLESTON



P.T. VASUDEVAN

**W**ELCOME to the 17TH annual celebration of research and discovery at the University of New Hampshire. The Undergraduate Research Conference highlights the outstanding research, scholarship and creative activities of our students and their faculty mentors, and it is a privilege to invite you to see their work firsthand.

Since it was launched as a University-wide effort in 2000, the URC has become one of UNH's most exciting traditions, and a showcase for the remarkable ingenuity, talent and accomplishments that our students develop at UNH. The URC also honors the collaboration and mutual respect that our students and faculty enjoy, and reflects how UNH-inspired research partnerships are improving the quality of life across the Granite State and around the world.

Our conference is one of the largest and most diverse in the nation, and this year marks another record in participation. More than 1,800 students will present their findings at both the Durham and Manchester campuses, representing academic achievements in every college and school and the support of hundreds of faculty mentors.

At UNH, discovery-based education offers every student the opportunity to build the knowledge, skills and confidence he or she needs to turn ideas into action and to achieve lifelong success.

Whether your visit includes a poster session, a formal presentation, an art exhibit or a creative demonstration, you will be impressed with the participants' knowledge and understanding. Thank you for supporting our students and New Hampshire's flagship public research university.

Best regards,

A handwritten signature in dark ink, appearing to read "Mark W. Huddleston".

MARK W. HUDDLESTON, PRESIDENT

A handwritten signature in dark ink, appearing to read "P.T. Vasudevan".

P.T. VASUDEVAN

INTERIM PROVOST AND VICE PRESIDENT FOR ACADEMIC AFFAIRS



---

## A Welcome from the Hamel Center for Undergraduate Research

---

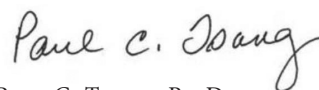
**W**ELCOME to the annual celebration of academic excellence at the University of New Hampshire! The URC embodies UNH's mission to offer students a discovery-based education by encouraging inquiry, exploration, and deeper immersion in their fields of study. This year, more than 1,800 students—mentored by over 325 faculty members—will present their research and scholarship at URC events, which include symposia, panel and poster sessions, performances, and prize competitions. Student presenters represent disciplines from across the academic spectrum, reflecting the breadth and depth of undergraduate research and scholarship at UNH.

The 2015–16 academic year marks the first year that the Hamel Center for Undergraduate Research is serving as the administrative home of the URC, which was previously coordinated by the Office of Engagement and Academic Outreach. We are excited to build upon the growth and success of previous years and to further promote and expand the opportunities for undergraduate research at UNH. As the mission of the Hamel Center for Undergraduate Research is to provide resources and financial support for the research, scholarly, and creative projects of UNH students, we see our new role with the URC as a happy marriage that enables us to broaden our commitment to supporting, nurturing, and showcasing all stages of the research process.

In every research process, the final stage is the communication of findings to the wider public, and the URC enables students to share the results of their scholarship with fellow students, faculty, staff, family members, federal and state agency personnel, business and industry representatives, and members of our local community.

For many students, the URC is their first opportunity to present their work to such a broad audience. The URC is thus vital in giving students practice in speaking in public, communicating complex ideas to a general audience, sharing ideas with colleagues in their fields, 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.

Finally, we 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 our community as we celebrate 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



LAURA A. PERILLE, PH.D.  
URC Coordinator,  
Hamel Center for Undergraduate Research

# URC 2016 Contents

Calendar of Events	4	UNH Manchester URC Engineering Technology Day	32
Map	5	Paul College of Business and Economics URC	
<b>Friday, April 15 Events</b>		Poster Presentations	33
2015 Senior B.A. & B.F.A. Exhibition and M.F.A. Thesis Exhibition Preview Reception	6	Oral Presentations	37
<b>Tuesday &amp; Wednesday, April 11-12 Events</b>		The Naked Arts – Creativity Exposed! (Act III)	42
Graduate Research Conference (GRC)	6	Paul College of Business and Economics University-wide Paul J. Holloway Prize Innovation-to-Market Competition (Bud Albin Challenge Round)	42
<b>Tuesday, April 19 Events</b>		College of Health and Human Services Grimes Award Competition	42
UNH Manchester URC Oral Presentations	6	Psychology Department George M. Haslerud URC	43
<b>Wednesday, April 20 Events</b>		Honors English URC	44
Thompson School Undergraduate Student Showcase	7	Student Composers’ Concert	44
Paul College of Business and Economics University-wide Paul J. Holloway Prize Innovation-to-Market Competition (Charles & Miriam Nelson Poster Round)	7	<b>Saturday, April 23 Events</b>	
The Naked Arts – Creativity Exposed! (Act I)	8	25th Annual COLSA URC	44
Interdisciplinary Science and Engineering Symposium (ISE)	8	<b>Saturday, April 30 Events</b>	
UNH Manchester URC Computing Technology Poster Presentations	16	Paul College of Business and Economics First-Year Innovation and Research Experience (FIRE) URC	50
UNH Manchester URC Poster Presentations	18	<b>Events in May</b>	
<b>Thursday, April 21 Events</b>		Chemistry Department Poster Exhibition	50
UNH Manchester URC Cinema Arts Day	19	Ann Manchester Kelley Nursing Inquiry Day	51
History Department URC	20	Paul College of Business and Economics Paul J. Holloway Prize University-wide Innovation-to-Market Competition, Championship Round	51
The Naked Arts – Creativity Exposed! (Act II)	21	<b>Additional Features</b>	
<b>Friday, April 22 Events</b>		Acknowledgments	52
Parents Association Breakfast and Welcome	21	Student Index	53
Parents Association Undergraduate Research Symposium			
Poster Presentations, Session A	21		
Oral Presentations, Session A	23		
Poster Presentations, Session B	25		
Oral Presentations, Session B	28		
Oral Presentations, Session C	31		

*All events are free and open to the public.*

*Accessibility accommodation requests may be directed to Laura Perille at (603) 862-5494.*

# URC 2016 Calendar

All events are free and open to the public.  
(Building numbers are bold and in parenthesis.)

---

## MONDAY & TUESDAY, APRIL 11-12

*Monday, April 11, 5–7:30 p.m.*

### Graduate Research Conference (GRC) Poster Presentations

Whittemore Center Arena (8)

### Graduate Research Conference (GRC) Oral Presentations

*Tuesday, April 12, 9 a.m.–4 p.m.*

Holloway Commons (2)

---

## FRIDAY, APRIL 15

*6–8 p.m.*

### 2016 Senior B.A. & B.F.A. Exhibition and M.F.A. Thesis Exhibition Preview Reception

*(Exhibition runs April 15–May 20, 2016)*

Museum of Art, Paul Creative Arts  
Center (6)

---

## TUESDAY, APRIL 19

*9:30 a.m.–2:30 p.m.*

### UNH Manchester Undergraduate Research Conference Oral Presentations

Pandora Mill, 2nd Floor, 88 Commercial  
Street, Manchester

---

## WEDNESDAY, APRIL 20

*11 a.m.–1 p.m.*

### Thompson School of Applied Sciences Student Showcase

Stacey's, Cole Hall (10)

*12–2 p.m.*

### Paul College of Business and Economics University-wide Paul J. Holloway Prize Innovation-to-Market Competition Charles & Miriam Nelson Poster Round

Peter T. Paul College Building (11)

*12–2 p.m.*

### The Naked Arts—Creativity Exposed! (Act I)

Museum of Art, Paul Creative Arts  
Center (6)

*1:30–4:30 p.m.*

### Interdisciplinary Science and Engineering (ISE) Symposium

Whittemore Center Arena (8)

*3–5 p.m.*

### UNH Manchester Undergraduate Research Conference Poster Presentations & Computing Technology Poster Presentations

Pandora Mill, 2nd Floor, 88 Commercial  
Street, Manchester

---

## THURSDAY, APRIL 21

*11 a.m.–1 p.m.*

### UNH Manchester Undergraduate Research Conference Cinema Arts Day

Pandora Mill, 4th Floor, 88 Commercial  
Street, Manchester

*12:15–2 p.m.*

### History Department Undergraduate Research Conference

Memorial Union Building, Rooms 302,  
338, 340 (3)

*12:40–2 p.m.*

### The Naked Arts—Creativity Exposed! (Act II)

Museum of Art, Paul Creative Arts  
Center (6)

---

## FRIDAY, APRIL 22

*9–9:30 a.m.*

### Parents Association Undergraduate Research Symposium Welcome Breakfast

Memorial Union Building, Granite  
State Room (3)

*9:30 a.m.–1:25 p.m.*

### Parents Association Undergraduate Research Symposium

Memorial Union Building, Granite State  
Room and various rooms (3)

*9 a.m.–3 p.m.*

### UNH Manchester Engineering Technology Day

Pandora Mill, 2nd Floor, 88 Commercial  
Street, Manchester

*9 a.m.–3 p.m.*

### Paul College of Business and Economics Undergraduate Research Conference

Peter T. Paul College Building (11)

*12:15–1 p.m.*

### The Naked Arts—Creativity Exposed! (Act III)

Memorial Union Building,  
Strafford Room (3)

*1–4:30 p.m.*

### Paul College of Business and Economics University-wide Paul J. Holloway Prize Innovation-to- Market Competition Bud Albin Challenge Round

Peter T. Paul College Building (11)

*1:30–4 p.m.*

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

Pettee Hall, Rooms G-10 and 106 (9)

*1:30–5 p.m.*

### Psychology Department George M. Haslerud Undergraduate Research Conference

McConnell Hall, Room 220 (13)

*2–6 p.m.*

### Honors English Undergraduate Research Conference

Memorial Union Building, Theater I (3)

*8–10 p.m.*

### Student Composers' Concert

Paul Creative Arts Center,  
Bratton Recital Hall (6)

---

## SATURDAY, APRIL 23

*7:45 a.m.–1 p.m.*

### 25th Annual College of Life Sciences and Agriculture (COLSA) Undergraduate Research Conference

Memorial Union Building, Granite State  
Room and Theater II (3)

---

## SATURDAY, APRIL 30

*9 a.m.–2 p.m.*

### Paul College First-Year Innovation and Research Experience (FIRE) Undergraduate Research Conference

Peter T. Paul College Building (11)

---

## FRIDAY, MAY 6

*3–4 p.m.*

### Chemistry Department Poster Exhibition

Parsons Hall, Southwest Lobby (7)

---

## TUESDAY, MAY 10

*8 a.m.–2 p.m.*

### Ann Manchester Kelley Nursing Inquiry Day

Memorial Union Building, Granite State  
Room (3)

---

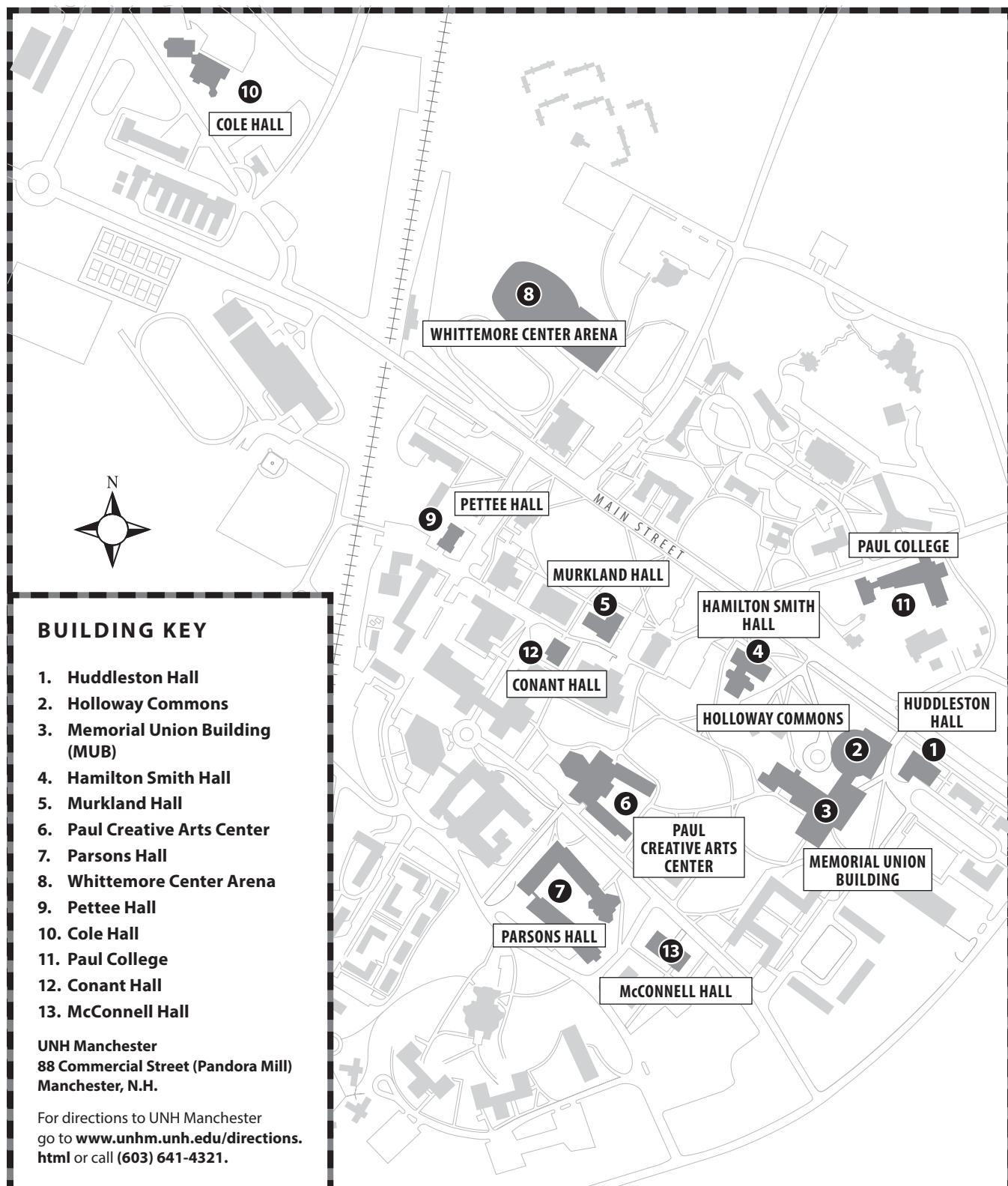
## WEDNESDAY, MAY 11

*1–6 p.m.*

### Paul College of Business and Economics University-wide Paul J. Holloway Prize Innovation-to-Market Championship Round

Peter T. Paul College Building,  
G75 Auditorium (11)

# URC 2016 Campus Map



## Graduate Research Conference (GRC)

### Poster Presentations

**Monday, April 11**  
**5–7:30 p.m.**  
**Whittemore Center Arena**

### Oral Presentations

**Tuesday, April 12**  
**9 a.m.–4 p.m.**  
**Holloway Commons**

The Graduate Research Conference (GRC) is devoted to celebrating the high quality research being conducted by graduate students at UNH and is designed to showcase research from graduate students in all disciplines. Participants interact with other graduate students and faculty from across campus. Attending the GRC affords the entire university community the opportunity to participate in the graduate education experience.

## 2016 Senior B.A., B.F.A. and M.F.A. Exhibition and Preview Reception

**Friday, April 15**  
**6–8 p.m.**  
**Museum of Art**  
**Paul Creative Arts Center**

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

**Alexa Bebon**  
 Fine Arts  
*Other Thoughts on Painting*  
 Adviser: Benjamin Cariens

**Matthew Kasabian**  
 Fine Arts  
*Thoughts on Painting*  
 Adviser: Craig Hood

**Jessica Mozdierz**  
 Fine Arts  
*Beyond the Threshold*  
 Adviser: Craig Hood

**Jillian Ryan**  
 Fine Arts  
*Time Changes Still*  
 Advisers: Julee Holcombe, Leah Woods

**Jillian Swist**  
 Fine Arts  
*Contemplating the Landscape*  
 Adviser: Jennifer Moses

**Emily Weber**  
 Fine Arts  
*Women in Art and History*  
 Adviser: Craig Hood

**Harry Wolfson Slepian**  
 Fine Arts  
*Where Do We Begin?*  
 Adviser: Julee Holcombe

## UNH Manchester Undergraduate Research Conference (URC)

### Oral Presentations

**Tuesday, April 19**  
**9:30 a.m.–2:30 p.m.**  
**Pandora Mill, 2nd Floor**  
**88 Commercial St., Manchester**

The UNH Manchester URC Oral Presentations feature formal scholarly lectures and/or multimedia presentations reflecting the students' research interests.

**Cara Brewer**  
 Politics and Society  
*An American Unconditional Basic Income*  
 Adviser: Melinda Negron-Gonzales

**Robert Dudgeon**  
 Undeclared  
*A Realistic Approach to Defeating ISIS/ISIL*  
 Adviser: Melinda Negron-Gonzales

**Michael Feeley**  
 Politics and Society  
*Veterans and PTSD*  
 Adviser: Melinda Negron-Gonzales

**Nelson Gbeve**  
 Communication Arts  
*How the Use of Mobile Devices Has Altered How We Relate to Public Spaces*  
 Adviser: Jeffrey Klenotic

**Isaiah Hutchinson**  
 Justice Studies  
*Can Radical Muslim Terrorists Be Rehabilitated?*  
 Adviser: Melinda Negron-Gonzales

**Jacob McQuaid**  
 Humanities  
*An Investigation of Privilege and Identity Politics*  
 Adviser: Phillip Deen

**John O'Neill**  
 History  
*Syria: A History of Resisting Revolution and a Failed State's Future*  
 Adviser: John Cerullo

**Alan Provance**  
 History  
*Rights and Morality: The Evolution of Public Schools in America*  
 Adviser: John Cerullo

**Ryan Sanborn**  
 History and Politics and Society  
*The Pragmatism of Politics: The Voting Rights Act of 1965*  
 Adviser: John Cerullo

**Caitlin Siegle**  
 Psychology  
*Nutritional Opportunities and Challenges Associated with Incarceration*  
 Adviser: Alison Paglia

**Lori Zibel**  
 History  
*Human Rights and the Bombing of Hiroshima*  
 Adviser: John Cerullo



## Thompson School Undergraduate Student Showcase

**Wednesday, April 20**  
**11 a.m.–1 p.m.**  
**Cole Hall (Stacey's)**

Thompson School of Applied Science students translate academic instruction into practical presentations at this year's URC. Join selected students who will showcase their expertise in such diverse areas as integrated agricultural management and horticultural technology.

### Hannah Bogart

Integrated Agricultural Management  
*Assessing the Feasibility of Small Scale Greenhouse Production of Small Batch Brewing Ingredients*  
 Adviser: Jonathan Ebba

### Hannah Bogart

Integrated Agricultural Management  
*Investigating the Business of Farm to Table Breweries*  
 Adviser: Leslie Adams

### Dylan Carney

Integrated Agricultural Management  
*Designing a Nonprofit Educational Permaculture Homestead*  
 Adviser: Leslie Adams

### Manuel Catala

Integrated Agricultural Management  
*New Era Farm*  
 Adviser: Leslie Adams

### Hannah Hibbard

Horticultural Technology  
*NH's Florist World*  
 Advisers: Jonathan Ebba, Rene Gingras

### Olivia Lenox

Community Leadership  
*Slingshot*  
 Adviser: Timothy Barretto

### Lexus Reyna

Community Leadership  
*Taking Climate Action*  
 Adviser: Timothy Barretto

### Jacob Schinas

Horticultural Technology  
*How Red, Blue, and Purple LED Lights Affect Arugula at Different Stages of Growth*  
 Adviser: Jonathan Ebba

### Dylan Smith

Integrated Agricultural Management  
*Explorations in Mycocyling: Analysis of Chemical, Pollutant, and Nutritional Values in Pleurotus ostreatus Grown Using Different Agricultural and Industrial Wastes*  
 Adviser: Leslie Adams

### Sarah Webster

Community Leadership  
*FOOTBALL SUNDA(E)Y for the Lupus Foundation of New England*  
 Adviser: Timothy Barretto

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

### Charles and Miriam Nelson Poster Competition

**Wednesday, April 20**  
**12–2 p.m.**

#### Peter T. Paul College Building

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

### Paige Balcom

William Taveras  
 Mechanical Engineering  
 Kirby Beranger  
 Zoology

### Mikalah Little

Sustainable Agriculture and Food Systems  
 Siddharth Nigam  
 Mechanical Engineering and Mechanical Engineering

### Kendre Rodriguez

Entrepreneurial Studies  
 Allison Wood  
 Environmental Engineering  
*Project OASIS*  
 Advisers: Diane Foster, Todd Guerdat, Ivaylo Nedyalkov

### Melissa Cressey

### Kelsie Morahan

### Jiayuan Wen

### Management

### Jeffrey Duchesne

Entrepreneurial Studies and Management  
*O-Ganix*  
 Adviser: John Ela

### Cassidy Croci

### Kendre Rodriguez

### Entrepreneurial Studies

### Matthew Haskell

### Entrepreneurial Studies and Finance

### Brianna Leclerc

### Marketing and Entrepreneurial Studies

### William Taveras

### Mechanical Engineering

### Allison Wood

### Environmental Engineering

### NH DreamTech

Advisers: Michael Collins, Jeffrey Sohl

### Cassidy Croci

### Kendre Rodriguez

### Entrepreneurial Studies

### Brianna Leclerc

### Marketing and Entrepreneurial Studies

### Brendan McCarthy

### Finance and Management

### Punch Buggy by Ento Inc.

Adviser: Devkamal Dutta

### Dalton Crossan

### Marketing

### Ryan Farrell

### Adam Riese

### Finance and Management

### NicoBrite

Adviser: John Ela

### Matthew Haskell

### Entrepreneurial Studies and Finance

### Michael Martin

### Stephen Nickerson

### Brett Simpson

### Management

### College Golf Variety Pass

Adviser: John Ela



**Nathan Landolt**

Computer Science

**Charles Wooster**Finance and Information Systems  
and Business Analytics*Tabs Calendar App*

Adviser: Jerry Marceau

**Christopher Montana**

Finance and Management

**Khoa Nguyen**

Management

**Cory Nitschelm**Information Systems and Business  
Analytics and Management**William Staebler**

Marketing and Management

*Coupler*

Advisers: Shane Baker, Kholekile Gwebu

**Alexander Pacocha**

Entrepreneurial Studies

**Axel Ragnarsson**Finance and Entrepreneurial Studies  
*Bodiya*

Adviser: Andrew Earle

## The Naked Arts— Creativity Exposed!

### Act I

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

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.

**Alexa Bebon**

Fine Arts

*More Thoughts on Painting*

Adviser: Leah Woods

**Samantha Granville**

English

*Fear Is*

Advisers: Jaed Coffin, Thomas Payne

**Melissa Hanley**

Theatre: Dance

*Conflict: Storytelling through Movement*

Adviser: Gay Nardone

**Jessica Mozdierz**

Fine Arts

*Beyond the Threshold*

Adviser: Craig Hood

**Jillian Ryan**

Fine Arts

*Time Changes Still*

Advisers: Julee Holcombe, Leah Woods

**Emily Weber**

Fine Arts

*Women in Art and History*

Adviser: Craig Hood

## Interdisciplinary Science & Engineering (ISE) Symposium

### Poster Presentations

**Wednesday, April 20****9 a.m.–Noon Judging****1:30–2:30 p.m. Awards Ceremony****2:30–4:30 p.m. Open House****Whittemore Center Arena**

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. Students have an opportunity to interact with peers and gain professional experience presenting research. Attendees learn more about research and educational opportunities in science and engineering at UNH. Judging occurs during the morning, followed by an awards ceremony and open house with refreshments.

## Chemical Engineering

**Group Leader: Dr. Kang Wu****Mariah Arral**

Chemical Engineering

*Biosensor for NG-Hydroxy-L-Arginine*

Adviser: Jeffrey Halpern

**D. Ryan Barden**

Chemical Engineering

*Molecular Dynamics Simulation Exploring the Mobility of Structural Sub-Unit A of Protein Phosphatase 2A*

Adviser: Harish Vashisth

**Brady Camplin**

Bioengineering

*Design and Characterization of Synthetic Divergent Promoters*

Adviser: Kang Wu

**Justin Cournoyer**

Chemical Engineering

*Mechanism Studies of Thermal**Decomposition of Hydrated Copper Nitrate and Copper Sulfate*

Adviser: Nan Yi

**Alison Deyett**

Chemical Engineering

*Differentiation of Neural Stem Cells into Neurons by Visible Light-Induced Electrical Stimulation*

Adviser: Kyung Jae Jeong

**Thanh Dinh**

Chemical Engineering

*A Bioadhesive Combined with Polydopamine Coating to Enhance Biointegration*

Adviser: Kyung Jae Jeong

**John Fernald**

Chemical Engineering

*Bio-Derived Polymers: Polymerization and Properties of Itaconate Based Monomers*

Adviser: John Tsavalas

**Rhiannon Jacobs**

Chemical Engineering

*Computational Study of RNA Structure and Dynamics*

Adviser: Harish Vashisth

**Alexis Mack**

Biochemistry, Molecular and Cellular Biology  
*Applications for Using Elastin-Polymers in Electrochemical Quartz Crystal Microbalance Experiments*  
 Adviser: Jeffrey Halpern

**Michael Pappas**

Chemical Engineering  
*Characterization of Hydrocarbon Degradation by Thermophilic Geobacillus Strains*  
 Adviser: Kang Wu

**Kishan Patel**

Biochemistry, Molecular and Cellular Biology and Applied Mathematics and Linguistics  
*KDAMPS: Antibiotics of the Next Generation*  
 Adviser: Subhash Minocha

**Garrett Thompson**

Biochemistry, Molecular and Cellular Biology  
*Electrochemical Detection of Antioxidants Using Surface Modified Electrodes*  
 Adviser: Jeffrey Halpern

**Laura Van Beaver**

Neuroscience and Behavior  
*Effects of Nanoparticles for DNA Delivery into Animal, Plant, and Bacterial Cells*  
 Advisers: Subhash Minocha, Fabio Vianello

---

**Chemistry****Group Leader: Dr. Roy Planalp****Robert Biro**

Chemistry  
*Collapsing Functional Copolymers into Single Chain Nanoparticles*  
 Adviser: Erik Berda

**Mark Cashman**

Chemistry  
*Polymer Folding via Intramolecular Cross-Linking by Atom Transfer Radical Coupling (ATRC)*  
 Adviser: Erik Berda

**James Chase**

Chemistry  
*Development of Novel FRET Sensor for Free Cu(II) and Zinc(II)*  
 Adviser: Roy Planalp

**Patrick Curley**

Chemistry  
*Preparation of a Biologically-Based, Printable Hydrogel*  
 Adviser: Leila Deravi

**Azaline Dunlap-Smith**

Chemistry  
*Computational Chemistry of Silatranes: Testing the Limits of Modern Density Functional Theory*  
 Adviser: Arthur Greenberg

**Ryan Fitzgerald**

Chemistry  
*Synthesis of Model Oxepin Substrates for Comparative Two Electron Oxidation Studies with Enzymes and Inorganic Compounds to Investigate Benzene Metabolism*  
 Adviser: Arthur Greenberg

**Ryan Fitzgerald**

Chemistry  
*Dynamic NMR: An Approach to Understand the Effects of Hydrogen Bonding on Amide Rotational Barriers*  
 Adviser: Arthur Greenberg

**Matthew Griswold**

Physics  
*Translating High-Throughput Nanofiber Fabrication Techniques for Electroactive-Protein Hybrid Textile Based Materials*  
 Adviser: Leila Deravi

**Ryan Hall**

Chemistry  
*Stabilizing Transition-Metal-Alkylthiolate Bonds via Secondary Sphere Hydrogen Bonding*  
 Adviser: Samuel Pazicni

**Anthony Jennings**

Chemistry  
*Surface Tension Measurements of Organic, Inorganic and Mixed Aqueous Solutions*  
 Adviser: Margaret Greenslade

**Anthony Lemieux**

Chemistry  
*Synthesis of Carbon Quantum Dots and Their Use as Photosensitizers*  
 Adviser: Christine Caputo

**Jacob Lessard**

Chemistry  
*Pendant Group Effect on Single-Chain Nanoparticle Collapse via Intra-Chain Radical Polymerization*  
 Adviser: Erik Berda

**Ian Martin**

Chemistry  
*Toward Well-Defined Single-Chain Nanoparticles via Reversible Diels-Alder Reactions*  
 Adviser: Erik Berda

**Matthew Rauch**

Chemistry  
*Investigation of the Synthesis of 1-Methyl-4-Silatranone*  
 Adviser: Arthur Greenberg

---

**Civil Engineering-Dry Infrastructure****Group Leader: Dr. Tat Fu****David Agan**

**Timothy Loukakes**  
 Civil Engineering  
*Model Mechanically Stabilized Earth (MSE) Wall with Modular Load Frame*  
 Adviser: Majid Ghayoomi

**Jason Beckwith**

**Benjamin Brock**  
**Zachary Cronin**  
**Matthew Dieterle**  
**Kimberly Vigneau**  
**Courtney Waterman**  
 Civil Engineering  
*UNH Steel Bridge Team*  
 Adviser: Charles Goodspeed

**Shahriar Beigi**

**Alexander Psihoules**  
 Civil Engineering  
*ABC Joint Project*  
 Adviser: Charles Goodspeed

**Celia Belletete**

**Lief Friedrichs**  
**Melinda Kline**  
**Aboubacar Konate**  
 Civil Engineering  
*Riverdale Road Bridge Project*  
 Adviser: Robert Henry

**Mark Bennett****David Latham**

Civil Engineering

**Cooper Hett**International Affairs and Civil  
Engineering*Finding an Alternative to Granite Curbing*

Adviser: Robert Henry

**Kyle Brunelle****Daniel Caiazzo****Nathan Foster****Kyle Higgins**

Civil Engineering

*I-93 Bridge over Beaver Brook, Derry, NH*

Advisers: Thomas Ballestero, Erin Bell

**Bradley Casperson****Ryan Vickers**

Civil Engineering

**Michael Langelier**

Mechanical Engineering and Philosophy

**Jasmine Seguin**

Mechanical Engineering

*Smart Building*

Advisers: Erin Bell, Kevin O'Maley

**Sean Chamberlin****Nicholas D'Ambruoso****Russell Fink****Travis Manning**

Civil Engineering

*Memorial Bridge: Structural Monitoring*

Adviser: Erin Bell

**Matthew Coleman****Christopher Cook****Maxwell George**

Civil Engineering

*ADA Sidewalk Design*

Adviser: Charles Goodspeed

**Jacob Doerfler****Daniel Flint****Justin Keefe****Justin Marr****Mercedes Valdez**

Civil Engineering

*Proposed Shopping Center - Rochester, NH*

Adviser: Jean Benoit

**Anthony Faccidomo**

Civil Engineering

*Alternative Methods for Modern Tiny Home*

Adviser: Robert Henry

**Jordan Farren****Christopher Gagne****Tyler Peer****Christian Rainey****John Rudowski****Ryan van der Heijden****Jordan Young**

Civil Engineering

*Science Way Pavilion*

Advisers: Raymond Cook, Tat Fu

**Kimberly Forance****Amanda Oka****Shannon Sweeney****Katelyn Welch****Trevor Yandow**

Civil Engineering

*Lower Plains Road over the**Middlebury River*

Adviser: Ricardo Medina

**Ryan Grover****Arianna Jesi****Joseph Kief****Benjamin Neff**

Civil Engineering

*Page School Outreach and Bridges*

Adviser: Raymond Cook

**Christopher Keenan****Daniel Lucchetti****Travis Panzini****Patrick Pike****Ryan Sheridan**

Civil Engineering

*Route 125 Intersection*

Adviser: Charles Goodspeed

**Billy Kitchens****Hilary Lamontagne**

Civil Engineering

*Town-Owned Bridge Repair Analysis*

Adviser: Charles Goodspeed

**Lucas Miller****Thomas Quillin**

Civil Engineering

*Municipal Bridge Management Program*

Adviser: Charles Goodspeed

**Civil Engineering-Research****Group Leader: Dr. M. Robin Collins****Seth Cote****Eric Lessard****Robert Lussier****Alexa Mack**

Environmental Engineering

*Peru Drip Chlorination System*

Adviser: M. Robin Collins

**Cassidy Croci****Kendre Rodriguez**

Entrepreneurial Studies

**Matthew Haskell**

Entrepreneurial Studies and Finance

**Brianna Leclerc**

Marketing and Entrepreneurial Studies

**William Taveras**

Mechanical Engineering

**Allison Wood**

Environmental Engineering

*NH DreamTech*

Advisers: M. Robin Collins, Jeffrey Sohl

**Jillian Crowley**

Environmental Engineering

*Climate Change and New England**Roadways*

Adviser: Jennifer Jacobs

**Christopher DeCarlo**

Civil Engineering

*How Does Silo Storage Time Impact Asphalt**Pavement Performance and Durability?*

Adviser: Jo Daniel

**Karl Duffield****Anthony Spirou****Benjamin Sweeney**

Environmental Engineering

**Kyle Mallory****Evan Owen**

Civil Engineering

*New Hampshire Shoreline Structure**Condition Rating System*

Adviser: Kevin Gardner

**John Lordan****Bimochan Poudyal**

Civil Engineering

*Laminar Container*

Adviser: Majid Ghayoomi

**Ryan van der Heijden**

Civil Engineering

*Analysis of Engineered Horseback Riding Surfaces*

Adviser: Jean Benoit

**Civil Engineering-Wet Infrastructure****Group Leader: Anthony Pontin****Lindsey Adams****Hans Weber**

Civil Engineering

**Alyssa Aligata****Maxwell Kenney****Justin Macek**

Environmental Engineering

**Tyler Kane**

Environmental Engineering and

Civil Engineering

*Closing the Loop: Star Island Water Reuse*

Adviser: James Malley

**Taler Bixler****Erik Dyrness****Rebecca Maskwa**

Environmental Engineering

**Daniel Lewis****Colin MacNamee**

Civil Engineering

*Hampton Marsh Segment of East**Coast Greenway*

Advisers: Kevin Gardner, John Gianforte,

Jennifer Jacobs

**Christian Blanchard****Donald Hanson****Robert Nothnagle****Sebastian Young**

Environmental Engineering

*Georgetown, ME Storm Resilience**Preparedness*

Adviser: Nancy Kinner

**Thomas Brigham****Micaela Guglielmi****Wu Yee Ng****Steven Santiago**

Environmental Engineering

*Design of a Small Drinking Water**System for Life Cycle Sustainability: The**Bethlehem Case Study*

Advisers: James Malley, Weiwei Mo

**Craig Curtin****James Hayden**

Civil Engineering

*Nutrient Reduction Plan for Newfields,**New Hampshire*

Adviser: Alison Watts

**Christopher DeCarlo****Joseph Locore**

Civil Engineering

*Consequential Life Cycle Assessment of**Pavement Infrastructure Design*

Advisers: Eshan Dave, Weiwei Mo

**Daniel Farley****Melissa Gloekler****Lukas Goerigk****Adam Moskal**

Environmental Engineering

*Mt. Washington Extreme Sewage**Treatment Plant Assessment*

Adviser: Nancy Kinner

**Computer Science-Applications****Group Leader: Collette Mathias Powers****Jonathan Bache****Takoda Register****Connor Stone**

Information Technology

*Jigging Website*

Adviser: Carl Masi

**Joel Barna****Nicholas Newdorf****John Peck**

Computer Science

*Lamprey Networks User Experience*

Advisers: Bence Cserna, Tom Harada,

Barry Reinhold

**Nicholas Calderan****Craig Kost****Taylor Puksta**

Information Technology

*Deploying DNS Security Extensions**(DNSSEC)*

Adviser: Scott Kitterman

**Alexander Clarke****Eliza Hunt-Hawkins****Ian Powell****KimXuan Tran**

Computer Science

*Sailing Information System*

Adviser: Radim Bartos

**Connor D'Amours****Tucker Owens**

Computer Science

*eCLAM - Electrochemical Laboratory**Analysis and Visualization Module*

Advisers: R Daniel Bergeron,

Jeffrey Halpern

**Andrew Desjardins****Henry Ma**

Information Technology

*Service Monitoring at UNH*

Advisers: Trenton Cavicchi, Bryan Scovill

**Matthew Fox****Louis Rochette**

Information Technology

*Occupancy Aware HVAC System*

Adviser: Tat Fu

**Caleb Frantz****Joseph LeBlanc****Cody Pitman**

Information Technology

*Wireless Occupancy Detection**Infrastructure*

Adviser: Nicholas Kirsch

**Nathan Landolt**

Computer Science

**Charles Wooster**

Finance and Information Systems

Management

*Tabs Calendar App*

Adviser: Jerry Marceau

**Christopher Sleys**

Computer Science

*Regression Testing Framework*

Adviser: Barry Reinhold

**Bradley Snay****Zachary Specht**

Computer Science

*Team Scheduling Tool*

Adviser: Wheeler Ruml

**Charles Valenza**

Computer Science

*A Non-Linear Sampling Based on Lateral**Subtractive Inhibition*

Adviser: Richard Messner



**Computer Science-Research****Group Leader: Collette Mathias Powers****Steven Clark****Sean Graham**

Information Technology

*Disaster Relief Coverage Network*

Adviser: Scott Valcourt

**Nicholas Craycraft**

Computer Science

*A System for Intentional Multithreaded Java*

Adviser: Philip Hatcher

**Peter Franchina****Cameron Pepin****Joseph Puzzo**

Computer Science

**Matthew Mayer**

Computer Engineering

*Drone Communication Protocol*

Adviser: Radim Bartos

**Sean Heeley****Eric Hutchins****Adam Wong**

Information Technology

*Body Cameras for Public Safety*

Adviser: Scott Valcourt

**Logan Henderson****Paul McNally****Christina Wilson**

Information Technology

*Living Bridge Lighting and Data Streaming*

Adviser: Tat Fu

**Caleb Miller**

Information Technology

*Moving Data from the Ground to the**Cloud: Considerations in Data Hosting*

Adviser: Scott Valcourt

**Michael Poirier****Matthew Skrabal**

Computer Science

*Compiling JavaScript to C++ with an**Emphasis on Optimization*

Adviser: Philip Hatcher

**Marcus Pullo****Timothy Sullivan**

Information Technology

*Testing Homenet*

Adviser: Tim Winters

**Earth Sciences/Environmental Science****Group Leader: Dr. Rosemarie Came****Jessica DelGreco**

Environmental Sciences

*Characterization of Vegetation Change in an**Arctic Mire Using Remotely Sensed Imagery*

Adviser: Michael Palace

**Adrien Flouros**

Environmental Sciences

*In situ Oceanographic LiDAR as a Tool**for Retrieving and Characterizing Particle**Distributions in the Ocean*

Adviser: Richard Zimmerman

**Ashli Grimaldi**

Geography

*First Freeze Date Trends across Southern**New England*

Adviser: Mary Stampone

**Tyler Hampton**

Environmental Sciences

*Near-Stream Groundwater Dynamics in**Two Distinct Hydopedalagic Units*

Adviser: John Davis

**Connor Hill**

Geology

**Reggie Lalmond****Kristie Smith****Genna String**

Earth Sciences

**Gregory Pearsall**

Environmental Sciences

*Earthquake Recurrence Intervals on Five**Oceanic Transform Faults*

Adviser: Margaret Boettcher

**Connor Hill**

Geology

**Reggie Lalmond****Kristie Smith****Genna String**

Earth Sciences

**Gregory Pearsall**

Environmental Sciences

*Coulomb Stress Patterns and Recurrence**Intervals in Relation to Thermal Scaling**Parameters of Five Oceanic Transform Faults*

Adviser: Margaret Boettcher

**Alexander Jacobson**

Earth Sciences

*Using Magnetostratigraphy of the Shire**Member of the Wasatch Formation to**Understand Eocene Climate Events*

Adviser: William Clyde

**Mark Kotowski**

Environmental Sciences

*Water Quality Analysis of the Lamprey**River Watershed*

Adviser: Anne Lightbody

**Amber Mercier**

Geography

*Evaluating the Influence of Snow Depth on**the Surface Energy Balance*

Advisers: Mary Stampone, Cameron Wake

**Adam Moskal**

Environmental Engineering

**Jessica Woodward**

Earth Sciences: Oceanography

*Sediment Oxygen Consumption in New**England Wetlands*

Advisers: Linda Kalnejais, Anne Lightbody

**Alexander Reiner**

Environmental Sciences

*A Statewide Application of GIS for**Determining Wind Turbine Site**Suitability in NH*

Adviser: Russell Congalton

**Katherine Rocci**

Earth Sciences

*Characterization of Ice Nucleating**Particles at the Western US Coast*

Adviser: Sonia Kreidenweis

**Gregory Sikora**

Earth Sciences

*Modeling Future Impacts of Extreme**Precipitation Events in the Lamprey**Watershed: Does Choice of Statistical**Analysis Matter?*

Adviser: Cameron Wake

**Anna Simpson**

Earth Sciences: Oceanography

*Remineralization Ratios in the Antarctic**Circumpolar Current Using Profiling**Float Data*

Adviser: Matt Mazloff

**Brian Taetzsch**

Environmental Sciences

*The Effects of Snow Melt on Stream Conductivity*

Advisers: Jack Dibb, James Lazarcik

---

**Electrical & Computer Engineering****Group Leader: Dr. Kent Chamberlin****Michael Arnoldy****Jeremy Hochschwender****Eric Routhier**

Electrical Engineering

*UNH IOL G.fast TIGA / PSD Jig*

Adviser: Michael Carter

**Eric Brown****Taylor Madore**

Computer Engineering

**Jacob Woodward**

Electrical Engineering

*Headset Measuring Ballistic Movements and Other Parameters*

Adviser: John LaCourse

**Michael Busby Jr.****Ramon Da Silva Sampaio****Travis Tisdell**

Electrical Engineering

*Electromagnetic Levitation*

Adviser: Wayne Smith

**Marc Coleman****Steven Speck****David Wolf**

Electrical Engineering

*Directional Electromagnetic Pulse Generator*

Adviser: Kent Chamberlin

**Ian D'Elia****Nathaniel Levin**

Computer Engineering

*Ultrasonic Electronic Cigarette*

Adviser: Wayne Smith

**Nolan Dinero****William Melanson Jr.**

Computer Engineering

*Early Detection of Upper Peripheral Neuropathies*

Adviser: John LaCourse

**Wilson Fwu****Atheer Jassem****Jonathan Mullaney****Novina Surusa**

Electrical Engineering

*Autonomous Mapping Robot*

Adviser: Se Young Yoon

**Zachary Johnson****Craig Woodmansee****Taylor Woodward**

Electrical Engineering

*Musical Analog Synthesizer*

Adviser: Richard Messner

**Geoffrey Kennedy****Jarrett Rennie**

Electrical Engineering

*Electromagnetic Levitation*

Adviser: Kent Chamberlin

**Evan Koester**

Electrical Engineering

*Low Frequency Audio Synthesizer Design*

Adviser: Michael Carter

**Joshua Letterman**

Computer Engineering

*Distributed Algorithms for Implementation of Electromagnetic Wave-Scattering in Julia*

Adviser: Mark Lyon

**Casey Liss**

Computer Engineering

*IOT Security: Hardware Implementation and Comparison of the Blake and Keccak Hash Functions*

Adviser: Qiaoyan Yu

**William Melanson Jr.**

Computer Engineering

*Rogue Election Terminal*

Adviser: Qiaoyan Yu

**Lindsay Turner**

Electrical Engineering

*Development and Testing of a Balance**Platform Perturbator for Research**in Neuromuscular Physiology and**Biomechanics*

Adviser: Wayne Smith

**Cyle Ziegler**

Electrical Engineering

*Transparent Metamaterials*

Adviser: Nicholas Kirsch

---

**Mathematics, Statistics, Physics Education****Group Leader: Dr. Sharon McCrone****Cody FitzGerald**

Mathematics

*Modeling Nosocomial Disease Outbreaks**Using Differential Equations and an**Agent-Based Modeling Approach*

Adviser: Adam Boucher

**Erin Gallagher**

Statistics

*Economic Effects on Crime Rates*

Adviser: Michelle Capozzoli

**Derek Gervais**

Physics

*Molecular Velcro: Modeling Viscosity in**Introductory Physics for Life Science Courses*

Adviser: Dawn Meredith

**Anna Kane**

Mathematics

*The Importance of Open Data*

Advisers: Margaret Greenslade,

Samuel Pazicni

**Christopher Leipold**

Mathematics

*Periodic Orbit Solutions of Plane Couette Flow*

Adviser: John Gibson

**Joseph Loftus**

Applied Mathematics

*Predictive Analytics Applied to**Consumer Behavior*

Adviser: Philip Ramsey

---

**Mechanical Engineering****Group Leader: John Gianforte****Owen Allen****Michelle Gregory****Alex Hodsdon**

Mechanical Engineering

*Sig Sauer—Hammer Impact Efficiency*

Adviser: Marko Knezevic

**Ryan Bannon****Kevin Crowley****Paige Galvin****Emily Gersbeck****Bradley Post**

Mechanical Engineering

*Innovative Hybrid Ski Binding*

Adviser: James Krzanowski

**Matthew Bemis****Carolyn Gernhard****Tyler Reeve****James Titcomb**

Mechanical Engineering

*Data Center Airflow Improvement*

Advisers: Paul Bemis, Iwaylo Nedyalkov

**Zachary Branchaud****Nicholas Burns****Christopher Knepper****James Vainauskas**

Mechanical Engineering

*Campus Cruiser—Electric Scooter*

Adviser: Christopher White

**Connor Brulotte****Nicholas Marino**

Mechanical Engineering

*Flow Physics Facility Drag Plate Design and Validation*

Advisers: Joseph Klewicki, Martin Wosnik

**Steven Burns****Cheston Machamer**

Mechanical Engineering

*Automation of Sector Seal Slot Inspection*

Adviser: Brad Kinsey

**Samuel Cole****Eric Desjardins**

Mechanical Engineering

*Micro-Tube Bending*

Adviser: Ioannis Korkolis

**Joseph Collins**

Mechanical Engineering

*Static and Dynamic Response of Seed Coats and Biomimetic 3D Printed Materials*

Adviser: Yaning Li

**Nathan Duskocil****Alexander Hautanen**

Mechanical Engineering

*Continuous Tension and Compression**Testing Machine for Sheet Metal Specimens*

Adviser: Ioannis Korkolis

**David Gottschalk**

Mechanical Engineering

*Design of Piezoelectric Shaker for Frequency Testing Applications*

Adviser: Iwaylo Nedyalkov

**Patrick O'Connor****Zachary Patnaude****Nicholas Shaw**

Mechanical Engineering

*SunShot Solar Receiver R&D with**Brayton Energy*

Adviser: Iwaylo Nedyalkov

**Victoria Romano**

Mechanical Engineering

*Mechanical and Electrical Properties of Carbon Nanotube Yarns*

Advisers: Ioannis Korkolis, David Lashmore

**Carlos Sosa**

Mechanical Engineering

*Simulation of the Cold Rolling Process of a Polymer Matrix Composite*

Advisers: Julio Briano, Barbara Calcagno,

Gustavo Gutierrez

**Wendy Thompson**

Mechanical Engineering

*Tyco Fire Protection Co-Op*

Adviser: Todd Gross

**Mechanical Engineering-  
Competition Teams****Group Leader: John Gianforte****Akshay Abraham****Tamir Blum****Abubaker Elsheikh****Adam Petit****Jesus Tudela-Longas**

Mechanical Engineering

**Jason Farr**

Electrical Engineering

**Matthew Leonard**

Mechanical Engineering and Physics

*Exploring Satellite Dynamics and Controls through Quadrotors*

Advisers: Shuai Chen, Christopher

Hashem, May-Win Thein

**Ryan Bachman****Liam Collins****Aaron Connolly****Timothy Panella****John Perrella****Hunter Rowley**

Mechanical Engineering

**Isaac Gagnon**

Computer Science

*Coordinated Control of Multiple**Autonomous Surface Vehicles (ASVs)*

Adviser: May-Win Thein

**Nathan Beaulieu****Iskandar Fendi****Brian Teune****Charles Yandell**

Computer Science

**Haley Breedlove****Brody McClure****Zachary Plumer****Samuel Wilkinson**

Electrical Engineering

**Nolan Dinero****Garrett Malagodi**

Computer Engineering

**Gregory Hatfield****Colin Pellerin****Joshua Proulx****Aaron Rist**

Mechanical Engineering

*Extraterrestrial Navigation with Particle Swarm Optimization (ET-NavSwarm)*

Advisers: May-Win Thein, Se Young Yoon

**Cameron Bloom****Spencer Burke****Brandon Hasslinger****Ian Marshall****Joseph Palazini****Frank Steinman V**

Mechanical Engineering

*UNH Aerocats*

Adviser: Todd Gross

**Ryan Boulay**  
**David Bourcier**  
**Joseph Coleman**  
**Luke Desmarais**  
**Evan Duane**  
**Brett Gervais**  
**Nathan Hall**  
**Keith Murray**  
**Christopher Wall**  
**Carlton Wolfe**  
 Mechanical Engineering  
*UNH Precision Racing Car #22*  
 Adviser: Todd Gross

**Richard DiPasquale**  
**Zhangxi Feng**  
**Adam Gawle**  
**Eric Nastasia**  
**Caroline Seekins**  
 Mechanical Engineering  
**Joseph Dudka**  
 Computer Engineering  
**John McGuire**  
**Stephen Tatarczuk**  
 Electrical Engineering  
*UNH Lunacats 2016*  
 Advisers: Wayne Smith, May-Win Thein

**Matthew Falbe**  
**Sital Khatiwada**  
**John McCormack**  
**Robert Swan**  
**Shawn Swist**  
 Mechanical Engineering  
**Lucas Lopez**  
 Electrical Engineering  
**John Wallace**  
 Information Technology  
**Robert Young**  
 Computer Engineering  
*Underwater Remotely Operated Vehicle*  
 Adviser: May-Win Thein

**Daniel Finney**  
**Andrew Levenbaum**  
**Ryan Morin**  
**Liam O'Connor**  
**Craig Shurtleff**  
**Stephen Tobin**  
 Mechanical Engineering  
*Firefighting Robot*  
 Adviser: Barry Fussell

## Ocean Engineering

**Group Leader: John Gianforte**

**Paige Balcom**  
**William Taveras**  
 Mechanical Engineering  
**Kirby Beranger**  
 Zoology  
**Mikalal Little**  
 Sustainable Agriculture and Food Systems  
**Siddharth Nigam**  
 Mechanical Engineering and  
 International Affairs  
**Kendre Rodriguez**  
 Entrepreneurial Studies  
**Allison Wood**  
 Environmental Engineering  
*Project OASIS*  
 Advisers: Diane Foster, Todd Guerdat,  
 Ivaylo Nedyalkov

**Timothy Barrett**  
**Aleksandra Wojtowicz**  
 Mechanical Engineering  
*Design of Wingtip Devices for Marine  
 Applications*  
 Advisers: Ivaylo Nedyalkov, Martin Wosnik

**Kaelin Chancey**  
**Jamison Couture**  
**Tyler Haddock**  
**Peter Wingate**  
 Mechanical Engineering  
*Tidal Turbine Deployment Platform:  
 Seakeeping and Safety*  
 Advisers: M. Robinson Swift,  
 Martin Wosnik

**Nathan Denoncourt**  
**Todd Michaud**  
 Mechanical Engineering  
*Wave Energy Conversion Buoy*  
 Advisers: Kenneth Baldwin,  
 M. Robinson Swift

**Ian Doyle**  
 Mechanical Engineering  
**Jessica Paskoski**  
 Environmental Engineering  
*Low Frequency Acoustic Projector*  
 Adviser: Thomas Weber

**Stephanie Gilooly**  
**Gregory Taylor-Power**  
 Mechanical Engineering  
*Physical Modeling of the Atmospheric  
 Boundary Layer in the UNH Flow  
 Physics Facility*  
 Advisers: Joseph Klewicki, Martin Wosnik

**Eric Illich**  
**Thomas Sattler**  
 Mechanical Engineering  
*Methane Bubble Trap*  
 Adviser: Thomas Weber

## Physics/Mathematics

**Group Leader: Dr. F. William Hersman**

**Zain Abbas**  
 Physics  
*Improving the Efficiency and Resolution of  
 the Time of Flight Mass Spectrometer for  
 Magnetospheric Applications*  
 Adviser: Harald Kucharek

**Steven Arias**  
 Physics  
*Novel Method for Synthesizing Graphene  
 on a Metal Electrode for Photovoltaic  
 Applications*  
 Adviser: Karsten Pohl

**Morgan Daly**  
 Physics  
*Studying the Neutron Response of  
 COMPTel*  
 Adviser: Mark McConnell

**Stewart Laroche**  
 Physics  
*Firewalls and Universal Horizons in  
 Horava-Lifshitz Gravity*  
 Adviser: David Mattingly

**Nicholas Marcellino Jr.**  
 Physics  
*The Probability of an Electron-Positron  
 Annihilation Creating Three Gamma-Ray  
 Photons in Air*  
 Adviser: Joseph Dwyer

**Makenzie O'Meara**  
 Physics  
*Magnetospheric Multiscale Mission  
 Interaction with Bifurcated Current Sheets*  
 Adviser: Roy Torbert



**Tyler Romano**

Physics

*Testing the Performance of an Electron Retarding Potential Analyzer under Varying Gas Pressures*

Advisers: Marc Lessard, Eberhard Moebius

**Matthew Tobin**

Physics

*Identifying Signatures of Magnetospheric Kelvin-Helmholtz Waves in Ground Magnetometer Data*

Advisers: Charles Farrugia, Joachim Raeder

**Alex Wright**

Computer Engineering and Physics

*Testing of Advanced Scintillators for Compton Telescope*

Advisers: Christopher Bancroft, Peter Bloser, Jason Legere

**Teacher Science and Engineering****Group Leader: Dr. Stephen Hale****Gavin Kearns**

Paul School

*Mechanical Experiments on 3D Printed Composites Plates*

Adviser: Yaning Li

**Robert Moore**

Pelham High School

*Disc-Shaped Compact Tension (DCT) of HMA Samples with 0% and 30% Recycled Asphalt Pavement (RAP) with and without Freeze-Thaw Conditioning*

Advisers: Jo Daniel, Eshan Dave

**Stephen Pascucci**

Farmington High School

*Investigating the Reformation of Ethanol over a Catalyst*

Adviser: Xiaowei Teng

**Bethany Poulin**

Pelham High School

*Practical Use of Arduino Sensors in Hydrologic Research*

Adviser: Mark Green

## UNH Manchester URC Computing Technology Presentations

### Poster Presentations

**Wednesday, April 20****3–5 p.m.****Pandora Mill, 2nd Floor****88 Commercial St., Manchester**

The UNH Manchester Computing Technology Program presents its annual Poster Project Presentation day. This event is the culmination of an academic year effort where students formally present their projects to peers, faculty members, representatives and technical advisers of sponsoring companies, and special guests.

**Saverna Ahmad**

Neil Champagne

Aaron Miller

Michael Salem

Computer Information Systems

*Capstone: Systems Group*

Adviser: Michael Jonas

**Saverna Ahmad**

Brenden Collins

Justin Gauthier

Dylan Lindstrom

Computer Information Systems

*MeAndYou: User Experience*

Adviser: Michael Jonas

**Brian Anker**

Brenden Collins

Brian Doehner

Justin Gauthier

Computer Information Systems

*Capstone: Data Group*

Adviser: Michael Jonas

**Daniel Bagley**

Mechanical Engineering Technology

Dean Dubois

Aashirya Kaushik

Computer Science and Entrepreneurship

*A Mobile App to Assist City Parking and Vehicle Location*

Adviser: Raymond Wallace

**Nicholas Bielinski**

Colin Cressman

Greta Milingyte

Computer Information Systems

*An Activities and Events Mobile Application*

Adviser: Raymond Wallace

**Zachery Boynton**

Electrical Engineering Technology

Jonathan Cleary

Jacob Sprague

Computer Information Systems

Refik Karic

Computer Engineering

*MeAndYou: The Layer between the Data and You*

Adviser: Michael Jonas

**Mark Bragdon**

Computer Information Systems

Benjamin Fuller

English

Scott Madaglia

Mechanical Engineering Technology

*A Mobile App to Assist Early Learners with Motor Skills, Reading, and Math*

Adviser: Raymond Wallace

**Martha Champagne**

Undeclared

Brian Doehner

Computer Information Systems

Darrel Morganelli

Electrical Engineering Technology

*Diet Meal Preparation and Exercise**Tracking App*

Adviser: Raymond Wallace

**Neil Champagne**

Andrew George

Ryan O'Neal

Daniel Stoller

Mark Tollick

Computer Information Systems

*MeAndYou: A League of Extraordinary Keys*

Adviser: Michael Jonas

**Jonathan Cleary**

Maryjean Emerson

Computer Information Systems

Joshua Young

Computer Science and Entrepreneurship

*uSafeNH: A Mobile App for Helping Sexual Assault Victims on College Campuses in*

*New Hampshire*

Adviser: Hong Jin

**Adam Connolly**

Electrical Engineering Technology  
*Power Control Lockout System*  
 Adviser: Christopher LeBlanc

**Kyle Cormier****Stephen Koble**

Electrical Engineering Technology

**Nicholas Klardie**

Computer Science and Entrepreneurship  
*A Mobile App to Track Exercise Performance*  
 Adviser: Raymond Wallace

**Cristian Davila**

Communication Arts

**Michael Huber**

Electrical Engineering Technology

**Camden Marble**

Computer Information Systems and Business  
*A Mobile Database App for Civic Involvement*  
 Adviser: Raymond Wallace

**Eric Demers**

Mechanical Engineering Technology

**Tri Nguyen**

Computer Information Systems

**Aushy Pokharel**

General Studies  
*A Configurable Database Mobile App Employing Multiple Sensors*  
 Adviser: Raymond Wallace

**Brian Doehtner**

Computer Information Systems  
*Research and Training for Unit Service Hours Reporting*  
 Adviser: Karla Vogel

**Peter Ferro****Matthew Heyner****Kevin Soucey**

Computer Information Systems

**Megan Wolfe**

*Capstone: Experiments Group*  
 Adviser: Michael Jonas

**Jeffrey Gancarz****Frederick Lochner II****Rose Salemi**

Computer Information Systems  
*'Wundergrad: The weather. Simplified.'*  
*Webapp*  
 Adviser: Mihaela Sabin

**Heather Monterio**

Business

*COMP 415 Mobile Computing Project*

Adviser: Raymond Wallace

**Matthew Heyner**

Computer Information Systems

*Installation and Configuration of System Center Data Protection Manager for the Hopkinton School District*

Adviser: Karla Vogel

**Michael Huber**

Electrical Engineering Technology  
*Cosmetology Android Application*

Adviser: Raymond Wallace

**Donald Kilian****Devlin Melvin**

Mechanical Engineering Technology

**Alexander Turner**

Electrical Engineering Technology  
*Multi-Sensor Personal Information Mobile App*

Adviser: Raymond Wallace

**Stephen Koble**

Electrical Engineering Technology  
*Using Smartphone Accelerometers to Determine Position*  
 Adviser: Raymond Wallace

**Andrew Kraines****Justin Purington**

Computer Information Systems

**Jonathon Shallow**

Computer Science and Entrepreneurship  
*Django Web Application Development: City-Data Project*  
 Adviser: Mihaela Sabin

**Benjamin Leith****Ryan O'Neal**

Computer Information Systems

**James Schumacher**

Electrical Engineering Technology

**Jonathon Shallow**

Computer Science and Entrepreneurship  
*Capstone: Modeling Group*  
 Adviser: Michael Jonas

**Daniel Lepine**

Mechanical Engineering Technology  
*Phone App Design Project*  
 Adviser: Raymond Wallace

**Daniel Lepine**

Mechanical Engineering Technology

**Caleb Mattson**

Electrical Engineering Technology

**Justin Purington**

Computer Information Systems

*Mobile App to Track Personal Expenses and Budget*

Adviser: Raymond Wallace

**Camden Marble**

Computer Information Systems and Business

**Christopher Nobrega**

Computer Information Systems

**Ryan Warrick**

General Studies

*Blabr: Anonymous Feed / Web Application*

Adviser: Mihaela Sabin

**Daisuke Matsukura****Nigel Swanson****Jonathan Trimble**

Computer Information Systems

**Thomas Rubino**

Information Technology

*Capstone: Tools Group*

Adviser: Michael Jonas

**Heather Monterio**

Business

**Lamia Mukanovic**

General Studies

**Kyle Sanborn**

Communication Arts

*Mobile App to Promote Safety While Driving*

Adviser: Raymond Wallace

**Thomas Rubino**

Information Technology

*Ensuring Student Privacy*

Adviser: Mihaela Sabin

**Nigel Swanson**

Computer Information Systems

*Construction Job and Safety Training*

*Using 3D Simulation Web App*

Adviser: Hong Jin

## UNH Manchester Undergraduate Research Conference

### Poster Presentations

**Wednesday, April 20**  
**3–5 p.m.**

**Pandora Mill, 2nd Floor**  
**88 Commercial St., Manchester**

At the UNH Manchester poster presentation events, students share their independent research, internship projects, service learning activities, and civic engagement work through scholarly lectures, multimedia projects, and poster presentations.

**Becky Baker**

Biotechnology

*An Investigation of Environmental and Medical Laboratories*

Advisers: Patricia Halpin, Stephen Pugh

**Franceska Balle**

Biological Sciences

*K-5 Science Teaching Exploration*

Advisers: Patricia Halpin, Stephen Pugh

**Bryanne Barna**

**Gabriela Diaconu**

**Zerina Dulas**

Biological Sciences

**Owen McNulty**

Undeclared

**Christen Palange**

Business

**Alexandra Twomey**

Psychology

**Kayla Wood**

Politics and Society

*Cafeteria Chaos: What Are Students Eating?*

Adviser: Stephen Pimpare

**Nicholas Bielinski**

Computer Information Systems

**Jonathan Cleary**

**Christopher Nobrega**

**Meagan Wolf**

Computer Information Systems

**Gregory Tinkham**

Computer Science and Entrepreneurship

*AppInventor to Android Studio:*

*A Student's Perspective in Mobile*

*Application Development*

Adviser: Hong Jin

**Shaunna Bois**

Biological Sciences

*Lake Massabesic: Water Microbiology and Microlife*

Adviser: Stephen Pugh

**Mark Bragdon**

Computer Information Systems

*AppInventor Project*

Adviser: Raymond Wallace

**Shelby Burns**

Biological Sciences

*Pump It Up: Cardiology for Kids*

Advisers: Patricia Halpin, Stephen Pugh

**Caitlin Carter**

Biology

*Assisted Living Care Experience: An*

*LNA's Role*

Advisers: Patricia Halpin, Stephen Pugh

**Christopher Cochran**

Biological Sciences

*VAP Prevention*

Advisers: Christine Andrews, Stephen Pugh

**Ronald Corkum**

Biological Sciences and Applied

Mathematics

*Pharmacy Technician*

Adviser: Patricia Halpin

**Kelly Delaney**

Politics and Society

*Terrorist by the Media*

Adviser: Melinda Negron-Gonzales

**Gabriela Diaconu**

Biological Sciences

*Prion Propagation in Yeast Cells*

Advisers: Kyle Mac Lea, Stephen Pugh

**Nathan Domingues**

Biological Sciences

*Internship in the Microbiology Lab at the Manchester Water Works Plant*

Advisers: Sarah Prescott, Stephen Pugh, Cheryl Wood

**Cody Drouin**

History

*Conscription and Rights*

Adviser: John Cerullo

**Farrah Ekbatani**

Genetics

*Personal Genomics of Cystic Fibrosis*

Adviser: Sarah Prescott

**Benjamin Fuller**

English

*Mobile Computing and Technology 1st and*

*4most Creative Final Project*

Adviser: Raymond Wallace

**Emma Gootee**

Biological Sciences

*Nepal*

Adviser: Kyle Mac Lea

**Victoria Gouveia**

**Nicole Gray**

Politics and Society

*Are New Hampshire High Schools' Dress*

*Codes Discriminatory?*

Adviser: Stephen Pimpare

**Cassidy John**

Humanities

*History of Inequality*

Adviser: Phillip Deen

**Almedina Karahasan**

Biology

*A Monitor Tech on a Cardiac Unit*

Adviser: Stephen Pugh

**Jennifer Ledoux**

Biology

*Personal Genomics of Breast Cancer*

Adviser: Sarah Prescott

**Satonya McNeal**

English

*Healthcare vs. Sickcare: Inequality in the Healthcare System*

Adviser: Phillip Deen

**Grant Michael**

Politics and Society

*U.S. Involvement in the Israeli-Palestinian Conflict: Is the U.S. Acting as an 'Honest' Broker?*

Adviser: Melinda Negron-Gonzales

**John O'Neill**

History

*Syria: A History of Resisting Revolution and a Failed State's Future*

Adviser: John Cerullo

**Kurt Plante**

History

*Jurisprudence in German Basic Law*

Adviser: John Cerullo

**Bionka Pouliot**

Biology

*Life of an LNA on E100*

Adviser: Stephen Pugh

**Chaille Proksch**

Biological Sciences

*Public Attitudes towards Antibiotic Resistance*

Adviser: Stephen Pugh

**Bruce Rheame**

Biological Sciences

*Comparative Microbial Genomics*

Adviser: Kyle Mac Lea

**Thomas Rhoades**

History

*Crisis of the Volk: The Failure of the Weimar Republic*

Adviser: John Cerullo

**Audrey Rose**

Biological Sciences

*Medical Mission to the Dominican Republic*

Adviser: Kyle Mac Lea

**Courtnei Russo**

Biological Sciences

*The Magicians of Massabesic*

Adviser: Stephen Pugh

**Courtnei Russo**

Biological Sciences

*Phenylketonuria People Eater*

Adviser: Sarah Prescott

**Mirian Samaan**

Genetics

*Colorectal Cancer*

Adviser: Sarah Prescott

**Katie Sarette**

History

*The Ongoing Battle over an Adequate Education: Why New Hampshire Is Failing Its Children*

Adviser: John Cerullo

**Donald Swinerton**

Biological Sciences

*A New Perspective on Calorie Counts*

Adviser: Stephen Pugh

**Ryan Tanner**

Political Science

*Budgeting in Londonderry, NH for a Heroin Rehab Center*

Adviser: Stephen Pimpare

**Michael Tay**

Biological Sciences

*Optometry Practice*

Adviser: Stephen Pugh

**Amber Therrien**

Biological Sciences

*An Investigation of Careers in the Pharmacy Field*

Advisers: Patricia Halpin, Stephen Pugh

**Kyle Vynorius**

Biological Sciences

*Lifetime Multiple Mild Traumatic Brain Injuries Are Associated with Cognitive and Mood Symptoms in Young Healthy College Students*

Adviser: Daniel Seichepine

**Brittany Warren**

Biological Sciences

*Genomics of Marfan Syndrome*

Adviser: Sarah Prescott

**Zachary Window**

Biological Sciences

*Robust Job Shadow at the Elliot Hospital Laboratory*

Adviser: Kyle Mac Lea

**Zachary Window**

Biological Sciences

*Functional Analysis of Soil Microbes Sequenced from Red and White Pine Habitat at the NH State Forest Nursery*

Adviser: Kyle Mac Lea

## UNH Manchester URC Cinema Arts Day

**Thursday, April 21****11 a.m.–1 p.m.****Pandora Mill, 4th Floor****88 Commercial St., Manchester**

The UNH Manchester 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.

**Amanda Amato**

Communication Arts

WPW

Adviser: Anthony Tenczar

**Becky Baker**

Biotechnology

*Pathogenic Microbials: An Invasion of the Brain Eating Amoeba*

Adviser: Patricia Halpin

**Wayne Charrette****Cole Riel**

Communication Arts

*Commuters*

Adviser: Anthony Tenczar

**Gabriela Diaconu**

Biological Sciences

*An Immigrant's Perspective*

Adviser: Anthony Tenczar

**Andrew George**

Computer Information Systems

*F.I.R.S.T. Robotics Student Team Lead*

Adviser: Anthony Tenczar

**Samantha Mackenzie**

Communication Arts

*Meet Kyle*

Adviser: Anthony Tenczar

**Cole Riel**

Communication Arts

*Stay Cheesy*

Adviser: Anthony Tenczar



**Vanessa Russell**

Biological Sciences  
*UNHM Lab Safety Video*  
 Adviser: Patricia Halpin

**Kyle Sanborn**

Communication Arts  
*No Ideas*  
 Adviser: Anthony Tenczar

**Kallie Tabor**

Communication Arts  
*Art Made Easily*  
 Adviser: Anthony Tenczar

**Kallie Tabor**

Communication Arts  
*Choices*  
 Adviser: Anthony Tenczar

**Eric Zale**

Communication Arts  
*New Freedom Academy*  
 Adviser: Anthony Tenczar

## History Department Undergraduate Research Conference

**Thursday, April 21**  
**12:15–2 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 302**

### **Panel I A: Ancient Issues with Modern Echoes: Ethnic Identity, Science and Religion**

Moderator: Michael Leese

**Charles Haycook**

History  
*More than Ducks and Newts: Magic in 6th-Century Europe*  
 Adviser: Jonathan Couser

**Qizhen Xie**

History and Classics  
*Ethnic Identity and Redefinition of the Galatians in the Hellenistic World*  
 Adviser: Michael Leese

**MUB, Room 302**

### **Panel I B: Multiple Identities in the Middle East and South Asia**

Moderator: Michael Leese

**Emma Bivona**

History  
*Persecution of the Baha'i Faith in Iran since the Islamic Revolution of 1979*  
 Adviser: Ethel Wolper

**Cameron Calato**

History and Philosophy  
*Where the Hills and Plains Collide: A Look at Nepal's Political Tension through Tharus in Chitwan*  
 Adviser: Ethel Wolper

**John O'Neill**

History  
*Syria: A History of Resisting Revolution and a Failed State's Future*  
 Adviser: John Cerullo

**MUB, Room 338**

### **Panel II A: Interdisciplinary Approaches to Knowing and Sharing Our Past**

Moderators: Lucy Salyer and Sarah Batterson

**Steven Cowley**

History  
*Edward Hitchcock: Geology and Religion in Early America*  
 Adviser: Jan Golinski

**Joseph Juknievich**

History  
*Staging Conspiracy: A Close Examination of the Palmer Raids through the Lens of Documentary Theatre*  
 Adviser: Lucy Salyer

**Jeffrey Pearson**

History and German  
*Ogunquit Leads the Way: Stewardship of the Beautiful Place by the Sea*  
 Adviser: Cathy Frierson

**Lauren Percy**

History  
*The Lost of the Atlantic*  
 Adviser: Cynthia Van Zandt

**Sean Thael**

History and Russian  
*From TNT to Tallgrass: Hybrid Landscapes and the Re-Prairification of the Military-Industrial Complex*  
 Adviser: W. Jeffrey Bolster

**MUB, Room 340**

### **Panel III A: Homosexual Identities in Europe: 1880s-1930s**

Adviser and Moderator: Nicoletta Gullace

**Cassidy Croci**

Entrepreneurial Studies  
*Crafting THE Lesbian Novel: Radcliffe Hall and the Propaganda behind The Well of Loneliness*

**Shaina Maciejewski**

International Affairs and Women's Studies  
*From Pathology to Progress: Sexological Theories of Female Same-Sex Attraction in Victorian Era Britain*

**Crystal Napoli**

Justice Studies and History  
*Magnus Hirschfeld: Ancestor of the Alliance*

**Amanda Perron**

History  
*Barney's Paris: How Lesbians Attempted to Craft a Unique Identity in 1920's France*

**MUB, Room 340****Panel III B: Two Perspectives on the Civil War in the United States**

Adviser and Moderator: J. William Harris

Justin Gamache

History

*Examining British Attitudes towards the American Civil War*

Bonnie Simpson

History

*Civil War Technology: Rifles and Ammo*

**The Naked Arts—Creativity Exposed!****Act II**

**Thursday, April 21**

**12:40–2 p.m.**

**Museum of Art**

**Paul Creative Arts Center**

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.

Elizabeth Girard

Theatre: Dance

Sara Martin

Alexandra Wing

Theatre

*The Developmental Director: The Process of Bringing New Plays to Life*

Adviser: David Kaye

Matthew Kasabian

Fine Arts

*Thoughts on Painting*

Adviser: Craig Hood

Jillian Swist

Fine Arts

*Contemplating the Landscape*

Adviser: Jennifer Moses

Harry Wolfson Slepian

Fine Arts

*Where Do We Begin?*

Adviser: Julee Holcombe

**Parents Association 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 before the University-wide Parents Association Undergraduate Research Symposium. Opening remarks will be offered by the UNH Provost and Hamel Center for Undergraduate Research staff.

**Parents Association Undergraduate Research Symposium****Poster Presentations, Session A**

**Friday, April 22**

**9:30–10:40 a.m.**

**Memorial Union Building  
Granite State Room**

The Parents Association Undergraduate Research Symposium is a University-wide event showcasing students from a range of disciplines. Students present their research, scholarly, and creative projects in interactive poster sessions and oral presentation sessions.

Jordan Badger

Nutrition

*The Relationship between Healthy Lifestyle Factors and Perceived Stress among College Students*

Adviser: Jesse Morrell

Cameron Bielski

English

*Advertising in America*

Adviser: Carla Cannizzaro

Samantha Blais

Nursing

*Exploring the Value of Obtaining Routine Gastric Residuals from Preterm Infants in the Neonatal Intensive Care Unit*

Advisers: Gene Harkless, Susan Fetzer

Samantha Brand

Occupational Therapy

*Through My Eyes: The Effect on Family Life of Having a Sibling with Autism Spectrum Disorder as Experienced by Typically Developing Adolescents*

Adviser: Lou Ann Griswold

Stephanie Brewster

Nutrition

*Which Best Predicts the Parameters of Metabolic Syndrome in College Students: Body Mass Index, Waist Circumference, or Body Composition?*

Adviser: Jesse Morrell

Leah Burke

Justice Studies and Psychology

*Selfishness and Self-Mattering: What Do My Friends Think?*

Adviser: Ellen Cohn

Taylor Collins

Communication Sciences and Disorders and Spanish

*A Thematic Analysis of Bilingual Speech-Language Pathologists in Southern New England*

Adviser: Amy Plante

Ashleiy Costa

Psychology and Family Studies

*The Influence of Personal Intelligence on Academic Success among College Students*

Advisers: John Mayer, Kateryna Sylaska

**Kasey Cushing**

Biochemistry, Molecular and Cellular Biology  
*The Effect of Gonadotrophin Releasing Hormone on the Proliferation Rate of a Melanoma Cell Line*  
 Adviser: Paul Tsang

**Tien Dang**

Biomedical Science  
*Characterizing the Angiogenic Properties of Glioma U373 Cells*  
 Adviser: Paul Tsang

**Caitlin Doonan**

Nursing  
*Exploring the Healthcare Experiences of LGBTQ+ College Students*  
 Adviser: Joanne Samuels

**Emily Dwyer**

Nursing  
*The Impact of an Epilepsy Self-Management Program on Health Care Utilization*  
 Adviser: Susan Fetzer

**Matthew Geason**

Political Science  
*National Identity in Taiwan*  
 Adviser: Jennifer Brewer

**Lindsey Hanna**

Communication Sciences and Disorders  
*Influence of Technology on Development of Social Language*  
 Adviser: Jeanne O'Sullivan

**Caitlin Hanrahan**

Occupational Therapy  
*Role Balance of Mothers with Children Receiving Early Intervention Services*  
 Adviser: Kerryellen Vroman

**Cody Hastings****Daniel Rowe****Sara Sturzo**

Kinesiology  
*Hiring Interscholastic Head Coaches: Examining the Hiring Practices of Interscholastic Athletic Directors*  
 Adviser: Heather Barber

**Margarethe Hauschildt**

Kinesiology  
*Effect of Progressive Resistance Training in Older Adults on Quality of Life and Affect*  
 Adviser: Summer Cook

**Justina Hiney**

Biomedical Science  
*Elements That Cause Stress to a Captive Primate*  
 Adviser: Leslie Curren

**Cassandra Izzo**

Biomedical Science  
*Allografts versus Autografts in Orthopedic Surgical Procedures*  
 Adviser: Thomas Pistole

**Julia Kahr**

Psychology  
*Personality and Alcohol Use as Predictors of Attitudes towards Condoms and Sexual Health Knowledge*  
 Adviser: Lindsey Rodriguez

**Katherine Le**

Nutrition  
*Perceived Stress and Alcohol Intake Comparison in First-Generation College Students and Their Peers*  
 Adviser: Jesse Morrell

**Elizabeth Lee****Kennedy Nickerson**

Psychology  
*Passes on the Field, Free Passes off the Field: An Exploration of Sexual Assault Endorsement Analyzing Comments on Sports Media Outlets*  
 Adviser: Katie Edwards

**Sara Mantovani-Schuell****Brynn Pedrick**

Zoology  
*The Effect of pH on Growth Rates and Activity Budgets of Ghost Shrimp (*Palaemonetes paludosus*)*  
 Adviser: Leslie Curren

**Keshav Nepal**

Biomedical Science  
*Dexamethasone Effects on Vascular Endothelial Growth Factor Production by Ovarian Macrophages*  
 Advisers: Thomas Foxall, David Townson

**Valerie Nesom**

Ecogastronomy and Nutrition  
*From Vision to Reality: Recipes for a New England Food Vision*  
 Adviser: Joanne Burke

**Maureen O'Brien**

Occupational Therapy  
*Examination of the Effectiveness of a One-Week Camp on Social Interaction for Youth with an Autism Spectrum Disorder*  
 Adviser: Lou Ann Griswold

**Megan Peavey**

Marine, Estuarine and Freshwater Biology  
*The Effect of Warming Temperatures on Competition between Two Invasive Species of Crab*  
 Adviser: Leslie Curren

**Jessica Pelletier**

Nutrition  
*Examining the Relationship between Fruit and Vegetable Consumption, Diet Quality, and Metabolic Syndrome*  
 Adviser: Jesse Morrell

**Rebecca Pettis**

Nursing  
*Describing the Experience of an Older Adult with Chronic Pain and the Use of a Therapeutic Music Intervention: A Case Study*  
 Adviser: Joanne Samuels

**Megan Sellarole**

Ecogastronomy and Kinesiology  
*Effect of Self-Myofascial Release via Roller Massage on the Active Properties of the Plantarflexor Muscles*  
 Adviser: Summer Cook

**Laura Van Beaver**

Neuroscience and Behavior  
*Effects of Nanoparticles for DNA Delivery into Animal, Plant, and Bacterial Cells*  
 Advisers: Subhash Minocha, Fabio Vianello

**Kelsi West**

Health Management and Policy  
*Examining the NH Opioid Crisis through the Lens of the Three Levels of Prevention*  
 Adviser: Ann-Marie Matteucci

**Colleen White**

Nursing  
*Buurtzorg Nurses in the Netherlands: A Mini-Ethnography of Care*  
 Adviser: Gene Harkless

**MUB, Granite State Room****Advanced Technical Writing****Adviser:** Molly Campbell**Kassandra Bacon**

Nutrition

*Assessing Web-Based Cancer Awareness***Jack Born**

Nutrition

*Assessing Science Resources for Students on the Web***Elizabeth Brown**

English

*Learning to Write a Novel in a World Saturated with Distractions***Erin Condon**

English

*Reinstating the Value of an English Degree***Lindsay Edmonds**

Communication

*Dreams: Why We Have Them and What They Mean***Kelly Gibbons**

Communication Sciences and Disorders

*The Importance of Awareness and Inclusion for the Special Needs Community***Andrew McFarland**

Information Systems Management

*Searching for the Next Big Thing***Richard Ouch**

Business and English

*Creating a Website about the Cambodian Genocide***Bridget Resse**

Nutrition

*Assessing Technical Writing in a Test Kitchen***Madison Schaefer**

Justice Studies and English

*Illuminating the Effects of Light Pollution***Parents Association Undergraduate Research Symposium****Oral Presentations, Session A****Friday, April 22****9:30–10:40 a.m.****Memorial Union Building**

The Parents Association Undergraduate Research Symposium is a University-wide event showcasing students from a range of disciplines. Students present their research, scholarly, and creative projects in interactive poster sessions and oral presentation sessions.

**MUB, Room 233****Clinical Identifications and Therapeutic Exercise Manipulations in Athletes****Moderator:** Robert Kertzer**Rebecca Daniels**

Kinesiology

*Effect of Verbal Instructions on EMG during the Bench Press in Trained and Untrained Males***Adviser:** Summer Cook**Frances Donahue**

Athletic Training

*Year Two Results of a Helmetless-Tackling Training Intervention in Football***Adviser:** Erik Swartz**Emily Larson**

Kinesiology

*Identification and Prevalence of Atrial Fibrillation ECG Markers in Collegiate Cross-Country Skiers***Adviser:** Tim Quinn**Nora Scanlan**

Kinesiology

*Effect of Proprioceptive Neuromuscular Facilitation and Static Stretching on Hip Flexion Angle***Adviser:** Summer Cook**Dana Walker**

Kinesiology

*The Effects of Roller Massage on the Passive-Elastic Properties of Human Skeletal Muscle***Adviser:** Dain LaRoche**MUB, Room 332****Culture, Identity, and Politics in a Global Context****Adviser:** Molly Wallace**Moderator:** Catherine D'Auteuil**Cooper Hett**

International Affairs and Civil Engineering

*Berlin: A Preservation of Culture and Historical Architecture***Kendall Klein**

International Affairs and Psychology

*Cultural Identity in France***Anne Loftus**

International Business and Economics

*Commodification or Catharsis? The French Fashion Industry's Interpretation of Political Events/Movements***Kevin Rivera**

Spanish

*Press One for English: The Globalization of the English Language and Second Language Education in Japan***Amy Simon**

International Affairs and Philosophy

*Life after Years of Solitude: Neoliberalism and Latin American Literature in Chile***MUB, Room 203****Feminism in Action—Session I****Adviser and Moderator:** Faina Bukher**Kathleen Fitzgerald**

Nutrition

*Seacoast Eat Local***Hollie Foster**

Women's Studies and Psychology and Russian

*An Eye towards Inclusivity: Health Services' Policies and Procedures*



**Lauren Garza**

Sociology and Women's Studies  
*Analysis of Gender and Humor*

**Anna Jones**

Women's Studies  
*Arts in Reach*

**Cecilia Martins**

Political Science and Women's Studies  
*Office of Minority Health and Refugee Affairs*

**Marisa Milone**

English Literature and Women's Studies  
*Navigating the Women's Studies Program*

**Carolyn Riley**

Communication and Women's Studies  
*Black Lives Matter*

**MUB, Room 207**

**Information, Identity, and  
Presentation in Ancient Greece  
and Rome**

Moderator: Scott Smith

**Gabriel Hoffman**

History and Classics  
*Upside Down and Inside Out: Information  
Management in the Age of the Roman  
Empire*  
Adviser: Susan Curry

**Michael Mignanelli**

Classics  
*Understanding Athenian Sentiments  
towards Public Speaking: A Study of  
Aristophanes' Ecclesiazusae*  
Adviser: Harriet Fertik

**Jack Vachon**

Classics and History  
*Putting Greek Myth on the Map:  
The Pausanias Project*  
Adviser: Robert Smith

**Qizhen Xie**

History and Classics  
*Ethnic Identity and Redefinition of the  
Galatians in the Hellenistic World*  
Adviser: Michael Leese

**MUB, Room 321**

**Media Studies Honors Papers**

Moderator: Nora Draper

**Ashlyn Daniel-Nuboor**

Communication  
*Smart Machines or Smart Reporters?  
Artificial Intelligence and the Future of  
Journalism*  
Adviser: Kevin Healey

**Emily Figiel**

Communication  
*How Online Dating Platforms Encourage  
Self-Presentation and Shape Perceptions of  
Idealized Romantic Relationships*  
Adviser: Nora Draper

**Hannah Lopez**

Communication  
*Fashion Identity: An Analysis of Aerie's  
Real Girl Campaign and the Distinction of  
Youth Representation*  
Adviser: Nora Draper

**Madison Piacentini**

Communication  
*The Commodification of Feminism in  
Online Publications*  
Adviser: Nora Draper

**MUB, Room 338**

**Multidisciplinary Session I:  
Culture, Philosophy, and Justice**

Moderator: Jim Parsons

**Ellis Codd**

Anthropology  
*The Portrayal and Appropriation of  
Hawaiian Culture*  
Advisers: Eleanor Harrison-Buck,  
Alexandra Martin

**Kristopher Dewey**

Philosophy  
*Neuroscience and Philosophy*  
Adviser: Willem De Vries

**Annemarie Guare**

Political Science  
*Closing the Gaps: Using Holistic Legal  
Services to Ensure Access to Justice*  
Adviser: Mary Malone

**Katherine Walden**

Music Education  
*Exploring New Hampshire's Celtic Music  
Tradition in the Elementary Music Classroom*  
Adviser: Rose Pruiksma

**MUB, Room 340**

**Neuroscience and Behavior  
Session**

Adviser: William Stine  
Moderator: Myles Lynch

**Nicholas Duggan**

Neuroscience and Behavior  
*Signal Detection Analysis of a Three  
Alternative Forced Choice in a  
Stereoacuity Context*

**Basmah El-Faramawi**

Psychology  
*Bootstrapping Psychometric Functions in the  
Context of Motion-Induced Blindness*

**Megan Lusignan**

Biology  
*Contrast Response Functions of On- and  
Off-Cells in Motion-Induced Blindness*

**MUB, Room 330**

**Perspectives on Contemporary  
Spain**

Adviser: Molly Wallace  
Moderator: Tom Haines

**Sara Aybar**

International Affairs and Economics  
*A Separate Peace: The Question of Economic  
Stability in the Case of Catalan Secession  
from Spain*

**Oriana Eason**

Information Systems and Business  
Analytics  
*Changing Opinions of the Spanish  
Monarchy in a Modern World*

**Alvaro Maranon**

International Affairs and Political Science  
*Catalonia? Catalunya? Europe's (Almost)  
Newest Country*

**Elora Moeller**

International Affairs and Spanish  
*The Rise of Grassroots Political Parties  
in Spain*

**MUB, Room 334*****Representations of Self and Other: Negotiating National Identity, Inclusion, and Exclusion***

Adviser: Molly Wallace  
 Moderator: Beth Kilinc

**Hannah Drake**

International Affairs and English  
*Constructing Islamic Identity in Spanish and American News Media*

**Emily Ham**

International Affairs and Anthropology  
*Droit du Sang? The Relationship between a Conflicted National Identity and Modern Immigration in France*

**Laurianne Posch**

International Affairs and German  
*Fluid as the Rhine or Stable as the Alps? German Identity/ies in Light of the European Refugee Crisis*

**Madeline Warren**

Communication  
*The Marginalization of Minorities in the French Media*

**MUB, Room 302*****Rhetoric Honors Panel***

Moderator: Michael Jackson

**Bettina Caspersen**

Marketing  
*Rhetorical Integration and the Cultural Projection at the Portsmouth African Burial Ground*  
 Adviser: Lawrence Prelli

**Emily Ciabattoni**

Communication  
*The Healing Powers of Dance Rhetoric*  
 Adviser: Michael Jackson

**Dorothy Long**

International Affairs and Communication  
*Food Identity: Is Food a Medium for Protest and Development?*  
 Adviser: Michael Jackson

**Anna Molinaro**

Communication  
*Photography: Preserving Fact or Fiction?*  
 Adviser: Michael Jackson

**MUB, Room 237*****Studies in Spanish Languages, Literatures and Cultures***

Moderator: Holly Cashman

**Sabrina Baiguy**

Spanish  
*Performativity and Gender in Costa Rica*  
 Adviser: Lori Hopkins

**Maxwell Brown**

Spanish  
*A Case of Morphosyntactic Variation in Spanish Discourse*  
 Adviser: Holly Cashman

**Pedro Celaya**

Spanish  
*Exploration of Bilingual Language Practices in Mexican Spanish*  
 Adviser: Holly Cashman

**Marissa Giuliano**

Spanish  
*Performativity and Gender in Latin America*  
 Adviser: Lori Hopkins

**Angel Taveras**

Spanish  
*Lorca in Context*  
 Adviser: Scott Weintraub

**Katherine Vaughn**

Spanish  
*Sociolinguistics Awareness & Study Abroad*  
 Adviser: Holly Cashman

**MUB, Room 336*****The Causes and Consequences of Violence: Terrorism, Civil War, and Military Intervention/Aid***

Adviser: Molly Wallace  
 Moderator: Maingi Solomon

**Sara Carlson**

International Affairs and Finance  
*Reintegrating Former Child Soldiers into Society: Lessons from Sub-Saharan Africa*

**Casey Harrigan**

International Affairs and Political Science  
*The Rise of Terrorist Activity in Belgium*

**Matthew Kimball**

International Affairs and Russian  
*Russian Military Intervention in the Syrian Civil War*

**Shaina Maciejewski**

International Affairs and Women's Studies  
*'Pura Vida' No? U.S. Involvement in Latin America and Its Effects on the Drug Trade in Costa Rica*

**Ariel Pueyo Encinas**

International Affairs and French and Political Science  
*Security and Minority Inclusion in France*

## Parents Association Undergraduate Research Symposium

**Poster Presentations, Session B**

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

The Parents Association Undergraduate Research Symposium is a University-wide event showcasing students from a range of disciplines. Students present their research, scholarly, and creative projects in interactive poster sessions and oral presentation sessions.

**Akshay Abraham****Tamir Blum****Abubaker Elsheikh****Adam Petit****Jesus Tudela-Longas**

Mechanical Engineering

**Matthew Leonard**

Mechanical Engineering and Physics

**Jason Farr**

Electrical Engineering

*Exploring Satellite Dynamics and Controls through Quadrotors*

Advisers: May-Win Thein, Shuai Chen, Christopher Hashem

**Stephanie Allaire**

Biology

**Kaleigh Erickson**

Neuroscience and Behavior

*Does Enclosure Size Drive Stereotypical Behavior in Felids?*

Adviser: Leslie Curren

**Mariah Arral**

Chemical Engineering

*Biosensor for N<sup>G</sup>-Hydroxy-L-Arginine*

Adviser: Jeffrey Halpern

**Kiley Ashley**

Psychology

*Profile of an Addict: Associations between Personality Traits and Social Media Usage*

Adviser: Lindsey Rodriguez

**Carolyn Babeu**

Communication Systems and Disorders

*The Preparedness of Speech-Language**Pathologists to Meet Educational**Challenges of Children with Cochlear**Implants in New Hampshire Public Schools*

Adviser: Stephen Calculator

**Christin Badylak-Reals**

Mechanical Engineering

*State Energy Plans: The Future of Federal Energy Policy*

Adviser: Katie Marks

**Elizabeth Barrett**

Political Science

*Due Process Point of Improvement – Child Abuse and Neglect Cases That End in**Termination of Parental Rights – Strafford County, New Hampshire*

Adviser: Susan Siggelakis

**Molly Belanger****Madeleine DiIunno**

Community and Environmental Planning

*NH Citizen Planner: Discovering the**Needs of Municipal Volunteers to Support Vibrant Communities*

Advisers: Molly Donovan, Christopher

Keeley, Mary Robertson

**Hannah Bergeron**

Occupational Therapy

*Occupational Justice and Work**Occupations of Individuals with**Disabilities: Emerging Role of**Occupational Therapists*

Adviser: Vidyalakshmi Sundar

**Hannah Betit**

Psychology

*A Profile of Entitlement*

Adviser: Lindsey Rodriguez

**Casey Block****Yvonne Cristy****Amanda Horne**

Psychology

*Correlates of Perpetration of Sexual Violence among New England High School Students*

Advisers: Kelly Palmer, Stephanie

Sessarego

**Nicholas deDiego**

Genetics

*Determining Protein Phosphatase 2A**C-Subunit Gene Interactions on Root**Growth under Salt Stress*

Adviser: Estelle Hrabak

**Caitlin Daly**

Family Studies

*Predicting Pre-Kindergarteners' Executive**Function Skills: The Role of the Classroom*

Adviser: Kimberly Nesbitt

**Nicholas Duggan****Hanne Hansen****Jaclyn Johnston****Amanda LeBel**

Neuroscience and Behavior

**Basmah El-Faramawi****Alison Meurer**

Psychology

**Megan Lusignan**

Biology

*Bootstrapping Sensitivity and Bias**Measures in the Context of Stereo Acuity*

Adviser: William Stine

**Basmah El-Faramawi****Joycelyn Pollack****Anna Skedros**

Psychology

**Lauren Guetling**

Psychology and Women's Studies

*Barriers to Intervening in Instances of**Sexual Assault and Relationship Abuse: A**Look at Bystander Behaviors among High**School Students*

Adviser: Robert Eckstein

**Rachael Duda**

Family Studies

*Contributing Factors to Attitudes and Beliefs about Diversity*

Adviser: Jill Trumbell

**Kathleen Gorman**

Sustainable Agriculture and Food Systems

*OASIS – Optimal Agriculture Skills**Initiative for Students*

Adviser: Joanne Curran-Celentano

**Melanie Green**

Ecogastronomy and Nutrition

*Impact of Health Behaviors on Academic**Performance in College Students*

Adviser: Jesse Morrell

**Karlynn Greene**

Justice Studies and Psychology

**Shannon Flynn**

Psychology and Mathematics

**Abby Leibowitz**

Psychology

*What Makes a Bully? Examining the Role**of Aggressive Behaviors between SES and**Being a Bully*

Adviser: Ellen Cohn

**Robert Hartwell**

Psychology

*Does Being Facebook Official Matter?*

Adviser: Lindsey Rodriguez

**Crystal Hermawan**

Biomedical Science

*Effects of hypo-O-GlcNAcylation on**Keratin 18 Filaments and Cytokine-Induced**Apoptosis in SiHa Cervical Cancer Cells*

Advisers: Thomas Foxall, David Townson

**Yongjiao Hu**

Sociology and Psychology

*International Students' Social Networks**and Academic Achievement*

Adviser: Michele Dillon

**Summer Johnson**

Psychology

*Relationship Dissolution and Facebook**Monitoring*

Adviser: Lindsey Rodriguez

**Jeffrey King**

Justice Studies and Psychology  
*Comparative Analytics of Sexual Assault Prevention Programming for Male Participants*  
 Adviser: Robert Eckstein

**Jacob Moss**

Geography  
*Effects of Graffiti on the Community of Dover, New Hampshire*  
 Adviser: Jennifer Brewer

**Samantha Mullen**

Justice Studies and Psychology  
*Parental Rights of Rapists*  
 Adviser: Katie Edwards

**Allison Onofrio**

Neuroscience and Behavior  
*The Effect of the Earth's Magnetic Field on the Resting Position of Canis familiaris*  
 Adviser: Leslie Curren

**Kishan Patel**

Biochemistry, Molecular and Cellular Biology and Applied Mathematics and Linguistics  
*KDAMPS: Antibiotics of the Next Generation*  
 Adviser: Subhash Minocha

**Mia Pelletier**

Social Work  
**Stephanie Trusty**  
 Neuroscience and Behavior and Music Performance Study  
*To Tell or Not to Tell: How Revealing Abuse Impacts Wellbeing*  
 Adviser: Victoria Banyard

**Janine Perkins**

**Saege Robinson**  
 Psychology  
*The Negative Consequences of Victimization on College Campuses*  
 Adviser: Victoria Banyard

**Nicole Petersen**

Biochemistry, Molecular and Cellular Biology  
*Characterizing Arabidopsis Sodium-Induced Root Skewing Mutants srs 4 and srs 10*  
 Adviser: Estelle Hrabak

**Alex Riccio**

Psychology  
*Why We Stalk the Ones We Love: Relationship-Contingent Self-Esteem, Commitment Processes, and Facebook Stalking*  
 Adviser: Lindsey Rodriguez

**Chad Roberge**

Psychology  
*Police Perceptions and Rule Rejections*  
 Adviser: Ellen Cohn

**Rebecca Robichaud**

Social Work  
*Mindfulness and Chronic Pain*  
 Advisers: Kelsey Sobel and Judy Stevens

**Brittany Sampson**

Occupational Therapy  
*Patient Outcomes following Hip and Knee Joint Replacement Surgery: Measurement of Social Support, Aspects of At-Home Environment, and Role of Local Community in Older Adults*  
 Adviser: Vidyalakshmi Sundar

**Stephanie Schmeltzer**

Nutrition  
**Ryan Walsh**  
 Health Management and Policy  
*The Impact of Practicing Gratitude*  
 Adviser: Kathleen Grace-Bishop

**Elizabeth Schweitzer**

Genetics  
*A Tangled Web: The Challenge of Patient Autonomy in Medical Genetics*  
 Adviser: Erica Stelmach

**Chaya Sophon**

Anthropology  
*The Future and Challenges of Counter-Mapping Indigenous Spaces*  
 Adviser: Alexandra Martin

**Yandan Wang**

Neuroscience and Behavior  
*Ultrasonic Vocalization as a Predictor of Resilience to Intermittent Swim Stress-Induced Anxiety: An Investigation of Re-Exposure Effects*  
 Adviser: Robert Drugan

**Kristen White**

Psychology and Communication Sciences and Disorders  
*How Personalized Lessons Enhance Learning*  
 Adviser: Michael Melville

**Katherine Wordell**

Justice Studies and History  
*Multigenerational Child Sexual Abuse: An Evaluation of Cases from a Child Advocacy Center*  
 Adviser: Robert Eckstein

---

**MUB, Granite State Room****Advanced Technical Writing**

Adviser: Molly Campbell

**Ross Baker**

Environmental Engineering  
*What's the Weather Like?*

**Castine Bernardy**

Environmental Engineering  
*Test Anxiety in College Students*

**Hailee Flaherty**

Health Management and Policy  
*How to Better Apply What Students Learn Inside and Outside the Classroom*

**Justin Healy**

Communication  
*Customer Service Tutorial Website Research*

**Nathan McAree**

Communication  
*Should Electronic Music Be Considered Genuine?*

**Alex McGinn**

Environmental Engineering  
*The Innovation and History of the Rotary Engine*

**Richard Ouch**

Business and English  
*Creating a Website about the Cambodian Genocide*

**Emma Rayner**

Ecogastronomy and English  
*Assessing the History and Recent Popularity of Yoga and Meditation*



**Dellene Watt**

Communication Sciences and Disorders  
*Why Speech Language Pathology Is Important*

## Parents Association Undergraduate Research Symposium

### Oral Presentations, Session B

**Friday, April 22****10:50 a.m.–Noon****Memorial Union Building**

The Parents Association Undergraduate Research Symposium is a University-wide event showcasing students from a range of disciplines. Students present their research, scholarly, and creative projects in interactive poster sessions and oral presentation sessions.

#### MUB, Room 237

### ***Bystander Intervention as a Tool for Social Justice***

Adviser and Moderator: Jane Stapleton

**Rebecca Barton**

Communication and Women's Studies  
*Responding to Racism on Campus*

**Lindsey Lussier**

Social Work and Women's Studies  
*Consumerism—An Active Bystander When Friends/Family Are Watching/Listening to Oppressive Media*

**Casey O'Dea**

Women's Studies  
*I'll Go with You: How to Be an Ally to the Transgender Community*

**Yamilex Bencosme**

Spanish and Women's Studies  
*Sexual Assault on College Campuses - I*

**Desiree Tribbett**

Women's Studies  
*Sexual Assault on College Campuses - II*

**Timothy Pearson**

Women's Studies  
*Bystander Actions - I*

**Jessica Hickey**

Women's Studies  
*Bystander Actions - II*

#### MUB, Room 340

### ***China Challenges the World***

Adviser: Lawrence Reardon  
 Moderator: Samantha Friedman

**Andrew Abrams**

History  
*Mao: Theory and Practice*

**Matthew Geason**

Political Science  
*Why Chinese Reunification Has Failed to Date*

**Abbygale Martinen**

Political Science and Kinesiology  
*An Expensive Activity: Why Do States Spend So Much Money on Sports?*

**Drew Sunderlin**

Political Science  
*The Rise of Coastal China*

#### MUB, Room 203

### ***Feminism in Action—Session II***

Adviser and Moderator: Faina Bukher

**Olivia Dean**

Communication  
*Women's Studies Recruitment and Outreach*

**Hollie Foster**

Women's Studies and Psychology and Russian  
*Virgin Mary, Become a Feminist*

**Giselle Hart**

Women's Studies  
*Women's Empowerment—Fierce and Fabulous*

**Shaina Maciejewski**

International Affairs and Women's Studies  
*The Effects of Capitalism on Women's Economic Independence*

**Marisa Milone**

English Literature and Women's Studies  
*Consequences of Misrepresentation in Media and Film*

**Subha Singh**

Anthropology  
*Women's Studies Alumni Outreach*

#### MUB, Room 207

### ***Framing Difference in Superhero Comics and Graphic Narratives***

Adviser and Moderator: Monica Chiu

**Olivia Bochicchio**

English Teaching  
*Photographs: The Incomplete Picture*

**Elizabeth Haas**

English/Journalism  
*Balancing Cultures Like a Superhero: Integration in Marvel Comics*

**Rachelle McKeown**

Ecogastronomy and English  
*Ms. Marvel: Empowerment in Race and Gender*

**Tiana Salsman**

English  
*Otherness in Maus I & II*

#### MUB, Room 158

### ***Governance: Questions of Legitimacy and Stability***

Adviser: Molly Wallace  
 Moderator: Claire Malarte-Feldman

**Taryn Flint**

International Affairs and French  
*Campaign Financing and Voter Confidence in Political Systems*

**Kelsey-Anne LeBlanc**

International Affairs and Political Science  
*Morocco and Political Islam: Why the Kingdom Is a Model of Controlled Opposition*

**Kyle McCrory**

International Affairs and Russian  
*Meet the New Boss, Same as the Old Boss: The Rise of Putin's Regime*

**Stefanie Orn**

International Affairs and Spanish  
*The Context for Political Corruption in Contemporary Spain*

**Liam Spinicci**

International Affairs and Russian  
*Authoritarianism in Russia: Failure to Change or a Modified Democracy?*

**MUB, Room 336**

### **Human Development and Sustainability: Health, Food Security, and Natural Resources**

Adviser: Molly Wallace

Moderator: Jennifer Purrenhage

**Jacqueline Gilbert**

International Affairs and Anthropology  
*Water Scarcity, Politics, and Resource Management in Bolivia*

**Emily Gold**

International Affairs and Political Science  
*Sex, Drugs, and Risk 'n' Roll: A Review of Harm Reduction Strategies for the Prevention of HIV/AIDS in South Africa*

**Siddharth Nigam**

Mechanical Engineering and Mechanical Engineering  
*Project OASIS: A Study on the Economic, Social, and Technological Feasibility of Family Sized Aquaponics in Uvita, Costa Rica*

**Lyndsay Ulin**

International Affairs and German  
*GMOs in Germany*

**MUB, Theater I**

### **Human Rights: Responding to State Policies and Repression**

Adviser: Molly Wallace

Moderator: Jeannie Sowers

**Kelsey Douville**

International Affairs and Russian  
*The Decade of Roma Inclusion: Lessons from a Multinational Minority Integration Initiative*

**Keeley Ffrench**

International Affairs and Health Management and Policy  
*Overcoming Minority Repression in Francoist Spain*

**Dorothy Long**

International Affairs and Communication  
*Reproductive Rights in Argentina*

**Ian MacKay**

International Affairs and German  
*Official U.S. Perspectives on Government Repression: Migration as a Political Strategy in Xinjiang and the West Bank*

**Brittany Mailhot**

International Affairs and Spanish  
*Transitional Justice in Chile: Finding Justice for Victims after the Death of Augusto Pinochet*

**MUB, Room 338**

### **Immigrants and Refugees in Europe: Experiences, Responses, and Policies**

Adviser: Molly Wallace

Moderator: Gregg Orifici

**Francesca Bragan**

Political Science  
*Post WW2 Germany and the Syrian Refugee Crisis*

**Jordan Lachance**

International Affairs and French  
*Plusieurs Versions de la Môme Histoire: Explanations for the Differences between How Immigrants Experience the Integration Process in France*

**Kyle Leafé**

International Affairs and German  
*Syrian Refugees and the Political Dilemma in Germany*

**Jacob Lehoux**

International Affairs and Economics  
*The Rise of the National Front: The Far-Right Wing and Its Implications on France and Europe*

**MUB, Room 332**

### **Multidisciplinary Session II: Studies in Science, Health, and Engineering**

Moderator: Kate Gaudet

**Lyndsay Canwell**

Biomedical Science  
*Tumor Necrosis Factor (TNF) Expression in Bovine Granulosa Cells*  
Adviser: Thomas Foxall

**Joseph Collins**

Mechanical Engineering  
*Static and Dynamic Response of Seed Coats and Biomimetic 3D Printed Materials*  
Adviser: Yaning Li

**Hayley Robertson**

Neuroscience and Behavior  
*Temporary Thalamic Inactivation: Effects on Signal-to-Noise Ratios and Tuning Properties of Rat Prefrontal Neurons*  
Adviser: Robert Mair

**Charlotte Thompson**

Sociology  
*Perceptions of Beach Water Quality in York, Maine*  
Adviser: Thomas Safford

**MUB, Room 334**

### **Multidisciplinary Session III: Studies in Health and Human Development**

Moderator: Jesse Morrell

**Adelaide Murray**

Health Management and Policy  
*Student Knowledge, Attitude, and Beliefs for Targeted Influenza Prevention Efforts at the University of New Hampshire*  
Adviser: Rosemary Caron

**Michael Sales**

Psychology and German  
*The Effect of Trained Mother-Child  
 Conversation on Science Learning in  
 Kindergarten Age Children*  
 Adviser: Michelle Leichtman

**Rebecca Smeltzer**

Nutrition  
*Pasteurized Donor Human Milk Programs  
 in Level One and Two Hospital Nurseries  
 in the Northeast United States*  
 Adviser: Gale Carey

**MUB, Room 321**

**Post-Colonial and Post-Cold  
 War International Relations  
 and Influence**

Adviser: Molly Wallace  
 Moderator: Tom Safford

**Valery Arnoux**

International Affairs and Spanish  
*How Did Spain Lose Its Influence in  
 Latin America?*

**Nicole Beaudet**

International Affairs and Political Science  
*Cold War 2.0: Russia's Stance on Nuclear  
 Proliferation in the 21st Century*

**Alexa Gozdoff**

International Affairs and Community and  
 Environmental Planning  
*Anti-Americanism in Argentina: The Roots  
 and Causes*

**Brittany Marien**

International Affairs and Political Science  
*The Nuclear Dragon: From Reluctance to  
 Adherence, China's Changing Attitude  
 toward the Nonproliferation Regime*

**MUB, Room 302**

**Rhetoric of Science**

Moderator: Michael Jackson

**Ellen Ballentine**

Communication  
*'Like' as a Discourse Marker*  
 Adviser: Edward Reynolds

**Devon Clarke**

Communication  
*The Rhetorical Analysis of the  
 Breastfeeding Debate*  
 Adviser: Michael Jackson

**Dana Gingras**

Communication and Women's Studies  
*Theories for Theories: A Rhetorical  
 Analysis of Nancy Krieger's "Theories for  
 Social Epidemiology in the 21st Century:  
 An Ecosocial Perspective"*  
 Adviser: Michael Jackson

**Steven Quigua**

Communication  
*Revolutionaries vs. The Old Regime*  
 Adviser: Michael Jackson

**MUB, Room 233**

**Sensitive Topics in  
 Communication and Psychology:  
 Examining Race, Intimacy,  
 and Anxiety**

Moderator: Danielle Pillet-Shore

**Jenna Clarkson**

Psychology  
*Guys and Dolls and All of Their Falls: The  
 Effects of Gender on Stressful Life Events  
 and Negative Behavior*  
 Adviser: Ellen Cohn

**Jessica Coccozziello**

Communication  
*A Tale of Two Intimacies: Some Systematic  
 Differences between How 'Family' and  
 'Friends' Interactionally Constitute Their  
 Social Relationships*  
 Adviser: Danielle Pillet-Shore

**Megan Kelleher**

Communication  
*An Analysis on the Intersection of Race  
 and Media in Criminal Cases*  
 Adviser: Joseph Terry

**Anna Tumber**

Communication  
*Learn How Yoga Calms Anxiety Holistically*  
 Adviser: Michael Jackson

**Stephanie Yee**

Psychology  
*Witness Credibility and Juror Decision-  
 Making: Effects of Racial Bias and Police  
 Legitimacy*  
 Adviser: Ellen Cohn

**MUB, Room 304**

**Top Comm-entary Papers**

Moderator: Kevin Healey

**Sean Fleese**

Communication  
*Body Cameras on Law Enforcement*  
 Adviser: Kevin Healey

**Christopher Kuist**

Communication  
*The Photograph as Montage*  
 Adviser: Michael Jackson

**Carolyn Riley**

Communication and Women's Studies  
*Networked Movements & Social Change:  
 The Success of #BlackLivesMatter*  
 Adviser: Michael Soha

**Jenna Ward**

Communication  
*An Ethical Dilemma in Media: 'A Rape  
 on Campus'*  
 Adviser: Mark Hungerford

**MUB, Room 330**

**U.S. Foreign Policy: A Case Study  
 of ISIL/ISIS**

Adviser and Moderator: Lionel Ingram

**Kelsey Crowley**

Political Science

**Justin Curley**

Political Science

**Alvaro Maranon**

International Affairs and Political Science

**Kyle Reilly**

Political Science

## Parents Association Undergraduate Research Symposium

### Oral Presentations, Session C

**Friday, April 22**  
**12:15 - 1:25 pm**

#### Memorial Union Building

The Parents Association Undergraduate Research Symposium is a University-wide event showcasing students from a range of disciplines. Students present their research, scholarly, and creative projects in interactive poster sessions and oral presentation sessions.

#### MUB, Room 237

### ***Bystander Intervention as a Tool for Social Justice / Leadership for Social Change***

Adviser and Moderator: Jane Stapleton

**Kelly DiNapoli**  
Hospitality Management  
*Responding to Environmental Injustice*

**Chelsea Evankow**  
Biology and Women's Studies  
*Bystander Actions - III*

**Anna Jones**  
Women's Studies  
*Bystander Actions - IV*

**Renee Loeffel**  
Zoology  
*Learning as a Way of Leading - I*

**Carolyn Riley**  
Communication and Women's Studies  
*Learning as a Way of Leading - II*

**Abby Geremia**  
Women's Studies  
*Learning as a Way of Leading - III*

#### MUB, Room 330

### ***ISIL/ISIS and Syria***

Moderator: Lionel Ingram

**John O'Neill**  
History  
*Syria: A History of Resisting Revolution and a Failed State's Future*  
Adviser: John Cerullo

**James Driscoll**  
**Andrea Kabala**  
Political Science  
**Lillian Radack**  
Political Science and English/Journalism  
**Emily Vulgamore**  
Biology  
*U.S. Foreign Policy: A Case Study of ISIL/ISIS*  
Adviser: Lionel Ingram

#### MUB, Room 332

### ***Multidisciplinary Session IV: Performance, Ritual, and Conflict***

Moderator: Kate Gaudet

**Cameron Calato**  
History and Philosophy  
*Where the Hills and Plains Collide: A Look at Nepal's Political Tension through Tharus in Chitwan*  
Adviser: Ethel Wolper

**Kelli Minelli**  
Music Performance Study  
*Bernard Herrmann's Wuthering Heights*  
Adviser: Rose Pruiksma

**Madison Pierce**  
English Teaching  
*Finding William Lloyd Garrison in The Liberator: Personal Views, Public Venue*  
Adviser: Monica Chiu

**Victoria Rudis**  
English Teaching  
*Ego and Religious Ritual*  
Adviser: Charli Valdez

**Hannah Whitcomb**  
Anthropology  
*Shopping as Ritual: An Anthropological Analysis of Consumption*  
Adviser: Robin Sheriff

#### MUB, Room 334

### ***Multidisciplinary Session V: Influences on Behavior and Experience***

Moderator: Jesse Morrell

**Jessica Choiniere**  
Environmental Engineering  
*How to Progress through Life Successfully*  
Adviser: Molly Campbell

**Julie Clancy**  
Psychology  
*The Impact of Emotion Regulation on Inhibitory Control and Its Neural Correlates*  
Adviser: Robert Ross

**Alana Davidson**  
Nutrition  
*Assessing Hunger Issues among University of New Hampshire Students*  
Adviser: Jesse Morrell

**Allison Onofrio**  
Neuroscience and Behavior  
*The Effect of the Earth's Magnetic Field on the Resting Position of Canis familiaris*  
Adviser: Leslie Curren

**Thomas Reese**  
Psychology  
*Confidant Interactions Affecting Adolescent Views of Authority and RVB*  
Adviser: Ellen Cohn

**Kate Santoso**  
Psychology and Health Management and Policy  
*Prescription Opioids and Heroin: Perceptions, Attitudes, and Beliefs among College Students*  
Adviser: Rosemary Caron

#### MUB, Room 302

### ***Rhetoric of the Photograph***

Moderator: Michael Jackson

**Olivia Cimeno**  
Communication  
*Liberation Photography: A Restoration of Faith*  
Adviser: Michael Jackson



**Angela McCarthy**

Communication

*The Art of Death: Photographic Depictions of the Dead and Dying*

Adviser: Michael Jackson

**Hannah Popovitch**

Justice Studies and Communication

*Environmental Deception through Photos*

Adviser: Michael Jackson

**Mikayla Schaefer**

Communication

*Make Graffiti, Not War*

Adviser: Lawrence Prelli

**MUB, Room 203*****Top Papers in Language and Social Interaction***

Moderator: Edward Reynolds

**Emily Ciabattoni**

Communication

*A Relational Explanation/Exploration of Anorexia Nervosa*

Adviser: Sheila McNamee

**Mikayla Collins**

Communication

*The Dialogic Interview: Co-Creating Meaning as an Alternative to Discovering "What Is"*

Adviser: John Lannamann

**Raleigh Goessling**

Communication

*Coach Athlete Interaction in Cross-Country Skiing*

Adviser: Edward Reynolds

**Andrea Russell**

Communication

*Would I Lie to You?: Lay Criteria for Determining Lies on Panel Comedy Shows*

Adviser: Edward Reynolds

**UNH Manchester  
URC Engineering  
Technology Day****Project Presentations****Friday, April 22****9 a.m.–3 p.m.****Pandora Mill, 2nd Floor****88 Commercial St., Manchester**

The UNH Manchester Engineering Technology Program presents its annual Senior Project Presentation 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.

**Christopher Apkarian****Tyler London****Brandon Therrien**

Mechanical Engineering Technology

*The Propane Advantage*

Adviser: Sean Tavares

**Zachery Boynton**

Electrical Engineering Technology

*Server Load Balancing in a Speech**Recognition System*

Adviser: Michael Jonas

**Garrett Bryant**

Electrical Engineering Technology

*Order Upload Service*

Adviser: Christopher LeBlanc

**Curtis Button**

Electrical Engineering Technology

*RGB Mechanical Television*

Adviser: Christopher LeBlanc

**Alexander Chretien**

Mechanical Engineering Technology

*Burner Component Design/Assembly**Improvement*

Adviser: Sean Tavares

**Adam Connolly**

Electrical Engineering Technology

*Power Control Lockout System*

Adviser: Christopher LeBlanc

**Kyle Cormier**

Electrical Engineering Technology

*Layout Design with TI*

Adviser: Christopher LeBlanc

**Ed Daniels****Stephen Koble****Samuel Workman**

Electrical Engineering Technology

*UNH 150th Celebration Blimp Project*

Advisers: Christopher LeBlanc,

Sean Tavares

**Eric Demers**

Mechanical Engineering Technology

*Volumetric Flow Rate Database*

Adviser: Sean Tavares

**Matthew Dimock**

Mechanical Engineering Technology

*ASME Pressure Vessel Design Guide*

Adviser: Sean Tavares

**Seth Eaves**

Mechanical Engineering Technology

*Velcro Mesh Edge*

Adviser: Sean Tavares

**Michael Elliott**

Mechanical Engineering Technology

*Testing Experiments to Enhance Secondary**Education Engineering Practices*

Advisers: Mihaela Sabin, Sean Tavares

**Kevin Ferdinand**

Mechanical Engineering Technology

*Noise Reduction and Rewiring of a UAV**Dynamometer Rig*

Adviser: Sean Tavares

**Toby Fontaine**

Mechanical Engineering Technology

*Media Belt Installation Process**Improvement*

Adviser: Gregg King

**Jacob Gallant**

Mechanical Engineering Technology

*Gas Compliant Electrical Feedthrough**System: Check Valve Concept*

Adviser: Sean Tavares

**Michael Huber**

Electrical Engineering Technology

*UNH Formula SAE Dashboard Data Display*

Adviser: Christopher LeBlanc

**Refik Karic**

Computer Engineering Technology  
*OTDR Controller*  
 Adviser: Christopher LeBlanc

**Eric Leighton**

Mechanical Engineering Technology  
*Water Rocket Launcher*  
 Adviser: Sean Tavares

**Harmony McCall**

Mechanical Engineering Technology  
*Crash Demonstration and the Effects of Delayed Response*  
 Adviser: Sean Tavares

**Eric Pepin**

Mechanical Engineering Technology  
*Self-Aligning Table*  
 Adviser: Sean Tavares

**Robert Salisbury**

Mechanical Engineering Technology  
*Formula SAE 2015 Participant*  
 Adviser: Sean Tavares

**Jesse Schraufnagel**

Mechanical Engineering Technology  
*Efficient 5-Axis Grinding of Airfoil Roots*  
 Adviser: Sean Tavares

**Michael St. Jean**

Electrical Engineering Technology  
*Low Cost Power Supply Module*  
 Adviser: Christopher LeBlanc

**Donald Wallis**

Mechanical Engineering Technology  
*Rotary Vibration Analysis Trainer*  
 Adviser: Sean Tavares

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

### Poster Presentations

**Friday, April 22**

**9 a.m.–3 p.m.**

**Peter T. Paul College Building**

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

**Paul College Courtyard**  
**9-10:30 a.m.**

### EcoGastronomy Poster Presentations

**Moderator: Daniel Winans**

**Grace Berkman****Christa Fagone**

Ecogastronomy and Hospitality Management  
*Wine Not? Sustainable Wine Bar Business Proposal*  
 Adviser: Daniel Innis

**Briana Bruinooge****Megan Sellarole**

Ecogastronomy and Kinesiology  
*My Herbal University*  
 Adviser: Joanne Curran-Celentano

**Zachary Casali**

Ecogastronomy and Management

**Antonio Garcia**

Ecogastronomy and Sustainable Agriculture and Food Systems  
*Growing a Greener Grass: Sustainable Cultivation of Medical Marijuana*  
 Adviser: Daniel Winans

**Danielle Gervais**

Ecogastronomy and Sustainable Agriculture and Food Systems  
*Fresh from Our Farm Catering: A Business Proposal for a Farm and Catering Company*  
 Advisers: William Hastings, Daniel Remar

**Melanie Green**

Ecogastronomy and Nutrition  
*How to Succeed at UNH without Really Trying: A First-Year Wellness Guide*  
 Advisers: Maggie Begis, Daniel Winans

**Alexander Harling**

Ecogastronomy and Economics  
*Baja's Catch: Fishing for a Cleaner Environment and Consistent Yield*  
 Advisers: Colin Sutton, Daniel Winans

**Anna Jones**

Women's Studies  
*Fed Up: Finding the Most Effective Ways to Fight Hunger in Elementary School Students*  
 Advisers: Larry Brickner-Wood, Daniel Winans

**Alexis Larabee**

Ecogastronomy and Hospitality Management  
*Sensory Cinema: Enhancing the Viewer Experience through Film & Food Pairing*  
 Advisers: Daniel Remar

**Matthew Larson**

Ecogastronomy and Marine, Estuarine and Freshwater Biology  
*Promoting Seaweed as a Fresh Part of New England's Food Identity*  
 Advisers: Arthur Mathieson, Daniel Winans

**Amber Litterer**

Ecogastronomy and Zoology  
*Hungry Hungry Homarus: Bait Preference in the American Lobster*  
 Advisers: Winsor Watson, Daniel Winans

**Diana Lo**

Ecogastronomy and Hospitality Management  
*The New American Dream: Moving from McMansions to Tiny Houses*  
 Advisers: Robert Henry, Daniel Winans

**Kelsey MacDonald**

Ecogastronomy and Nutrition  
*Culinary Assessment of Sweet  
 Potato Varieties*

Advisers: Rebecca Sideman, Daniel Winans

**Georgina Martin**

Ecogastronomy and Hospitality  
 Management  
*Restaurant Possible: Finding a Recipe  
 for Success*

Adviser: Daniel Innis

**Emma Rayner**

Ecogastronomy and English  
*The UNH Challenge: Getting Students to  
 Halt the Salt and Beat the Sweet*

Adviser: Ronald Boucher

**Campbell Reiff**

Ecogastronomy and Nutrition  
*The Hidden Truth: How Gluten Sensitivity  
 Could Be Affecting Your Health*

Adviser: Gale Carey

**Marlee Scott**

Ecogastronomy and Recreation  
 Management and Policy  
*Chef It Up! An Affordable Farm to Fork  
 Afterschool Program*

Advisers: Robert Barcelona, Daniel Winans

**Catherine Talbot**

Ecogastronomy and Communication  
 Sciences and Disorders  
*The Missing Piece: Discovering the Link  
 between Nutrition and Autism*

Advisers: Rae Sonnenmeier, Daniel Winans

**Hannah Wolf**

Ecogastronomy and Nutrition  
*The Local Biscuit: A Website Dedicated to  
 Bringing Awareness to Local Food*

Advisers: Mary Schrieffer, Daniel Winans

**Paul College Great Hall**

**11 a.m.–12:30 p.m.**

### **Economics Capstone Poster Presentations**

**Adviser and Moderator: Aziz Saglam**

**Kevin Barker**

Economics  
*How Effective Is a Tax on Plastic Bags?*

**Austin Bauer**

Economics  
*R&D Spending and Venture Capitalism*

**Andrew Beaulieu**

Economics  
*Economic Impacts of the Highway System*

**Thomas Boivin**

Economics  
*Body Mass Index vs. Income*

**Justin Cawley**

Economics  
*Unemployment Duration: Causes and  
 Consequences*

**Cristina DiFabio**

Economics  
*Wealth Inequality*

**Sarah Harmon**

Economics  
*Risk Aversion of Men vs. Women in  
 Economic Decision-Making*

**Sean Hogan**

Economics  
*Firm Size and Economic Growth*

**Maura Kalil**

Economics  
*Macroeconomic Effects of Oil Price  
 Fluctuations*

**Eric Kelly**

Economics  
*Do Private Military Companies Cause  
 Military Conflicts to Be More Intense?*

**Jenna Knox**

Economics  
*Policy Issues of Medicare in a Changing  
 Medical World*

**Jacob Lehoux**

Economics  
*International Affairs and Economics  
 Charter Schools: Are They Effective?*

**Brandon Lyman**

Economics  
*College Tuition vs. Future Salary*

**Nicholas Natella**

Economics  
*Estimating the Effects of High-Value  
 Players on the Success in the NBA*

**Joseph Sameski**

Economics  
*Internet Economy: Past, Present, Future*

**Connor Sullivan**

Economics  
*An Economic Analysis of the Streaming  
 Media Industry*

**Brandon Swift**

Economics  
*The Economic Impact of Mobile Technology*

**Andrew Taylor**

Economics  
*Why Recycling? Economic Issue or  
 Moral Issue?*

**Craig Tyer**

Economics  
*Economic Costs of the Opiate Epidemic in  
 New Hampshire*

**Dongjie Wang**

Economics  
*How Effective Is the Expansionary Mon-  
 etary Policy in Fighting against Recession?*

**Michael Zehngut**

Economics  
*Impact of Refugees on European Economies*

**Paul College Courtyard**

**11 a.m.–12:30 p.m.**

### **Economics Poster Presentations**

**Adviser and Moderator: Robert Mohr**

**Sara Aybar**

International Affairs and Economics  
*Immigration Reform and the Refugee  
 Crisis: The Benefit or Burden of  
 Nontraditional Immigrants*

**Graham Ayres**

Economics  
*Measuring Value: An Economic  
 Examination of New Hampshire's Food  
 Cooperatives*

**Richard Chamberland**

Economics  
*From Trash to Treatment*

**Michael Darisse**

Economics

*New Hampshire and the Regional  
Greenhouse Gas Initiative  
(Cap and Trade vs. Pollution Tax)*

**Adam Day**

Economics

*Economics of End of Life Care*

**Abigail Hahr**

Economics

*Analysis of Financial Crisis, Formation  
and Bust of Housing Bubble, and  
Involvement of Asymmetric Information*

**Christian Jensen**

Economics

*Statistical Arbitrage: Machine Learning &  
Performance Optimization*

**Kaitlyn Kelley**

Economics

*The New Hampshire Climate Action Plan*

**Robert Lowe**

Economics

*The Housing Market Collapse*

**Jeremy Lowell**

Economics and Spanish

*Uber vs Taxi Companies*

**Sean Mitchell**

Economics and Political Science

*The High Price of Higher Education*

**Zachary Mulkern**

Economics

*WTI-BRENT Spread*

**Andrea Nash**

Economics and Entrepreneurial Studies

*Adverse Effects of Solid & Hazardous Waste*

**Erika Sweet**

Economics

*Solar Panel Policy*

**Ekaterina Tsareva**

Economics

*Heroin Epidemic*

**William Vetrone**

Economics

*An Economic Analysis of the Recent Heroin  
and Opioid Epidemic in New Hampshire*

**Zichun Zhang**

Economics

*Natural Gas Effect on Electricity Price in  
New England Region*

**Yanmin Zheng**

Economics

*The Local Food Current Situation in New  
England Area*

---

**Paul College Courtyard &  
Great Hall, 1–2:30 p.m.**
**Multidisciplinary Poster  
Presentations**
**Ahed Alhamdan**

William Driscoll

Edward Hoogasian

David Labins

Matthew Mutuski

Information Systems and Business

Analytics

*Student Housing Price Analysis*

Adviser: Roger Grinde

**Elizabeth Assaf**

Accounting

Rebecca Wuorio

Accounting and Finance

*Taxation as It Relates to Politics, Small  
Business, & Corporate America*

Adviser: John Hasseldine

**Dylan Bartlett**

Accounting

*Governmental Financial Disclosures: A  
Study on the Timeliness of Comprehensive  
Annual Financial Reports*

Adviser: Catherine Plante

**Christopher Bohlig**

Entrepreneurial Studies and Finance

Maxwell DesMarais

Marketing and Finance

Wendell Miller

Entrepreneurial Studies

Cram

Adviser: Ludwig Bstieler

**John Bowen**

Economics

*A Cost-Effectiveness Comparison of Gun  
Control Legislation and Economic Policies*

Adviser: Robert Mohr

**Emma Carleton**

Information Systems and Business

Analytics and Management

Haley Smith

Paige Tuller

David Veilleux

Peter Yarosewick

Information Systems and Business

Analytics

*Working Out the Crowds at the Gym*

Adviser: Roger Grinde

**Katelin Collins**

Accounting

*Balancing Act: Trends and Current  
Issues of Retaining and Promoting  
Women in Auditing*

Adviser: John Hasseldine

**Jacob Daniels**

Grace Patton

Keegan Twomey

John Wynters

Kaleigh Zukowski

Information Systems and Business

Analytics

*UNH Parking Services Analysis*

Adviser: Roger Grinde

**Angela Deng**

Finance

*Determinants and Differences of  
Profitability of Domestic and Foreign  
Commercial Banks*

Adviser: Wenjuan Xie

**Oriana Eason**

Information Systems and Business

Analytics

*Factors Influencing Project Success  
in Information Systems Development  
Methodologies Transitions: An Analysis of  
Waterfall to Iterative Methodologies*

Adviser: Kholekile Gwebu

**Oriana Eason**

Julia Hird

Yanxi Lu

Information Systems and Business

Analytics

Karina Popkova

Finance and Information Systems and

Business Analytics

*Understanding Housing Dynamics at UNH*

Adviser: Roger Grinde



**Riley Ellis**

Kayla Kennedy

Margaret McVeigh

Timothy Prior

Christopher Wingate

Information Systems and Business  
Analytics*The Wildcat Fueling Station*

Adviser: Roger Grinde

**Julia Hopkins**

Marketing

*The Effectiveness, Efficiency, and Ethics of  
Marketing Analytics*

Adviser: M. Billur Akdeniz

**Jeffrey Lertora**

Marketing

*Healthy Eating Influences: Every Good  
Decision Starts with Good Intentions*

Adviser: Lin Guo

**Colin MacArthur**

Brendan Mantell

Kien Tran

Information Systems and Business  
Analytics*Red River Computer's Growth Strategy*

Advisers: Kholekile Gwebu, Justin Millette

**Christopher Morelli**Accounting and Information Systems and  
Business Analytics*An Effectiveness Review of Section 404 of  
the Sarbanes Oxley Act (2002)*

Adviser: John Hasseldine

**Erin Mullaney**

Marketing

*Assessing the Business-to-Business Model  
of Destination Marketing Organizations in  
New England*

Adviser: M. Billur Akdeniz

**Ian Newcombe**Information Systems and Business  
Analytics and Finance*Mainframe Relevance in Modern IT*

Adviser: Kholekile Gwebu

**Jacob Pentheny**

Marketing

*The Influence of Movie Reviews  
on Consumers*

Adviser: Bruce Pfeiffer

**Brendan Phelan**

Marketing

*Motivational Factors for Playing  
Fantasy Sports*

Adviser: Matthew O'Hern

**Harrison Quast**

Entrepreneurial Studies

*The Personality of Success: A Study  
of Desirable Personality Traits of  
Entrepreneurs*

Adviser: Jeffrey Sohl

**Valeriu Tomescu**

Finance

*The Economic Impact of Immigration on the  
Output-Mix: Results from Hurricane Mitch*

Advisers: Karen Conway, Bruce Elmslie

**Valeriu Tomescu**

Finance

*Natural Disasters and the Effectiveness of  
Foreign Aid on Economic Development*

Adviser: Mihail Miletkov

**Sarah Tubbs**

Marketing and Management

*Branding a Business School: The Paul  
College Experience*

Adviser: Diane Devine

**Paul College Great Hall  
9-10:30 a.m.*****The Macroeconomics of National  
Economies around the World***

Adviser and Moderator: James Wible

**Emmanuel Adeeko**

Applied Mathematics

*A Macroeconomic Analysis of Switzerland***Antoni Athanasopoulos**

Accounting and Economics

*The Tragic Downfall of Greece in Recent Years***Paige Benik**

Marketing

*A Macroeconomic Analysis of Brazil***Zachary Bosen**

Economics and Mechanical Engineering

*A Macroeconomic Analysis of France***Ryan Buckley**

Economics

*A Macroeconomic Analysis of Sweden***Katherine Freitas**

Applied Mathematics

*Portugal: Still Fighting an Uphill Battle  
after the Financial Crisis of 2008***Olivia Goodale**

Social Work

*A Macroeconomic Analysis of Uganda: A  
Developing Nation***Erik Hauck**International Business and Economics  
and Management*A Macroeconomic Analysis of Haiti***Andrew Ibechem**

Economics

*A Macroeconomic Analysis of China***Colleen Lynch**International Business and Economics  
*A Macroeconomic Analysis of Canada***Ryan Malfait**

Finance

*Analysis of Monetary Policy and  
Institutional Structure in Norway***Christopher McDade**Environmental and Resource Economics  
*A Macroeconomic Analysis of Singapore***Jacob Mechaber**

Economics

*A Macroeconomic Analysis of Mexico***Sarah Michaud**

Management

*A Macroeconomic Analysis of Israel***Sean Mitchell**

Economics and Political Science

*The United Kingdom: A Macroeconomic  
Analysis of a European Outlier***Javen Morse**

Undeclared

*A Macroeconomic Analysis of Panama***Anh Phuoc Thien Nguyen**

Economics

*Japan Since 2007: Rising Sun and  
Shrinking Economy*

**Nhan Ha Nguyen**

Environmental and Resource Economics  
*A Macroeconomic Analysis of Vietnam*

**Kyle Palmer**

Undeclared  
*Macroeconomics of Germany*

**William Scherneck**

Economics  
*Italy's Money and Macroeconomics*

**Michael Simpson**

Economics  
*The Effects of the 2008 Financial Crisis on Turkey's Expanding Economy*

**Justin Sirois**

Finance  
*A Macroeconomic Analysis of the Phillipines*

**Christopher Tveter**

Communication  
*A Macroeconomic Analysis of the Netherlands*

**Mark Wentworth**

Finance and International Business  
 and Economics  
*A Macroeconomic Analysis of Egypt*

**Bradley White**

Economics  
*A Macroeconomic Analysis of Australia*

**Christian Widmark**

Applied Mathematics and History  
*The Economy of Spain after the Global Financial Crisis of 2008-2013*

**Seth Wyskiel**

Economics  
*A Macroeconomic Analysis of Ireland*

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

### Oral Presentations

**Friday, April 22**  
**9 a.m.–3 p.m.**  
**Paul College Building**

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

### Paul College 165

#### **Atkins Investment Group**

**Moderators: Stephen Ciccone & Ahmad Etebari**

**Rebecca Atkinson**  
 Accounting and Marketing  
**Nicholas Bagley**  
**Courtney Debus**  
**Finn Johnson**  
**Bradford Kelley**  
**Dongjie Wang**  
 Economics  
**Austin Bauer**  
 Economics and Math  
**Nicholas Bouchard**  
**Jonathan Harrison**  
**Paul Valhouli**  
 Finance and Accounting

**William Cavanaugh**  
**Zachery Fitzgerald**  
**Galen Hand**  
**Justin Lappin**  
**Aaron LeLacheur**  
**Jason Michonski**  
 Cullen Moore  
**Richard Roy**  
**John Schwartz**  
**Jon Tamposi**  
**Chandler Wishart**  
 Finance  
**Tyler Cornellier**  
**Charles Demarco**  
**Jacob Gomez**  
**Nicholas Muldrow**  
 Finance and Information Systems and  
 Business Analytics  
**Alexander Febonio**  
 Finance and Accounting  
**Patrick Hammond**  
**Eric Murray**  
 Accounting and Finance  
**Jonathan Kiskinis**  
 Finance and Geography  
**Garrett Malagodi**  
 Computer Engineering  
**Taylor McDonald**  
 Psychology  
**Nicholas Savoia**  
 Business Administration  
**Caroline Schmidt**  
 Finance and Management  
**Jessica Selensky**  
 Accounting  
**Connor Whelan**  
 Applied Mathematics  
*Atkins Investment Group*  
 Advisers: Stephen Ciccone, Ahmad Etebari,  
 Alexys Gilcreast, Connor Leppzer,  
 Kelsey Ulaskiewicz

**Paul College 125****Marketing Workshop 1A**

Moderator: Peter Masucci

**Robert Allard****Dean Calcagno****Sean Kenneally****Laura McHoul****Brendan Phelan****Andrew Robertson****Tamlyn Smith**

Marketing

**Vivian King**

Marketing and Accounting

**Andrew McAuliffe**

Marketing and Management

*U.S. Environmental Protection Agency:**Development of Marketing Programs to**Raise the Level of Awareness of the 'Safer**Choice' Product Label and Encourage More**Consumer Selection of Labeled Products*

Advisers: Tiffany Keenan, Peter Masucci

**Kelsey Aucoin****Allison Brown****Daniel Correale**

Kassandra Coulombe

Nicole Gagnon

**Maxim Gaudreault****David Rogers****Christopher Turner**

Marketing

**Timothy Curran**

Marketing and Entrepreneurial Studies

**Rebecca Hall****William Staebler**

Marketing and Management

*180 Blue Restaurant: Research and Design**of a Marketing Campaign to Promote This**On-Campus Restaurant and the Culinary**Arts Program at the Thompson School of**Applied Sciences*

Adviser: Peter Masucci

**John Bethoney****Jacob Penthony****Olivia Scala****Audrey VanZandt**

Marketing

**Daniel Cone****Thomas Spohn**

Marketing and Finance

**Justin Diercks****Rose Gilday****Katherine Lindberg****Devon See**

Marketing and Management

*Research and Development of a Marketing**Campaign for the Carsey School to**Promote the New Master in Public Policy**Degree Program*

Adviser: Peter Masucci

**Ryan Dempsey****Cameron Tufts****Ross Weiller**

Marketing

**Christopher King****Taylor McPherson**

Marketing and Entrepreneurial Studies

**Christopher McCafferty****Sean McGartland**

Marketing and Management

**Samuel Quirk**

Marketing and Finance

**Athena Rondeau**

Marketing and Information Systems and

Business Analytics

Campus Recreation: Development

of Marketing Programs to Support

the Opening of the Expanded Hamel

Recreation Center and the New Swimming

Pool

Advisers: Cailey Griffin, Peter Masucci

**Paul College 135****Marketing Workshop 1B**

Moderator: Peter Masucci

**Natasha Borges****Nicholas Fiel****Lixing Huang****Edward McDonough****Erin Mullaney****Steven Ricciardone****Kaitlyn Shaw****Leo Sutura**

Marketing

**Amanda Federico**

Marketing and Management

**Joseph Russell**

Marketing and Entrepreneurial Studies

**Patrick Tripodi**

Marketing and Finance

*Key Auto Group: Research and Develop-**ment of Marketing Programs to Increase**Awareness and Sales at Geographically**Dispersed Dealerships, and to Promote**Careers at the Company*

Adviser: Peter Masucci

**Christopher Carroll****Kyle Ferguson****Xiaotian Mao**

Marketing and Finance

**Bettina Caspersen****Jenna Jordan****Jacob Lewis****Junjiang Wang**

Marketing

**Joseph Flynn****Alanna Hogan****Mark Lyscars**

Marketing and Management

*Prevention Innovations Research Center:**Design and Development of a Marketing**Plan and Associated Programs to Launch**and Introduce the uSafe Mobile Phone App*

Adviser: Peter Masucci

**Benita Daftari**

Marketing and Management

**Robert Emmons**

Shanley Groves

**Brian Johnson**

Sean McCarthy

Han Nguyen

**Matthew Temme**

Marketing

**Christopher Murphy**

Marketing and Finance

**Hailey White**

Marketing and Information Systems and Business Analytics

Port Authority of NH: Development of a Marketing Plan to Increase Awareness of and Interest in Using the Port by Regional Businesses

Advisers: Brenna Cahill, Peter Masucci

**Christopher Davis****Taylor Fabricant****David Fish**

Aleeza Goodman

Nicholas Hutchison

John Kelley

Jeffrey Lertora

Erika Mattson

Brooke Poulin

Marketing

Grace Marsh

Erin O'Shea

Marketing and Finance

**Kelly McIntyre**

Marketing and Management

*U. S. State Department: Research and Development of a Marketing Campaign to Counter Violent Extremism*

Adviser: Peter Masucci

**Paul College 125****Marketing Workshop 2A**

Moderator: Peter Masucci

Brenna Buckwalter

Daniel DelGrosso

Julia Hopkins

Taylor Leggett

Alexandra Weidman

Marketing

Erin Chesterton

Marketing and Entrepreneurial Studies

Meagan Covey

Michael Deris

Stephen Folan

Chelsea Lalime

Abbey Smith

Marketing and Management

*Fantastic Fortune Cookies: Design and Development of Marketing Programs to Increase Awareness of the Company and Better Market to New, Targeted Consumers and Commercial Businesses*

Adviser: Peter Masucci

Andrew Chaput

Sarah Juknievich

Brooke Prestia

June Kenneth Solomon

Erin Wade

Marketing

Brendan Fraser

Charles Harrington

Marketing and Entrepreneurial Studies

Diane King

Marketing and Management

Michael Raccio

Garrett Sahlin

Marketing and Finance

Windsor Mountain Summer Camp: Development of Marketing Programs to Increase Awareness and Drive Early Camper Registrations

Adviser: Peter Masucci

Casey Dupuis

Christine Leaf

Jiapeng Pan

Marketing

Ryan Fanning

Marketing and International Business

Leah Gamble

Ian Szilagyi

Marketing and Management

Alec Hurd

Marketing and Finance

*Lamprey Health Care: Research and Design of Marketing Programs to Increase Awareness and Use of this Regional Health Care Provider*

Advisers: Peter Masucci, Julia Pramberg

James Ellis

Marketing and Finance

Lauren Irish

Sarah Tubbs

Marketing and Management

Ryan Jepson

Casey McGuill

Monica Napolitano

Kathleen Teren

Alyson Werth

Jerome Wilkins

Marketing

Nicholas Parente

Marketing and Entrepreneurial Studies

*UNH Police Department: Research and Development of Marketing Programs to Assist in the Recruitment of New Police Officers from Diverse Backgrounds*

Adviser: Peter Masucci



**Paul College 135****Marketing Workshop 2B**

Moderator: Peter Masucci

**Andrew Albers****Hayden Knudson**

Marketing

**Kristin Letvinchuk****Charles McConville****Nash Osgood**

Marketing and Finance

**Ashley Pilotte**

Marketing and Entrepreneurial Studies

**Taylor Rodolico****Travis Smalley****Kerrienne Sullivan****Nathaniel Taylor**

Marketing and Management

*Monster Worldwide: Research and**Development of a Marketing Program to**Increase Awareness on the UNH Campus**of This Online Job Search Site*

Advisers: Thomas DelSignore,

Peter Masucci

**Christopher Birnie****Elsa Javenes****Alyssa Nugent****Kelci O'Rourke****Julia Ricciardi****Alexander Savastano**

Marketing

**James Halloran****Kellie McGoldrick**

Finance and Marketing

**April Phengdara**

Marketing and International Business

and Economics

**Matthew Rozenberg**

Marketing and Management

*Autoworks: Design and Development of**Marketing Programs to Increase Awareness**and Attract New Customers to this Kittery,**Maine, Auto Service Business*

Adviser: Peter Masucci

**Christopher Lang**

Marketing and Management

**Brianna Leclerc****Patrick Walsh**

Marketing and Entrepreneurial Studies

**Lyndsay Levin****Jillian McDonough****Emma Scarito**

Marketing

**Wyatt Powell**

Marketing and Finance

*UNH SHARPP: Research and**Development of Marketing Programs to**Increase Awareness and Understanding of**Support Services Offered by SHARPP to**Both Students and Parents*

Advisers: Sydney Crogan, Peter Masucci,

Samantha Raymond

**Paul College 165****Multidisciplinary Oral  
Presentations****Shannon Cleary****Daniel DelGrosso****Kelci O'Rourke**

Marketing

**William Jackman****Marc Pagliocca****Michael Titlebaum**

Finance and Entrepreneurial Studies

**Ryan Kelly**

Finance and Management

*Kustom Kart*

Adviser: Ludwig Bstieler

**Cassidy Croci**

Entrepreneurial Studies

*Is Entrepreneurship a Discipline?*

Adviser: Jeffrey Sohl

**Matthew Haskell**

Entrepreneurial Studies and Finance

*The Entrepreneurial Trope*

Adviser: Jeffrey Sohl

**Kendre Rodriguez**

Entrepreneurial Studies

*Angel Groups: Developing a Regional**Economic Development Strategy for Robust**Seed Capital Ecosystems for**Entrepreneurs*

Adviser: Jeffrey Sohl

**Paul College Courtyard &  
Great Hall, 1-2:30 p.m.****Multidisciplinary Poster  
Presentations****Ahed Alhamdan**

Accounting and Information Systems and

Business Analytics

**William Driscoll**

Finance and Information Systems and

Business Analytics

**Edward Hoogasian**

Entrepreneurial Studies and Information

Systems and Business Analytics

**David Labins****Matthew Mutuski**

Information Systems and Business

Analytics

*Student Housing Price Analysis*

Adviser: Roger Grinde

**Elizabeth Assaf**

Accounting

**Rebecca Wuorio**

Accounting and Finance

*Taxation As It Relates to Politics, Small**Business, & Corporate America*

Adviser: John Hasseldine

**Dylan Bartlett**

Accounting

*Governmental Financial Disclosures- A**Study on the Timeliness of Comprehensive**Annual Financial Reports*

Adviser: Catherine Plante

**Christopher Bohlig**

Entrepreneurial Studies and Finance

**Maxwell DesMarais**

Marketing and Finance

**Wendell Miller**

Entrepreneurial Studies

*Cram*

Adviser: Ludwig Bstieler

**John Bowen**

Economics

*A Cost-Effectiveness Comparison of Gun**Control Legislation and Economic Policies*

Adviser: Robert Mohr

**Emma Carleton****Haley Smith**

Information Systems and Business  
Analytics

**Paige Tuller**

Information Systems and Business  
Analytics and International Business  
and Economics

**David Veilleux**

Information Systems and Business  
Analytics and Entrepreneurial Studies

**Peter Yarosewick**

Information Systems and Business  
Analytics and Finance  
*Working out the Crowds at the Gym*  
Adviser: Roger Grinde

**Katelin Collins**

Accounting  
*Balancing Act: Trends and Current Issues  
of Retaining and Promoting Women in  
Auditing*  
Adviser: John Hasseldine

**Jacob Daniels****John Wynters**

Information Systems and Business  
Analytics

**Grace Patton**

Hospitality Management

**Keegan Twomey**

Information Systems and Business  
Analytics and Management

**Kaleigh Zukowski**

Information Systems and Business  
Analytics and Accounting  
*UNH Parking Services Analysis*  
Adviser: Roger Grinde

**Angela Deng**

Finance  
*Determinants and Differences of  
Profitability of Domestic and Foreign  
Commercial Banks*  
Adviser: Wenjuan Xie

**Oriana Eason**

Information Systems and Business  
Analytics and International Affairs  
*Factors Influencing Project Success  
in Information Systems Development  
Methodologies Transitions: An Analysis of  
Waterfall to Iterative Methodologies*  
Adviser: Kholekile Gwebu

**Oriana Eason**

Information Systems and Business  
Analytics and International Affairs

**Julia Hird****Yanxi Lu**

Information Systems and Business  
Analytics and Management

**Karina Popkova**

Finance and Information Systems and  
Business Analytics  
*Understanding Housing Dynamics at UNH*  
Adviser: Roger Grinde

**Riley Ellis****Timothy Prior****Christopher Wingate**

Finance and Information Systems and  
Business Analytics  
**Kayla Kennedy**  
**Margaret McVeigh**  
Information Systems and Business  
Analytics  
*The Wildcat Fueling Station*  
Adviser: Roger Grinde

**Julia Hopkins**

Marketing  
*The Effectiveness, Efficiency, and Ethics of  
Marketing Analytics*  
Adviser: M. Billur Akdeniz

**Jeffrey Lertora**

Marketing  
*Healthy Eating Influences: Every Good  
Decision Starts with Good Intentions*  
Adviser: Lin Guo

**Colin MacArthur****Brendan Mantell**

Information Systems and Business  
Analytics

**Kien Tran**

Entrepreneurial Studies and Information  
Systems and Business Analytics  
*Red River Computer's Growth Strategy*  
Advisers: Kholekile Gwebu, Justin Millette

**Christopher Morelli**

Accounting and Information  
Systems and Business Analytics  
*An Effectiveness Review of Section 404 of  
the Sarbanes Oxley Act (2002)*  
Adviser: John Hasseldine

**Erin Mullaney****Marketing**

*Assessing the Business-to-Business Model  
of Destination Marketing Organizations in  
New England*  
Adviser: M. Billur Akdeniz

**Ian Newcombe**

Information Systems and Business  
Analytics and Finance  
*Mainframe Relevance in Modern IT*  
Adviser: Kholekile Gwebu

**Jacob Pentheny****Marketing**

*The Influence of Movie Reviews on Consumers*  
Adviser: Bruce Pfeiffer

**Brendan Phelan****Marketing**

*Motivational Factors for Playing  
Fantasy Sports*  
Adviser: Matthew O'Hern

**Harrison Quast****Entrepreneurial Studies**

*The Personality of Success: A Study  
of Desirable Personality Traits of  
Entrepreneurs*  
Adviser: Jeffrey Sohl

**Valeriu Tomescu****Finance**

*The Economic Impact of Immigration on the  
Output-Mix: Results from Hurricane Mitch*  
Advisers: Karen Conway, Bruce Elmslie

**Valeriu Tomescu****Finance**

*Natural Disasters and the Effectiveness of  
Foreign Aid on Economic Development*  
Adviser: Mihail Miletkov

**Sarah Tubbs****Marketing and Management**

*Branding a Business School: The Paul  
College Experience*  
Adviser: Diane Devine

**Paul College 165****Rines Student Angel  
Investment Fund**

Moderator: Jeffrey Sohl

**Kathryn Aiken**

Business Administration

**Brendan Beale**

Finance and Accounting

**Benjamin Bernstein**

Management

**Charles Cappetta**Finance and International Business  
and Economics**Ryan Casey**

Devereux Evans

**Andrew Gibson**

Domenic Previte

Accounting and Finance

**Samuel Collins**

Global Trade and Finance

**Tyler Cornellier**

Peter Shellenberger

Finance and Information Systems and  
Business Analytics**Cassidy Croci****Kendre Rodriguez**

Entrepreneurial Studies

**Timothy Curran**

Marketing and Entrepreneurial Studies

**Jeffrey Duchesne**

Entrepreneurial Studies and Management

**Victoria-Lynne Forrest**

Management and Accounting

**Matthew Haskell**

Entrepreneurial Studies and Finance

**Sarah Keiran****Steven Lemay**

Accounting

**Matthew Kiley**

Finance and Economics

**Brianna Leclerc****Patrick Walsh**

Marketing and Entrepreneurial Studies

**David Linton**

Entrepreneurial Studies and Finance

**Andrew McFarland**Information Systems and Business  
Analytics**Wyatt Powell**

Marketing and Finance

**Axel Ragnarsson**

Finance and Entrepreneurial Studies

**Steven Roberts**

Finance and Management

**William Taveras**

Mechanical Engineering

*Rines Student Angel Investment Fund*

Advisers: Julianne Calef, Jeffrey Sohl

**The Naked Arts—  
Creativity Exposed!****Act III****Friday, April 22****12:15 - 1 p.m.****Memorial Union Building  
Strafford Room**

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.

**Yussra Ebrahim**Sustainable Agriculture and Food Systems  
*Vigil: A Muslim's Story of Finding Peace in  
a Time of Terrorism*

Advisers: Jaed Coffin, Thomas Payne

**William Lombard****Molly McKay****Ina Nakuci****Brooke Snow**

Theatre

*Luna Goes to Mars: Creating a Storytelling  
Experience for Young Audiences*

Adviser: Raina Ames

**Teagan Yutrzenka**

Art History

*Viking Burial Ships and the Secrets  
They Hold*

Adviser: Rebecca Karo

**Peter T. Paul College of  
Business and Economics  
Paul J. Holloway  
Innovation-to-Market  
Prize Competition****Bud Albin Challenge Round****Friday, April 22****1–4:30 p.m.****Peter T. Paul College Building**

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.

**College of Health and  
Human Services Grimes  
Award Competition****Friday, April 22****1:30 - 4 p.m.****Pettee Hall, Rooms G-10 and 106**

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.

**Samantha Brand**

Occupational Therapy

*Through My Eyes: The Effect on Family Life  
of Having a Sibling with Autism Spectrum  
Disorder as Experienced by a Typically  
Developing Adolescent*

Adviser: Lou Ann Griswold

**Rebecca Daniels**

Kinesiology  
*Effect of Verbal Instructions on EMG During the Bench Press in Trained and Untrained Males*  
 Adviser: Summer Cook

**Frances Donahue**

Kinesiology  
*Year Two Results of a Helmetless-Tackling Training Intervention in Football*  
 Adviser: Erik Swartz

**Caitlin Hanrahan**

Occupational Therapy  
*Role Balance of Mothers with Children Receiving Early Intervention Services*  
 Adviser: Kerryellen Vroman

**Emily Larson**

Kinesiology: Exercise Science  
*Identification and Prevalence of Atrial Fibrillation ECG Markers in Collegiate Cross-Country Skiers*  
 Adviser: Tim Quinn

**Maureen O'Brien**

Occupational Therapy  
*Examination of the Effectiveness of a One-Week Camp on Social Interaction for Youth with an Autism Spectrum Disorder*  
 Adviser: Lou Ann Griswold

**Rebecca Robichaud**

Social Work  
*Chronic Pain and Mindfulness*  
 Advisers: Kelsey Sobel, Judy Stevens

**Brittany Sampson**

Occupational Therapy  
*Role of Social Supports and Home and Community Environment in Recovery from Hip and Knee Joint Replacement Surgery*  
 Adviser: Vidya Sundar

**Colleen White**

Nursing  
*Buurtzorg Nurses in the Netherlands: An Mini-Ethnography of Care*  
 Adviser: Gene Harkless

## Psychology Department George M. Haslerud Undergraduate Research Conference

**Friday, April 22**  
**1:30 - 5 p.m.**  
**McConnell Hall, Room 220**

The George M. Haslerud Undergraduate Research Conference, 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.

**Samantha Aiello**

Psychology  
*The Effects of Parent-Child Talk on Children's Memory*  
 Adviser: Michelle Leichtman

**Alyssa Carlisle**

Psychology  
*Assessing Public Opinion about a Sexual Assault Case Using the Comments Section of Online News Sources*  
 Adviser: Victoria Banyard

**Kenneth Cashman**

Psychology  
*Sleep Quality and Friend Support/Conflict*  
 Adviser: Rebecca Warner

**Claire Czotter**

Psychology  
*How Meditation-Like Activities Affect Well-Being*  
 Adviser: Rebecca Warner

**Melissa Dongo**

Psychology  
*Comparing Teachers' Prevention Actions & Students' Perceptions on Teachers' Willingness to Help in Situations of Teen Dating Violence & Sexual Assault*  
 Adviser: Katie Edwards

**McKenzie Dow**

Psychology  
*Social Media and Well-Being: An Exploratory Study*  
 Adviser: Rebecca Warner

**Marykate Mulcahy**

Psychology  
*Predictors of Opioid and Heroin Abuse in a National Sample of Adolescents and Emerging Adults*  
 Adviser: Ellen Cohn

**Katherine Seavey**

Psychology  
*Rural Community Members' Perceptions of Help-Seeking by Victims of Intimate Partner Violence*  
 Adviser: Katie Edwards

**Ceara Tavares**

Justice Studies  
*The Role of Emotions on Morality: How Self-Conscious and Unconscious Emotions Influence an Adolescent's Everyday Morality*  
 Adviser: Ellen Cohn

**Stephanie Yee**

Psychology  
*Motivations for Expressing Public and Private Gratitude*  
 Adviser: Rebecca Warner



## Honors English Undergraduate Research Conference

**Friday, April 22**

**2–6 p.m.**

**Memorial Union Building, Theater I**

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.

**Yue Bai**

English Teaching

**Jie Zhao**

English

*How Rubrics Mediate 'Culture Differences' in Group Work between International Students and Domestic Students*

Advisers: Marino Fernandes, Soo Hyon Kim

**Amy Conte**

English

*Holocaust Literature*

Adviser: Diane Freedman

**Hannah Drake**

International Affairs and English

*After the Madness: A Continued Journey through Fiction Writing*

Adviser: Clark Knowles

**Jennifer English**

English

*I Heard It through the... Vine*

Adviser: Douglas Lanier

**Elizabeth Haas**

English/Journalism

*Blogging: How, Why, and Best Practices*

Adviser: Lisa Miller

**Sarah Milicia**

English

*The Mother-Daughter Relationship in Sylvia Plath's and Anne Sexton's Poetry*

Adviser: Diane Freedman

**Gabriella Pezzelli**

Humanities

*A Comparative Analysis of Traditional Film Noir to Modern Neo-Noir*

Adviser: Matthias Konzett

**Jessica Rosenthal**

English and Women's Studies

*Edna the Oblivious Oppressor: An Intersectional Analysis of Privilege and Its Lack Thereof in The Awakening*

Adviser: Sarah Sherman

**Madison Schaefer**

Justice Studies and English

*The Joy of Melancholy*

Adviser: Diane Freedman

## Student Composers' Concert

**Friday, April 22**

**8–10 p.m.**

**Bratton Recital Hall**

**Paul Creative Arts Center**

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.

**Katja Kleyensteuber**

Music Education

*Great, Scott! II - A Brass Quintet*

Adviser: Michael Annicchiarico

**Matthew Lush**

Music

*The Mice That Danced - for Solo Piano*

Adviser: Ryan Vigil

**Ian Nelson**

Music

*Quartet for Percussion: Drums of the Dead*

Adviser: Andrew Boysen

**Frank Noah**

Music

*A Day in Town*

Adviser: Michael Annicchiarico

**Robert Stevens**

Music

*Palindrome - for Trumpet, two*

*Euphoniums and Tuba*

Adviser: Christopher Kies

## 25th Annual COLSA Undergraduate Research Conference

### Oral Presentations

**Saturday, April 23**

**8:15–10:30 a.m.**

**Memorial Union Building Theater 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. Research ranges from field studies to molecular biology to genomic studies. After review of abstracts, the COLSA URC Subcommittee selected the following students to deliver oral presentations.

**Joshua Buonpane**

Environmental Sciences

*An Examination of the Factors that Control Nitrate Retention in Man-Made Reservoirs*

Adviser: Wilfred Wollheim

**Adrien Flouros**

Environmental Sciences

*Oceanographic LiDAR as a Tool for Retrieving and Characterizing Particle Distributions in the Ocean*

Adviser: Richard Zimmerman

**Heidi Giguere**

Wildlife and Conservation Biology

*Change in Relative Population Abundance and Distribution of Hochstetter's Frog (Leiopelma hochstetteri) in Maungatautari Ecological Island, New Zealand*

Adviser: Ria Brejaart

**Christian Kapstad**

Biochemistry, Molecular and Cellular Biology

*Characterization of Rod and Cone P Affinity for PDE6 Catalytic Dimer and Efficiency of Activation by Transducin*  
Adviser: Rick Cote

**Allison Onofrio**

Neuroscience and Behavior

*The Effect of the Earth's Magnetic Field on the Resting Position of Canis familiaris*  
Adviser: Leslie Curren

**Denyelle Surrell**

Wildlife and Conservation Biology

*A Comparative Analysis of the Nest Structure of Saltmarsh, Nelson's, and Saltmarsh-Nelson's Hybrid Sparrows*  
Adviser: Adrienne Kovach

**Stephanie Sykes**

Marine, Estuarine and Freshwater Biology

*The Effect of Ocean Acidification on the Feeding Behavior of the American Lobster (Homarus americanus)*

Advisers: Elizabeth Morrissey, Winsor Watson

**Laura Van Beaver**

Neuroscience and Behavior

*Effects of Nanoparticles for DNA Delivery into Animal, Plant, and Bacterial Cells*  
Advisers: Subhash Minocha, Fabio Vianello

## 25th Annual COLSA Undergraduate Research Conference

### Poster Presentations

**Saturday, April 23**

**10:45 a.m. – 12:15 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.

**Adam Aasen**

**Cynthia Holler**

**Hayley Robertson**

Neuroscience and Behavior

*Revealing the Mechanics behind Single Cell Recording: Assembly of Drivable Multi-Tetrode Arrays*

Adviser: Brett Gibson

**Stephanie Allaire**

**Fritz Maslan**

Biology

*Detection of Cyanobacteria Toxins in Common Loon (Gavia immer) Chick and Adult Feathers*

Adviser: James Haney

**Stephanie Allaire**

Biology

**Kaleigh Erickson**

Neuroscience and Behavior

*Does Enclosure Size Drive Stereotypical Behavior in Felids?*

Adviser: Leslie Curren

**Emily Allen**

**Lauren Brodie**

**Nicolas DiPierro**

Environmental Conservation Studies

*Eating Local in Durham: A Systems Approach to the Environmental, Economic, and Community Relationships*  
Adviser: Debra Straussfogel

**Bradley Anderson**

Nutrition

*Diet and Nutrition of Long-Distance Hikers on the Appalachian Trail: A Cross-Sectional Study*

Adviser: Jesse Morrell

**Jordan Badger**

Nutrition

*The Relationship between Healthy Lifestyle Factors and Perceived Stress among College Students*

Adviser: Jesse Morrell

**Sarai Bardales**

Zoology

**Autumn Bennett**

Wildlife and Conservation Biology

*Landscape Ecology Based Assessment of University of New Hampshire Campus Lands and Recommendations for Future Development*

Adviser: James Haney

**Molly Belanger**

**Madeleine DiIunno**

Community and Environmental Planning  
*NH Citizen Planner: Discovering the Needs of Municipal Volunteers to Support Vibrant Communities*

Advisers: Molly Donovan, Christopher Keeley, Mary Robertson

**Kirby Beranger**

Zoology

*An Evaluation of the Ammonia Removal Performance of a Hydroponic Media-Filled Bed Fed from a Recirculating Aquaculture System*

Adviser: Todd Guerdat

**Shelby Bernier**

Wildlife and Conservation Biology

*Measuring Carbon Flux and Energy Using Alternative Methods to Determine an Ecosystem Service Based Carbon Use Efficiency*

Adviser: Andrew Ouimette

**Lydia Birch**

Biomedical Science

**Anastasia Kouros**

Ecogastronomy and Biology

**Molly Ruprecht**

Biochemistry, Molecular and Cellular Biology

*Effects of Temperature Change on Particle Aerosolization in a Laboratory Setting*

Adviser: James Haney

**Evice Bolton**

Biomedical Science

*Are Wolbachia Present in Harmonia axyridis?*

Adviser: Matthew Macmanes

**Connor Breton**

Environmental Sciences

*Can Tropical Teak Plantations Be Managed Sustainably for Both Timber and Water? An Experimental Thinning Study in Panama*

Advisers: Heidi Asbjornsen, Jefferson Hall

**Stephanie Brewster**

Nutrition

*Which Best Predicts the Parameters of Metabolic Syndrome in College Students: Body Mass Index, Waist Circumference or Body Composition?*

Adviser: Jesse Morrell

**Alona Brosh**

Genetics

*Sugar and Lipid Analysis of Ceratina**Calcarata Brood Cell Pollen Balls*

Adviser: Sandra Rehan

**Christopher Burke**

Zoology

*Skeletal Injuries in Small Mammals: A Multi-Species Assessment of Injury Type and Prevalence*

Adviser: Rebecca Rowe

**Katie Butler****Jennifer Halstead****Alexandra Hiley****Jaclyn Robidoux**

Marine, Estuarine and Freshwater Biology

*Ocean Acidification Recirculating System (OARS)*

Adviser: Larry Harris

**Kerri Callahan**

Genetics

*Do the SNPs Support the Studies? A Genomic Look into the Overdiagnosis of Schizophrenia*

Adviser: Matthew Macmanes

**Susan Campbell****Kelsie Schanlaber**

Biochemistry, Molecular and Cellular Biology

**Caelie Kern**

Neuroscience and Behavior

*Can Cytoplasmically Sequestered and Apoptotically Inactivate p53 in a Subset of AML Patients from a Clinical Population Be Reactivated by MKT-077 and Withanone?*

Adviser: Charles Walker

**Lyndsay Canwell**

Biomedical Science

*Tumor Necrosis Factor (TNF) Expression in Bovine Granulosa Cells*

Adviser: Thomas Foxall

**Christopher Cape**

Biomedical Science

**Eric Macdonald****Rebecca Scialabba**

Biochemistry, Molecular and Cellular Biology

*Investigation of the Relationship between the Thyroid and Reproductive Systems in Sea Lamprey, Petromyzon marinus*

Adviser: Stacia Sower

**Kimberly Celona**

Biomedical Science

*Patterns of White-Nose Syndrome Presence in Big Brown Bats*

Adviser: Jeffrey Foster

**Sarah Clements**

Wildlife and Conservation Biology

*Genetic Structure of an Isolated New England Cottontail (Sylvilagus transitionalis) Population*

Adviser: Adrienne Kovach

**Sarah Clements**

Wildlife and Conservation Biology

*Optimizing a Protocol for DNA Extraction from Historic Bobcat (Lynx rufus) Skull Specimens*

Adviser: Marian Litvaitis

**Shenandoah Crook**

Sustainable Agriculture and Food Systems

*Regrowth Potential of Annual Alternative Forage Crops in New England*

Adviser: Nicholas Warren

**Kasey Cushing**

Biochemistry, Molecular and Cellular Biology

*The Effect of Gonadotrophin Releasing Hormone on the Proliferation Rate of a Melanoma Cell Line*

Adviser: Paul Tsang

**Raecliffe Daly**

Biochemistry, Molecular and Cellular Biology

*The Effect of Electrostatic Charge on DNA Oligonucleotide Interactions*

Advisers: Thomas Laue, Carrie May

**Tien Dang**

Biomedical Science

*Characterizing the Angiogenic Properties of Glioma U373 Cells*

Adviser: Paul Tsang

**Alana Davidson**

Nutrition

*Assessing Hunger Issues among University of New Hampshire Students*

Adviser: Jesse Morrell

**Alexandra DeRosa**

Environmental and Resource Economics

*Current State of Composting in the Seacoast Region*

Adviser: John Halstead

**Lauren Dingle**

Environmental Conservation Studies

**Enrica Jossi**

Marine, Estuarine and Freshwater Biology

*Cyanobacterial Toxins in Loon Blood in Relation to Environmental Concentrations*

Adviser: James Haney

**Jason Doheny**

Biology

**Roy Newell Jr.**

Biochemistry, Molecular and Cellular Biology

*The Effect of Zooplankton Grazing on Aerosol Production in situ*

Adviser: James Haney

**Blair Downey**

Neuroscience and Behavior

*Investigations of Change Detection in People and Pigeons*

Adviser: Brett Gibson

**Blair Downey****Theodore Kazan****Amanda Marino**

Neuroscience and Behavior

*Conditional Coding Properties of Reinforcement Responses in Rat Prefrontal Cortex*

Adviser: Robert Mair

**Austin Drake****Joseph McKee**

Neuroscience and Behavior

**Harrison Gustin**

Psychology

*Investigating Movement Properties in the Rat Prefrontal Cortex during Task Specific Events*

Adviser: Robert Mair

**Thomas DuBois**

Genetics

*The Characteristics of the PAT21  
Palmitoyltransferase Gene in Arabidopsis  
thaliana*

Adviser: Estelle Hrabak

**Erin Ducharme**

Marine, Estuarine and Freshwater Biology

*The Impact of Feeding on Horseshoe  
Crab Activity*

Adviser: Winsor Watson

**Erin Ducharme**

Marine, Estuarine and Freshwater Biology

*Plant Productivity in Hydroponic versus  
Aquaponic Systems*

Adviser: Todd Guerdat

**Yussra Ebrahim**

Sustainable Agriculture and Food Systems

*Food System Education among High  
School Students*

Advisers: Jessica Bolker, Carrie Hall

**Adrien Flouros**

Environmental Sciences

*In situ Oceanographic LiDAR as a Tool  
for Retrieving and Characterizing Particle  
Distributions in the Ocean*

Adviser: Richard Zimmerman

**Kara Foley**

Environmental Sciences

**Athena Ryan**

Marine, Estuarine and Freshwater Biology

*Investigating the Pathways of Microcystin  
and beta-Mythylamino-L-alanine  
Accumulation in Plankton*

*from Freshwater Ecosystems*

Adviser: James Haney

**Carolyn Forstrom**

Zoology

*Use of Hand Gestures and Communication  
Abilities in Various Primates*

Adviser: Leslie Curren

**Cullen Franchino**

Zoology

*Foraging Ecology and Parental Investment  
in a Small Carpenter Bee*

Adviser: Sandra Rehan

**Benjamin Gallo**

Marine, Estuarine and Freshwater Biology

**Beau Garcia**

Zoology

*Culturing Cyanobacteria from Lake Aerosols*

Adviser: James Haney

**Heidi Giguere**

Wildlife and Conservation Biology

*Change in Relative Population Abundance  
and Distribution of Hochstetter's Frog  
(Leiopelma hochstetteri) in Maungatautari  
Ecological Island, New Zealand*

Adviser: Ria Brejaart

**Hannah Glanville**

Biomedical Science

**Heather Shahzade**

Neuroscience and Behavior

*New Insights on the Functional Ecology  
of Cnidarians and the Origins of  
Bilaterian Sensory Neurons Revealed by  
Cytoarchitectonic Investigations of the Hydra*

Adviser: David Plachetzki

**Eva Golden**Marine, Estuarine and Freshwater Biology  
and Spanish

*Challenges to Foraging and Nesting Sea  
Turtles: Sponge Population and Erosion in  
Costa Rican Habitats*

Advisers: Larry Harris, Andrew Ogden

**Kathleen Gorman**

Sustainable Agriculture and Food Systems

*OASIS - Optimal Agriculture Skills*

*Initiative for Students*

Adviser: Joanne Curran-Celentano

**Hannah Green**

Biology

*Characterizing the Ovary and Testes  
Transcriptome of the Cape and Lesser  
Masked Weaver*

Adviser: Matthew Macmanes

**Melanie Green**

Ecogastronomy and Nutrition

*Impact of Health Behaviors on Academic  
Performance in College Students*

Adviser: Jesse Morrell

**John Hastings**

Environmental Sciences

*Missing Sources and Sinks: Exploration of  
Mineral Soils as a Nitrogen Bank*

Advisers: Lucie Lepine, Andrew Ouimette

**Crystal Hermawan**

Biomedical Science

*Effects of hypo-O-GlcNAcylation on  
Keratin 18 Filaments and Cytokine-Induced  
Apoptosis in SiHa Cervical Cancer Cells*

Advisers: Thomas Foxall, David Townson

**Justina Hiney**

Biomedical Science

*Elements that Cause Stress to a Captive  
Primate*

Adviser: Leslie Curren

**Erica Holm**

Wildlife and Conservation Biology

**Jennifer Kerr**

Zoology

*Predicting the Abundance of Shrubland-  
Dependent Songbirds in Managed  
Shrublands in Southeastern New Hampshire*

Adviser: Matthew Tarr

**Megan Honeywell**Biochemistry, Molecular and  
Cellular Biology

*Characterization of the PAT14 Protein  
S-acyltransferase Mutant in Arabidopsis  
thaliana*

Adviser: Estelle Hrabak

**Molly Jacobson**

Wildlife and Conservation Biology

*Historical Declines in Bumble Bees in  
New England*

Adviser: Sandra Rehan

**Molly Jenssen**

Biology

*A Comparative Study Investigating  
Different Diets on Strongylocentrotus  
droebachensis and Mysis sp. for Use in  
Multi-Trophic Aquaculture Systems*

Adviser: Larry Harris

**Christian Kapstad**Biochemistry, Molecular and Cellular  
Biology

*Characterization of Rod and Cone P  
Affinity for PDE6 Catalytic Dimer and  
Efficiency of Activation by Transducin*

Adviser: Rick Cote

**Caelie Kern**

Neuroscience and Behavior

*TARGETING Breast Cancer: The Integral  
Relationship between Cancer and the  
Immune System*

Adviser: Charles Walker



**Riley Kirk**

Biomedical Science

**Macklin Sweeney**

Biology

*Do Dissolved Microcystins Aerosolize in Freshwater Lakes?*

Adviser: James Haney

**Noelle Labrecque**

Genetics

*Epigenetic Regulation of Sphingolipid Metabolism in Acute Myeloid Leukemia*  
Adviser: Brian Barth**Kathleen Le**

Nutrition

*Perceived Stress and Alcohol Intake Comparison in First-Generation College Students and Their Peers*  
Adviser: Jesse Morrell**Jacqueline Lemaire**

Genetics

*Comparative Genomic Analysis of Environmental Strains of Vibrio parahaemolyticus*  
Adviser: Steve Jones**Sean Lombard**

Biomedical Science

*Analysis of Carpenter Bee Cuticular Hydrocarbon Chains across a Latitudinal Gradient*  
Adviser: Sandra Rehan**Sara Mantovani-Schuell****Brynn Pedrick**

Zoology

*The Effect of pH on Growth Rates and Activity Budgets of Ghost Shrimp (Palaemonetes paludosus)*  
Adviser: Leslie Curren**Jennie Marinucci**

Biomedical Science

*A Good Life in Old Age: A Thai Model for Cross-Cultural Gerontology in the United States*  
Adviser: Natalie Porter**Megan McCafferty****Heather Siart**

Wildlife and Conservation Biology

**Peter Trefry**

Biology

*Fluorometry and Toxin Analysis of New England Freshwater Bodies*  
Adviser: James Haney**Kelley McDonnell**

Environmental Conservation Studies

*Generating Reference Data for Validating Crop Type Maps*

Adviser: Russell Congalton

**Zakkary McNutt**

Biochemistry, Molecular and Cellular Biology

*Identification of the IAA Biosynthesis Genes in Nocardia strain BMG51109 and Their Up-Regulation in Response to Root Exudates of the Host Plant, Casuarina*  
Adviser: Louis Tisa**Jacob Moore****Luke Violette**Marine, Estuarine and Freshwater Biology  
*Quantitative Survey of the Flora of Appledore Island, Maine*  
Adviser: Gregg Moore**Allison Nash**

Neuroscience and Behavior

*Localization of the Circadian Clock in the Central Nervous System of the Nudibranch Melibe leonina*  
Advisers: James Newcomb, Winsor Watson**Keshav Nepal**

Biomedical Science

*Dexamethasone Effects on Vascular Endothelial Growth Factor Production by Ovarian Macrophages*  
Advisers: Thomas Foxall, David Townson**Valerie Nesom**

Ecogastronomy and Nutrition

*From Vision to Reality: Recipes for a New England Food Vision*  
Adviser: Joanne Burke**Christopher Olivier**

Biochemistry, Molecular and Cellular Biology

*Expression and Purification of Functionally Active Recombinant PDE6*  
Adviser: Rick Cote**Allison Onofrio**

Neuroscience and Behavior

*The Effect of the Earth's Magnetic Field on the Resting Position of Canis familiaris*  
Adviser: Leslie Curren**Adam Parker**

Biochemistry, Molecular and Cellular Biology

*Use of Phosphodiesterase Inhibitors as Potential Nematicides*  
Adviser: Rick Cote**Kishan Patel**

Biochemistry, Molecular and Cellular Biology and Applied Mathematics and Linguistics

*KDAMPS: Antibiotics of the Next Generation*  
Adviser: Subhash Minocha**Megan Peavey**Marine, Estuarine and Freshwater Biology  
*The Effect of Warming Temperatures on Competition between Two Invasive Species of Crab*

Adviser: Leslie Curren

**Jessica Pelletier**

Nutrition

*Examining the Relationship between Fruit and Vegetable Consumption, Diet Quality, and Metabolic Syndrome*  
Adviser: Jesse Morrell**Nicole Petersen**

Biochemistry, Molecular and Cellular Biology

*Characterizing Arabidopsis Sodium-Induced Root Skewing Mutant srs4 and srs10*  
Adviser: Estelle Hrabak**Sarah Piet**

Biochemistry, Molecular and Cellular Biology

*Optimization of pAkt Expression and Detection in Bovine Granulosa Cells*  
Advisers: David Townson, Paul Tsang**Lily Poland**Sustainable Agriculture and Food Systems  
*Missing Digits in Shrews: Insights into a Secret Life*  
Adviser: Rebecca Rowe**Caroline Reckelhoff**

Biomedical Science

*Amino Acid Profile of Plasma, Whole Blood, and Red Blood Cells in Lactating Dairy Cows*  
Adviser: Andre Brito

**Rachel Sabol**

Biology

*Analyzing the Effects of Sphingolipid Enzymes in Linking Obesity and Acute Myeloid Leukemia*

Adviser: Brian Barth

**Suraj Sangroula**

Biochemistry, Molecular and Cellular Biology

*Do Fungal Competitors Prevent Infection by Pseudogymnoascus destructans?*

Adviser: Jeffrey Foster

**Hallett Sargent**

Environmental Sciences and English

**Stephanie Smith**

Biology

*Innovative Techniques in Cyanobacteria Monitoring for Human Health and Awareness*

Adviser: James Haney

**Megan Schiappa**

Environmental Sciences

*What is the University of New Hampshire's Nitrogen Footprint?*

Advisers: John Aber, Allison Leach

**Erin Shangraw**

Biomedical Science

*Effect of Direct-Fed Microbials and Enzyme Supplementation in Parturient Holstein Cows on Colostrum*

Yield and Composition

Adviser: Peter Erickson

**Richard Shepardson II**

Biochemistry, Molecular and Cellular Biology

*Effects of Supplemental Lactoferrin in Milk Replacer on Fecal IgA Concentrations in Preweaned Holstein Calves*

Adviser: Peter Erickson

**Subha Singh**

Anthropology

*Contouring the Genomic Transformation in Arabidopsis thaliana for Mutation Accumulation Lines for DNA Damage Response Genes*

Adviser: Kevin Culligan

**Puskar Siwakoti**

Biomedical Science

*Understanding Immunogenic Aspect of infection by Vibrio parahaemolyticus Using Caco-2 cell line and IL-8*

Adviser: Cheryl Whistler

**Dylan Smith**

Integrated Agricultural Management

*Explorations in Mycocyling: Analysis of Chemical, Pollutant, and Nutritional Values in Pleurotus ostreatus Grown Using Different Agricultural and Industrial Wastes*

Adviser: Leslie Adams

**Karen Sonnichsen**

Zoology

*Categorizing Injuries within a Population of Grey (Halichoerus grypus) and Harbor (Phoca vitulina) Seals*

Adviser: William Howell

**Brianna Stoye**

Biomedical Science

*Down in the Dumps: Demographics of Garbage-Raiding Elephants in Wasgamuwa, Sri Lanka*

Adviser: Thomas Foxall

**Joao Tavares-Carreiro**

Environmental Conservation Studies

*Assessing the Influence of Elevation, Slope, and Aspect on Foliar %N at the Hubbard Brook Experimental Forest*

Advisers: Lucie Lepine, Andrew Ouimette

**Abbey Rose Tedford**

Biology

*Isolation and Identification of Bacterial Endosymbionts in the Brooding Brittle Star Amphipholis squamata*

Advisers: Michael Lesser, Kathleen Morrow

**Cristy Theriault**

Neuroscience and Behavior

*Comparison of Movement Properties between Subthalamic Nuclei*

Adviser: Robert Mair

**Lauren Turner**

Genetics and Psychology

*Identification of Genes Involved in Arabidopsis thaliana Adventitious Root Formation*

Adviser: Dennis Mathews

**Cameron Twombly**

Environmental Sciences

*The Characterization of Fine Root Production in New Hampshire Forests and Its Response to Drought*

Advisers: Heidi Asbjornsen, Matthew Vadeboncoeur

**Vilma Vaattovaara**

Biomedical Science

Horseshoe Crabs

Adviser: Winsor Watson

**Jacqueline Watts**

Neuroscience and Behavior

*The Effects of Intermittent Swim Stress on Morphine-Induced Conditioned Place Preference*

Adviser: Robert Drugan

**Gwyneth Welch**

Neuroscience and Behavior

*The Effects of Histone Deacetylase Inhibitor Treatment on Executive Function and Prefrontal Cortex in Adolescent Rats*

Adviser: Jill McGaughy

**Alexander White**

Neuroscience and Behavior

*Physical and Emotional Improvements of Patients through Dolphin-Facilitated Healing Experiences: Some Case Studies*

Adviser: Jan Tornick

**Courtney Woelfl**

Sustainable Agriculture and Food Systems

*Organic Agriculture: A Case Study in Hoi An*

Adviser: Thanh Duong

**Nicholas deDiego**

Genetics

*Determining Protein Phosphatase 2A C-subunit Gene Interactions on Root Growth under Salt Stress*

Adviser: Estelle Hrabak

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

### Poster Presentations & Oral Presentations

**Saturday, April 30**  
**9 a.m.–2 p.m.**

**Peter T. Paul College Building**

FIRE is an integrated, team-based, and game-like experience for first-year 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."

*A list of participants will be available at the event.*

## Chemistry Department Poster Exhibition

**Friday, May 6**  
**3–4 p.m.**

**Parsons Hall, Southwest Lobby**

The Chemistry Department Poster Exhibition is the result of students' yearlong senior thesis research in such areas as organic, inorganic, physical or analytical chemistry, and under the direction of their research adviser.

**Shauna Barritt**

Chemistry

*Utilization of Infrared and Raman Micro-Spectroscopy for the Chemical Analysis of Art*

Adviser: Patricia Wilkinson

**Catherine Borella**

Chemistry

*The Chemical Properties and Mechanism of Naloxone and How the Government Is Regulating Its Use*

Adviser: Patricia Wilkinson

**James Chase**

Chemistry

*Development of Novel FRET Sensor for Free Cu(II) and Zinc(II)*

Adviser: Roy Planalp

**Patrick Curley**

Chemistry

*Preparation of a Biologically-Based, Printable Hydrogel*

Adviser: Leila Deravi

**Azaline Dunlap-Smith**

Chemistry

*Computational Chemistry of Silatranes: Testing the Limits of Modern Density Functional Theory*

Adviser: Arthur Greenberg

**Kirsten Enegren**

Chemistry

*Synthesis and Characterization of a Confused N-heterocyclic Carbene Ligand*

Adviser: Christine Caputo

**Ryan Fitzgerald**

Chemistry

*Synthesis of Model Oxepin Substrates for Comparative Two Electron Oxidation Studies with Enzymes and Inorganic Compounds to Investigate Benzene Metabolism*

Adviser: Arthur Greenberg

**Ryan Fitzgerald**

Chemistry

*Dynamic NMR: An Approach to Understand the Effects of Hydrogen Bonding on Amide Rotational Barriers*

Adviser: Arthur Greenberg

**Anyu Gao**

Chemistry

*The Solar Fuel Generation by CO<sub>2</sub> Reduction on Surface Molecular Catalysts*

Adviser: Gonghu Li

**Ryan Hall**

Chemistry

*Stabilizing Transition-Metal-Alkylthiolate Bonds via Secondary Sphere Hydrogen Bonding*

Adviser: Samuel Pazicni

**Anthony Jennings**

Chemistry

*Surface Tension Measurements of Organic, Inorganic and Mixed Aqueous Solutions*

Adviser: Margaret Greenslade

**Anthony Lemieux**

Chemistry

*Synthesis of Carbon Quantum Dots and Their Use as Photosensitizers*

Adviser: Christine Caputo

**Jacob Lessard**

Chemistry

*Pendant Group Effect on Single-Chain Nanoparticle Collapse via Intra-Chain Radical Polymerization*

Adviser: Erik Berda

**Matthew Rauch**

Chemistry

*Investigation of the Synthesis of 1-Methyl-4-Silatranone*

Adviser: Arthur Greenberg

## Ann Manchester Kelley Nursing Inquiry Day

**Tuesday, May 10, 2016**  
**8 a.m.–2 p.m.**  
**Memorial Union Building**  
**Granite State Room**

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

### **Caitlin Doonan**

Nursing

*Exploring the Healthcare Experiences of LGBTQ+ College Students*

Advisers: Joyce Capiello, Joanne Samuels

### **Emily Dwyer**

Nursing

*The Impact of an Epilepsy Self-Management Program on Health Care Utilization*

Advisers: Susan Fetzner, Joanne Samuels

### **Rebecca Pettis**

Nursing

*Describing the Experience of an Older Adult with Chronic Pain and the Use of a Therapeutic Music Intervention: A Case Study*

Adviser: Elizabeth Evans

### **Colleen White**

Nursing

*Buurtzorg Nurses in the Netherlands: A Mini-Ethnography of Care*

Adviser: Gene Harkless

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

### Championship Round

**Wednesday, May 11**  
**1–6 p.m.**

**Peter T. Paul College Building**  
**G75 Auditorium**

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 2016 URC happen.

## *Special thanks to:*

**Office of the Provost & VP for Academic Affairs**

**Office of the Senior Vice Provost for Academic Affairs**

**All Faculty Mentors**

Hamel Center for Undergraduate Research  
Memorial Union Building Administrative Staff  
Town of Durham, Public Works  
UNH Advancement & Alumni Relations  
UNH Admissions  
UNH Audiovisual Services  
UNH Catering  
UNH Communications and Public Affairs (CPA)  
UNH Dimond Library  
UNH Facilities  
UNH Parents Association  
UNH Printing Services  
UNH Robert J. Connors Writing Center  
UNH Transportation Services  
UNH Web and Mobile Development  
University Honors Program  
Whittemore Center Administrative Staff

## *Event Sponsors:*

Bellwether Credit Union  
College of Engineering and Physical Sciences (CEPS)  
College of Life Sciences and Agriculture (COLSA)  
Institute for the Study of Earth, Oceans, and Space (EOS)  
The Joan and James Leitzel Center for Mathematics, Science, and Engineering Education  
New Hampshire NASA Experimental Program to Stimulate Competitive Research (EPSCoR)  
UNH InterOperability Laboratory  
University Instrumentation Center (UIC)  
Velcro USA

## *Award Sponsors:*

Center for International Education  
College of Engineering and Physical Sciences (CEPS) Advisory Board  
College of Engineering and Physical Sciences (CEPS) Alumni Society

College of Life Sciences and Agriculture (COLSA)  
Department of Chemical Engineering  
Department of Civil Engineering  
Department of Computer Science  
Department of Mechanical Engineering  
Institute for the Study of Earth, Oceans, and Space (EOS)  
The Joan and James Leitzel Center for Mathematics, Science, and Engineering Education  
New Hampshire Space Grant Consortium  
Office of the Senior Vice Provost for Academic Affairs  
UNH InterOperability Laboratory  
UNH Phi Beta Kappa Chapter

## *Thanks to the 2016 URC Planning Committee (as well as the many individuals who served on subcommittees):*

Carole Berry, Co-Chair, ISE Symposium; Administrative Manager, CEPS Dean's Office  
Janet Cass, Director of Engagement, Parents Association  
Summer Cook, Assistant Professor, Kinesiology  
Sarah Daigle, Coordinator, Paul College URC  
Gina Damiano, Director of Donor Relations & Stewardship, Advancement Relations  
Molly Doyle, Co-Chair, Parents Association Undergraduate Research Symposium; Administrative Director, Hamel Center for Undergraduate Research  
Nora Draper, Assistant Professor, Communication  
Kate Gaudet, Assistant Director, University Honors Program  
Rob Haskins, Chair, Naked Arts; Associate Professor, Music Department  
Tara Hicks Johnson, Co-Chair, ISE Symposium; Outreach Specialist, Center for Coastal and Ocean Mapping (CCOM)  
Scott Jones, Director of Client Services, CPA  
John Larsen, Associate Director, UNH Admissions  
Tracey Lauder, Assistant Dean, Library Administration  
Nancy Lowenberg, Associate Director, Development, Interdisciplinary Programs Development  
Myles Lynch, Graduate Assistant/Coordinator, Graduate Research Conference  
Michael Merenda, Chair, Paul College Holloway Competition; Professor, Management  
Subhash Minocha, Co-Chair, COLSA URC; Professor, Biological Sciences  
Cynthia Nizzari-McClain, Co-Chair, Paul College Holloway Competition; Educational Program Coordinator, Paul College

Laura Perille, Co-Chair, Parents Association Undergraduate Research Symposium; URC Coordinator, Hamel Center for Undergraduate Research  
Beth Potier, Manager, Research and Outreach Communication, CPA  
Timothy Quinn, Associate Professor, Kinesiology  
Dan Reagan, Chair, UNH Manchester URC; Associate Dean, Academic Affairs, UNH Manchester  
Chris Reardon, Professor, Political Science  
Molly Tetreault, Director, Connors Writing Center; Adjunct Faculty, English Department  
Paul Tsang, Faculty Director, Hamel Center for Undergraduate Research; Professor, Molecular, Cellular and Biomedical Sciences  
Pam Wildes, Co-Chair, COLSA URC  
Mary Young, Project Manager, Services Enhancement Initiatives, Dean's Office, UNH Manchester

## *2016 URC Event Chairs/Co-Chairs:*

Carole Berry, Kent Chamberlin, Tara Hicks Johnson and Ruth Varner, Interdisciplinary Science & Engineering Symposium  
Anne Broussard, CHHS Grimes Award Competition  
Pablo Chavajay and Jill McGaughy, Psychology Department George M. Haslerud URC  
Sarah Daigle and Roger Grinde, Paul College URC  
Molly Doyle and Laura Perille, Parents Association Undergraduate Research Symposium  
Cathy Frierson, History Department URC  
Cynthia Giguere, Thompson School Student Showcase  
Rob Haskins, Naked Arts–Creativity Exposed!  
Chris Kies, Student Composers' Concert  
Delia Konzett, Honors English URC  
Michael Merenda and Cynthia Nizzari-McClain, Paul College Holloway Prize Competition; Nelson Poster Competition  
Cari Moorhead and Myles Lynch, Graduate Research Conference  
Dan Reagan and Mary Young, UNH Manchester URC  
Subhash Minocha and Pamela Wildes, 25th Annual COLSA URC  
Cindi Rohwer, Chemistry Department Poster Exhibition  
Tamara Rury and Sean Stewart, Paul College FIRE URC  
Joanne Samuels, Ann Manchester Kelley Nursing Inquiry Day  
Leah Woods, 2015 Senior B.A. & B.F.A. Art Exhibition and M.F.A. Thesis Exhibition

# Student Index

Aasen, Adam	45	Barrett, Timothy	15	Bragan, Francesca	29	Catala, Manuel	7
Abbas, Zain	15	Barritt, Shauna	50	Bragdon, Mark	16,18	Cawley, Justin	34
Abraham, Akshay	14, 25	Bartlett, Dylan	35,40	Branchaud, Zachary	14	Celaya, Pedro	25
Abrams, Andrew	28	Barton, Rebecca	28	Brand, Samantha	21,42	Celona, Kimberly	46
Adams, Lindsey	11	Bauer, Austin	34,37	Breedlove, Haley	14	Chamberland, Richard	34
Adeeko, Emmanuel	36	Beale, Brendan	42	Breton, Connor	45	Chamberlin, Sean	10
Agan, David	9	Beaudet, Nicole	30	Brewer, Cara	6	Champagne, Martha	16
Ahmad, Saverna	16	Beaulieu, Andrew	34	Brewster, Stephanie	21,45	Champagne, Neil	16
Aiello, Samantha	43	Beaulieu, Nathan	14	Brigham, Thomas	11	Chancey, Kaelin	15
Aiken, Kathryn	42	Bebon, Alexa	6,8	Brock, Benjamin	9	Chaput, Andrew	39
Albers, Andrew	40	Beckwith, Jason	9	Brodie, Lauren	45	Charrette, Wayne	19
Alhamdan, Ahed	35,40	Beigi, Shahriar	9	Brosh, Alona	46	Chase, James	9,50
Aligata, Alyssa	11	Belanger, Molly	26,45	Brown, Allison	38	Chesteron, Erin	39
Allaire, Stephanie	26,45	Belletete, Celia	9	Brown, Elizabeth	23	Choiniere, Jessica	31
Allard, Robert	38	Bemis, Matthew	14	Brown, Eric	13	Chretien, Alexander	32
Allen, Emily	45	Bencosme, Yamilex	28	Brown, Maxwell	25	Ciabattoni, Emily	25,32
Allen, Owen	13	Benik, Paige	36	Bruinooge, Briana	33	Cimeno, Olivia	31
Amato, Amanda	19	Bennett, Autumn	45	Brulotte, Connor	14	Clancy, Julie	31
Anderson, Bradley	45	Bennett, Mark	10	Brunelle, Kyle	10	Clark, Steven	12
Anker, Brian	16	Beranger, Kirby	7,15,45	Bryant, Garrett	32	Clarke, Alexander	11
Apkarian, Christopher	32	Bergeron, Hannah	26	Buckley, Ryan	36	Clarke, Devon	30
Arias, Steven	15	Berkman, Grace	33	Buckwalter, Brenna	39	Clarkson, Jenna	30
Arnoldy, Michael	13	Bernardy, Castine	27	Buonpane, Joshua	44	Cleary, Jonathan	16,18
Arnoux, Valery	30	Bernier, Shelby	45	Burke, Christopher	46	Cleary, Shannon	40
Arral, Mariah	8,26	Bernstein, Benjamin	42	Burke, Leah	21	Clements, Sarah	46
Ashley, Kiley	26	Bethoney, John	38	Burke, Spencer	14	Cochran, Christopher	18
Assaf, Elizabeth	35,40	Betit, Hannah	26	Burns, Nicholas	14	Coccoziello, Jessica	30
Athanasopoulos, Antoni	36	Bielinski, Nicholas	16,18	Burns, Shelby	18	Codd, Ellis	24
Atkinson, Rebecca	37	Bielski, Cameron	21	Burns, Steven	14	Cole, Samuel	14
Aucoin, Kelsey	38	Birch, Lydia	45	Busby, Michael	13	Coleman, Joseph	15
Aybar, Sara	24,34	Birnie, Christopher	40	Butler, Katie	46	Coleman, Marc	13
Ayres, Graham	34	Biro, Robert	9	Button, Curtis	32	Coleman, Matthew	10
Babeu, Carolyn	26	Bivona, Emma	20	Caiazzo, Daniel	10	Collins, Brenden	16
Bache, Jonathan	11	Bixler, Taler	11	Calato, Cameron	20,31	Collins, Joseph	14,29
Bachman, Ryan	14	Blais, Samantha	21	Calcagno, Dean	38	Collins, Katelin	35,41
Bacon, Kassandra	23	Blanchard, Christian	11	Calderan, Nicholas	11	Collins, Liam	14
Badger, Jordan	21,45	Block, Casey	26	Callahan, Kerri	46	Collins, Mikayla	32
Badylak-Reals, Christin	26	Bloom, Cameron	14	Campbell, Susan	46	Collins, Samuel	42
Bagley, Daniel	16	Blum, Tamir	14,25	Camplin, Brady	8	Collins, Taylor	21
Bagley, Nicholas	37	Bochicchio, Olivia	28	Canwell, Lyndsay	29,46	Condon, Erin	23
Bai, Yue	44	Bogart, Hannah	7	Cape, Christopher	46	Cone, Daniel	38
Baiguy, Sabrina	25	Bohlig, Christopher	35,40	Cappetta, Charles	42	Connolly, Aaron	14
Baker, Ross	27	Bois, Shaunna	18	Carleton, Emma	35,41	Connolly, Adam	17,32
Baker, Becky	18,19	Boivin, Thomas	34	Carlisle, Alyssa	43	Conte, Amy	44
Balcom, Paige	7,15	Bolton, Evie	45	Carlson, Sara	25	Cook, Christopher	10
Balle, Francesca	18	Borella, Catherine	50	Carney, Dylan	7	Corkum, Ronald	18
Ballentine, Ellen	30	Borges, Natasha	38	Carroll, Christopher	38	Cormier, Kyle	17,32
Bannon, Ryan	14	Born, Jack	23	Carter, Caitlin	18	Cornellier, Tyler	37,42
Bardales, Sarai	45	Bosen, Zachary	36	Casali, Zachary	33	Correale, Daniel	38
Barden, D. Ryan	8	Bouchard, Nicholas	37	Casey, Ryan	42	Costa, Ashleiy	21
Barker, Kevin	34	Boulay, Ryan	15	Cashman, Kenneth	43	Cote, Seth	10
Barna, Bryanne	18	Bourcier, David	15	Cashman, Mark	9	Coulombe, Kassandra	38
Barna, Joel	11	Bowen, John	35,40	Caspersen, Bettina	25,38	Cournoyer, Justin	8
Barrett, Elizabeth	26	Boynton, Zachery	16,32	Casperson, Bradley	10	Couture, Jamison	15

Covey, Meagan	39	DesMarais, Maxwell	35,40	Ellis, James	39	Franchina, Peter	12
Cowley, Steven	20	Dewey, Kristopher	24	Ellis, Riley	36,41	Franchino, Cullen	47
Craycraft, Nicholas	12	Deyett, Alison	8	Elsheikh, Abubaker	14,25	Frantz, Caleb	11
Cressey, Melissa	7	Diaconu, Gabriela	18,19	Emerson, Maryjean	16	Fraser, Brendan	39
Cressman, Colin	16	Diercks, Justin	38	Emmons, Robert	39	Freitas, Katherine	36
Cristy, Yvonne	26	Dieterle, Matthew	9	Enegren, Kirsten	50	Friedrichs, Lief	9
Croci, Cassidy	7,10,20,40,42	DiFabio, Cristina	34	English, Jennifer	44	Fuller, Benjamin	16,18
Cronin, Zachary	9	DiIonno, Madeleine	26,45	Erickson, Kaleigh	26,45	Fwu, Wilson	13
Crook, Shenandoah	46	Dimock, Matthew	32	Evankow, Chelsea	31	Gagne, Christopher	10
Crossan, Dalton	7	DiNapoli, Kelly	31	Evans, Devereux	42	Gagnon, Isaac	14
Crowley, Kelsey	30	Dinero, Nolan	13,14	Fabricant, Taylor	39	Gagnon, Nicole	38
Crowley, Kevin	14	Dingle, Lauren	46	Faccidomo, Anthony	10	Gallagher, Erin	13
Crowley, Jillian	10	Dinh, Thanh	8	Fagone, Christa	33	Gallant, Jacob	32
Curley, Justin	30	DiPasquale, Richard	15	Falbe, Matthew	15	Gallo, Benjamin	47
Curley, Patrick	9,50	DiPierro, Nicolas	45	Fanning, Ryan	39	Galvin, Paige	14
Curran, Timothy	38,42	Doehner, Brian	16,17	Farley, Daniel	11	Gamache, Justin	21
Curtin, Craig	11	Doerfler, Jacob	10	Farr, Jason	14,25	Gamble, Leah	39
Cushing, Kasey	22,46	Doheny, Jason	46	Farrell, Ryan	7	Gancarz, Jeffrey	17
Czotter, Claire	43	Domingues, Nathan	18	Farren, Jordan	10	Gao, Anyu	50
Da Silva Sampaio, Ramon	13	Donahue, Frances	23,43	Febonio, Alexander	37	Garcia, Antonio	33
Daftari, Benita	39	Dongo, Melissa	43	Federico, Amanda	38	Garcia, Beau	47
Daly, Caitlin	26	Doonan, Caitlin	22,51	Feeley, Michael	6	Garza, Lauren	24
Daly, Morgan	15	Doskocil, Nathan	14	Fendi, Iskandar	14	Gaudreault, Maxim	38
Daly, Raecliffe	46	Douville, Kelsey	29	Feng, Zhangxi	15	Gauthier, Justin	16
D'Ambruoso, Nicholas	10	Dow, McKenzie	43	Ferdinand, Kevin	32	Gawle, Adam	15
D'Amours, Connor	11	Downey, Blair	46	Ferguson, Kyle	38	Gbeve, Nelson	6
Dang, Tien	22,46	Doyle, Ian	15	Fernald, John	8	Geason, Matthew	22,28
Daniel-Nuboe, Ashlyn	24	Drake, Austin	46	Ferro, Peter	17	George, Andrew	16,19
Daniels, Ed	32	Drake, Hannah	25,44	Ffrench, Keeley	29	George, Maxwell	10
Daniels, Jacob	35,41	Driscoll, James	31	Fiel, Nicholas	38	Geremia, Abby	31
Daniels, Rebecca	23,43	Driscoll, William	35,40	Figiel, Emily	24	Gernhard, Carolyn	14
Darisse, Michael	35	Drouin, Cody	18	Fink, Russell	10	Gersbeck, Emily	14
Davidson, Alana	31,46	Duane, Evan	15	Finney, Daniel	15	Gervais, Brett	15
Davila, Cristian	17	Dubois, Dean	16	Fish, David	39	Gervais, Danielle	33
Davis, Christopher	39	DuBois, Thomas	47	FitzGerald, Cody	13	Gervais, Derek	13
Day, Adam	35	Ducharme, Erin	47	Fitzgerald, Kathleen	23	Gibbons, Kelly	23
Dean, Olivia	28	Duchesne, Jeffrey	7,42	Fitzgerald, Ryan	9,50	Gibson, Andrew	42
Debus, Courtney	37	Duda, Rachael	26	Fitzgerald, Zachery	37	Giguere, Heidi	44,47
DeCarlo, Christopher	10,11	Dudgeon, Robert	6	Flaherty, Hailee	27	Gilbert, Jacqueline	29
deDiego, Nicholas	26,49	Dudka, Joseph	15	Fleese, Sean	30	Gilday, Rose	38
Delaney, Kelly	18	Duffield, Karl	10	Flint, Daniel	10	Gilooly, Stephanie	15
DelGreco, Jessica	12	Duggan, Nicholas	24,26	Flint, Taryn	28	Gingras, Dana	30
DelGrosso, Daniel	39,40	Dulas, Zerina	18	Flouros, Adrien	12,44,47	Girard, Elizabeth	21
D'Elia, Ian	13	Dunlap-Smith, Azaline	9,50	Flynn, Joseph	38	Giuliano, Marissa	25
Demarco, Charles	37	Dupuis, Casey	39	Flynn, Shannon	26	Glanville, Hannah	47
Demers, Eric	17,32	Dwyer, Emily	22,51	Folan, Stephen	39	Gloekler, Melissa	11
Dempsey, Ryan	38	Dyrness, Erik	11	Foley, Kara	47	Goerigk, Lukas	11
Deng, Angela	35,41	Eason, Oriana	24,35,41	Fontaine, Toby	32	Goessling, Raleigh	32
Denoncourt, Nathan	15	Eaves, Seth	32	Forance, Kimberly	10	Gold, Emily	29
Deris, Michael	39	Ebrahim, Yussra	42,47	Forrest, Victoria-Lynne	42	Golden, Eva	47
DeRosa, Alexandra	46	Edmonds, Lindsay	23	Forstrom, Carolyn	47	Gomez, Jacob	37
Desjardins, Andrew	11	Ekbatani, Farrah	18	Foster, Hollie	23,28	Goodale, Olivia	36
Desjardins, Eric	14	El-Faramawi, Basmah	24,26	Foster, Nathan	10	Goodman, Aleeza	39
Desmarais, Luke	15	Elliott, Michael	32	Fox, Matthew	11	Gootee, Emma	18

Gorman, Kathleen	26,47	Heeley, Sean	12	Jossi, Enrica	46	Kouros, Anastasia	45
Gottschalk, David	14	Henderson, Logan	12	Juknievich, Joseph	20	Kraines, Andrew	17
Gouveia, Victoria	18	Hermawan, Crystal	26, 47	Juknievich, Sarah	39	Kuist, Christopher	30
Gozdiff, Alexa	30	Hett, Cooper	10, 23	Kabala, Andrea	31	Labins, David	35, 40
Graham, Sean	12	Heyner, Matthew	17	Kahr, Julia	22	Labrecque, Noelle	48
Granville, Samantha	8	Hibbard, Hannah	7	Kalil, Maura	34	Lachance, Jordan	29
Gray, Nicole	18	Hickey, Jessica	28	Kane, Anna	13	Lalime, Chelsea	39
Green, Hannah	47	Higgins, Kyle	10	Kane, Tyler	11	Lalmond, Reggie	12
Green, Melanie	26,33,47	Hiley, Alexandra	46	Kapstad, Christian	45, 47	Lamontagne, Hilary	10
Greene, Karlyn	26	Hill, Connor	12	Karahasan, Almedina	18	Landolt, Nathan	8, 11
Gregory, Michelle	13	Hiney, Justina	22, 47	Karic, Refik	16, 33	Lang, Christopher	40
Grimaldi, Ashli	12	Hird, Julia	35, 41	Kasabian, Matthew	6, 21	Langelier, Michael	10
Griswold, Matthew	9	Hochschwender, Jeremy	13	Kaushik, Aashirya	16	Lappin, Justin	37
Grover, Ryan	10	Hodsdon, Alex	13	Kazan, Theodore	46	Larabee, Alexis	33
Groves, Shanley	39	Hoffman, Gabriel	24	Kearns, Gavin	16	Laroche, Stewart	15
Guare, Annemarie	24	Hogan, Alanna	38	Keefe, Justin	10	Larson, Emily	23, 43
Guetling, Lauren	26	Hogan, Sean	34	Keenan, Christopher	10	Larson, Matthew	33
Guglielmi, Micaela	11	Holler, Cynthia	45	Keiran, Sarah	42	Latham, David	10
Gustin, Harrison	46	Holm, Erica	47	Kelleher, Megan	30	Le, Kathleen	48
Haas, Elizabeth	28, 44	Honeywell, Megan	47	Kelley, Bradford	37	Leaf, Christine	39
Haddock, Tyler	15	Hoogasian, Edward	35, 40	Kelley, John	39	Leafe, Kyle	29
Hahr, Abigail	35	Hopkins, Julia	36, 39, 41	Kelley, Kaitlyn	35	LeBel, Amanda	26
Hall, Nathan	15	Horne, Amanda	26	Kelly, Eric	34	LeBlanc, Joseph	11
Hall, Rebecca	38	Hu, Yongjiao	26	Kelly, Ryan	40	LeBlanc, Kelsey-Anne	28
Hall, Ryan	9, 50	Huang, Lixing	38	Kenneally, Sean	38	Leclerc, Brianna	7, 10, 40, 42
Halloran, James	40	Huber, Michael	17, 32	Kennedy, Geoffrey	13	Ledoux, Jennifer	18
Halstead, Jennifer	46	Hunt-Hawkins, Eliza	11	Kennedy, Kayla	36, 41	Lee, Elizabeth	22
Ham, Emily	25	Hurd, Alec	39	Kenney, Maxwell	11	Leggett, Taylor	39
Hammond, Patrick	37	Hutchison, Nicholas	39	Kern, Caelie	46, 47	Lehoux, Jacob	29, 34
Hampton, Tyler	12	Hutchins, Eric	12	Kerr, Jennifer	47	Leibowitz, Abby	26
Hand, Galen	37	Hutchinson, Isaiah	6	Khatiwada, Sital	15	Leighton, Eric	33
Hanley, Melissa	8	Ibechem, Andrew	36	Kief, Joseph	10	Leipold, Christopher	13
Hanna, Lindsey	22	Illich, Eric	15	Kiley, Matthew	42	Leith, Benjamin	17
Hanrahan, Caitlin	22, 43	Irish, Lauren	39	Kilian, Donald	17	LeLacheur, Aaron	37
Hansen, Hanne	26	Izzo, Cassandra	22	Kimball, Matthew	25	Lemaire, Jacqueline	48
Hanson, Donald	11	Jackman, William	40	King, Christopher	38	Lemay, Steven	42
Harling, Alexander	33	Jacobs, Rhiannon	8	King, Diane	39	Lemieux, Anthony	9, 50
Harmon, Sarah	34	Jacobson, Alexander	12	King, Jeffrey	27	Lenox, Olivia	7
Harrigan, Casey	25	Jacobson, Molly	47	King, Vivian	38	Leonard, Matthew	14, 25
Harrington, Charles	39	Jassem, Atheer	13	Kirk, Riley	48	Lepine, Daniel	17
Harrison, Jonathan	37	Javenes, Elsa	40	Kiskinis, Jonathan	37	Lertora, Jeffrey	36, 39, 41
Hart, Giselle	28	Jennings, Anthony	9, 50	Kitchens, Billy	10	Lessard, Eric	10
Hartwell, Robert	26	Jensen, Christian	35	Klardie, Nicholas	17	Lessard, Jacob	9, 50
Haskell, Matthew	7, 10, 40, 42	Jenssen, Molly	47	Klein, Kendall	23	Letterman, Joshua	13
Hasslinger, Brandon	14	Jepson, Ryan	39	Kleyensteuber, Katja	44	Letvinchuk, Kristin	40
Hastings, Cody	22	Jesi, Arianna	10	Kline, Melinda	9	Levenbaum, Andrew	15
Hastings, John	47	John, Cassidy	18	Knepper, Christopher	14	Levin, Lyndsay	40
Hatfield, Gregory	14	Johnson, Brian	39	Knox, Jenna	34	Levin, Nathaniel	13
Hauck, Erik	36	Johnson, Finn	37	Knudson, Hayden	40	Lewis, Daniel	11
Hauschildt, Margarethe	22	Johnson, Summer	26	Koble, Stephen	17, 32	Lewis, Jacob	38
Hautanen, Alexander	14	Johnson, Zachary	13	Koester, Evan	13	Lindberg, Katherine	38
Haycook, Charles	20	Johnston, Jaclyn	26	Konate, Aboubacar	9	Lindstrom, Dylan	16
Hayden, James	11	Jones, Anna	24, 31, 33	Kost, Craig	11	Linton, David	42
Healy, Justin	27	Jordan, Jenna	38	Kotowski, Mark	12	Liss, Casey	13

Litterer, Amber	33	Marino, Nicholas	14	Melvin, Devlin	17	Nesom, Valerie	22, 48
Little, Mikalah	7, 15	Marinucci, Jennie	48	Mercier, Amber	12	Newcombe, Ian	36, 41
Lo, Diana	33	Marr, Justin	10	Meurer, Alison	26	Newdorf, Nicholas	11
Lochner, Frederick	17	Marsh, Grace	39	Michael, Grant	19	Newell, Roy	46
Locore, Joseph	11	Marshall, Ian	14	Michaud, Sarah	36	Ng, Wu Yee	11
Loeffel, Renee	31	Martin, Georgina	34	Michaud, Todd	15	Nguyen, Anh Phuoc Thien	36
Loftus, Anne	23	Martin, Ian	9	Michonski, Jason	37	Nguyen, Han	39
Loftus, Joseph	13	Martin, Michael	7	Mignanelli, Michael	24	Nguyen, Khoa	8
Lombard, Sean	48	Martin, Sara	21	Milicia, Sarah	44	Nguyen, Nhan Ha	37
Lombard, William	42	Martinen, Abbygale	28	Milingyte, Greta	16	Nguyen, Tri	17
London, Tyler	32	Martins, Cecilia	24	Miller, Aaron	16	Nickerson, Kennedy	22
Long, Dorothy	25, 29	Maskwa, Rebecca	11	Miller, Caleb	12	Nickerson, Stephen	7
Lopez, Hannah	24	Maslan, Fritz	45	Miller, Lucas	10	Nigam, Siddharth	7, 15, 29
Lopez, Lucas	15	Matsukura, Daisuke	17	Miller, Wendell	35, 40	Nitschelm, Cory	8
Lordan, John	10	Mattson, Erika	39	Milone, Marisa	24, 28	Noah, Frank	44
Loukakes, Timothy	9	Mattson, Caleb	17	Minelli, Kelli	31	Nobrega, Christopher	17, 18
Lowe, Robert	35	Mayer, Matthew	12	Mitchell, Sean	35, 36	Nothnagle, Robert	11
Lowell, Jeremy	35	McAree, Nathan	27	Moeller, Elora	24	Nugent, Alyssa	40
Lu, Yanxi	35, 41	McAuliffe, Andrew	38	Molinaro, Anna	25	O'Brien, Maureen	22, 43
Lucchetti, Daniel	10	McCafferty, Christopher	38	Montana, Christopher	8	O'Connor, Liam	15
Lush, Matthew	44	McCafferty, Megan	48	Monterio, Heather	17	O'Connor, Patrick	14
Lusignan, Megan	24, 26	McCall, Harmony	33	Moore, Cullen	37	O'Dea, Casey	28
Lussier, Lindsey	28	McCarthy, Angela	32	Moore, Jacob	48	Oka, Amanda	10
Lussier, Robert	10	McCarthy, Brendan	7	Moore, Robert	16	Olivier, Christopher	48
Lyman, Brandon	34	McCarthy, Sean	39	Morahan, Kelsie	7	O'Meara, Makenzie	15
Lynch, Colleen	36	McClure, Brody	14	Morelli, Christopher	36, 41	O'Neal, Ryan	16, 17
Lyscars, Mark	38	McConville, Charles	40	Morganelli, Darrel	16	O'Neill, John	19, 20, 31
Ma, Henry	11	McCormack, John	15	Morin, Ryan	15	Onofrio, Allison	27, 31, 45, 48
MacArthur, Colin	36, 41	McCrary, Kyle	28	Morse, Javen	36	Orn, Stefanie	29
Macdonald, Eric	46	McDade, Christopher	36	Moskal, Adam	11, 12	O'Rourke, Kelci	40
MacDonald, Kelsey	34	McDonald, Taylor	37	Moss, Jacob	27	Osgood, Nash	40
Macek, Justin	11	McDonnell, Kelley	48	Mozdierz, Jessica	6, 8	O'Shea, Erin	39
Machamer, Cheston	14	McDonough, Edward	38	Mukanovic, Lamia	17	Ouch, Richard	23, 27
Maciejewski, Shaina	20, 25, 28	McDonough, Jillian	40	Mulcahy, Marykate	43	Owen, Evan	10
Mack, Alexa	10	McFarland, Andrew	23, 42	Muldrow, Nicholas	37	Owens, Tucker	11
Mack, Alexis	9	McGartland, Sean	38	Mulkern, Zachary	35	Pacocha, Alexander	8
MacKay, Ian	29	McGinn, Alex	27	Mullaney, Erin	36, 38, 41	Pagliocca, Marc	40
Mackenzie, Samantha	19	McGoldrick, Kellie	40	Mullaney, Jonathan	13	Palange, Christen	18
MacNamee, Colin	11	McGuill, Casey	39	Mullen, Samantha	27	Palazini, Joseph	14
Madaglia, Scott	16	McGuire, John	15	Murphy, Christopher	39	Palmer, Kyle	37
Madore, Taylor	13	McHoul, Laura	38	Murray, Keith	15	Pan, Jiapeng	39
Mailhot, Brittany	29	McIntyre, Kelly	39	Murray, Adelaide	29	Panella, Timothy	14
Malagodi, Garrett	14, 37	McKay, Molly	42	Murray, Eric	37	Panzini, Travis	10
Malfait, Ryan	36	McKee, Joseph	46	Mutuski, Matthew	35, 40	Pappas, Michael	9
Mallory, Kyle	10	McKeown, Rachelle	28	Nakuci, Ina	42	Parente, Nicholas	39
Manning, Travis	10	McNally, Paul	12	Napoli, Crystal	20	Parker, Adam	48
Mantell, Brendan	36, 41	McNeal, Satonya	18	Napolitano, Monica	39	Pascucci, Stephen	16
Mantovani-Schuell, Sara	22, 48	McNulty, Owen	18	Nash, Allison	48	Paskoski, Jessica	15
Mao, Xiaotian	38	McNutt, Zakkary	48	Nash, Andrea	35	Patel, Kishan	9, 27, 28
Maranon, Alvaro	24, 30	McPherson, Taylor	38	Nastasia, Eric	15	Patnaude, Zachary	14
Marble, Camden	17	McQuaid, Jacob	6	Natella, Nicholas	34	Patton, Grace	35, 41
Marcellino, Nicholas	15	McVeigh, Margaret	36, 41	Neff, Benjamin	10	Pearsall, Gregory	12
Marien, Brittany	30	Mechaber, Jacob	36	Nelson, Ian	44	Pearson, Jeffrey	20
Marino, Amanda	46	Melanson, William	13	Nepal, Keshav	22, 48	Pearson, Timothy	28

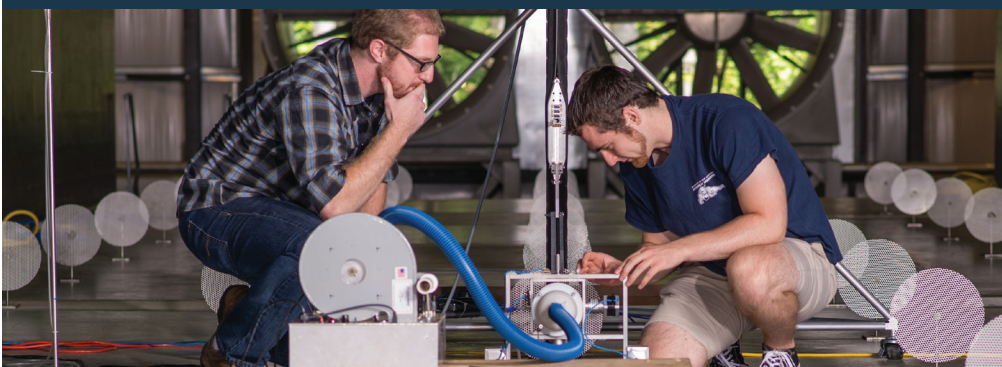


Peavey, Megan	22, 48	Quast, Harrison	36, 41	Rudowski, John	10	Shaw, Kaitlyn	38
Peck, John	11	Quigua, Steven	30	Ruprecht, Molly	45	Shaw, Nicholas	14
Pedrick, Brynn	22, 48	Quillin, Thomas	10	Russell, Andrea	32	Shellenberger, Peter	42
Peer, Tyler	10	Quirk, Samuel	38	Russell, Joseph	38	Shepardson, Richard	49
Pellerin, Colin	14	Raccio, Michael	39	Russell, Vanessa	20	Sheridan, Ryan	10
Pelletier, Jessica	22, 48	Radack, Lillian	31	Russo, Courtnei	19	Shurtleff, Craig	15
Pelletier, Mia	27	Ragnarsson, Axel	8, 42	Ryan, Athena	47	Siart, Heather	48
Pentheny, Jacob	36, 38, 41	Rainey, Christian	10	Ryan, Jillian	6, 8	Siegle, Caitlin	6
Pepin, Cameron	12	Rauch, Matthew	9, 50	Sabol, Rachel	49	Sikora, Gregory	12
Pepin, Eric	33	Rayner, Emma	27, 34	Sahlin, Garrett	39	Simon, Amy	23
Percy, Lauren	20	Reckelhoff, Caroline	48	Salem, Michael	16	Simpson, Anna	12
Perkins, Janine	27	Reese, Thomas	31	Salemi, Rose	17	Simpson, Bonnie	21
Perrella, John	14	Reeve, Tyler	14	Sales, Michael	30	Simpson, Brett	7
Perron, Amanda	20	Register, Takoda	11	Salisbury, Robert	33	Simpson, Michael	37
Petersen, Nicole	27, 48	Reiff, Campbell	34	Salsman, Tiana	28	Singh, Subha	28, 49
Petit, Adam	14, 25	Reilly, Kyle	30	Samaan, Mirian	19	Sirois, Justin	37
Pettis, Rebecca	22, 51	Reiner, Alexander	12	Sameski, Joseph	34	Siwakoti, Puskar	49
Pezzelli, Gabriella	44	Rennie, Jarrett	13	Sampson, Brittany	27, 43	Skedros, Anna	26
Phelan, Brendan	36, 38, 41	Resse, Bridget	23	Sanborn, Kyle	17, 20	Skrabal, Matthew	12
Phengdara, April	40	Reyna, Lexus	7	Sanborn, Ryan	6	Sleys, Christopher	11
Piacentini, Madison	24	Rheume, Bruce	19	Sangroula, Suraj	49	Smalley, Travis	40
Pierce, Madison	31	Rhoades, Thomas	19	Santiago, Steven	11	Smeltzer, Rebecca	30
Piet, Sarah	48	Ricciardi, Julia	40	Santoso, Kate	31	Smith, Abbey	39
Pike, Patrick	10	Ricciardone, Steven	38	Sarette, Katie	19	Smith, Dylan	7, 49
Pilotte, Ashley	40	Riccio, Alex	27	Sargent, Hallett	49	Smith, Haley	35, 41
Pitman, Cody	11	Riel, Cole	19	Sattler, Thomas	15	Smith, Kristie	12
Plante, Kurt	19	Riese, Adam	7	Savastano, Alexander	40	Smith, Stephanie	49
Plumer, Zachary	14	Riley, Carolyn	24, 30, 31	Savoia, Nicholas	37	Smith, Tamlyn	38
Poirier, Michael	12	Rist, Aaron	14	Scala, Olivia	38	Snay, Bradley	11
Pokharel, Aushy	17	Rivera, Kevin	23	Scanlan, Nora	23	Snow, Brooke	42
Poland, Lily	48	Roberge, Chad	27	Scarito, Emma	40	Solomon, June Kenneth	39
Pollack, Joycelyn	26	Roberts, Steven	42	Schaefer, Madison	23, 44	Sonnichsen, Karen	49
Popkova, Karina	35, 41	Robertson, Andrew	38	Schaefer, Mikayla	32	Sophon, Chaya	27
Popovitch, Hannah	32	Robertson, Hayley	29, 45	Schanlaber, Kelsie	46	Sosa, Carlos	14
Posch, Laurianne	25	Robichaud, Rebecca	27, 43	Scherneck, William	37	Soucey, Kevin	17
Post, Bradley	14	Robidoux, Jaclyn	46	Schiappa, Megan	49	Specht, Zachary	11
Poudyal, Bimochan	10	Robinson, Saege	27	Schinas, Jacob	7	Speck, Steven	13
Poulin, Bethany	16	Rocci, Katherine	12	Schmeltzer, Stephanie	27	Spinicci, Liam	29
Poulin, Brooke	39	Rochette, Louis	11	Schmidt, Caroline	37	Spirou, Anthony	10
Pouliot, Bionka	19	Rodolico, Taylor	40	Schraufnagel, Jesse	33	Spohn, Thomas	38
Powell, Ian	11	Rodriguez, Kendre	7, 10, 15, 40, 42	Schumacher, James	17	Sprague, Jacob	16
Powell, Wyatt	40, 42	Rogers, David	38	Schwartz, John	37	St. Jean, Michael	33
Prestia, Brooke	39	Romano, Tyler	16	Schweitzer, Elizabeth	27	Staebler, William	8, 38
Previte, Domenic	42	Romano, Victoria	14	Scialabba, Rebecca	46	Steinman, Frank	14
Prior, Timothy	36, 41	Rondeau, Athena	38	Scott, Marlee	34	Stevens, Robert	44
Proksch, Chaille	19	Rose, Audrey	19	Seavey, Katherine	43	Stoller, Daniel	16
Proulx, Joshua	14	Rosenthal, Jessica	44	See, Devon	38	Stone, Connor	11
Provance, Alan	6	Routhier, Eric	13	Seekins, Caroline	15	Stoyle, Brianna	49
Psihoules, Alexander	9	Rowe, Daniel	22	Seguin, Jasmine	10	String, Genna	12
Pueyo Encinas, Ariel	25	Rowley, Hunter	14	Selensky, Jessica	37	Sturzo, Sara	22
Puksta, Taylor	11	Roy, Richard	37	Sellarole, Megan	22, 33	Sullivan, Connor	34
Pullo, Marcus	12	Rozenberg, Matthew	40	Shahzade, Heather	47	Sullivan, Kerrienne	40
Purington, Justin	17	Rubino, Thomas	17	Shallow, Jonathon	17	Sullivan, Timothy	12
Puzzo, Joseph	12	Rudis, Victoria	31	Shangraw, Erin	49	Sunderlin, Drew	28

Surrell, Denyelle	45	Trusty, Stephanie	27	Webster, Sarah	7	Young, Robert	15
Surusa, Novina	13	Tsareva, Ekaterina	35	Weidman, Alexandra	39	Young, Sebastian	11
Sutera, Leo	38	Tubbs, Sarah	36, 39, 41	Weiller, Ross	38	Yutzenka, Teagan	42
Swan, Robert	15	Tudela-Longas, Jesus	14, 25	Welch, Gwyneth	49	Zale, Eric	20
Swanson, Nigel	17	Tufts, Cameron	38	Welch, Katelyn	10	Zehngut, Michael	34
Sweeney, Benjamin	10	Tuller, Paige	35, 41	Wen, Jiayuan	7	Zhang, Zichun	35
Sweeney, Macklin	48	Tumber, Anna	30	Wentworth, Mark	37	Zhao, Jie	44
Sweeney, Shannon	10	Turner, Alexander	17	Werth, Alyson	39	Zheng, Yanmin	35
Sweet, Erika	35	Turner, Christopher	38	West, Kelsi	22	Zibel, Lori	6
Swift, Brandon	34	Turner, Lauren	49	Whelan, Connor	37	Ziegler, Cyle	13
Swinerton, Donald	19	Turner, Lindsay	13	Whitcomb, Hannah	31	Zukowski, Kaleigh	35, 41
Swist, Jillian	6, 21	Tveter, Christopher	37	White, Alexander	49		
Swist, Shawn	15	Twombly, Cameron	49	White, Bradley	37		
Sykes, Stephanie	45	Twomey, Alexandra	18	White, Colleen	22, 43, 51		
Szilagyi, Ian	39	Twomey, Keegan	35, 41	White, Hailey	39		
Tabor, Kallie	20	Tyer, Craig	34	White, Kristen	27		
Taetzsch, Brian	13	Ulin, Lyndsay	29	Widmark, Christian	37		
Talbot, Catherine	34	Vaattovaara, Vilma	49	Wilkins, Jerome	39		
Tamposi, Jon	37	Vachon, Jack	24	Wilkinson, Samuel	14		
Tanner, Ryan	19	Vainauskas, James	14	Wilson, Christina	12		
Tataczuk, Stephen	15	Valdez, Mercedes	10	Window, Zachary	19		
Tavares, Ceara	43	Valenza, Charles	11	Wing, Alexandra	21		
Tavares-Carreiro, Joao	49	Valhouli, Paul	37	Wingate, Christopher	36, 41		
Taveras, Angel	25	Van Beaver, Laura	9, 22, 45	Wingate, Peter	15		
Taveras, William	7, 10, 15, 42	van der Heijden, Ryan	10, 11	Wishart, Chandler	37		
Tay, Michael	19	VanZandt, Audrey	38	Woelfl, Courtney	49		
Taylor, Andrew	34	Vaughn, Katherine	25	Wojtowicz, Aleksandra	15		
Taylor, Nathaniel	40	Veilleux, David	35, 41	Wolfe, Carlton	15		
Taylor-Power, Gregory	15	Vetrone, William	35	Wolf, David	13		
Tedford, Abbey Rose	49	Vickers, Ryan	10	Wolf, Hannah	34		
Temme, Matthew	39	Vigneau, Kimberly	9	Wolf, Meagan	18		
Teren, Kathleen	39	Violette, Luke	48	Wolfe, Megan	17		
Teune, Brian	14	Vulgamore, Emily	31	Wolfson Slepian, Harry	6, 21		
Theriault, Cristy	49	Vynorius, Kyle	19	Wong, Adam	12		
Therrien, Amber	19	Wade, Erin	39	Wood, Allison	7, 10, 15		
Therrien, Brandon	32	Walden, Katherine	24	Wood, Kayla	18		
Thoel, Sean	20	Walker, Dana	23	Woodmansee, Craig	13		
Thompson, Charlotte	29	Wall, Christopher	15	Woodward, Jacob	13		
Thompson, Garrett	9	Wallace, John	15	Woodward, Jessica	12		
Thompson, Wendy	14	Wallis, Donald	33	Woodward, Taylor	13		
Tinkham, Gregory	18	Walsh, Patrick	40, 42	Wooster, Charles	8, 11		
Tisdell, Travis	13	Walsh, Ryan	27	Wordell, Katherine	27		
Titcomb, James	14	Wang, Dongjie	34, 37	Workman, Samuel	32		
Titlebaum, Michael	40	Wang, Yandan	27	Wright, Alex	16		
Tobin, Matthew	16	Wang, Junjiang	38	Wuorio, Rebecca	35, 40		
Tobin, Stephen	15	Ward, Jenna	30	Wynters, John	35, 41		
Tollick, Mark	16	Warren, Brittany	19	Wyskiel, Seth	37		
Tomescu, Valeriu	36, 41	Warren, Madeline	25	Xie, Qizhen	20, 24		
Tran, KimXuan	11	Warrick, Ryan	17	Yandell, Charles	14		
Tran, Kien	36, 41	Waterman, Courtney	9	Yandow, Trevor	10		
Trefry, Peter	48	Watt, Dellene	28	Yarosewick, Peter	35, 41		
Tribbett, Desiree	28	Watts, Jacqueline	49	Yee, Stephanie	30, 43		
Trimble, Jonathan	17	Weber, Emily	6, 8	Young, Jordan	10		
Tripodi, Patrick	38	Weber, Hans	11	Young, Joshua	16		



[unh.edu/urc](http://unh.edu/urc)



URC 2016