Undergraduate Research Conference

A UNIVERSITY-WIDE CELEBRATION OF RESEARCH, SCHOLARSHIP AND CREATIVITY
WELCOME to the 18th annual Undergraduate Research Conference, one of UNH’s most exciting traditions and a showcase for the outstanding research, scholarship and creative activities of our students and their faculty mentors.

The URC exemplifies UNH’s 150-year legacy of providing students with great opportunities and building research partnerships that improve the quality of life here in the Granite State and around the world.

Launched as a university-wide effort in 2000, the URC has grown steadily to become one of the largest and most diverse gatherings of undergraduate researchers in the nation. More than 1,800 students will share their findings at our Durham and Manchester campuses, with projects representing academic achievements in every college and school.

Whether your visit includes a poster session, an oral presentation 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,

Mark W. Huddleston, President

Nancy Targett
Provost and Vice President for Academic Affairs
Welcome 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 400 faculty members and other research advisers—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.

At the Hamel Center for Undergraduate Research—celebrating 30 years at UNH this spring—our core mission is to provide resources and financial support for the research, scholarly, and creative projects of UNH students. Our additional role as the administrative home of the URC enables us to broaden our commitment to supporting, nurturing, and showcasing all stages of the research process. 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.

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 showcase 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

Katie Donnelly
URC Coordinator,
Hamel Center for Undergraduate Research
URC 2017

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All events are free and open to the public.
Accessibility accommodation requests may be directed to Katie Donnelly at (603) 862-5494.
**URC 2017 Calendar**

**TUESDAY, APRIL 18**
10 a.m.–2 p.m.
UNH Manchester URC Oral Presentations
Pandora Mill, Room 201

**WEDNESDAY, APRIL 19**
11 a.m.–1 p.m.
Thompson School of Applied Science Student Showcase
Cole Hall, Stacey’s (8)

Noon–2 p.m.
The Naked Arts—Creativity Exposed! (Act I)
Paul Creative Arts Center, Hennessy Theatre (4)

1:30–4 p.m.
Interdisciplinary Science and Engineering (ISE) Symposium
Whittemore Center Arena (6)

3–5 p.m.
UNH Manchester URC Computing Technology Poster Presentations
Pandora Mill, 1st Floor

3–5 p.m.
UNH Manchester URC Poster Presentations
Pandora Mill, Room 201 and Student Commons

**THURSDAY, APRIL 20**
9 a.m.–3:30 p.m.
Paul College of Business and Economics URC
Paul College (9) and Holloway Commons (1)

11 a.m.–1 p.m.
UNH Manchester URC Cinema Arts Day
Pandora Mill, Room 456

Noon–2 p.m.
Paul College of Business and Economics University-Wide Paul J. Holloway Prize Innovation-to-Market Competition
Charles & Miriam Nelson Poster Round
Paul College (9)

12:15 a.m.–2 p.m.
History Department URC
Memorial Union Building, Rooms 334, 336, 338 (2)

12:40 p.m.–2 p.m.
The Naked Arts—Creativity Exposed! (Act II)
Paul Creative Arts Center, Room A218 (4)

**FRIDAY, APRIL 21**
8:45 a.m.–4 p.m.
Languages, Literatures, & Cultures Department URC
Mulk Hall, Rooms 115 and 202 (3)

9 – 9:30 a.m.
All Colleges Undergraduate Research Symposium Welcome Breakfast
Memorial Union Building, Granite State Room (2)

9:30 a.m.–1:25 p.m.
All Colleges Undergraduate Research Symposium
Memorial Union Building, Granite State Room and various rooms (2)

9 a.m.–4 p.m.
UNH Manchester URC Engineering Technology Senior Project Presentations
Pandora Mill, Room 201 and 1st Floor

12:15–1 p.m.
The Naked Arts—Creativity Exposed! (Act III)
Memorial Union Building, Strafford Room (2)

1–4 p.m. and 4–8 p.m.
Paul College of Business and Economics University-Wide Paul J. Holloway Prize Innovation-to-Market Competition
Bud Albin Challenge Round
Paul College (9) and Alpha Loft

1:30–4 p.m.
College of Health and Human Services (CHHS) Grimes Award Competition
Pettee Hall, Rooms G10 and 106 (7)

1:30–5 p.m.
Psychology Department
George M. Haslerud URC
McConnell Hall, Room 220 (10)

1:30–4 p.m.
Honors English URC
Mulk Hall, Room G02 (3)

4–7 p.m.
Philosophy Department URC
Mulk Hall, Room G17 (3)

8–10 p.m.
Student Composers’ Concert
Paul Creative Arts Center, Bratton Recital Hall (4)

**SATURDAY, APRIL 22**
8:15 a.m.–12:45 p.m.
College of Life Sciences and Agriculture (COLSA) URC
Memorial Union Building, Granite State Room and Theatre II (2)

**SATURDAY, APRIL 29**
9 a.m.–2 p.m.
Paul College First-Year Innovation and Research Experience (FIRE) URC
Paul College (9)

**FRIDAY, MAY 5**
3–4:30 p.m.
Chemistry Department Poster Exhibition
Parsons Hall, Southwest Lobby (5)

**TUESDAY, MAY 9**
8:15 a.m.–4 p.m.
Ann Manchester Kelley Nursing Inquiry Day
Memorial Union Building, Granite State Room (2)

1–5:30 p.m.
Paul College of Business and Economics University-Wide Paul J. Holloway Prize Innovation-to-Market Championship Round
Paul College (9)

All events are free and open to the public.
(Building numbers are bold and in parenthesis.)
URC 2017 Campus Map

BUILDING KEY

1. Holloway Commons
2. Memorial Union Building (MUB)
3. Murkland Hall
4. Paul Creative Arts Center
5. Parsons Hall
6. Whittemore Center Arena
7. Pettee Hall
8. Cole Hall
9. Paul College
10. McConnell Hall

UNH Manchester
88 Commercial Street (Pandora Mill)
Manchester, N.H.

For directions to UNH Manchester go to www.unhm.unh.edu/directions.html or call (603) 641-4321.
UNH Manchester Undergraduate Research Conference

Oral Presentations

Tuesday, April 18
10 a.m.–2 p.m.
Pandora Mill, Room 201
88 Commercial St., Manchester

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

Ashley Belbin
Biological Sciences
Sequencing and Medicine
Adviser: Patricia Halpin

Meagen Fuller
Communication Arts
HB 438: The Relationship between Labor Unions and the New Hampshire Legislature
Adviser: Stephen Pimpare

Taylor Gilliam
Nathan Whitehead
Politics and Society
SB 98: Eliminating the Statute of Limitations on Sexual Assault
Adviser: Stephen Pimpare

Victoria Gouveia
Patricia Melillo
Allison Payne
Politics and Society
SB 66: Fetal Homicide Law
Adviser: Stephen Pimpare

Timothy Labonville
Biological Sciences
Concussion and Traumatic Brain Injury
Neural Imaging Techniques
Advisers: Kyle MacLea, Daniel Seichepine

Johnathan Lemitelamy
General Studies
A Song Worth Singing
Advisers: Stephanie Kirylych

Ryan Sanborn
History and Politics and Society
The International Institute of New England: Our Mission, Our Clients, and Community Impact
Adviser: Stephen Pimpare

Kyli Van Curen
Communication Arts
Jamanae White
Kayla Wood
Politics and Society
HB 587: Relative to Conversion Therapy Seeking to Change a Person’s Sexual Orientation
Adviser: Stephen Pimpare

Thompson School of Applied Science Student Showcase

Wednesday, April 19
11 a.m.–1 p.m.
Cole Hall (Stacey's)

At this event, Thompson School of Applied Science students translate academic instruction into practical presentations. Selected students showcase their expertise in such diverse areas as food services management and forest and horticultural technology.

Elizabeth Barbera
Community Leadership
A Talent Show for All
Advisers: Robert Arnold, Timothy Barretto

Aidan Benner
Integrated Agriculture Management
Growing through Adversity: Nurturing Education in At-Risk Communities through Hydroponics Food Production
Adviser: Andrew Conroy

Summer Boudreau
Integrated Agriculture Management
Helping Homeowners Turn Their Backyard into a Profitable and Sustainable Agricultural System
Adviser: Andrew Conroy

Tyler Brodie
Integrated Agriculture Management
Holistic Farm Management: A Plan to Produce Nutrient Dense Food Utilizing Livestock and The Albrecht Method of Soil Nutrient Balancing
Adviser: Andrew Conroy

Tyler Comte
Integrated Agriculture Management
The Root Seller Farm Succession: Becoming Part-Owner through Dynamic Strategies to Expand Crop, Maple, and Timber Cultivation
Adviser: Andrew Conroy

Amelia Curtis
Integrated Agriculture Management
Animal Integration at Turtle Run Farm: Utilizing Poultry and Swine for Ecological Management of Orchard and Forest Understories
Adviser: Andrew Conroy

Daniel Gregson
Integrated Agriculture Management
Sustainable Beef Production in New England: Mapping a Full Farm Plan for Grazing, Nutrient Management, Business and Marketing
Adviser: Andrew Conroy

Brianna Hanson
Mariah Litka
Horticultural Technology
Greenhouse Grown Cut Flower Production and Marketing
Adviser: Jonathan Ebba

Brian Hunter
Community Leadership
The Passion in Music: Bringing Back Music Therapy to Raymond High School
Adviser: Timothy Barretto

Julian Linero
Community Leadership
2017 Capstone Seminar
Adviser: Timothy Barretto

Tabitha McElroy
Community Leadership
Community Leadership Capstone Project
Adviser: Timothy Barretto
The Naked Arts—Creativity Exposed

Interdisciplinary Science & Engineering (ISE) Symposium

Poster Presentations

Wednesday, April 19
9 a.m.–Noon Judging
1:30–2:30 p.m. Awards Ceremony
2:30–4 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.

Biology

Group Leader: Wilfred Wollheim

Jasmin Buteau
Marine, Estuarine and Freshwater Biology
Characterizing an Unknown Blue Whale (Balaenoptera musculus) Population in the South Atlantic Ocean through Acoustic Analysis of Song
Adviser: Jennifer Miksis-Olds

Andrew Butts
Biology

Tara Cieszka
Zoology

Predator Induced Plasticity in the Model Organism, Ambystoma mexicanum, the Mexican Axolotl
Adviser: Jessica Bolker

Lauren Dingle
Environmental Conservation Studies

Aleea Grazul
Carolyn Piche
Biomedical Science

Emily Landry
Wildlife and Conservation Biology

Carmella St. Pierre
Biology

ALS - Aerosols -DHMC
Advisers: James Haney, Patricia Jarema

Meghan Gillespie
Emily Vulgamore
Biology

Measuring Somatic Mutation in the Nematode, Caenorhabditis elegans
Adviser: John Collins

Allison Jeffrey
Biomedical Science

The Relationship of Life Stage to Daily Social Patterns of Captive African Elephants (Loxodonta africana) and the Correlation of Handler Perceptions of Elephant Personality to Demonstrated Social Behaviors
Advisers: Vanessa Grunkemeyer, Clare Padfield, Debbie Young

Shuhan Long
Biomedical Science

Transitioning from Sun-Grown System to Shade-Grown System of Coffee: A Bioeconomic Model
Adviser: Shady Atallah

Allison Nash
Neuroscience and Behavior

The Distribution and Possible Roles of the Neuropeptide SCP in Melibe leonina
Adviser: Winsor Watson

Jared O’Brien
Earth Sciences

Barosafe: Increasing the Survivability of Bycatch that Experience Barotrauma in the Recreational Fisheries
Adviser: Erik Chapman

Rachel Sabol
Biology

Bicistronic Regulation of the CERSI/GDF1 Transcript
Adviser: Brian Barth
### Chemical Engineering/Bioengineering

**Group Leader:** Kang Wu

- **Mariah Arral**  
  Chemical Engineering  
  Optimization of a NG-Hydroxy-L-Arginine Electrochemical Sensor  
  Adviser: Jeffrey Halpern

- **Michael Beck**  
  Chemical Engineering  
  RPIMapPr: A Novel Approach to Predicting Interfacing Protein Residues in RNA-Protein Complexes  
  Adviser: Harish Vashisth

- **Liam Corless**  
  Chemical Engineering  
  Revealing the Role of Sodium-Gold Clusters in Preferential Carbon Monoxide Oxidation in Hydrogen (PROX)  
  Adviser: Nan Yi

- **Justin Cournoyer**  
  Chemical Engineering  
  Copper-Titanium Dioxide: Synthesis, Characterization, and CO Oxidation  
  Adviser: Nan Yi

- **Sofia Diaco**  
  Chemical Engineering  
  Bioremediation of Lead Using Spore Surface Displayed Proteins  
  Adviser: Kang Wu

- **Sabrina Marnoto**  
  Chemical Engineering  
  Detection of Beta Carotene Using Electrochemical Impedance Spectroscopy  
  Adviser: Jeffrey Halpern

- **Lorenzo Milani**  
  Chemical Engineering  
  Nickel-Gallium Layered Double Hydroxides: Synthesis and Characterization  
  Adviser: Nan Yi

- **Altai Perry**  
  Chemical Engineering  
  Nitrogen and Carbon Stable Isotope Composition Informs Metabolic Routing in Blarina brevicauda Tissues  
  Adviser: Erik Hobbie

### Chemistry

**Group Leader:** Roy Planalp

- **Graham Beaton**  
  Chemistry  
  Synthesis and Characterization of Porphyrin Containing Nanoparticles to Model Heme Proteins  
  Adviser: Samuel Pazicni

- **Robert Biro**  
  Chemistry  
  Precise Spacing of Pendant Vinyl Crosslinking Functionality along a Polymer Chain  
  Adviser: John Tsavalas

- **Erin Braker**  
  Chemistry  
  Synthesis of a Hydrogel for the Protection of Phosphorene  
  Adviser: Christine Caputo

- **Jennifer Chounard**  
  Chemistry  
  Exploring the Synthesis and Internal Cross-Linking Abilities of Single Polymer Chains via Diels-Alder Reactions  
  Adviser: Erik Berda

- **Matthew Currier**  
  Chemistry  
  Investigation into the Synthetic Route and Characterization of 2,3-Dimethylmaleimide Functionalized Monomer for Photo-Cross-Linking  
  Adviser: Samuel Pazicni

- **Bryanna Dowcett**  
  Chemistry  
  Synthesis and Evaluation of Carbapenem beta-lactams Containing Bulky Hydrophobic C-6 Side Chains as Potential Inhibitors of Carbapenemases  
  Adviser: Marc Boudreau

- **Cynthia Gerber**  
  Chemistry  
  Isolation and Characterization of Microplastics Used in Soaps and Cosmetics  
  Adviser: Margaret Greenslade

- **Jackson Kaspari**  
  Chemical Engineering  
  The Effect of Evaporating Dicarboxylic Acids on Aerosol Size  
  Adviser: Margaret Greenslade

- **Brent Lawson**  
  Chemistry and Physics  
  Dicarboxylic Acid Shell on an Inert Aerosol Core: A Variable Controlled Hygroscopicity Investigation with Unexpected Results  
  Adviser: Margaret Greenslade

- **Anthony Lemieux**  
  Chemistry  
  Light Induced Dehalogenation of Halobenzene Using Carbon Quantum Dots  
  Adviser: Christine Caputo

- **Joseph Mancinelli**  
  Chemistry  
  Synthesis of P-Xylene Diisocyanide and Subsequent Polymerization to Form Poly(2,4-pyrrole-alt-p-phenylene)  
  Adviser: Erik Berda

- **Kassie Picard**  
  Chemistry  
  Exploration of the Synthesis of Silatranes and the Contest for Nitrogen’s Lone Pair  
  Adviser: Arthur Greenberg

- **Ian Smith**  
  Chemistry  
  Development of New Fluorescent Materials: Putting Quantum Dots to Work  
  Adviser: Christine Caputo

- **Claudia Willis**  
  Chemistry  
  Synthesis of Single-Chain Nanoparticles via Atom-Transfer Radical Coupling  
  Adviser: Erik Berda
Colman Wimsatt  
Chemistry  
*Synthesis of Single-Chain Nanoparticles to Model [FeFe] Hydrogenase*  
Adviser: Samuel Pazicni

**Civil Engineering-Dry Infrastructure**

Group Leader: Anthony Puntin

Evan Appleton  
Sabrina Ayrton  
Jane Leven  
Serena Pape  
Civil Engineering  
*Embankment of Soft Clay Design*  
Adviser: Jean Benoit

Christopher Chiaramonte  
Jacob Davis  
Bryan Dube  
Minhtam Nguyen  
Civil Engineering  
*Interactive Water Themed Element for Six Flags New England*  
Advisers: Erin Bell, Christopher White

Ken Chow  
Connor Golden  
Nolan Jacques  
Matthew Kiritsy  
Sean Philbrick  
Troy Reinold  
Civil Engineering  
*Tunnel under Gulf Road*  
Adviser: Jean Benoit

Jason Connaughton  
Andrew Kahr  
Benjamin McCarthy  
Dzijeme Ntumi  
Civil Engineering  
*Kimberly Hamel*  
Environmental Engineering  
*Blue Sky Mall (Cargo Container Project)*  
Adviser: Robert Henry

Ryan Conroy  
Taylor Kirk  
Civil Engineering  
*Modeling Rock Mechanics with 3D Printed Geomaterials*  
Advisers: Majid Ghayoomi, John Gianforte

Daniel Dadmum  
Mitchell Dutton  
Anthony Moglia  
Varavut Suwanchinda  
Richard Zaharek  
Civil Engineering  
*Cargo Container Mall - Dover, NH*  
Adviser: Robert Henry

Monica Decicco  
Shaun McKenna  
Justin O’Blenes  
Lindsey Rago  
Brendan Sleight  
Civil Engineering  
*The Synergy Project*  
Adviser: Robert Henry

Demetri Decoulos  
Benjamin Kapnis  
Nicholas Kondek  
Joshua White  
Civil Engineering  
*Nelson Reconstruction Project*  
Adviser: Jo Daniel

Oluwafemi Ekundayo  
Andrew Martin  
Duncan McGeehan  
Civil Engineering  
*Automated Concrete Bridge Curb Cracking Survey*  
Advisers: Raymond Cook, Eshan Dave, Andrew Hall, Elizabeth Klemann

Ashley Filion  
Eric Petersson  
Civil Engineering  
*Jia Xian Siew*  
Environmental Engineering  
*Applying Sustainable Infrastructure Rating Systems to Transportation Planning and Design*  
Advisers: Eshan Dave, Weiwei Mo

Emily Frazzoni  
Ryan Murphy  
Aaron Wolfson-Slepian  
Civil Engineering  
*Albacore Visitor Center Expansion*  
Adviser: Anthony Puntin

Tyler Gagnon  
Anthony LoPresti  
Ryan Malcolm  
Wyatt Wolverton  
Civil Engineering  
*Parking Lot Resurrection - ContiTech Thermopol*  
Adviser: Anthony Puntin

John Hird  
Trent Lofaro  
Bryan Sutherland  
Civil Engineering  
*UNH Steel Bridge Team*  
Advisers: Erin Bell, Raymond Cook

Thomas Holter-Sorensen  
Matthew McGinnis  
Johan Pellumi  
Rachael Simms  
Michael Vittiglio  
Civil Engineering  
*Indian River Suspension Bridge*  
Adviser: Raymond Cook

Paul Lovely  
Civil Engineering  
*High-Strength, Light-Weight Concrete in Residential Design*  
Adviser: Charles Goodspeed

Weiru Tao  
Yaohan Wang  
Civil Engineering  
*Traditional Strain Gauge vs. DIC (Digital Image Correlation)*  
Adviser: Erin Bell

Lei Zhang  
Civil Engineering  
*Concrete Cold Weather Design*  
Adviser: Charles Goodspeed
### Civil Engineering-Research

**Group Leader:** Majid Ghayoomi

**Kirsten Bailey**  
**Joanna Lewis**  
**John Little**  
**Jesse Ross**  
Environmental Engineering  
*Snare Performance for Submerged Oil Detection and Monitoring*  
Adviser: Steve Lehmann

**Katherine Bemis**  
**Zachary Jarosz**  
**Adam Murphy**  
**Taylor St. Peter**  
**Gregory Stragnell**  
Civil Engineering  
*Atlanta Botanical Garden Walkway Collapse Forensic Analysis*  
Advisers: Zachary Chabot, Raymond Cook

**Katie Haslett**  
Civil Engineering  
*Exploration of Temperature and Loading Rate Interdependency for Fracture Properties of Asphalt Mixtures*  
Advisers: Jo Daniel, Eshan Dave

**Joanna Lewis**  
**Paige Taber**  
Environmental Engineering  
*Constant Flow in a Drip Chlorination System*  
Adviser: M. Robin Collins

**Kimberly Perkins**  
Civil Engineering  
*Modeling a Pavement System to Measure Pore Water Pressure in Subgrade Soil*  
Advisers: Eshan Dave, Majid Ghayoomi

### Civil Engineering-Wet Infrastructure

**Group Leader:** M. Robin Collins

**Nathan Bujwid**  
**Huancheng Zhang**  
Civil Engineering  
**John Collins**  
**Jillian Crowley**  
**Chao Du**  
**Shawn Murphy**  
Environmental Engineering  
*UNH Pilot Drinking Water Facility*  
Adviser: M. Robin Collins

**Aidan Cleaves**  
Civil Engineering  
**Daniel Sievers**  
**Chandan Singh**  
**Lucas Withers**  
Environmental Engineering  
*Four Hills Landfill Expansion*  
Advisers: Lisa Damiano, Kevin Gardner, Eric Steinhauser

**Kendra Dow**  
**Thomas Gerhard**  
**Trina Lafata**  
Environmental Engineering  
*Derecktor Robinhood Marine Center Stormwater Management Design*  
Adviser: Nancy Kinner

**Paige Howard**  
Environmental Engineering  
**Jack Reitz**  
**Jessica Wilson**  
Civil Engineering  
*Leighton Way Pump Station Renewal*  
Advisers: Thomas Ballestero, Bill Boulanger, Gretchen Young

**Daniel Jacobson**  
**Kasey Kenyon**  
**Jessica McNeill**  
**Amanda Szymanski**  
**Paige Taber**  
Environmental Engineering  
*Star Island: Sustainable Water Heating Project*  
Adviser: James Malley

**Tanner Kent**  
**Pia Marciano**  
Civil Engineering  
**Nathan Edwards**  
**Sarah Ehrmentraut**  
**Amy LeBel**  
Environmental Engineering  
*Waste Reduction Engineering Decision Platform*  
Adviser: James Malley

**Casey Melrose**  
**David Thibault**  
Environmental Engineering  
**Julia Camacho**  
**Liam McGrath**  
Civil Engineering  
*Exploring Dam Removal Alternatives for Newmarket’s Macallen Dam*  
Adviser: Kevin Gardner

**Jacob Richl**  
Environmental Engineering  
**Morgan Ellman**  
**Jacqueline Hozza**  
Civil Engineering  
*Georgetown Culverts Flow Analysis*  
Advisers: Joel Ballestero, Nancy Kinner

**Nathan Seed**  
Civil Engineering  
**Noah Goldstein**  
**Ian Howard**  
Environmental Engineering  
*Chestnut Street Combined Sewer Separation*  
Adviser: James Malley

### Computer Science-Applications

**Group Leader:** Collette Powers

**Joshua Andrews**  
**Gina Bueno**  
Information Technology  
*Anthro-Perspectives Blog*  
Advisers: Marieka Broeker Burg, Sara Withers
Matthew Arroyo  
Sebastian Coraccio  
Charles McNaughton  
Auderien Monareh  
David San Antonio  
Tiffany Winn  
Computer Science

K-12 Data Collection Portal  
Advisers: Brian Shepperd, Scott Valcourt

Kelsey Aten  
Nikita Yerram  
Computer Science

Every Cloud Needs a Secure Lining  
Adviser: Kenneth Graf

Theodore Belanger  
Jeffrey Guichard  
Karl Hamnqvist  
Computer Science

PV Inspections  
Adviser: Whitney Weller

Daniel Briggs  
Nicholas Guidoboni  
David Lademan  
Rayvoughn Millings  
Christopher Plankey  
Bibek Thapa  
Information Technology

Curtailed Operations Dashboard  
Adviser: Collette Powers

Brandon Bryant  
Alexander Caruso  
George Ruseski  
Eric Warner  
Computer Science

Vocal Visualization  
Adviser: Kevin Short

Ryan Ducharme  
Luyao Zhang  
Information Technology

DNSSEC  
Adviser: Scott Kitterman

Mitchell Fillion  
Kylie Patton  
Information Technology

Peer Review Dashboard  
Adviser: Collette Powers

Nicholas Goodman  
Computer Science

UNH Programming Assistance Center Automation  
Advisers: Andras Fekete, Arvind Narayan

Joseph Janiak  
Information Technology

See, Sign, Say  
Adviser: Deb Hamlin

Benjamin Mager  
William Pugh  
Yiming Yin  
Information Technology

Peter Guarino  
Computer Science

Living Bridge Project  
Advisers: Erin Bell, Collette Powers

Jasdeep Singh  
Information Technology

Zachary Mailhot  
Computer Science

Food Recall Application  
Adviser: Matt Tonelli

Patrick Fleming  
Andrew Johnson  
Trevor Maddaus  
Andrew Mitchell  
Michael Schoerner  
Computer Science

IOT  
Adviser: Scott Valcourt

Shane Kochvi  
Computer Science

Adviser: Wheeler Ruml

Devon McAvoy  
Daniel Spencer  
Computer Science

Evaluating the Go Programming Language  
Adviser: Philip Hatcher

Christopher Oelerich  
Olva Timorry  
Computer Science

Assistive Robotics  
Adviser: Momotaz Begum

Computer Science-Research

Group Leader: Philip Hatcher

Kristen Anderson  
Andrew Ciesielski  
Information Technology

Public Data Breaches for the Fortune 1000 between 2005-2016  
Adviser: Stephen Patton

Aaron Blais  
Cody Shaw  
Computer Science

Network-Based Precise Time Synchronization  
Adviser: Radim Bartos

Warren Edgar  
Irene Hardjono  
Computer Science

An Evaluation of gRPC  
Adviser: Philip Hatcher

Earth Sciences/Environmental Science

Group Leader: Anne Lightbody

Margaret Beck  
Earth Sciences

Tracking Organic Carbon Transport from the Stordalen Mire to Lake Tornetrask, Sweden  
Advisers: Joel Johnson, Ruth Varner, Carmody McCalley, Michael Palace, Wallace Bothner

David Bertolami  
Environmental Sciences

Analysis of Dissolved Methane in the Old Durham Reservoir  
Adviser: Ruth Varner
<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Title</th>
<th>Adviser</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Ciaburri</td>
<td>Environmental Sciences</td>
<td>Examining Impacts of Runoff into CT Lakes on Surface Chlorophyll-a Concentrations</td>
<td>Anne Lightbody</td>
</tr>
<tr>
<td>Kyle Hacker</td>
<td>Environmental Sciences</td>
<td>Dissolved Gas Concentrations in Two Reservoir Systems</td>
<td>Wilfred Wollheim</td>
</tr>
<tr>
<td>Mikhail Jackson</td>
<td>Earth Sciences</td>
<td>Identification of Volcanics within the Bar Harbor Sedimentary Sequence</td>
<td>Jo Laird</td>
</tr>
<tr>
<td>Mary Jalbert</td>
<td>Earth Sciences</td>
<td>Paleomagnetic Analysis of Sedimentary Samples</td>
<td>William Clyde</td>
</tr>
<tr>
<td>Amber Kittle</td>
<td>Sustainable Agriculture and Food Systems</td>
<td>Effects of Garlic Mustard Invasion and Additional Abiotic Stressors on Fine Root Biomass of Native Tree Species</td>
<td>Serita Frey</td>
</tr>
<tr>
<td>Matthew L’Heureux</td>
<td>Environmental and Resource Economics</td>
<td>Prioritizing Sustainability Initiatives for Small Businesses</td>
<td>Vanessa Levesque</td>
</tr>
<tr>
<td>Kyle Loughlin</td>
<td>Earth Sciences</td>
<td>The Crystalization and Assimilation Processes of the Mt. Pawtuckaway Ring Dyke Complex</td>
<td>Jo Laird</td>
</tr>
<tr>
<td>William Orfei</td>
<td>Geology</td>
<td>Metamorphism and Deformation of Pelitic Rocks along the Flint Hill Fault Zone in Southern New Hampshire</td>
<td>Jo Laird</td>
</tr>
<tr>
<td>Sarah Patry</td>
<td>Earth Sciences</td>
<td>Calculating Snow Water Equivalence with an Automated Snow Scale in Southeastern New Hampshire</td>
<td>Elizabeth Burakowski</td>
</tr>
<tr>
<td>Katherine Rocci</td>
<td>Earth Sciences</td>
<td>Seasonal Changes in the Isotopic Composition and Concentration of CH4 at a Sub-Arctic Mire in Abisko, Sweden</td>
<td>Ruth Varner</td>
</tr>
<tr>
<td>Anna Simpson</td>
<td>Earth Sciences</td>
<td>Flooding and Inundation Modeling in the Great Bay Estuary</td>
<td>Thomas Lippmann</td>
</tr>
<tr>
<td>Brandon VanDeWalle</td>
<td>Earth Sciences</td>
<td>Blue Ocean Society for Marine Conservation Summer Internship</td>
<td>Dianna Schulte</td>
</tr>
</tbody>
</table>
| Electrical & Computer Engineering-Hardware Design | Group Leader: Kent Chamberlin | David Albertini  
Cameron Davison  
Chunyang Li  
Electrical Engineering  
Modification and Refinement of the Intermittent Swim Stress Test System  
Advisers: Richard Messner, Robert Drugan, Nathaniel Stafford  
William Clark II  
Reed Vandergraaf  
Connor Wynn  
Electrical Engineering  
Directional EMP  
Adviser: Kent Chamberlin | Edward Song                               |
| Daniel Cusolito      | Electrical Engineering        | The Living Bridge: Power Converter                                                        | Michael Carter           |
| Joshua Eifeller      | Computer Engineering          | Mitigating Control Flow Attacks in Embedded Systems with a Hardware-Based Approach        | Qiaoyan Yu               |
| Ayokunle Olorunfemi  | Computer Engineering          | Xybion Control Box                                                                        | Michael Carter           |
| Robert Meade         | Computer Engineering          | Sleep Right                                                                               | Wayne Smith              |
| Glenn Ballard        | Computer Science              | ISINGLASS Ground Instrumentation Xybion Control Box                                        | Michael Carter           |
| Maria Panacopoulos   | Electrical Engineering        | Determination of Concentration in Sucrose Solutions Using an Interdigital Capacitor Probe | Edward Song              |
| Ronald Totten        | Computer Engineering          | Antenna Measurement and Mapping with an Unmanned Aerial Vehicle                           | Wayne Smith              |
| Alex Wright          | Computer Engineering and Physics | John Dokoupil  
Daniel Gray  
Michael Kazamias  
Computer Engineering  
Antenna Measurement and Mapping with an Unmanned Aerial Vehicle | Richard Messner          |
Electrical & Computer Engineering-Software/System Design

Group Leader: Kent Chamberlin

Lars Bolduc  
Electrical Engineering  
*Embedded Solution for Automotive GPS Tracking*  
Adviser: W. Thomas Miller

Michael Crotty  
Nicholas Voisine  
Computer Engineering  
*Electrical Engineering*  
*Embedded Solution for Automotive GPS Tracking*  
Adviser: W. Thomas Miller

Cameron Devine  
Computer Engineering  
*Detecting and Modeling Traffic Using Bluetooth*  
Adviser: Nicholas Kirsch

Eric Duross  
Mackenzie Meyers  
Charles Rickarby  
Computer Engineering  
*Autonomous Vehicle Design Using UNH Driving Simulator*  
Adviser: W. Thomas Miller

Hayden Haynes  
Nicholas Laves  
Electrical Engineering  
*DSP Based Synthesizer*  
Adviser: Michael Carter

Joshua Larsen  
Electrical Engineering  
*DSP Parametric Audio Equalizer*  
Adviser: Michael Carter

Jordan Smith  
Electrical Engineering  
*Active Acoustic Noise Cancellation*  
Adviser: W. Thomas Miller

Shawn Venti  
Computer Engineering  
*Natural Gesture Authentication Network*  
Adviser: Andrew Kun

Paveen Virameteekul  
Computer Engineering  
*Develop Hololens Application by Using Concept of Holoporation*  
Adviser: Andrew Kun

Mechanical Engineering-Competition Teams

Group Leader: John Gianforte

Seth Andreasson  
Kenneth Arico  
Mechanical Engineering  
*Joshua Amero*  
Computer Engineering  
*Alexander Cook*  
Computer Science  
*UNH ET-NavSwarm*  
Adviser: May-Win Thein

Jeffrey Bajor  
Samuel Carbonneau  
Matthew Ciocys  
Ryan Gancarz  
Aleksander Holm  
Conor Langille  
Camden Medeiros  
Mechanical Engineering  
*Joseph Lemener*  
Finance and Management  
*Mini Baja SAE*  
Adviser: Barbaros Celikkol

Adam Benincasa  
Brandon Clark  
Thomas Giarratano  
Jacob Morgan  
Travis Paola  
Kyle Poodiak  
Mechanical Engineering  
*UNH AeroCats*  
Adviser: Alireza Ebadi

Francesca Bolton  
Mathew Chadwick  
Ivan Galic  
Simon Hunter  
Seth Jerzsyk  
Lance Lentinii  
Drew Mills  
David Monasky  
John Parrillo  
Joel Russell  
Jose Salmeron  
Keegan Sullivan  
Keller Waldron  
Mechanical Engineering  
*UNH Precision Racing*  
Adviser: Todd Gross

Connor Borne  
Daniel Conley  
Kyle Desrochers  
Clayton Garland  
Shane Murphy  
Brett Pike  
Michael Smith  
Mechanical Engineering  
*Justin Gardiner*  
Computer Science  
*Lunacats*  
Adviser: May-Win Thein

Michael Casey  
Morgan Clendennin  
Jeromey Green  
Michael Joncas  
Sean McGuire  
Mechanical Engineering  
*Extreme Chunkin Senior Design Team*  
Advisers: Barbaros Celikkol, Steve Seigars

Mechanical Engineering-Industrial

Group Leader: John Gianforte

Ellen Barth  
Henry Blount  
Michael Locke  
Nathan Manning  
Mechanical Engineering  
*Christopher Chin*  
Computer Science  
*Manufacturing Automation*  
Advisers: Momotaz Begum, Brad Kinsey, Se Young Yoon
Nicholas Chagnon
Mechanical Engineering
Determining Intrinsic Residual Stress in 3-D Woven Composites with Electronic Speckle Pattern Interferometry
Adviser: Todd Gross

Randy Colburn
Sydney Kay
Colin Spillane
Spencer Triglione
Emma Underwood
Mechanical Engineering
Data-Center Cooling Analysis Using CFD Modeling Techniques and Experimental Investigation of Perforated Tiles
Advisers: Paul Bemis, Ivaylo Nedyalkov

Joshua Dyer
Luke Morenz
Mechanical Engineering
Sig Sauer Linear Measurement System
Adviser: Marko Knezevic

Carlos Graniello
Simon Popecki
Mechanical Engineering
Method of Non-Contact Machining by Means of Electrochemical Turning
Advisers: John Bundza, Ioannis Korkolis, Tim Noronha

Mingchen Mao
Mechanical Engineering
Non-Contact Motion Sensor
Adviser: Barry Fussell

Kul Niroula
Mohammad Omer Saleem
Mechanical Engineering
NH Ball Bearings
Advisers: Brad Kinsey, Ioannis Korkolis

Shengguang Jin
Mechanical Engineering
Analyzing Mechanical Properties of Auxetic Honeycomb Cellular Structure
Adviser: Yaning Li

Cassandra MacKinnon
Mechanical Engineering
Determination of Coupling Coefficients in Magnetic Pulse Systems
Adviser: Brad Kinsey

Richard Nash
Mechanical Engineering
Bonding Dissimilar Substrates through the Use of Mechanical Interlocking Surface Features
Adviser: Yaning Li

Kevin Cole
Mechanical Engineering
Investigating the Effects of Surface Roughness on Bi-Directional Hydrofoils
Adviser: Ivaylo Nedyalkov

Alec Cunningham
Adam Lovell
Mechanical Engineering
Cyclist Aerodynamic Analysis in Cross Wind
Adviser: Ivaylo Nedyalkov

Joseph Durant
Robert Lozowski-Aliberti
Mechanical Engineering
The Electrochemical Etching of Microscale Features in Copper
Adviser: James Krzanowski

Liam Grenier
Charles Klewicki
Mechanical Engineering
Optimization of Marathon Runner Performance
Advisers: Joseph Klewicki, Christopher White

Gavin Hess
Mechanical Engineering
1m Scale Research Wind Turbine Rotor
Adviser: Martin Wosnik

Jacques Jalbert
Jacqueline McNally
Mechanical Engineering
Continuous Tension-Compression Testing Machine
Adviser: Ioannis Korkolis

Ocean Engineering

Group Leader: James Szmyt

Nathan Bredow
Daniel Cohen
Aaron Cordova
Brian Ellis
Kara Graney
Brandon Wong
Mechanical Engineering
UNH Remotely Operated Vehicle
Adviser: May-Win Thein

Kaelin Chancey
Gunnar Ericsson
Ryan Tingley
Sarah Torgesen
Mechanical Engineering
The Living Bridge Project: Environmental and Tidal Energy Resource Instrumentation at Memorial Bridge in Portsmouth
Advisers: Ian Gagnon, Martin Wosnik
Naomie Clark  
Alexander Clemons  
Paul Gesel  
Graham Pirie  
Mary Sareault  
Langdon Tarbell  
Mechanical Engineering  
Peter Abdu  
Electrical Engineering  
The Poseidon Project: Portable SONAR Device for Ocean Floor Mapping  
Adviser: Thomas Weber

Jamison Couture  
Alexander Larson  
Cole Matthews  
Mechanical Engineering  
Design and Analysis of Wingtip Devices for Marine Applications  
Advisers: Ivaylo Nedyalkov, Martin Wosnik

Anna Devitto  
Ecogastronomy and Sustainable Agriculture and Food Systems  
Melanie Nute  
Environmental Engineering  
Ethan Pirie  
Sylvia Romero  
Drue Seksinsky  
Justin Stickney  
Mechanical Engineering  
Project OASIS: Optimizing Aquaponic Systems to Improve Sustainability  
Advisers: Todd Guerdat, Ivaylo Nedyalkov

Collin Gagnon  
Steven Hurley  
Robert Mitchell  
Alexander Roemer  
Mechanical Engineering  
Jeffrey Hensel  
Xavier McNulty  
Computer Science  
Autonomous Surface Vehicle (ASV)  
Adviser: May-Win Thein

Chelsea Kimball  
Aaron Russell  
Mechanical Engineering  
Wave Energy Conversion Buoy  
Advisers: Kenneth Baldwin, M. Robinson Swift

**Physics/Mathematics**

- **Group Leaders:** F. William Hersman and Orly Buchbinder
- **Patrick Blanchette**  
  Mathematics  
  *How Students Use Analogies in Math*  
  Adviser: Samuel Pazicni
- **Eric Bower**  
  Physics  
  *Data Analysis of IBEX-Lo Energy Steps 1, 2, 3 and 4 of Neutral Interstellar He*  
  Adviser: Eberhard Moebius
- **Hannah Bush**  
  Mathematics Education  
  *The Relationship between Race, Gender, and Self-Efficacy in Undergraduate STEM and Non-STEM Majors*  
  Adviser: Orly Buchbinder
- **Emma Clarke**  
  Physics  
  *Studying Cosmic-Ray Neutrons*  
  Adviser: James Ryan
- **Cameron Flynn**  
  Physics  
  *The Effects of Surface Adsorbates on Graphene and Two-Dimensional MoS2*  
  Adviser: Shawna Hollen
- **Tessa Gorte**  
  Physics  
  *Analyzing Sea Level Rise Due to Melting of Antarctic Ice and Dispersion of Sea Water from Mass Redistribution*  
  Advisers: David Mattingly, Cameron Wake
- **Patrick Hampson**  
  Physics  
  *Eddy Flux Data Analysis of Four Durham Area Ecosystems*  
  Advisers: David Mattingly, Andrew Ouimette
- **Nicholas Lajoie**  
  Physics and German  
  *The Assembly and Modification of a 3-D Printer for a KEL-F Target Stick*  
  Advisers: Elena Long, Karl Slifer

**Teacher Science and Engineering**

- **Group Leader:** Stephen Hale
- **John Blackwell**  
  Teacher Science and Engineering  
  Teacher Science and Engineering Group Leader: Stephen Hale
- **Andrew Pereira**  
  Teacher Science and Engineering
- **Michelle Ramiz**
- **Katherine Young**  
  Teacher Science and Engineering
- **Cathleen Little**  
  Teacher Science and Engineering  
  *Space Weather Underground: A Collaboration between UNH and Local High Schools*  
  Adviser: Charles Smith
- **Carol Young**
- **Kacie Ferraro**  
  Teacher Science and Engineering  
  *Designing a Model for Predicting Fatigue Cracking in Asphalt Pavement*  
  Advisers: Jo Daniel, Eshan Dave
UNH Manchester URC Computing Technology Projects

UNIVERSITY OF NEW HAMPSHIRE

INTERDISCIPLINARY SCIENCE & ENGINEERING SYMPOSIUM, POSTER PRESENTATIONS, CONTINUED

Julia Fitzgibbons
Caroline Hayes
Erin Janas
Richard Levergood
Elizabeth Niven
Alena Pursel
Samantha Schofield

Managing Data from a SAM III Magnetometer Using an Arduino Microcontroller, GPS, XBee and SD Cards
Adviser: Charles Smith

Elizabeth Murphy
Characterizing New Hampshire Climate
Adviser: Mary Stampone

Stephen Pascucci
A 24-Hour Study of Mercury in Wetland Flora of Sallie's Fen
Advisers: Maria Fahnestock, Ruth Varner

Donald Wason
Investigating Linkages between Iron, Manganese and Arsenic Contents in Bedrock-Hosted Groundwater Drinking Supplies in New Hampshire
Advisers: Julie Bryce, Maria Fahnestock

Jeremy Beal
Computer Information Systems
A Morning Breeze with Pi
Adviser: Raymond Wallace

Jeremy Beal
Sharayah Corcoran
Jeffrey Gancarz

Computer Information Systems
Computer Science and Entrepreneurship
Capstone Speech Project: Tools
Adviser: Michael Jonas

Daniel Beitel
Zachary Dudek
Isaac Marsh

Computer Information Systems
Computer Hardware History
Adviser: Earl Labatt Jr

Nicholas Bielinski
Zachary Dudek
Jacob Sprague

Computer Information Systems
Capstone Project: Experimentation
Adviser: Michael Jonas

Marcus Botticello
Computer Science and Entrepreneurship
Biofeedback Methods Using Arduino and Raspberry Pi Platforms
Adviser: Raymond Wallace

Jonah Bras
Computer Science
Raspberry Magic Mirror
Adviser: Raymond Wallace

Jonathan Cleary
Computer Information Systems
Vitali Taranto
Gregory Tinkham

Computer Science and Entrepreneurship
Capstone Speech Project: Modeling
Adviser: Michael Jonas

Jonathon Cleary
Computer Information Systems
Internship: Ping4 Inc
Adviser: Hong Jin

Donald Combs
Information Technology
EnCept - and - EnceptMe Project
Advisers: Mihaela Sabin, Raymond Wallace

Julian Consoli
Andrew George
Bonnie Smith
Mark Tollick

Computer Information Systems
Capstone Speech Project: Systems
Adviser: Michael Jonas

Sharayah Corcoran
Computer Information Systems

Help Desk Ticketing System: Expanding Familiarization and Implementing Improvements
Adviser: Hong Jin

Wesley Couturier
Computer Science and Entrepreneurship
Awato Internship: The Difference between Authentication and Authorization
Adviser: Hong Jin

Travis Deschenes
Computer Information Systems
Home Inventory System Pi
Adviser: Raymond Wallace

Zachary Dudek
Yashna Giri
Ryan Warrick

Computer Information Systems
Joshua Quigley
William Rivera

Information Technology
MeAndYou: Reconnecting with the Past
Adviser: Michael Jonas

Faruk Durakovic
Computer Science and Entrepreneurship
Faruk’s Internship Experience
Adviser: Hong Jin

Brian Dustin
Shawn Snook

Mechanical Engineering Technology
Application Presentation
Adviser: Mihaela Sabin

UNIVERSITY OF NEW HAMPSHIRE

WEDNESDAY 4/19

Poster Presentations

Wednesday, April 19
3–5 p.m.
Pandora Mill, 1st Floor
88 Commercial St., Manchester

Brian Barnes
Computer Information Systems
128 Technology Internship
Adviser: Hong Jin

Brian Barnes
Computer Information Systems
Ian Daly
Niles Daly
Computer Science
Virtual Machines
Adviser: Earl Labatt Jr
Matthew Fintonis  
Electrical Engineering Technology  
Maryjean Emerson  
Dylan Lindstrom  
Jeffrey Gancarz  
Computer Information Systems  
Internship Experience: Software Development  
Adviser: Hong Jin

Aashirya Kaushik  
Wesley Krol  
Gregory Tinkham  
Computer Science and Entrepreneurship  
Dilpreet Singh  
Computer Information Systems  
Hardware Effects on Software Development  
Adviser: Earl Labatt Jr

MATSCIENCE  
Jaden Henry  
Camden Marble  
Business and Computer Information Systems  
The Evolution of Cloud Services as Provided by IaaS  
Adviser: Earl Labatt Jr

Claudia Maynard  
Biological Sciences  
UNH Manchester Offers Youth Program Curated for English Language Learners and Program Analysis Suggests a Significant Educational Impact on Students’ Perspective Concerning STEM-Related Topics  
Adviser: Mihaela Sabin

Emma Amenkowicz  
Barbara Ste. Croix  
Biological Sciences  
Physiological Assessment during the Anx-DOX Task: A Pilot Study of Electrodermal Activity  
Adviser: Nicholas Mian

Jacob Sprague  
Computer Information Systems  
Manchester School District Website Update and Migration  
Adviser: Hong Jin

Vitali Taranto  
Computer Science and Entrepreneurship  
EPIC Data Analysis Using R and SPSS  
Adviser: Hong Jin

John Vey  
Computer Information Systems  
Changing How a Web Development Company Does Responsive Testing  
Adviser: Michael Jonas

Aashirya Kaushik  
Wesley Krol  
Gregory Tinkham  
Computer Science and Entrepreneurship  
Dilpreet Singh  
Computer Information Systems  
Hardware Effects on Software Development  
Adviser: Earl Labatt Jr

UNH Manchester Undergraduate Research Conference  
Poster Presentations  
Wednesday, April 19  
3–5 p.m.  
Pandora Mill, Room 201 and Student Commons  
88 Commercial St., Manchester  
The UNHM URC Poster Presentations showcase students’ independent research and internship projects, service learning activities and civic engagement projects in the learning lab of the city of Manchester.

Emma Amenkowicz  
Barbara Ste. Croix  
Biological Sciences  
Physiological Assessment during the Anx-DOX Task: A Pilot Study of Electrodermal Activity  
Adviser: Nicholas Mian
Harrison Beck  
Biology  
Phlebotomy  
Adviser: Kyle MacLea

Joseph Boulanger  
Psychology  
The Effects of Mask Coherence, Target Depth, and Motion-Aftereffect on Motion-Induced Blindness  
Adviser: John Sparrow

Marc Brennan  
Biotechnology  
Genome Sequencing of Marine Bacterium Oceanimonas doudoroffii  
Adviser: Kyle MacLea

Myranda Brodsky  
Biological Sciences  
Phlebotomy Exploration  
Adviser: Kyle MacLea

Katelynn Brooks  
Vanessa Russell  
Biological Sciences  
The Mangroves of Belize  
Adviser: Patricia Halpin

Erica Chapman  
Biological Sciences  
Water Quality and Impacts on Human Health  
Adviser: Kyle MacLea

Kerrin Cobb  
Biology  
Physician Assistant Job Shadow Experience  
Adviser: Christine Andrews

Nicole Collette  
Jasmine Lee  
Biotechnology  
The Broad-Leafed Forest of Belmopan, Belize  
Adviser: Patricia Halpin

Amanda Cozzens  
Biological Sciences  
QA Audit and Inspection Intern at Lonza  
Adviser: Autumn Arsenault

Justin Cummings  
Communication Arts and Politics and Society  
Shreya Vijay  
Psychology  
Nathan Whitehead  
Politics and Society  
Quality of School Lunches in the New Hampshire Education System  
Adviser: Stephen Pimpare

Hannah Curran  
Neuroscience and Behavior  
Jillian McCalvey  
Undeclared  
Locavore Eating in the Greater Manchester Area  
Adviser: Stephen Pimpare

Grace Dean  
History  
Women’s Mill Labor in Antebellum New England  
Adviser: Robert Macieski

Elizabeth Diaz  
Psychology  
The Children’s Behavioral Health Initiative  
Adviser: Nicholas Mian

Jennifer Drago  
Biological Sciences  
A Historical Apex Predator: Canis lupus  
Adviser: Stephen Pugh

Jennifer Drago  
Biological Sciences  
A Study of Human Impact on Biodiversity  
Adviser: Stephen Pugh

Tarah Dudley  
Biotechnology  
A Novel Way to Treat Congestive Heart Failure  
Adviser: Robert Duane

William Duval  
Politics and Society  
Accounts of Vietnam  
Adviser: Robert Macieski

Valerie Fernandez  
Biology  
Alyssa Fitzgerald  
Undeclared  
Robert Hunt  
Mechanical Engineering Technology  
The Impact of Industrial Farming on World Health  
Adviser: Stephen Pimpare

Allyson Feugill  
Psychology  
Psychology Internship at Easter Seals  
Adviser: Nicholas Mian

Alicia Finney  
Biology  
Madeline Powers  
Biotechnology  
Katherine Roblee  
Business  
Nutritional Access in New Hampshire Public Schools  
Adviser: Stephen Pimpare

Kyle Foden  
Alexander Rego  
Politics and Society  
A Large Supermarket’s Effect on a Town  
Adviser: Stephen Pimpare

Abigail Goune  
Biological Sciences  
Duchenne Muscular Dystrophy  
Adviser: Sarah Prescott

Jonathan Gonsalves  
Biological Sciences  
Volunteering in Planning Activities for the Health and Wellness of Kids and Their Families  
Adviser: Patricia Halpin

Victoria Gouveia  
Politics and Society  
Advocating for Fetal Homicide Laws within New Hampshire  
Adviser: Stephen Pimpare

Victoria Gouveia  
Politics and Society  
When Did Emergency Management Emerge as a Budget Item and How and When Have Cities Implemented (or Not Implemented) Emergency Management Policies?  
Adviser: Stephen Pimpare
Nicole Gray  
Politics and Society  
Emergency Response Plans for the Public  
Adviser: Stephen Pimpare

Ashley Hall  
Undeclared  

Rebecca Sinclair  
Sign Language Interpretation  
Food Shopping Demographics  
Adviser: Stephen Pimpare

Peter Hood  
Humanities  
Baby Boomers and Suburbia  
Adviser: Robert Macieski

Amelia Keane  
Biological Sciences  
Public Health Legislation in the 2017 New Hampshire General Court Session  
Adviser: Stephen Pugh

Timothy Labonville  
Biological Sciences  
Concussion and Traumatic Brain Injury  
Neural Imaging Techniques  
Advisers: Kyle MacLea, Daniel Seichepine

Michael Lang  
History  
The Anoskeag Manufacturing Company: Pre-Civil War  
Adviser: Robert Macieski

Jasmine Lee  
Biotechnology  
Isolation of Soil Microbes for Genomic Analysis  
Adviser: Kyle MacLea

Jasmine Lee  
Biotechnology  
My Role at Health Care for the Homeless Program  
Adviser: Patricia Halpin

Nicole Maio  
Biological Sciences  
Small Intestinal Bacterial Overgrowth and Testing for It: My Work with Aerodiagnostics  
Adviser: Patricia Halpin

Jacob Maynard  
History  
Marshall Plan and the Berlin Airlift  
Adviser: Robert Macieski

Patricia Melillo  
Politics and Society  
Comparing State Legislatures Paid vs. Unpaid  
Adviser: Stephen Pimpare

Andrew Merelman  
Biotechnology  
Utilization of Paramedics in New Hampshire Emergency Departments  
Adviser: Kyle MacLea

Madisson Oliwa  
Biological Sciences  
Medical Job Shadow  
Adviser: Christine Andrews

Stephen Ormond  
Biological Sciences  
Creation of Food Micro Laboratory at the Londonderry Freezer Warehouse  
Adviser: Kyle MacLea

Juan Posada  
Biological Sciences  
My Internship at Langley Hospital, Langley AFB  
Adviser: Stephen Pugh

Helen Proksch  
Biological Sciences  
Position and Orientation of Plumose Anemone (Metridium senile) at the Cribs on Applecore Island  
Adviser: James Coyer

Vanessa Russell  
Biological Sciences  
Distribution of Peromyscus leucopus and Peromyscus maniculatus in Northern and Western New Hampshire  
Adviser: Stephen Pugh

Anesa Salkunic  
Psychology  
How Does Childhood Obesity Lead to Adult Obesity?  
Adviser: Stephen Pimpare

Nicholas Sammartino  
History  
The Assassination of JFK  
Adviser: Robert Macieski

Samantha Sarofian  
Biological Sciences  
Diagnosing Lymphoma: All Hands On Deck  
Adviser: Stephen Pimpare

Claudia Soltys  
Biological Sciences  
The Differences and Similarities between a Doctor and a Physician’s Assistant in a Family Practice  
Adviser: Kyle MacLea

Meagan St. Clair  
Biological Sciences  
The Role of an Inventory Specialist at CVS Pharmacy  
Adviser: Patricia Halpin

Cory Szaro  
History  
Impact of the Korean War on the Racial Integration of the U.S. Military  
Adviser: Robert Macieski
Ryan Tanner  
Political Science  
Public Policy Rollout  
Adviser: Stephen Pimpare

Ariel Trachtenberg  
Biological Sciences  
*Genome Sequence of the Salt Water Bacterium Oceanospirillum linum ATCC 11336*  
Adviser: Kyle MacLea

Laura Tuttle  
Psychology  
*Layperson Knowledge of Hospice/Palliative Care Services and Enrollment Requirements*  
Adviser: Alison Paglia

Carolyn Walley  
Business  
*U.S. Civil Rights Movement*  
Adviser: Robert Macieski

Kayla Wood  
Politics and Society  
*Food Insecurity in New Hampshire and Solutions through Mobile Food Pantries*  
Adviser: Stephen Pimpare

### Holloway Commons  
9 a.m.–12:30 p.m.

#### Marketing Workshop Presentations

Adviser and Moderator: Peter Masucci

**Kassandra Aguirre**  
Marketing and Theatre: Dance

**Blake Corneliher**  
Marketing

**Jessica Costello**  
Anthropology and Marketing

**Michael Lucas**  
Entrepreneurial Studies and Marketing

**Catherine Wolstromer**  
Finance and Marketing

_Echo Thrift Shop: Design and Development of a Marketing Campaign to Raise Awareness of and Visits to this Durham, NH, Not-for-Profit Retail Store_

**Emily Amlaw**  
Marketing

**Alexis Bouchard**  
Marketing and Theatre: Dance

**Zoe DeGeorge**  
Marketing

**Jake Laurent**  
Marketing

**Rebecca Atkinson**  
Accounting and Marketing

**Jordan Howard-Collins**  
Information Systems Management and Marketing

**Nicholas Tempesta**  
Finance and Marketing

**Nicholas White**  
Management and Marketing

_L. L. Bean, Project #2 - Winter Adventures: Research and Design of a Marketing Campaign to Promote the Sale of Winter Apparel and Accessories_

### Johanna Arguin  
Allison D’Amico  
Daniel Dion  
Andrea Levy  
Christian Roberts  
Marketing  
Nicholas Coviello  
International Business and Economics and Marketing  
Emily Fuller  
Marissa McCoo  
Management and Marketing  
Adam Hale  
Entrepreneurial Studies and Marketing  
**Paul College Career Services: Research and Development of Marketing Programs Aimed at Increasing Awareness of and Use of the Services Provided by This Paul College Department**

**Ashley Avery**  
Ellen Christiana  
Brian Trefry  
Marketing  
Paige Gould  
Business Administration, International Business and Economics and Marketing  
**Rachel Lennon**  
Information Systems Management and Marketing  
**Anthony Marino**  
Entrepreneurial Studies and Marketing  
**Marcus Ross**  
Management and Marketing  
_L. L. Bean, Project #3 - Boats and Totes: Development of Marketing Programs to Increase Interest in and Sales of These Classic Bean Products_

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

### Oral Presentations

**Thursday, April 20**  
9 a.m.–3:30 p.m.  
Peter T. Paul College Building and Holloway Commons

Through original research and valuable guidance from mentors, this event helps Paul College students gain deeper academic knowledge as well as professional experience. This URC event includes poster presentations, oral presentations, and feedback from University and business leaders.
May Phyu Aye  
Spencer Leman  
Entrepreneurial Studies and Marketing  
Garrett Colantino  
Alexa Joyal  
Paul Panetta  
Sydney Strout  
Marketing  
Francesca Genello  
Environmental Conservation Studies and Marketing  
Troy Gilfix  
Information Systems Management and Marketing  
Austin Hicks  
Management and Marketing  
Lisa Salley  
Hospitality Management and Marketing  
Rokon International: Research and Development of a Marketing Campaign Targeting a Specific New Market Segment for This Rochester, NH, Manufacturer of Off-Road Motorcycles  
Laura Barrett  
Finance and Marketing  
Shannon Cleary  
John LaFreniere  
Rilei Tong  
Adrian Wong  
Marketing  
Caitlin Connare  
Marketing and Psychology  
Maxwell DesMarais  
Finance and Marketing  
Olivia Gonzales  
Hospitality Management and Marketing  
Sarah Murphy  
Sean Reinhard  
Karina Smith  
Rebecca Woods  
Management and Marketing  
Jonathan Nartiff  
International Business and Economics and Marketing  
U.S. State Department: Research and Development of a Marketing Campaign Designed to Counter Violent Extremism  
Alyson Beaulieu  
Brendan O’Brien  
Alexa Papadellis  
Marketing  
Alexandra Brewer  
Brett Labnon  
Management and Marketing  
Margaret Doherty  
Daniel McKenna  
Hospitality Management and Marketing  
Susan Dudka  
Management, Marketing and Psychology  
L. L. Bean, Project #1 - First of Fall: Research and Development of Marketing Programs to Increase Awareness of and Sales of Fall Apparel and Accessories  
Meredith Beir  
Jane Funk  
Sebastian Lis  
Marketing  
Michael DeMarco  
Marissa Newlove  
International Business and Economics and Marketing  
Gabrielle Lamontagne  
French and Marketing  
Jordan Law  
Matthew Vlahos  
Management and Marketing  
Julia Pelosi  
Marketing and Russian  
Revision Military, Project #2 - Social Media Marketing via Instagram: Research and Development of an Instagram Marketing Campaign to Raise Awareness of the Company and Its Product Lines  
Paige Benik  
Economics and Marketing  
Caroline Curtis  
Management and Marketing  
Theodore Jerdee  
Ian Kelley  
Michelle Paulsen  
Shane Perron  
Taylor Rober  
Aaron Wallack  
Marketing  
Drew Sullivan  
Finance and Marketing  
Woodman Museum: Research and Development of Marketing Programs Aimed at Increasing Awareness of and Visits to This Dover, NH, Museum of Natural History and Americana  
Michael Breen  
Kylee McLaughlin  
Finance and Marketing  
Stephen Domenick  
Economics and Marketing  
Lindsay Galvin  
Information Systems Management and Marketing  
Alexandra Matusevich  
Brittany McLaughlin  
Management and Marketing  
Riley Pritchett  
Jessica Swartz  
Marketing  
Shane Whitehouse  
Accounting and Marketing  
Revision Military, Project #3 - Innovation and Crowdsourcing: Research into New Markets and New Methods of Distribution for the Company’s Product Lines  
Marena Brock  
Entrepreneurial Studies and Marketing  
William Clay  
Owen Hilton  
Jordan Lavallee  
Management and Marketing  
Amanda Elmassih  
Grant Flewelling  
Finance and Marketing  
Summer Youth Programs at UNH: Research and Design of a Marketing Campaign to Promote This University Sponsored Set of Summer Camps and Programs Targeting Youths in Grades K-12
Jessica Brooks
Jack Wyman
Marketing
Meredith Faxon
International Business and Economics and Marketing
Alexandra Flager
Business Administration, Information Systems Management and Marketing
Amanda Ghattas
Hospitality Management and Marketing
George Soderberg
Management and Marketing
Casey Studley
Finance and Marketing
Michael Thomson
Information Systems Management and Marketing
Revision Military, Project #1 - Innovation and Crowdsourcing: Research and Design of a “Hackathon” Event to Promote Development of New Products and Marketing Communication Methods for This Manufacturing Company

Lauren Bushey
Communication and Marketing
Amanda Daniels
Carson Fleno
Brendan Jaworski
Bradley Martinez
Marketing
Anthony Finocchiaro
Management and Marketing
Hanna Scholberg
Hospitality Management and Marketing
L. L. Bean, Project #4 - Bean Boots: Research and Design of a Marketing Campaign to Promote and Expand the Sale of the Iconic Bean Boot Product Line

Zachary Canto
Austin Cote
Entrepreneurial Studies and Marketing
Cassidy Cefalo
Matthew Kelly
Ashley Kinsella
Scout Pierce
Marketing
Emma Kantola
Richard Ouch
English and Marketing
Erin Kelly
Management and Marketing
Spruce Creek Provisions: Design and Development of Marketing Programs to Increase Awareness of and Visits to This Kittery, Maine, Retailer of Craft Beers and Specialty Wines

Dalton Crossan
Jenna Davis
Marketing
James Ewing
Emma White
Entrepreneurial Studies and Marketing
Kendall Sebastian
Marketing and Spanish
Nathan Yanuszewski
Information Systems Management and Marketing
UNH Center for International Education and Global Engagement (CIEGE): Research and Development of Marketing Programs to Increase Participation in Study Abroad

Sasha Delong
Kyle Gauvin
Joseph Smith
Molly Smith
Nicole Stephen
Marketing
Katie Liston
Finance and Marketing
Project Kuchengetedza Zviwanikawa (PKZ) in Zimbabwe: Development and Implementation of a Series of Marketing Programs to Raise Awareness of and Support for This Non-Governmental Organization Based in Zimbabwe, Africa

Timothy Foley
Danielle Lewis
Management and Marketing
Ryan Holloran
Marketing
Annalise McCall
Information Systems Management and Marketing
Jarrett Neckameyer
Entrepreneurial Studies and Marketing
Sydney Padgett
Hospitality Management and Marketing
Three Chimneys Inn: Research and Development of Marketing Programs Aimed at Increasing Awareness of and Bookings at This Historic Durham, NH, Inn and Tavern

Paul College, Room 125
9:40–11 a.m.

Mel Rines Angel Investment Fund
Advisers: Laura Hill, Jeffrey Sohl
Brendan Beale
Accounting and Finance
Julianne Calef
Ryan Casey
Sarah Keiran
Accounting
Samuel Collins
Economics BA
Tyler Cornellier
Finance and Information Systems Management
Zachary Dresser
Sean Hickey
Jennifer Luke
Michael McCarthy
Keelan McCoole
Devon McMahon
Brennan Ross
Ryan Williams
Business Administration
Harrington Duval
Political Science
Devereux Evans
Accounting and Finance
Tristan Evarts
Chemical Engineering and Computer Science
Matthew Kiley  
Economics BA and Finance  
David Linton  
Entrepreneurial Studies  
Axel Ragnarsson  
Nicholas Stuart  
Entrepreneurial Studies and Finance  
Andrew Ware  
Economics BS and Philosophy  
Peter White  
Economics BS

Holloway Commons  
2–3:30 p.m.

Atkins Investment Group  
Advisers: Stephen Ciccone, Ahmed Etebari

Charles Andes  
Cameron Bean  
Jose Bowen  
Scott Brockelbank  
Charles Cappetta  
William Cavanaugh  
Maxwell Craig  
Robert Doretti  
Jeremy Dorrell  
Andre Filadelfo  
Zachery Fitzgerald  
Claire Hawkes  
Christine Lee  
Aaron LeLacheur  
Cullen Moore  
Michael O’Donnell  
Luke Palmer  
George Pantelis  
Anthony Santosoosso  
Nicholas Savoia  
Jon Tamposi  
Patrick Thompson  
Kelsey Ulaskiewicz  
Austin Wildes  
Finance  
Nicholas Bagley  
Logan Hoffman  
Finn Johnson  
Bradford Kelley  
Charles White  
Peter White  
Chandler Wishart  
Economics BS  
Nicholas Bouchard  
Accounting

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

Poster Presentations

Thursday, April 20  
11 a.m.–3:30 p.m.  
Peter T. Paul College Building

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

Paul College Courtyard  
11 a.m.–1 p.m.

Bachelor of Arts in Economics  
Poster Presentations

Adviser: Robert Mohr

Kendall Barnett  
Economics BA  
The Cost Effects of the Affordable Care Act

Hunter Berke  
Economics BA  
An Analysis of Self-Checkout Technology and Productivity

Zachary Bosen  
Economics and Mechanical Engineering  
A Policy Analysis of International Trade

Emily Buchholz  
Economics BA  
The High Cost of Energy and the Northern Pass Project

Samuel Collins  
Economics BA  
Combating Pharmaceutical Drug Cost Increases

Garette Craig  
Economics BA  
Effect of Climate Change on the Ski Industry

Jerickson Fedrick  
Economics BA  
Couples’ Choice: The LGBT Movement and the Workplace

John Giraldo  
Economics BA  
The Economics of Gun Importation and Control Laws

Niccolo Hilgendorf  
Economics BA  
An Economic Analysis of Solar Energy in Durham, NH

Kristen Hillery  
Economics BA  
The Market Effect of Supply-Side Opioid Policy

Andrew Ibechem  
Economics  
The Economic and Medicinal Benefits of Marijuana

James Kennedy  
Economics BA  
Has Medicaid Expansion Worked?

Matthew Kiley  
Economics BA and Finance  
The Economics of Bitcoin
Paul College Great Hall
11 a.m.–1 p.m.

Bachelor of Science in Economics
Poster Presentations

Adviser: Aziz Saglam

Marta Avots
Business Administration, Finance and
International Business and Economics
Understanding Income Inequality:
Antitrust Laws and Industry
Concentration in the U.S.

Nicholas Bagley
Economics BS
Pay and Performance in Major
League Baseball

Matthew Bracci
Economics BS
Why States Adopt Renewable Portfolio
Standards

Jonathan Brice
Economics BS
Reliability of Gemstone Ratings

Travis Broadhurst
Economics BS
Halting Immigration and Mass
Deportations: Economic Implications

Joseph Brown
Economics BS
Military Expenditures and Economic
Growth

Ian Carpenter
Economics BS
Economic Impact of the Music Industry

Jonathan Dean
Economics BS
Financial Incentives and Student
Achievements

Charles Dwyer
Economics BS
College Loans and the Returns to Schooling

Finn Johnson
Economics BS
The Impact of Foreign Exchange Volatility
on the Macroeconomy

Michael Karpel
Economics BS
Economic Impact of a Professional Sports
Franchise on the Local Economy

Bradford Kelley
Economics BS
Low Interest Rate Environment and the U.S.
Economy

Ian Kulac
Applied Mathematics and Economics BS
Stock Price Prediction Using Artificial
Neural Networks

Elyse Law
Economics
Fracking: Benefits and Costs

Lauren Mattucci
Economics BS
Catastrophe Insurance and Economic
Mobility Post-Natural Disaster

Conor McFarland
Economics BS
The Scarcity of Affordable Housing in
New England

William McNerny
Economics BS
College GPA and Post-Graduation Success

Jacob McLinden
Economics BS
Public Social Expenditure and
Income Inequality

Zachary O’Neil
Economics BS
The Effect of IMF Programs on
Economic Growth

Evan O’Reilly
Economics BS
Economic Effects of Casino Gaming in New
Hampshire

Nicholas Pascucci
Economics BS
Are Low Oil Prices Good for the Economy?

Aaron Scheinman
Economics BS
U.S. Tax Enforcement Regime:
Socially Efficient?

Kyle Wiley
Economics BS
Is Universal Basic Income (UBI)
Economically Feasible?

Harrison Voloshin
Economics BS
How Important Are All-Stars to Win a
Championship?
Paul College Great Hall
1:30–3 p.m.

EcoGastronomy Poster Presentations

Evan Barreto
Sustainable Agriculture and Food Systems
The Food We Want at the Places We Love: Local Sourcing Methods for NH Seacoast Restaurants
Adviser: Daniel Winans

Brianna Bowlan
Ecogastronomy and Nutrition
Wine Corks: A Sustainable Energy Source for the Future
Advisers: Nelson Barber, Daniel Winans

Caroline Connors
Ecogastronomy and Nutrition
Farm to Picnic Table Catering: A Business Proposal
Advisers: Joanne Curran-Celentano, Daniel Winans

Vanessa Croteau
Akaylah Glidden
Megan Phelan
Ecogastronomy and Nutrition
A Systems Approach to Curbing Food Waste at the Waysmeet Cornucopia Food Pantry
Advisers: Larry Brickner-Wood, Kevin Pietro, Daniel Winans

Martha Dalrymple
Ecogastronomy and Family Studies
Growing up with Your Food: How a Hands-On Relationship with Food Fosters a Healthy Lifestyle
Advisers: Erin Sharp, Daniel Winans

Anna Devitto
Ecogastronomy and Sustainable Agriculture and Food Systems
Amelia Kief
Communication and Ecogastronomy
Recipes for the Local Eater, Inspired by the New England Food Vision
Adviser: Daniel Winans

Katarina Gallogly
Ecogastronomy and Entrepreneurial Studies
Amina Hughes
Ecogastronomy, International Affairs and Kinesiology
The MUB Market: Establishing a Farmer’s Market for the UNH Community
Adviser: Daniel Winans

Katherine Guaragno
Ecogastronomy and Nutrition
Katie’s Cooking for College Students
Advisers: Ronald Boucher, Daniel Winans

Mackenzie Gunn
Ecogastronomy and Marine, Estuarine and Freshwater Biology
Stress Mitigation of Striped Bass during Transportation
Advisers: David Berlinsky, Daniel Winans

Ashley Hardy
Ecogastronomy and Nutrition
Assessing Diabetes Self-Management Education Outreach Strategies in New Hampshire
Advisers: Joanne Burke, Daniel Winans

Anastasia Kourosov
Ecogastronomy and Sustainable Agriculture and Food Systems
Paula Krenicki
Ecogastronomy and Tourism Planning and Development
Sweet and Simple Vegan Recipes and Practices
Adviser: Daniel Winans

Karyn Lomeli
Ecogastronomy and Nutrition
Ferment for Fun: The Methods and Motives of Fermenting Food
Adviser: Daniel Winans

Valerie Nesom
Ecogastronomy and Plant Biology
A Step Further in Recipes for a New England Food Vision
Advisers: Joanne Burke, Daniel Winans

Jessica Neuman
Ecogastronomy and Sustainable Agriculture and Food Systems
More Than Food: An Analysis of Multidimensional Relationships in Our Food System
Advisers: Alberto Manalo, Daniel Winans

Kevin Rodriguez
Ecogastronomy and Nutrition
Bringing Fresh Food Back to the Cony High School Community
Advisers: Maggie Begis, Brenda Weis, Daniel Winans

Molly Schneider-Ferrari
Ecogastronomy and Nutrition
Farm to Hospital: Bringing Local Food into Wentworth Douglass Hospital
Adviser: Daniel Winans

Paul College Great Hall
1:30–3:30 p.m.

Multidisciplinary Poster Presentations

Rebecca Atkinson
Accounting Marketing
Kelsey Ulaskiewicz
Finance
Sustainability and Corporate Social Responsibility: Their Ever Changing Roles with Respect to Society, Business, and Performance
Adviser: David Hasseldine

Andrew Doppsadt
Finance
State Budgets and Their Impact on University Funding
Adviser: David Hasseldine

Devereux Evans
Accounting and Finance
Financial Reporting Quality and Valuation Methods for Private Companies
Advisers: Jeffrey Sohl, Le Xu
Paige Gould
Business Administration, International Business and Economics and Marketing
Let’s Get Ethical: The Influence of Corporate Responsibility on Consumers
Adviser: Bruce Pfeiffer

Jordan Howard-Collins
Information Systems Management and Marketing
Nicole Meyers
Finance and Management
freeUP: Productivity Made Possible
Advisers: Vanessa Druskat, Kholekile Gwebu

Sarah Keiran
Accounting
Gender Roles in Public Accounting and the Absence of Women in a Male Dominated Profession
Adviser: Linda Ragland

Kayla Kennedy
Business Administration
Margaret McVeigh
Elizabeth Ng
Timothy Prior
Information Systems Management
Global Aquaculture Alliance
Adviser: Russell Miles

Gregory Marinaccio
Accounting
The Effect of Taking Accounting Courses in High School to Choosing Accounting as a Major
Adviser: John Nash

Cassidy Morgan
Hospitality Management
Franchising as It Relates to the Hospitality Industry
Adviser: El-Hachemi Aliouche

Phuoc Thien Anh Nguyen
Economics
Assessing an Impact of Microfinance on Women’s Empowerment in Vietnam: How to Build an Indicator
Adviser: Michael Swack

Karina Popkova
Finance and Information Systems Management
Artificial Intelligence and Machine Learning
Adviser: Kholekile Gwebu

Daniel Rivet
Finance and Management
The Study of Leadership and Innovation within Organizations
Adviser: Andrew Earle

Qianwen Rong
Accounting
Ethics in Accounting
Adviser: David Hasseldine

Aaron Scheinman
Economics BS
An Exploration of the Efficiency of the Marketplace for Parking at the University of New Hampshire
Adviser: Ju-Chin Huang

Benjamin Sumner
Economics BA
How Do Risk Attitudes Differ between Illegal Alcohol and Marijuana Users?
Adviser: Robert Tischer

Sarah Tobias
Hospitality Management
Wine Selection Behavior for Various Target Markets
Adviser: Nelson Barber

Yanwen Wang
Accounting
Internal Control and Non-Accelerated Fillers
Adviser: Le Xu

Taylor Witkiewicz
Accounting and Finance
The Study of Corporate Tax Transparency
Adviser: David Hasseldine

Kaleigh Zukowski
Accounting, Business Administration and Information Systems Management
Behavioral Aspects of Wearable Technology
Adviser: Inchan Kim
Trenton Gobel
Undeclared
Pretty Good: A Short Film about Females in Skateboarding, as Presented by Micaela Wilson, a Former Semi-Professional Skateboarder
Adviser: Anthony Tenczar

Christopher Hale
Hunter MacDowell
Communication Arts
Scrambled Eggs
Adviser: Anthony Tenczar

Samantha Mackenzie
Kallie Tabor
Communication Arts
Yes, Another Food Documentary
Adviser: Stephen Pimpare

Elizabeth Pellerin
Juan Posada
Anthony Santiesteban
Biological Sciences
The Biodiversity of Birds in Punta Gorda, Belize
Adviser: Stephen Pugh

Christopher Perez
Communication Arts
Nicholas Lavallee: Comedian
Adviser: Anthony Tenczar

Cole Riel
Kyle Sanborn
Communication Arts
Scout Lewis
Adviser: Anthony Tenczar

Cole Riel
Communication Arts
Scout Lewis/Violet Crux
Adviser: Anthony Tenczar

Kyle Sanborn
Communication Arts
iPod Retro
Adviser: Anthony Tenczar

Cameron Wright
Communication Arts
Mindfulness
Adviser: Anthony Tenczar

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

Charles & Miriam Nelson
Poster Competition

Thursday, April 20
12–2:00 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 into entrepreneurship. Teams have three minutes to present their business idea, followed by three minutes of Q&A with the judges.

History Department
Undergraduate Research Conference

Thursday, April 20
12:15–2 p.m.
Memorial Union Building
Rooms 334, 336, 338

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 338

**Vitriol, Violence, and Diplomacy: From the Roman Republic to the Islamic State**
Moderator: Gerard Morin
Charles-Nicholas Beard  
German and History  
*King Richard II of England and the German Hansa*  
Adviser: David Bachrach

Bethany Fraser  
History  
*Tactical and Strategic Military Intelligence in the Late Roman Republic and Early Empire*  
Adviser: Michael Leese

Mia Sacks  
Art History and History  
*Green Vitriol (FeSO4.7H2O) in Elizabethan and Stuart England: Chemistry and Politics*  
Adviser: Jan Golinski

Michaela Todd  
History and International Affairs  
*The Islamic State’s Media War on the West*  
Adviser: Ethel Wolper

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**The Naked Arts—Creativity Exposed**

**Act II**

**Thursday, April 20**
12:40–2 p.m.
Paul Creative Arts Center, A218

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.

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

**Friday, April 21**
8:45 a.m.–4 p.m.
Murkland Hall, Rooms 115 and 202

The Department of Languages, Literatures, and Cultures (LLC) hosts an undergraduate research conference comprised of oral presentations, poster presentations, a foreign language award ceremony, and a reception.

Marjorie Boyer  
Theatre: Dance  
Witchcraft  
Adviser: Mekeel McBride

Sarahanne Kent  
Psychology  
*When Irish Eyes Are Smiling*  
Adviser: Thomas Payne

Stephanie Khairallah  
English/Journalism  
*Generosity*  
Adviser: Mekeel McBride

Adam Nastasia  
Computer Science  
*Explorations with a Custom RGBD Camera System*  
Advisers: Julee Holcombe, Wheeler Ruml

Gloria Bibbo  
Communication and Spanish  
*Cultural Competence in Context and in the Classroom*  
Adviser: Holly Cashman

Margaret Brush  
Linguistics and Spanish  
*Tactics of Political Mobilization in Las Madres de la Plaza de Mayo and the Women’s March on Washington: Feminism on the Move*  
Adviser: Scott Weintraub

Lorena Cruz  
International Affairs and Spanish  
*Spanish ≠ Arabic*  
Adviser: John Chaston

Kevin Marc Dioneda  
Biochemistry, Molecular and Cellular Biology  
*Miguel de Luarca and the Exploration of the Spanish Philippines: An Untold Story*  
Adviser: Jorge Abril Sanchez

Morgan Erickson  
Spanish  
*Code-Switching in the Classroom Setting: Skills and Strategies*  
Adviser: Holly Cashman

Taryn Johnson  
Communication and Spanish  
*The Value of Study Abroad for Language Proficiency and Intercultural Competence*  
Adviser: Holly Cashman

Katherine Vaughn  
Spanish  
*A Qualitative Exploration of French Language Instruction in the Elementary School Setting*  
Adviser: Holly Cashman
All Colleges Undergraduate Research Symposium

Welcome Breakfast

Friday, April 21
9–9:30 a.m.
Memorial Union Building
Granite State Room

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

All Colleges Undergraduate Research Symposium

Poster Presentations, Session A

Friday, April 21
9:30–10:40 a.m.
Memorial Union Building
Granite State Room

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

Sarah Balmilero
Psychology
The Relationship between Demographic Factors and Teacher’s Intentions and Efficacy to Intervene in Student Relationship Abuse and Sexual Assault
Adviser: Katie Edwards

Julia Boisselle
Mary Hammar
Courtney Pusz
Nutrition
Genevieve Gray
Biology
Beyond Dining and Recreation Services: How Does the Greater UNH Campus Support a Healthy Lifestyle?
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

Julia Boisselle
Mary Hammar
Courtney Pusz
Nutrition
Evaluation of UNH’s Dining Facilities and Campus Eateries: Does the Food Environment Contribute to Healthy Eating?
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

Colleen Brothers
Environmental Sciences
The Importance of Environmental Regulations: The Experience of an Environmental Consulting Intern
Adviser: Thomas Lippmann

Christine Bunyon
Gavin Cook
Jonathan Gaare
Environmental Conservation Studies
Amanda Cugno
Wildlife and Conservation Biology
A Study on Hochstetter’s Frog (Leiopelma hochstetteri) Populations in Predator Controlled and Uncontrolled Catchments in the Waitakere Ranges, New Zealand
Adviser: Chris Longson

Marisa Butler
Nutrition
Profiling the Health, Wellness, and Nutrition of Collegiate Dancers
Adviser: Jesse Morrell

Emily Carbonara
Health Management and Policy
Youth Suicide Prevention in New Hampshire
Adviser: Semra Aytur

Sau Leung Cheung
Occupational Therapy
Knowledge and Perception of Flight Attendants on In-Flight Needs of Air Travelers with Physical Disabilities
Adviser: Sajay Arthanat

Christopher Cleary
Kinesiology
The Effects of the Knee Flexor Muscles’ Size and Strength on Physical Function in Older Adults
Adviser: Summer Cook

Haylee Colannino
Carly Orlacchio
Elizabeth Suschana
Nutrition
Let the BOD POD Be the Teacher: An Advanced Understanding of Body Composition Testing
Adviser: Kevin Pietro

Shannon Coughlin
Communication Sciences and Disorders
Collaborative Practices among Professionals in Special Education Workplaces
Adviser: Allan Smith

John Cox
Earth Sciences
Cell Counts of the Research Cruise EN584 aboard the R/V Endeavor
Adviser: Kai Ziervogel

Yvonne Cristy
Psychology
High School Dating and Sexual Violence Prevention Program Feasibility and Fidelity: A Qualitative Approach
Advisers: Katie Edwards, Stephanie Sessarego

Casey Dwyer
Jessica Peterson
Justice Studies and Psychology
Popularity as a Mediator between Empathy, Selfishness and Bullying
Adviser: Ellen Cohn

Mikaela Frechette
Kinesiology
Physical Function, Health, and Wellbeing in Older Adults
Adviser: Summer Cook

Livia Gosselin
Occupational Therapy
Developing an Evaluation to Measure Usability of Computer Access Devices for Individuals with Disabilities
Adviser: Sajay Arthanat

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<table>
<thead>
<tr>
<th>Name</th>
<th>College</th>
<th>Title</th>
<th>Adviser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna Haber</td>
<td>Genetics</td>
<td>Profiling the Effect of Drought and Salt Tolerance on Polyamine Biosynthesis in Rice</td>
<td>Subhash Minocha</td>
</tr>
<tr>
<td>Morgan James</td>
<td>Communication Sciences and Disorders</td>
<td>Principles of Neural Plasticity and Motor Programming in Apraxia of Speech</td>
<td>Donald Robin</td>
</tr>
<tr>
<td>Abigail Karparis</td>
<td>Environmental Conservation Studies</td>
<td>A New Zealand Case Study: The Effects of Mammalian Pest Eradication on Endemic Weta Diversity and Abundance</td>
<td>Ria Brejaart</td>
</tr>
<tr>
<td>Alyssa Kolbert</td>
<td>Psychology</td>
<td>Parental Monitoring and the Effects of the Prevalence of Bullying</td>
<td>Ellen Cohn</td>
</tr>
<tr>
<td>Sean Kramer</td>
<td>Electrical Engineering</td>
<td>Preventing Control-Flow Attacks to an Engine Control Unit</td>
<td>Qiaoyan Yu</td>
</tr>
<tr>
<td>Michelle Lacroix</td>
<td>Communication Sciences and Disorders</td>
<td>Gender Differences in Parents' Assessment of Language Development</td>
<td>Allan Smith</td>
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<tr>
<td>Samuel Lewis</td>
<td>Occupational Therapy</td>
<td>Social Participation and Academic Engagement of an Elementary School Student Using an Augmentative Alternative Communication Device</td>
<td>Lou Ann Griswold</td>
</tr>
<tr>
<td>Andrew McElroy</td>
<td>History</td>
<td>Berlin 1961</td>
<td>Robert Macieski</td>
</tr>
<tr>
<td>Alyson Messina</td>
<td>Occupational Therapy</td>
<td>A Survey to Explore Usability and Cost Benefits of Assistive Technology in the Workplace</td>
<td>Sahay Arthanat</td>
</tr>
<tr>
<td>Emily Mierswa</td>
<td>Anthropology</td>
<td>Longevity of Salt: Archaeological Past and Contemporary Trends of the World’s Fifth Element</td>
<td>Marieka Brouwer Burg</td>
</tr>
<tr>
<td>Shannon Nadeau</td>
<td>Occupational Therapy</td>
<td>The Impact of Patient Coping during Inpatient Rehabilitation on the Long Term Recovery of Patients with Cardiac-Related Illnesses</td>
<td>Vidyalakshmi Sundar</td>
</tr>
<tr>
<td>Rachel Platt</td>
<td>Communication Sciences and Disorders</td>
<td>Formant Transitions in Young Adults with a History of Childhood Apraxia of Speech</td>
<td>Allan Smith</td>
</tr>
<tr>
<td>Tasya Rakasiwi</td>
<td>Biomedical Science</td>
<td>TB and Its Slow but Growing Awareness</td>
<td>Christopher Benton, Judy Stevens</td>
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<tr>
<td>Amy Rixon</td>
<td>Occupational Therapy</td>
<td>Developmental Trends and Item Analysis of the Sensory Processing 3-Dimensions Scale</td>
<td>Shelley Mulligan</td>
</tr>
<tr>
<td>Lacey Ryder</td>
<td>Communication Sciences and Disorders</td>
<td>Social-Pragmatic Communication in Women with Autism Spectrum Disorder</td>
<td>Allan Smith</td>
</tr>
<tr>
<td>Kitty Savage</td>
<td>Biomedical Science</td>
<td>The Effect of Neurogranin Manipulation on Immediate Early Gene Expression</td>
<td>Arturo Andrade</td>
</tr>
<tr>
<td>Katherine Shelhamer</td>
<td>Anthropology</td>
<td>Cultural and Environmental Dynamics of the Maya: Investigating Settlements and Wetland Resource Use</td>
<td>Eleanor Harrison-Buck</td>
</tr>
<tr>
<td>Josephine Tarbell</td>
<td>Anthropology and Classics</td>
<td>Ethno-Medical Illustration: ‘Wind’ in U.S. Yoga and Ancient Indian Medicine</td>
<td>Casey Golomski</td>
</tr>
<tr>
<td>Angela Tirabassi</td>
<td>Occupational Therapy</td>
<td>The Influence of the Environment on the Quality of Social Interaction among Children during Play</td>
<td>Lou Ann Griswold</td>
</tr>
<tr>
<td>Peyton Waddicor</td>
<td>Biomedical Science</td>
<td>Role of Cav2.2 Splice Isoforms in Norepinephrine Release</td>
<td>Arturo Andrade</td>
</tr>
<tr>
<td>Nicholas Wakeman</td>
<td>Biochemistry, Molecular and Cellular Biology</td>
<td>Linking Students' Math Self-Efficacy in Biology to Sources of Mean Self-Efficacy</td>
<td>Melissa Aikens, Sarah Andrews</td>
</tr>
<tr>
<td>Kristen White</td>
<td>Communication Sciences and Disorders and Psychology</td>
<td>An Independent Examination of a New Language Sampling Technique</td>
<td>Allan Smith</td>
</tr>
<tr>
<td>Samantha Wohlmacher</td>
<td>Communication Sciences and Disorders</td>
<td>Characterizing Food Selectivity in Children on the Autism Spectrum</td>
<td>Rae Sonnenmeier</td>
</tr>
<tr>
<td>Kassie Zukowski</td>
<td>Communication Sciences and Disorders</td>
<td>An Analysis of the Northwestern University-Children's Perception of Speech (NU-CHIPS) Assessment Tool</td>
<td>Allan Smith</td>
</tr>
</tbody>
</table>
All Colleges Undergraduate Research Symposium

Oral Presentations, Session A

Friday, April 21
9:30–10:40 a.m.
Memorial Union Building

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

MUB, Room 321

Cities, Markets, and Development: China, Latin America, and Europe

Moderator: Jennifer Purrenhage

Maren Crabill
Environmental Conservation Studies and International Affairs
Is There a Relationship between Water Scarcity in Daily Life and Environmental Concern in Madrid, Spain?
Adviser: Molly Wallace

Katherine Dalrymple
Business Administration and International Affairs
Cerda’s Past, Present, and Future for Barcelona
Adviser: Thomas Safford

Elizabeth Gill
International Affairs and Sustainable Agriculture and Food Systems
Seed Transitions: A Case Study in Costa Rica
Adviser: Thomas Safford

John Hutton
International Affairs and Linguistics
Ethnic Groups, Education, and State Power in the PRC
Adviser: Thomas Safford

Samantha Powers
International Affairs and Recreation Management and Policy
To What Extent Do NGOs and International Universities Contribute to Society via Social Entrepreneurship?
Adviser: Thomas Safford

Samuel Warach
Business Administration and International Affairs
To What Extent Do NGOs and International Universities Contribute to Society via Social Entrepreneurship?
Adviser: Thomas Safford

MUB, Room 332

Communication Honors and Comm-entary

Moderator: Kevin Healey

Nicole Downing
Communication
Corporate Ethics and Authenticity: Gaining Consumer Buying One Virtue at a Time
Adviser: Kevin Healey

Natalie Gaynor
Communication
The Internet and Social Media: A New Space for Activism and Social Movements
Adviser: Nora Draper
Ellen Gibbs
Communication
Rushing towards a Religion
Adviser: Kevin Healey

Katherine Sutherby
Communication
Hillary Clinton’s Identity Politics for the Masses: The Appropriation of Branded Femvertising Strategies in a Political Campaign
Adviser: Jennifer Borda

MUB, Room 233
Dating and Sexual Violence Prevention from Adolescence to Young Adulthood
Advisers: Katie Edwards, Katherine Lee
Moderator: Katherine Lee

Bridget Furlong
Recreation Management and Policy and Women’s Studies
Adolescents’ Action Plans in Anticipated Situations of Dating and Sexual Violence: A Qualitative Analysis

Kaleigh Santos
Psychology
Situational Factors Surrounding Incidents of Intimate Partner Aggression

Erinn Vittum
Philosophy and Psychology
Helping Behavior in Middle School Youth: A Descriptive Study

Jeffrey Wilson
Psychology
Understanding Perceptions of Social Media Networks: Implications for Prevention

MUB, Room 233
Feminism in Action: Women’s Studies Internship Program
Adviser and Moderator: Faina Bukher

Emma Chinman
Social Work and Women’s Studies
Community Service and Learning

Kacey Dutton
Occupational Therapy
Women’s Studies Program Social Media and Promotion

Gabrielle Greaves
English and Women’s Studies
Post-Landfill Action Network

Hannah Mathieu
Computer Science and Women’s Studies
Women’s Studies Program Office

Kelsey Nicholson
History and Women’s Studies
The Freedom Cafe

MUB, Room 330
External Interventions and Contested States in the Middle East, China, and Europe
Moderator: Jeannie Sowers

Mito Andonellis
International Affairs and Political Science
External Countries’ Meddling in the Arab Spring
Adviser: Thomas Safford

Matthew Goduto
International Affairs and Political Science
Analyzing the Causes and Consequences of Germany’s Intervention in Afghanistan
Adviser: Jeannie Sowers

Michael Ray
History and International Affairs
Jordan: Maintaining Stability in an Unstable World
Adviser: Thomas Safford

Alexander Sullivan
International Affairs and Political Science
Media Censorship in China: An In-Depth Look at What the Chinese Can and Cannot Say, and Why That Is
Adviser: Thomas Safford

MUB, Room 203
From Misogyny to Philogyny: Women’s Lives Investigated
Adviser and Moderator: Peter Welch

Nicole Benjamin
Neuroscience and Behavior
The Effect of Ageism on Women’s Lives

Katherine Gleason
Social Work
The Size of a Woman’s Worth

Hamida Hassan
Social Work and Women’s Studies
Hitched
Britta McCarthy  
Political Science  
Women in the Kitchen

Zoe Parsons  
Communication  
Ecofeminism: Women, Feminism, and Ecology

Hayley Poff  
Psychology  
Media and Consumer Culture: Their Effects on Women's Body Image

Sarah Unruh  
International Affairs and Sociology  
Politically-Motivated Sexual Violence Wielded in the Egyptian Revolution: Outcomes and Advances  
Adviser: Jeannie Sowers

MUB, Room 207

Local Culture I

Adviser and Moderator: Sara Withers

Christopher Capozzo  
Anthropology  
Following the Storm: The Aftercare of Sexual Assault Survivors on College Campuses

Nicholas Davini  
Anthropology  
Opportunity vs. Reality: Navitas and the Successful American College Experience

Taylor Gallagher  
Anthropology  
The University of New Hampshire's Water Usage Protocol in Times of Drought and Its Impact on the Surrounding Communities

Kayla Krueger  
Anthropology  
The Impact of Heroin Addiction on the Community in New Hampshire

MUB, Room 334

Gender, Discrimination, and Violence in Comparative Perspective

Moderator: Dilsa Deniz

Grace Dietz  
Anthropology and International Affairs  
Islamophobia in the American Media  
Adviser: Dilsa Deniz

Ashley Gonzalez  
International Affairs and Sociology  
Feminist Organizations in France and Their Perception of the Headscarf Debate  
Adviser: Jeannie Sowers

Christopher Grinley  
German, International Affairs and Political Science  
Gender in Syria: Comparing Gender Roles and the Treatment of Women across ISIS, Rojava, the Assad Regime, and the Opposition  
Adviser: Dilsa Deniz

Stephanie Morales  
English/Journalism and International Affairs  
The Impact of the Berlusconi Administration on Gender Equity in Italy  
Adviser: Dilsa Deniz

Catherine Svendsen  
History and International Affairs  
A Country Torn Apart: France's Factors of Discrimination against Muslim Women in France  
Adviser: Thomas Safford

Lily Harris  
Environmental and Resource Economics  
Perception and Purchasing of Local Agricultural Products by Restaurants in the Seacoast Area  
Adviser: John Halstead

Margarethe Hauschildt  
Kinesiology  
The Effect of Foam Rolling on Delayed Onset Muscle Soreness and Muscular Performance Decrement  
Adviser: Summer Cook

Katherine Rocci  
Earth Sciences  
Seasonal Changes in Isotopic Composition and Concentration of CH4 at Sub-Arctic Mire in Abisko, Sweden  
Adviser: Ruth Varner

MUB, Room 207

The Conundrum of Global Trade

Adviser: Lawrence Reardon  
Moderator: Eric White

Andrew Abrams  
History  
New Right Same as the Old: The Development of Protectionism in the Front National

Dominick Gianduso  
Political Science and Sociology  
WTO Non-Compliance: Shortcomings of the Dispute Settlement Process

Morgan Hebert  
Political Science  
The Illicit Economy: Understanding the Economic Origins of Drug Cartel Activity

Melissa Norton  
Justice Studies and Political Science  
Blood Diamonds: A War's Best Friend

Jesse Vaughan  
Environmental Conservation Studies  
Why Isn't the World Bank Financing Renewable Energy in the Developing World?

Tianjia Yan  
International Affairs and Political Science  
The Growing Phenomenon of Chinese Traveling Abroad
All Colleges
Undergraduate Research Symposium

Poster Presentations,
Session B

Friday, April 21
10:50 a.m.–Noon
Memorial Union Building
Granite State Room

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

**Sherlee Alvarez**
Biochemistry, Molecular and Cellular Biology
*Understanding the Role of Replication Protein A 1E in the Immune Response of Arabidopsis thaliana against a Microbial Pathogen*
Adviser: Kevin Culligan

**Jennifer Annand**
Health Management and Policy
*A Qualitative Analysis of Barriers and Enablers to Sports Participation among Youth with Disabilities*
Adviser: Semra Aytur

**Lauren Barker**
Nursing
*Self Care of T2DM Patients with Chronic Wounds in Ghana*
Adviser: Gene Harkless

**Jamie Barton**
Hannah Root
Biology

**Angela Sarni**
Mechanical Engineering

**Megan Savoie**
Marine, Estuarine and Freshwater Biology
*Submersible Oceanic Aquaculture of Kelp (SOAK)*
Advisers: Michael Chambers, M. Robinson Swift

**Yamilex Bencosme**
Sociology and Women’s Studies
*On Our Way to Ending Sexualized Violence: Engaging Bystanders and Building Awareness*
Adviser: Victoria Banyard

**Julia Boisselle**
Mary Hammar
**Courtney Pusz**
Nutrition
*Evaluation of UNH’s Recreation Services: A Key Component of a Healthy Campus Environment*
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

**Celine Boutin**
Nursing
*Stress Levels and Their Relationship to Coping Mechanisms and Personality Traits in Nursing Students*
Adviser: Rosemary Taylor

**Haylee Colannino**
Carly Orlacchio
Elizabeth Suschana
Nutrition
*Let the BOD POD Be the Teacher: An Advanced Understanding of Body Composition Testing*
Adviser: Kevin Pietro

**Annabelle Collins**
Psychology
*Orthorexia Nervosa: An Unhealthy Obsession with Eating Healthy*
Adviser: Rebecca Warner

**Rachel Colstad**
Deryn Fishman
Psychology
**Samantha Park**
Biomedical Science
*Domestic Violence and Sexual Assault Prevention: An Evaluation of Community Leader Awareness*
Advisers: Victoria Banyard, Elizabeth Moschella, Andrew Rizzo

**Cailin Conley**
Health Management and Policy
*Using Social Vulnerability Assessment to Support Emergency Preparedness and Promote Community Resilience*
Adviser: Semra Aytur

**Liam Corless**
Chemical Engineering
*Revealing the Role of Sodium-Gold Clusters in Preferential Carbon Monoxide Oxidation in Hydrogen (PROX)*
Adviser: Nan Yi

**Marissa DeCaro**
Communication Sciences and Disorders
*Examination of the Relationship between Resting State Neural Oscillations and Lexical Semantic Retrieval in Mild Traumatic Brain Injury*
Adviser: Robert Ross

**Nicholas deDiego**
Genetics
*Genetic Interactions of Protein Phosphatase 2A Subunits in Roots during Salt Stress*
Adviser: Estelle Hrabak

**Jake Donahue**
Michael Goulet
Biomedical Science
**Sarah Piet**
Biochemistry, Molecular and Cellular Biology
*Regulation of the Angiogenic Inducer, CNN1, in the Bovine Corpus Luteum: A Preliminary Study*
Adviser: Paul Tsang

**Elizabeth Faircloth**
Biology
*Is the Expression of Tissue-Degrading Enzymes in the Skeletal Muscle of Spiny Dogfish Correlated to Capture Stress?*
Adviser: Paul Tsang
Christine Feudo  
Kinesiology  
Effects of Cardiolocomotor Entrainment on Running Economy  
Adviser: Timothy Quinn

Danielle Flanagan  
Jacqueline Melius  
Shannon Moley  
Psychology  
Associations between Experienced Trauma and Mental Health for Women in Recovery: Implications for Sober Living Facilities  
Advisers: Katie Edwards, Katherine Lee

Joanna Foos  
Nursing  
The Effects of Alcohol Prep Pads and Blood Drop Number on Capillary Blood Glucose Results  
Adviser: Susan Fetzer

Jane Garofalo  
Health Management and Policy  
Exploring Campus Policies at UNH via the Healthy POINTS Audit  
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

Alexa Gilmore  
Nursing  
Women’s Experiences in the CenteringPregnancy™ Program  
Adviser: Joyce Cappiello

Jennifer Goodwin  
Psychology  
Music Preference in Leopard Spotted Geckos  
Adviser: Jan Tornick

Myrilla Hartkopf  
Environmental Conservation Studies  
Evaluating the Effects of Rotational Grazing Soil Microbial Activity  
Advisers: Alexandra Contosta, Andrew Grandy, Scott Greenwood

Alyssa Henry  
Health Management and Policy  
Using Photovoice to Ensure a Right to Health: Eliciting Patient Perspectives to Support Patient-Provider Communication Improvements  
Adviser: Semra Aytur

Abby Jackson  
Psychology  
Hannah Perry  
Justice Studies and Psychology  
Gender Differences of Bystander Intervention within a Community Sample  
Advisers: Victoria Banyard, Katie Edwards, Andrew Rizzo

Shuhan Long  
Biomedical Science  
Transitioning from Sun-Grown System to Shade-Grown System of Coffee: A Bioeconomic Model  
Adviser: Shady Atallah

Julianna Minogue  
Psychology  
Do Dogs Respond Differently to Male and Female Visitors in a Shelter?  
Adviser: Jan Tornick

Steven Moroni  
Environmental Sciences  
A Historic Understanding of Urbanized Tree Growth at UNH  
Adviser: Mark Ducey

Sumeet Panesar  
Zachary Tepper  
Neuroscience and Behavior  
Characterization of Cholecystokinin-Expressing Neurons in Sensory Areas of Spinal Cord and Trigeminal Nucleus  
Adviser: Arturo Andrade

Sumeet Panesar  
Zachary Tepper  
Neuroscience and Behavior  
Region-Specific Expression of Cholecystokinin in Endothelial Cells and Pericytes  
Adviser: Arturo Andrade

Kaleigh Santos  
Anna Skedros  
Psychology  
Correlates between Women’s Sense of Community and Their Recovery within a Trauma-Informed Sober Living Home  
Adviser: Katie Edwards

Moussa Siri  
Environmental Sciences  
Effect of Land Use on Sediment Transport in Streams Draining Coastal Watersheds  
Adviser: Wilfred Wollheim

Christen Soucy  
Nursing  
The Work of Mental Health Nurses in Australian Primary Care: A Descriptive Study  
Adviser: Gene Harkless

Mary Kate Visnic  
Nursing  
Neutropenic Diet: Standardizing the Practice Using Evidence-Based Practice Methods  
Adviser: Gene Harkless

Eleni Zotos  
Nursing  
Urinary Incontinence among Female High School Athletes: A Pilot Study  
Adviser: Gene Harkless

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

Laura Blanchette  
English  
Responsibly Choosing a Pet

Alexander Gentile  
English  
Everything You Need to Know about Choosing a Major

Todd Glynn  
Biology  
How to Lose Weight yet Gain Muscle: A Website

Victoria Hennessy  
Biomedical Science  
New Technology in Prosthetic and Bionic Limbs

Brittany Mezzancella  
Biomedical Science  
Pet Insurance

Cassidy Yates  
Environmental Engineering  
Website Design Featuring Environmental Justice
All Colleges
Undergraduate Research Symposium

Oral Presentations, Session B

Friday, April 21
10:50 am–Noon
Memorial Union Building

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

MUB, Room 237

Activism, Identity, and the Media in Europe and the U.S.

Moderator: Tom Stafford

Claire FitzMorris
International Affairs, Linguistics and Spanish
Perception of Islam in Spain
Adviser: Dilsa Deniz

Virginia Harmon
International Affairs, Political Science and Spanish
Territorial Disputes on Europe’s Southern Borders: A Comparative Evaluation of the Legitimacy of Spanish Claims to the Enclaves of Ceuta and Melilla and British Claims to Gibraltar
Adviser: Thomas Safford

Amina Hughes
Ecogastronomy, International Affairs and Kinesiology
Foundations of Prejudices towards Immigrants and Refugees in France
Adviser: Thomas Safford

Bailey Johnson
French and International Affairs
La Manif Collective: The Necessity of Protest in France
Adviser: Thomas Safford

Jordan Mrvos
Communication and International Affairs
Nous Avons Commencé: A Social Constructionist Exploration of a Protest in Dijon, France
Adviser: Thomas Safford

Michaela Todd
History and International Affairs
Self-Identification in Catalonia
Adviser: Thomas Safford

MUB, Room 334

China’s Compliance and Self-Interest

Adviser: Lawrence Reardon
Moderator: Michael Cole

Jonathan Dunn
Political Science
WTO: Will China Comply?

Jacob McLinden
Economics BS
The Political Economics of Chinese Steel Dumping

Alexander Sullivan
International Affairs and Political Science
Blowing Bubbles: A Look at China’s Supposed Housing Bubble

Tyler Young
Political Science
Analytical Case Study of the U.S-China Bilateral Trade Relations

MUB, Room 330

Health and Education in Comparative Perspective

Moderator: Smitha Lahiri

Anna Baker
Biomedical Science and International Affairs
Analysis of the Pharmaceutical Industry in the French Healthcare
Adviser: Thomas Safford

Hannah Gilman
French and International Affairs
Why Are the French Healthier?
Adviser: Thomas Safford

Jessica Racioppi
International Affairs and Spanish
The Evolution of Peace Education in the 20th Century
Adviser: Jeannie Sowers

Elle Richards
International Affairs and Sociology
The Cultural Factors that Influence Elder Care in Spain in Comparison to the United States
Adviser: Dilsa Deniz

Tianjia Yan
International Affairs and Political Science
Reforming National College Entrance Exams in China, Japan, and South Korea
Adviser: Jeannie Sowers

MUB, Room 321

Interrogating Interactions: Papers in Language and Social Interaction

Moderator: Edward Reynolds

Matthew Fields
Communication
Conflict Talk Expanded
Adviser: Edward Reynolds

Shannen Ketenci
Communication and International Affairs
The Body in Medical Interactions: The Use of Gaze in Constructing Biomedical and Psychosocial Models
Adviser: Edward Reynolds
Kendra Swanson  
Communication  
*Turn Taking Systems between Bartender and Server*  
Adviser: Edward Reynolds

Anna Tumber  
Communication  
*The Exploration of Teaching Yoga*  
Adviser: Danielle Pillet-Shore

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**MUB, Room 302**

**Local Culture II**  
Moderator: Svetlana Peshkova

Grace Dietz  
Anthropology and International Affairs  
*Native American Cultural Heritage in New Hampshire*  
Advisers: Svetlana Peshkova, Denise Pouliot, Paul Pouliot

Elisabeth Iacono  
History  
*The Lives of Objects: Ethical Treatment of Collections*  
Adviser: Sara Withers

Rachel Parr  
Biomedical Science  
*The Social Construct of Dreaming: College Culture*  
Adviser: Robin Sheriff

Katherine Shelhamer  
Anthropology  
*The Contemporary Campus: Assessing University Response to Multicultural Issues*  
Adviser: Sara Withers

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**MUB, Room 336**

**Multidisciplinary Session II: Psychology, Neuroscience and Behavior**  
Moderator: Jesse Morrell

Stephanie Barlow  
Neuroscience and Behavior  
*Investigation of the Changes in Oscillatory Power during Rule Switching after Mild Traumatic Brain Injury*  
Adviser: Robert Ross

Emma DePierro  
Alison Meurer  
Psychology  
*Hanne Hansen*  
*Amanda LeBel*  
Neuroscience and Behavior  
*Using Motion-Induced Blindness to Determine Contrast Response Asymmetries of ON and OFF Cells*  
Advisers: Andrew Kitt, William Stine

Nicholas Duggan  
Neuroscience and Behavior  
*John Hewitt*  
*Nicholas Tabor*  
Psychology  
*Exploring Spatial Frequency Channels in Stereopsis*  
Advisers: Andrew Kitt, William Stine

Sarah Meier  
Jonathan Neilio  
Neuroscience and Behavior  
*Olivia Rebel*  
Psychology  
*Mapping Stereo Threshold by Spatial Frequency*  
Advisers: Andrew Kitt, William Stine

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**MUB, Room 207**

**Navigating Intersectional Challenges in the Age of Michelle Obama**  
Adviser and Moderator: Lyn Tjon Soei Len

Rebecca Barton  
Communication and Women’s Studies  
*The Power of Time-Binds for WOC in the Workforce*  

Sage Gould  
Fine Arts  
*The Importance of Intersectionality above Singular Identities*

Jane Kayarian  
Social Work  
*History in the Making: Gender and Race Performance in the Age of Michelle Obama*

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**MUB, Room 203**

**Semester in the City: Social Innovation Fellowships**  
Adviser and Moderator: Faina Bukher

Hannah Bowen  
Family Studies and Women’s Studies  
The Petey Greene Program

Gabrielle Greaves  
English and Women’s Studies  
The Theater Offensive

Julia Marshall  
Psychology and Sociology  
Let’s Get Ready

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**All Colleges Undergraduate Research Symposium**

**Oral Presentations, Session C**

Friday, April 21  
12:15–1:25 p.m.  
Memorial Union Building

The All Colleges Undergraduate Research Symposium showcases students from all disciplines. Students present their faculty-mentored projects in one of two interactive poster sessions, or in one of three oral presentation sessions. University-wide participants come from a variety of disciplines.
MUB, Room 332

Change and World Politics
Moderator: Justin Troiano

Alex Bostic
English/Journalism
The Political and Economic Challenges Facing Post-Fidel Cuba
Adviser: Elizabeth Carter

Nolan Flagg
Justice Studies and Political Science
A Robust Mandate: An Evaluation of MINUSMA in Mali and the Effectiveness of Chapter VII Authorized Peacekeeping
Adviser: Alynna Lyon

Marissa Parker-Bair
Political Science
Women in International Political Leadership Roles
Adviser: Alynna Lyon

Scott Shallow
Political Science
Russian Realism in the Age of Putin
Adviser: Alynna Lyon

Weicong Zeng
Political Science
Kurds and the Balance of Power of the Middle East
Adviser: Alynna Lyon

MUB, Room 336

Hot Topics in Women and Gender Studies: Theory, Science, and Practice
Adviser: Katie Edwards
Moderator: Katherine Lee

Hollie Foster
Psychology, Russian and Women's Studies
The Shade Tree, Las Vegas' Largest Shelter for Victims of Domestic and Sexual Abuse
Adviser: Alynna Lyon

Giselle Hart
Women's Studies
Defense of Women's Studies

Cayden O'Dea
Women's Studies
Growing Up Trans

Lacey Ryder
Communication Sciences and Disorders and Women's Studies
Reproductive Justice from a Native American Feminist Perspective

Sarah Piet
Biochemistry, Molecular and Cellular Biology
The Right to Die with Dignity

MUB, Room 338

Multidisciplinary Session III: Studies in Science and Engineering
Moderator: Arturo Andrade

Lindsay Anibal
Art Studio and Neuroscience and Behavior
Open-Sand Pit Shelter Use by American Lobsters (Homorus americanus)
Adviser: Leslie Curren

Joseph Durant
Robert Lozowski-Aliberti
Mechanical Engineering
The Electrochemical Etching of Microscale Features in Copper
Adviser: James Krzanowski

Meghan Gillespie
Emily Vulgamore
Biology
Measuring Somatic Mutation in the Nematode, Caenorhabditis elegans
Adviser: John Collins

Alexandria Hidrovo
Environmental Engineering
Applying MP UV Disinfection with Low Wavelength Monitoring to Achieve Sustainable Public Health Protection
Adviser: James Malley

Salimah Hussien
Bioengineering
Light-Triggered Differentiation of Human Neural Stem Cells to Neurons
Adviser: Kyung Jae Jeong

Brittany Marshall
Mechanical Engineering
Impact of Knee Extensor Strength on Lower-Limb Kinematics and Kinetics during Walking in Older Adults
Adviser: Dain LaRoche
UNIVERSITY OF NEW HAMPSHIRE
2017 UNDERGRADUATE RESEARCH CONFERENCE

FRIDAY 4/21

MUB, Room 237

Multidisciplinary Session IV:
Education, History, Music, and Fiction Writing

Moderator: Kate Gaudet

Harry Haytayan
History
The Historical Condition of African American Family Dynamics in America
Adviser: Jeffrey Bolster

Andrew LaBelle
English
Around Suddenly, Ungracefully Flying: The Merits of the Fiction Writer in a New Disinformation Age
Adviser: Clark Knowles

Graham Peterson
History
Metal Machine Music: The Worst Album Ever Recorded
Adviser: Daniel Beller-McKenna

John Sullivan
Music Education
Musical Expressions of School Spirit at UNH throughout the Years
Adviser: Rose Pruiksma

Danielle Tidd
English Teaching
Students’ Perceptions of Open-Topic Research Assignments
Adviser: Alecia Magnifico

MUB, Room 334

Women’s Studies: The Fruit of Struggle

Adviser and Moderator: Jane Stapleton

Shannon Bryant
Psychology
Women and Science: A Glimpse into the Past

Jamie Cormier
Communication
How Lay’s “Do Us a Flavor” Campaign Became More Than Just an Advertisement
Adviser: Michael Jackson

MUB, Room 302

Representation and Rhetoric

Moderator: Michael Jackson

Michael Fratarcangieli
Communication and Justice Studies
False Accusation in West Memphis: The Devil Made Them Do It?
Adviser: Michael Jackson

Emma Giangregorio
Communication
Gender Equality: The Fight Is Far from Over
Adviser: Michael Jackson

Robert Maynard
Communication and Linguistics
Nolan and Interstellar: The Argument to Save Tradition
Advisers: Michelle Gibbons, Michael Jackson

Jie Ning
Communication and Women’s Studies
Nudity and Body in Chinese Photographer and Poet Renhang’s Work
Adviser: Michael Jackson

Kellie Reardon
Communication
How Lay’s “Do Us a Flavor” Campaign Became More Than Just an Advertisement
Adviser: Michael Jackson

UNH Manchester
URC Engineering Technology Day

Senior Project Presentations

Friday, April 21
9 a.m.–4 p.m.
Pandora Mill
1st Floor and Room 201
88 Commercial St., Manchester

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

James Caron
Mechanical Engineering
Blimp Ground Control
Adviser: Theodore Tavares

Ryan Chartier
Mechanical Engineering Technology
Jetboil Capstone Project
Adviser: Theodore Tavares

Daniel Crean
Electrical Engineering Technology
Water Methanol Injection Control System
Adviser: Christopher LeBlanc

Oliver Dale
Brian Dustin
William Genest
Devlin Melvin
Mechanical Engineering Technology
UNH Manchester UAV
Adviser: Theodore Tavares

Matthew Dassatti
Mechanical Engineering Technology
Case Auto-Racking
Adviser: Theodore Tavares

Christopher Decato
Mechanical Engineering Technology
Blimp Ground Crew
Adviser: Theodore Tavares
Andrew Hoitt  
Mechanical Engineering Technology  
*Lighter Than Air - UAV ET Blimp Project*  
Adviser: Christopher LeBlanc

Andrew Hoitt  
Robert Hunt  
Donald Kilian  
Richard Sena Reyes  
Mechanical Engineering Technology  
*ET Blimp Control*  
Adviser: Christopher LeBlanc

James Jordan  
Mechanical Engineering Technology  
*Boiler Improvement Evaluation via Exhaust Gas Analysis*  
Adviser: Keith McBrien

Steven Kazakis  
Mechanical Engineering Technology  
*UNH Cooperative Extension: Hydroponics*  
Adviser: Sarah Grosvenor

Andrew Kelsall  
Mechanical Engineering Technology  
*Analysis of the Oil Circulation System of the Magnum Compacts’ Gear Case*  
Adviser: Theodore Tavares

Donald Kilian  
Mechanical Engineering Technology  
*UNH ET Blimp, Gondola and Fan Ducting*  
Advisers: Christopher LeBlanc, Sean Tavares, Theodore Tavares

Kyle Legg  
Electrical Engineering Technology  
*Design and Characterization of a Time-of-Flight Sensor*  
Adviser: Christopher LeBlanc

Micheal Pinkham  
Mechanical Engineering Technology  
*Blimp Ground Control Team*  
Adviser: Theodore Tavares

Ronald Rousseau  
Mechanical Engineering Technology  
*21’ Blimp Deflation Emergency System*  
Adviser: Theodore Tavares

James Schumacher  
Electrical Engineering Technology  
*Viability of PocketSphinx for EXACOM*  
Advisers: Michael Jonas, Christopher LeBlanc, Theodore Tavares

Shawn Snook  
Christopher Tanner  
Mechanical Engineering and Technology  
*Velcro Machine R&D Internship*  
Advisers: Michael Jonas, Christopher LeBlanc, Theodore Tavares

Alexander Turner  
Electrical Engineering Technology  
*AFL App Store*  
Advisers: Christopher LeBlanc, Theodore Tavares

Jonathan Vassiliades  
Mechanical Engineering Technology  
*University of New Hampshire Precision Racing—FSAE Suspension Design*  
Advisers: Todd Gross, Theodore Tavares

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**The Naked Arts—Creativity Exposed**

**Act III**

**Friday, April 21**  
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.

Isabelle Beagen  
Theatre: Dance  
Elizabeth Feinschreiber  
William Lombard  
Theatre  
Simon Freitas  
Social Work  
*Seven Boxes of Books: The Historical Past and Present through the Lens of Devised Theatre*  
Adviser: Amy Blessing

Frank Noah  
Music  
*Music for Theatre*  
Adviser: Ryan Vigil

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

**Bud Albin Challenge Round**

**Friday, April 21**  
1–4 p.m.  
**Peter T. Paul College Building**  
4–8 p.m.  
**Alpha Loft**

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 21
1:30–4 p.m.

Pettee Hall, Rooms G10 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.

Lauren Barker
Nursing
Self-Reported Care Experiences of T2DM Patients with Chronic Wounds in Ghana: A Descriptive Study
Adviser: Gene Harkless

Stefanie Cheung
Occupational Therapy
Knowledge and Perceptions of Flight Attendants on In-Flight Needs of Air Travelers with Physical Disabilities
Adviser: Sajay Arthanat

Joanna Foos
Nursing
The Effect of Alcohol Prep Pads and Blood Drop Number on Capillary Blood Glucose Values
Adviser: Sue Fetzer

Livia Gosselin
Occupational Therapy
An Evaluation Tool to Measure Usability of Computer Access Assistive Technology for Individuals with Physical Disabilities
Adviser: Sajay Arthanat

Samuel Lewis
Occupational Therapy
Social Interaction and Participation in School Activities of an Elementary School Student Using an Augmentative Alternative Communication Device
Adviser: Lou Ann Griswold

Amy Rixon
Occupational Therapy
Development Trends and Item Analysis of the Sensory Processing 3-Dimensions Scale
Adviser: Shelley Mulligan

Shannon Nadeau
Occupational Therapy
The Effects of Occupational Therapy and Client Coping Mechanisms on the Recovery of Cardiac Patients in Inpatient Rehabilitation
Adviser: Vidya Sundar

Nora Scanlon
Kinesiology-Exercise Science
The Effect of Foam Rolling on Delayed Onset Muscle Soreness and Plasma Indicators of Muscle Damage
Adviser: Summer Cook

Christen Soucy
Nursing
The Work of Mental Health Nurses in Primary Care: A Descriptive Study
Adviser: Gene Harkless

Angela Tirabassi
Occupational Therapy
The Influence of the Environment on the Quality of Social Interaction among Children during Play
Adviser: Lou Ann Griswold

Psychology Department
George M. Haslerud Undergraduate Research Conference

Friday, April 21
1:30–5 p.m.

McConnell Hall, Room 220

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

Yvonne Cristy
Psychology
High School Dating and Sexual Violence Prevention Program Feasibility and Fidelity: A Qualitative Approach
Advisers: Katie Edwards, Stephanie Sessarego

Kaitlyn Sterns
Biomedical Science and Psychology
Medial Prefrontal Neurons Encode Information about Stimuli Signaling Reinforcement
Adviser: Robert Mair

Erinn Vittum
Philosophy and Psychology
Helping Behavior in Middle School Youth: A Descriptive Study
Advisers: Katie Edwards, Katherine Lee, Elizabeth Moschella
**Honors English Undergraduate Research Conference**

**Friday, April 21**
**1:30–4 p.m.**
**Murkland Hall, Room G02**

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.

**Morgan Plessner**  
English  
*Understanding Modern America through Contemporary Literary Interpretations of the Book of Revelation*  
Adviser: David Watters

**Sophie Ruesswick**  
English Teaching  
*Teaching Literary Elements through the Lens of Short Story Mentor Texts*  
Adviser: Alecia Magnifico

**Eliza Sneeden**  
English/Journalism  
*The Youngest Child: A Collection of Personal Essays*  
Adviser: Jaed Coffin

**Kelly Sorge**  
English and History  
*Women and Power in Shakespeare’s Macbeth, As You Like It, and Titus Andronicus*  
Adviser: Diane Freedman

**Moira Wright**  
Classics, English Literature and Women’s Studies  
*Amorphous Reality: The Power of Unreliable Narration in Nabokov’s Lolita and Pale Fire*  
Adviser: Diane Freedman

**PhD Philosophy Department Undergraduate Research Conference**

**Friday, April 21**  
**4–7 p.m.**  
**Murkland Hall G17**

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

**Nils Babcock**  
Classics and Philosophy  
*Animalism in Aristotle*  
Adviser: Charlotte Witt

**Michael Langelier**  
Mechanical Engineering and Philosophy  
*Should the Sale of Organs Be Legal?*  
Adviser: Nicholas Smith

**Amanda Lathrop**  
Philosophy  
*Capitalism and Inequality: The Legacy of Slavery in the U.S.*  
Adviser: Nicholas Smith

**Amanda LeBel**  
Neuroscience and Behavior  
*Heidegger and Westworld: A Look at Dasein and Artificial Intelligence*  
Adviser: Matthew Dowd

**Andrew Ware**  
Economics BS and Philosophy  
*Distributional Implications of the Development of Artificial Intelligence for Global Policy*  
Advisers: Simon Beard, Nicholas Smith

**Rory Wilson**  
Philosophy  
*Who We Are and How We Say It? A Philosophical Exploration of Transgender Identities and Pronouns*  
Adviser: Charlotte Witt

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**Student Composers’ Concert**

**Friday, April 21**  
**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.

**Troy Grimsley**  
Music Education  
*Rondo for Clarinet Sextet and Into the Unknown for Woodwind Quintet*  
Adviser: Andrew Boysen

**Thomas Mottershead**  
Music  
*Three Rose Poems*  
Adviser: Ryan Vigil

**Frank Noah**  
Music  
*Sonata for Oboe*  
Adviser: Michael Annicchiarico
COLSA Undergraduate Research Conference

Oral Presentations

Saturday, April 22
8:15–10:30 a.m.
Memorial Union Building, Theatre II

Student presentations at the COLSA URC are based on research conducted in any of the departments within the College of Life Sciences and Agriculture.

Meghan Carr
Marine, Estuarine and Freshwater Biology
Entanglement of Grey (Halichoerus grypus) and Harbor Seals (Phoca vitulina) at Duck Island Ledges, ME
Advisers: Andrea Bogomolni, James Coyer, Nadine Lysiak

Nina Coffey
Neuroscience and Behavior
Is There a Connection between Performance on Problem-Solving Tasks and Dominance Levels in Canis familiaris?
Adviser: Leslie Curren

Cynthia Holler
Neuroscience and Behavior
The Influence of Medial Thalamus on the Response Properties of Neurons in Medial Prefrontal Cortex
Advisers: Brett Gibson, Robert Mair

Alison Jeffrey
Biomedical Science
The Relationship of Life Stage to Daily Social Patterns of Captive African Elephants (Loxodonta africana) and the Correlation of Handler Perceptions of Elephant Personality to Demonstrated Social Behaviors
Advisers: Vanessa Grunkemeyer, Clare Padfield, Debbie Young

Sean Lombard
Biomedical Science
Comparative Sociobiology and Ecology of a Small Carpenter Bee
Adviser: Sandra Rehan

Kathryn Slebodnik
Environmental Sciences
Effects of Land-Use Change on Soil Nitrogen Retention at the University of New Hampshire Organic Dairy Research Farm
Adviser: Alexandra Contosta

Emily VanGulick
Marine, Estuarine and Freshwater Biology
Neuroanatomical Mapping and RNA Expression and Localization in the Brain of a Basal Vertebrate, the Sea Lamprey (Petromyzon marinus)
Adviser: Stacia Sower

Elisabeth Wise
Biochemistry, Molecular and Cellular Biology
Daily Distance Moved and Home Range Analysis of Female Cheetahs (Acinonyx jubatus) on Namibia’s Commercial Farmland
Advisers: Andrew Conroy, Laurie Marker

Casey Albano
Biology
Anna Dorrance
Marine, Estuarine and Freshwater Biology
Cyanobacteria Toxins in Loon Feathers and Water
Adviser: James Haney

Lindsay Anibal
Art Studio and Neuroscience and Behavior
Open-Sand Pit Shelter Use by American Lobsters (Homarus americanus)
Adviser: Leslie Curren

Anna Baker
Biomedical Science and International Affairs
Cnidarian Behavior under Various Adenylate Cyclase Drug Regulating Conditions
Adviser: David Plachetzki

Cameron Barnes
Zoology
Examining the Presence of Magnetoreception in the American Lobster (Homarus americanus)
Adviser: Winsor Watson

Jamie Barton
Hannah Root
Biology
Angela Sarni
Mechanical Engineering
Megan Savoie
Marine, Estuarine and Freshwater Biology
Submersible Oceanic Aquaculture of Kelp (SOAK)
Advisers: Michael Chambers, M. Robinson Swift

Kaitlyn Belknap
Biomedical Science
Understanding a Rare Pediatric Cancer Cluster along the New Hampshire Seacoast
Adviser: Brian Barth

Kathryn Bennett
Environmental Sciences
How Would the University of New Hampshire’s Nitrogen Footprint Change If We Achieved Other Sustainability Scenarios?
Adviser: John Aber

COLSA Undergraduate Research Conference

Poster Presentations

Saturday, April 22
10:45 a.m.–12:45 p.m.
Memorial Union Building, Granite State Room

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

Adam Aasen
Neuroscience and Behavior
Comparison of Single Cell Response Types Encoding Movement Information in Prefrontal Cortex and Central Thalamus
Adviser: Robert Mair
Julia Boisselle
Mary Hammar
Courtney Pusz
Nutrition
Genevieve Gray
Biology
Beyond Dining and Recreation Services: How Does the Greater UNH Campus Support a Healthy Lifestyle?
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

Julia Boisselle
Mary Hammar
Courtney Pusz
Nutrition
Evaluation of UNH’s Dining Facilities and Campus Eateries: Does the Food Environment Contribute to Healthy Eating?
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

Julia Boisselle
Mary Hammar
Courtney Pusz
Nutrition
Evaluation of UNH’s Recreation Services: A Key Component of a Healthy Campus Environment
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

Samantha Bromley
Equine Studies
Effect of Niacin and Beta-Carotene Supplementation in Pre-Partum Holstein Cattle on Acquisition of Immunity and Growth in Calves
Adviser: Peter Erickson

Cooper Bryer
CaseyCoupe
Wildlife and Conservation Biology
The Influence of Shrubland Type and Area on the Abundance and Age Structure of Male Prairie Warblers
Adviser: Matthew Tarr

Jasmin Buteau
Marine, Estuarine and Freshwater Biology
Characterizing an Unknown Blue Whale (Balaenoptera musculus) Population in the South Atlantic Ocean through Acoustic Analysis of Song
Adviser: Jennifer Miksis-Olds

Meghan Carr
Marine, Estuarine and Freshwater Biology
Entanglement of Grey (Halichoerus grypus) and Harbor Seals (Phoca vitulina) at Duck Island Ledges, ME
Advisers: Andrea Bogomolni, James Coyer, Nadine Lysiak

Haylee Colannino
Carly Orlacchio
Elizabeth Suchana
Nutrition
Let the BOD POD Be the Teacher: An Advanced Understanding of Body Composition Testing
Adviser: Kevin Pietro

Timothy Curry
Environmental and Resource Economics
Rebecca Kammerer
Nicolete Niemiec
Environmental Sciences
Robert Keefe
Forestry
Impacts of a Predator Free Area on Vegetation Growth and Health
Adviser: David Clarke

Marisa Butler
Nutrition
Profiling the Health, Wellness, and Nutrition of Collegiate Dancers
Adviser: Jesse Morrell

Andrew Butts
Tara Cieszka
Zoology
Predator Induced Plasticity in the Model Organism, Ambystoma mexicanum, the Mexican Axolotl
Adviser: Jessica Bolker

Jacqueline Carey
Zoology
Parasite Susceptibility of H. diversicolor, A. virens, and A. succinea
Adviser: Larry Harris

Ryan Chiesa
Environmental Sciences
Cutting Height Is Critical in Control of Invasive Glossy Buckthorn
Adviser: Thomas Lee

Nicole Clark
Biology
Role of the BinK Regulator in Symbiotic Bioluminescence Regulation
Adviser: Cheryl Whistler

Nina Coffey
Neuroscience and Behavior
Kadianne Tommasi
Marine, Estuarine and Freshwater Biology
Is There a Connection between Performance on Problem-Solving Tasks and Dominance Levels in Canis familiaris?
Adviser: Leslie Curren

Amelia Cullerot
Zoology
Does Rapid Mimicry during Play Predict Social Cognition in Domestic Dogs?
Adviser: Leslie Curren

Luke Daley
Biomedical Science
Does Type III Adenylyl Cyclase Regulate Memory Formation in Adult Mice?
Adviser: Xuanmao Chen

Molly Dawson
Biology
Differential Gene Expression Patterns Contributing to Color Mimicry within the Imitator Poison Dart Frog (Ranitomeya imitator)
Adviser: Matthew MacManes

Nicholas deDiego
Genetics
Genetic Interactions of Protein Phosphatase 2A Subunits in Roots during Salt Stress
Adviser: Estelle Hrabak

Matthew Derrick
Emily Ray
Marine, Estuarine and Freshwater Biology
Role of Daphnia in the Production of Toxic Lake Aerosols
Adviser: James Haney

Daniel Deschenes
Biochemistry, Molecular and Cellular Biology
Using Fluorometry to Create a Citizen-Based Monitoring System of Cyanobacteria
Adviser: James Haney

Anna Devitto
Ecogastronomy and Sustainable Agriculture and Food Systems
Assessing Coupled and Decoupled Aquaponic Systems through Water Quality and Nutrient Analysis
Adviser: Todd Guerdat
Madeleine DiIonno  
Community and Environmental Planning  
New Hampshire Citizen Planner Engaging Municipal Boards to Inform Content and Training in Rockingham County, NH  
Advisers: Molly Donovan, Mary Friedman

Lauren Dingle  
Environmental Conservation Studies  
Gregory Thompson  
Biochemistry, Molecular and Cellular Biology and Computer Engineering  
Stream Salinization by Road Salt and the Effects on local NH Macroinvertebrates  
Adviser: Annette Schloss

Lauren Dingle  
Environmental Conservation Studies  
Emily Landry  
Wildlife and Conservation Biology  
The Aerosolization of Biotoxins as a Potential Link to Amyotrophic Lateral Sclerosis  
Adviser: James Haney

Jake Donahue  
Michael Goulet  
Biomedical Science  
Sarah Piet  
Biochemistry, Molecular and Cellular Biology  
Regulation of the Angiogenic Inducer, CNN1, in the Bovine Corpus Luteum: A Preliminary Study  
Adviser: Paul Tsang

Colleen Donovan-West  
Nutrition and Psychology  
Megan Duranko  
Monica Ford Ortiz  
Psychology  
Erin Hart  
Kathryn Taylor  
Neuroscience and Behavior  
Behavioral and Biological Markers  
Underlying Vulnerability to Heroin Abuse  
Advisers: Sergios Charntikov, Robert Drugan

Monique Duchesne  
Community and Environmental Planning  
Joshua Gilmore  
Environmental and Resource Economics  
Hydration Stations: Reducing UNH’s Carbon Footprint  
Advisers: Mary Friedman, Patricia Jarema

Yusuf Ebrahim  
Biomedical Science  
A Study of p53 Cytoplasmic Sequestration in Acute Myelogenous Leukemia  
Patient Samples  
Adviser: Charles Walker

Kerrie Enger  
Genetics  
The Prevalence of Avian Malaria in Hawaiian Birds from 2014-2016  
Adviser: Jeffrey Foster

Elizabeth Faircloth  
Biology  
Is the Expression of Tissue-Degrading Enzymes in the Skeletal Muscle of Spiny Dogfish Correlated to Capture Stress?  
Adviser: Paul Tsang

Bradley Friedman  
Biology  
Ida Whitcomb  
Environmental Sciences  
Bioaccumulation of Cyanotoxins  
Microcystins and BMAA in Phytoplankton and Zooplankton  
Adviser: James Haney

Ashley Gagnon  
Biomedical Science  
Untangling the Effects of TadC in the Vibrio fischeri - Eupryma scolopes Symbiosis  
Adviser: Cheryl Whistler

Benjamin Gallo  
Marine, Estuarine and Freshwater Biology  
Exploring the Recent Dominance of the Spiny Dogfish (Squalus acanthias) in the Gulf of Maine  
Adviser: Erik Chapman

Benjamin Gallo  
Stephanie Sykes  
Marine, Estuarine and Freshwater Biology  
The Raised Gillnet: The Application of a Novel Gear Modification to Improve Fishing Efficiency and Selectivity  
Adviser: Erik Chapman

Jane Garofalo  
Health Management and Policy  
Exploring Campus Policies at UNH via the Healthy POINTS Audit  
Advisers: Laura Brown, Tanya Horacek, Jesse Morrell

Elizabeth Gill  
International Affairs and Sustainable Agriculture and Food Systems  
Exploring the Diversity of Tropical Pumpkin in Costa Rica  
Adviser: Andrew Ogden

Meghan Gillespie  
Emily Vulgamore  
Biology  
Measuring Somatic Mutation in the Nematode, Caenorhabditis elegans  
Adviser: John Collins

Anna Gruen  
Neuroscience and Behavior  
The Influence of Nitric Oxide on Rhythmic Feeding Behavior in Melibe leonina  
Adviser: Winsor Watson

Avianna Guerrero  
Biomedical Science  
Microwave-Assisted Glicosaminoglycans Labeling Using 1-phenyl-3-methyl-5-pyrazolone Followed by MALDI-TOF-MS Analysis  
Advisers: Qing Guo, Vernon Reinhold

Mackenzie Gunn  
Ecogastronomy and Marine, Estuarine and Freshwater Biology  
Stress Mitigation of Striped Bass during Transportation Using Salt and Anesthetic  
Adviser: David Berlinsky

Jessica Guptill  
Wildlife and Conservation Biology  
Testing the Utility of Dental Morphology in Refining Diet Group Classifications of Rodents  
Adviser: Rebecca Rowe

Anna Haber  
Genetics  
Profiling the Involvement of Polyamines in the Drought and Salt Tolerance of Rice  
Adviser: Subhash Minocha

Kyle Hacker  
Environmental Sciences  
Dissolved Gas Concentrations in Two Reservoir Systems  
Adviser: Wilfred Wollheim
Kelsey Harrington  
Genetics  
Identification of Signal Molecules from Frankia that Induced the Early Step of Nodule Development in Casuarina  
Adviser: Louis Tisa  

Crysta Harris  
Sustainable Agriculture and Food Systems  
Processing Pumpkin Varieties  
Advisers: James Loy, Andrew Ogden  

Erin Hart  
Kathryn Taylor  
Sara White  
Neuroscience and Behavior  
Daniel Hertia  
Biology  
Ambyr Lane  
Psychology  
A Quantitative Analysis of the Value-Enhancing Effects of Nicotine and Varenicline  
Adviser: Sergios Charntikov  

Molly Hartley  
Biomedical Science  
Using Comparative Transcriptomics to Classify Taste and Opsin Genes from the Evolutionary Ancient Cnidarian Hydra magnipapillata  
Adviser: David Plachetzki  

John Ianiri  
Wildlife and Conservation Biology  
Silviculture and Wildlife  
Adviser: Theodore Howard  

Molly Jacobson  
Wildlife and Conservation Biology  
Historical Changes in Distribution and Floral Associations of Bumble Bee (Apidae: Bombus) Species of Greatest Conservation Need in New Hampshire  
Adviser: Sandra Rehan  

Alison Jeffrey  
Biomedical Science  
The Relationship of Life Stage to Daily Social Patterns of Captive African Elephants (Loxodonta africana) and the Correlation of Handler Perceptions of Elephant Personality to Demonstrated Social Behaviors  
Advisers: Vanessa Grunkemeyer, Clare Padfield, Debbie Young  

Joel Jordan  
Genetics  
Loss of One Protein Phosphatase 2A A-Subunit Gene in Arabidopsis Is Partially Complemented by Other A-Subunit Genes  
Adviser: Estelle Hrabak  

Enrica Jossi  
Marine, Estuarine and Freshwater Biology  
Diel and Seasonal Changes in Old Durham Reservoir  
Adviser: James Haney  

Amir Kirata  
Wildlife and Conservation Biology  
Diet Composition of Nestling Prairie Warblers (Setophaga discolor) Raised in an Active Gravel Pit in Southeastern New Hampshire  
Adviser: Matthew Tarr  

Amber Kittle  
Sustainable Agriculture and Food Systems  
Effects of Garlic Mustard Invasion and Additional Abiotic Stressors on Fine Root Biomass of Native Tree Species  
Adviser: Serita Frey  

Victoria Kleiner  
Biomedical Science  
Mutational Analysis of Salt Tolerance in Casuarina Isolate Frankia  
Adviser: Louis Tisa  

Robert LeBel  
Biochemistry, Molecular and Cellular Biology  
Histological and Physiological Analysis of Neonatal Black 6 Mice Termination Caused by the Gene Ablation of Type 3 Adenylate Cyclase in Neuronal Primary Cilia  
Adviser: Xuanmao Chen  

Shuhan Long  
Biomedical Science  
Transitioning from Sun-Grown System to Shade-Grown System of Coffee: A Bioeconomic Model  
Adviser: Shady Atallah  

David Macomber  
Biomedical Science  
Rickettsia Bacteria in Michigan Tick Samples  
Adviser: Jeffrey Foster  

Shayna Mallat  
Neuroscience and Behavior  
Exploring the Prospect of Kin Recognition in the Planarian Species Dugesia dorotocephala  
Adviser: Leslie Curren  

Jacqueline Marshall  
Genetics  
Comparing the Regulation of Alternatively SplicedIsoforms of Ceramide Synthases in AML  
Adviser: Brian Barth  

Sarah Martini  
Genetics  
Seeing What Sticks: An Integrative Approach to Examine the Effect of Adhesion Mutation in Experimentally Evolved Vibrio fischeri Symbionts  
Advisers: Molly Pankey, Cheryl Whistler  

Jacob Mayerson  
Sustainable Agriculture and Food Systems  
Evaluation of Eastern Skunk Cabbage, Symlocarpus foetidus, as a Heat Source for Winter Grown Lettuce inside a Controlled Environment  
Adviser: Andrew Ogden  

Britta McCarthy  
Political Science  
Determining the Importance of Local Hops in Craft Beer  
Adviser: Shady Atallah  

Kelley McDonnell  
Environmental Conservation Studies  
Generating Random Samples for the Reference Data of Cropland Maps  
Advisers: Russell Congalton, Kamini Yadav
Danielle McGinty  
Biomedical Science  
Sequencing and Characterization of S-Acyl Transferase Mutants from Arabidopsis thaliana  
Adviser: Estelle Hrabak

Seth McNutt  
Biochemistry, Molecular and Cellular Biology  

Andrew Morin  
Biology  
The Genome of Mya, a Molluscan Model for p53-Related Animal Cancers  
Adviser: Charles Walker

Rebecca Migotsky  
Biology  
Is More Always More? Female Prairie Mole Crickets Ignore Vibrational Signals When Making Mate Choice Decisions  
Adviser: Daniel Howard

Steven Moroni  
Environmental Sciences  
A Historic Understanding of Urbanized Tree Growth at UNH  
Adviser: Mark Ducey

Allison Nash  
Neuroscience and Behavior  
The Distribution and Possible Roles of the Neuropeptide SCP in Melibe leonina  
Adviser: Winsor Watson

Carly Nelson  
Genetics  
Characterization of a Palmitoyltransferase Mutant in Arabidopsis thaliana  
Adviser: Estelle Hrabak

Valerie Nesom  
Ecogastronomy and Plant Biology  
A Step Further in Recipes for A New England Food Vision  
Advisers: Joanne Burke, Daniel Winans

Hieu Nguyen  
Biochemistry, Molecular and Cellular Biology  
Using Chemical Cross-Linking and Mass Spectrometry to Identify the Binding Mechanism of PU-H71 on Heat Shock Protein 90 (Hsp90) in Embryonic Stem Cells  
Adviser: Feixia Chu

Jenna O’del  
Wildlife and Conservation Biology  
Examining Animal Behavior through Dual Lenses: Indigenous Stories Predate but Also Highlight Western Ethological Principles in the Form and Function of Its Animal Characters  
Advisers: Carrie Hall, Daniel Howard

Connor Perry  
Biology  
Bioaccumulation of Cyanotoxins in the Blood of Common Loons (Gavia immer)  
Adviser: James Haney

Kira Rasmussen  
Animal Science  
Dairy Cow Preference for Free-Stall Barn versus an Outdoor Open Bark Mulch Pack  
Advisers: Peter Erickson, Anne-Marieke Smid, Marina von Keyserlingk

Alyssa Richman  
Biomedical Science  
Using Genome Wide Association Studies (GWAS) to Identify Candidate Genes Affecting Plant Root Phenotypes  
Adviser: Dennis Mathews

Emmalayne Riley  
Marine, Estuarine and Freshwater Biology  
Nutritional Quality of Lettuce Grown in Hydroponic System vs Aquaponic System  
Adviser: Todd Guerdat

Maegan Ryckman  
Zooology  
Imprinting Kin Recognition in Adult Male Guppies (Poecilia reticulata)  
Adviser: Leslie Curren

Rachel Sabol  
Biology  
Bicistronic Regulation of the CERS1/GDF1 Transcript  
Adviser: Brian Barth

Samuel Sanders  
Wildlife and Conservation Biology  
Effects of Camera-Trap Study Design on Avoidance Behavior in Coyotes (Canis latrans)  
Adviser: Leslie Curren

Chloe Schmir  
Nutrition  
Farmers’ Market Food Preferences and Food Habits among the Local Older Adults  
Adviser: Kevin Pietro

Rebecca Scialabba  
Biochemistry, Molecular and Cellular Biology  
Investigation of Aggregation Patterns of Soluble Htt Protein Complexes Using Analytical Ultracentrifugation with Fluorescence Detection System  
Adviser: Clyde Denis

Moussa Siri  
Environmental Sciences  
Effect of Land Use on Sediment Transport in Streams Draining Coastal Watersheds  
Adviser: Wilfred Wollheim

Frederique Sirois  
Biomedical Science  
Detection and Quantitative Analysis of Leptospirosis in Rat (Rattus rattus) Feces from the Kahanahaiki Forest of Oahu, Hawaii  
Advisers: Jeffrey Foster, Katy Parise

Kathryn Slebdonik  
Environmental Sciences  
Advisers: Alexandra Contosta, Andrew Grandy

Celeste Souza  
Biomedical Science  
Frankia Mediated Bioremediation of Dioxin Like Compounds  
Adviser: Louis Tisa

Kaitlyn Sterns  
Biomedical Science and Psychology  
Medial Prefrontal Neurons Encode Information about Stimuli Signaling Reinforcement  
Adviser: Robert Mair

Gianna Tempera  
Animal Science  
Effects of Feeding Sugar and Flax Oil on Performance of Holstein Cows Fed Flaxseed Meal  
Advisers: Andre Brito, Caren Ghedini
Mason Twombly  
Community and Environmental Planning  
*First Impressions: Somersworth*  
Advisers: Molly Donovan, Mary Friedman

Emily VanGulick  
Marine, Estuarine and Freshwater Biology  
*Neuroanatomical Mapping and RNA Expression and Localization in the Brain of a Basal Vertebrate, the Sea Lamprey (Petromyzon marinus)*  
Adviser: Stacia Sower

Emma Warren  
Neuroscience and Behavior  
*Comparing Cortical Activity of Prefrontal Neurons While Rats Perform Two Tasks with Different Decision Making Requirements*  
Adviser: Robert Mair

Ida Whitcomb  
Environmental Sciences  
*Effects of Land-Use Changes on Nitrate Concentrations in Four New England Watersheds*  
Adviser: Wilfred Wollheim

Shana Whitney  
Environmental Conservation Studies  
*Fungal Responses to Elevated Temperature and Soil Nitrogen Availability*  
Adviser: Serita Frey

Molly Womersley  
Zoology  
*The Larval Mass Effect and the Behavior of Calliphora vomitoria*  
Adviser: Leslie Curren

Sarah Grady  
Business Administration and Justice Studies  
Amy Stanieich  
Marketing

**Team: One Nation Under Paul**  
Adviser: Catherine Wolstromer

Shae Berry  
Michael Carbone  
Sara Cordova  
Catherine Eshbaugh  
Connor Finnegan  
Matthew Hotchkiss  
Kirsten LaFleur  
Ryan Leach  
Timothy Lefebvre  
Bryce Little  
Trevor Lunn  
Emily Morris  
Samantha Moussalli  
Brendan O’Connor  
Miguel Penalba Diaz  
Cody Twombly  
James Webber  
Business Administration  
Molly Genest  
Finance  
Joseph Perry  
Economics BA

**Team: Risky Business**  
Adviser: Samantha Blaine

Cassidy Bartlett  
Olivia Brigagliano  
Ciara Brooks  
Anthony Costalas  
Ethan Floyd  
Dylan Grocer  
Joshua Hollis  
Aaron Hunt  
Hunter Lambroff  
Thomas Licence  
Sean McDonough  
Matthew McEvoy  
Andrew Merchant  
Grace Monahan  
Kaley Patterson  
Nathan Rumford  
Business Administration  
Abigail Chapman  
Undeclared
Team: The 29ers
Adviser: Hayley Siemering
Samantha Carlen
Julia Dushane
Elizabeth Eilertson
Charles Gates
Ian Stocker
Emily Sullivan
Business Administration
Katherine Falzone
Emilia Favorito
Holly Grodt
David Jakubowski
Isabel Jimenez
Shawn Johnstone
Sarah Jones
Hanna Lawler
Sara Mihajlovits
Quynh Thao Nguyen
Kate Rosenblatt
Jordan Schille
Amelia Smiaroski
Escarle Turcios
Hospitality Management

Team: W1LDF1RE
Adviser: Ahed Alhamdan
Eric Berkemeier
Corey Bleau
Benjamin Chapin
Emma Conner
RyleeMckay Culverwell
Madeline Guay
Patrick Hamill
Laci Hanington
Emile Hobeika
Sierra Juneau
Bulat Khamidullin
Erick MacCormack
Ryan Quinn
Edward Speidel
Andrew Wilson
Business Administration
Evan Carpinella
Nicholas Gould
Undeclared
Joshua Jasneski
Statistics
Jamie Nelson
Business Administration and Entrepreneurial Studies

Grand Challenge: Food?

Team: Arnold Paulmer
Adviser: Katarina Gallogly
Gregory Abbott
Adam Chase
Matthew Coleman
Michael Cusolito
Ryan Donahue
Brendan Forauer
Kelsey Girard
Jaspreeet Kaur
Kevin Kerrigan
Ivana Korusiakova
Charles Lamplough
Kayleigh Moquin
Patrick Moriarty
Daniel Nadeau
Brett Noone
Michael Parker
Keegan Porter
Sierra Riedel
Kendall Robinson
Business Administration

Team: Catch 22
Adviser: Michelle Paulsen
Joseph Capodagli
Economics BA
Rachel Conroy
Jessica Gagnon
Alana Hovey
Zachary Jarvis
Madeline Karlberg
Amylee Lawn
Hunter Letendre
Tara Marand
Cameron Piana
Brian Rivet
Kyle Romero
Sara Sherburne
Cara Small
Hailey Studley
Jacob Woodrow
Business Administration
Savannah Hayes
Management
Nicholas Karas
Undeclared
Hannah Simard
Accounting

Team: Fuego 5
Adviser: Scout Pierce
Daniel Bamber
Jack Briggs
Jill Conry
Charles Davis
Jeffrey Foster
Caroline Hagan
Grant Harris
Emma Landry
Kijana Love
Cameron Novotny
Lily Pabo
Jack Rohrer
Dylan Salazar
Abigail Stearns
Caroline Tucker
Ponmani Vongsay
Business Administration
Eric Munson
Finance
Enoska Ventura
International Business and Economic and Psychology
Maxwell Williamson
Marketing
Team: No aPAULogies
Adviser: Kelsey Ulaskiewicz
Rachel Doherty
Management
Meghan McGonagle
Hospitality Management
Elizabeth Lane
Cynthia Liu
Mary McKenna
Savannah McMenemy
Amelia Milonas
Brayden Moreno
Kalyani Pearson
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Nicholas Rocchio
Jordan Ross
Brandon Sasserson
Zachary Schneeloch
Nathan Sheeler
Madeline Surette
Joseph Suriner
Justin Thomas
Brian Thorne
Christine Tringali
Business Administration

Team: Views from the 9
Adviser: Matthew Vossler
Alexa Arndolino
Taylor Barbagallo
Nora Biron
Benjamin Buchholz
John Cahill
Scott Callahan
Marissa Capone
Kayley Cedrone
Bethany Cherubini
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Anthony DeBeer
Samuel Eggert
Althea Gere
Peter Grande
Laura Mc Ardle
Erin McCarthy
Madison Murdick
Business Administration
Timothy McCarthy
Entrepreneurial Studies

Team: Burning Up
Adviser: Michael Ellison
Samuel Bennett
Accounting
Nicholas Celentano
Daniel Delaney
Daniel Dixon
Jack Doherty
Nola Hesby
Megan Kikosicki
Madeleine Lessard
Sebastian McLinden
Grace Meehan
Megan Menard
Taylor Nottebart
Peyton Osgood
Patrick Roy
Taylor Spica
Keith Styles
Business Administration
James Ordway
Economics BA

Team: The Great 28
Adviser: Brandilynn Barker
Colby Barrett
Jackson Burbic
Martin Hecka
Casey Hopkins
Meghan McAvoy
Arielle Seavey
Ryan Sherman
Carly Sikorski
Philip Sy
Christopher Torname
Matthew Townsend
Kimberly Tsui
Shay Waldsmith
McLane Wood
Business Administration
Bretton Belden
Economics BS and English/Journalism
Ryan Gallant
Undeclared
Luke Gouldsbrough
Marketing

Patrick Morse
Economics BS
Nicholas Wyman
Finance

Team: Almost Legal
Adviser: Alexandra Flagler
Niccole Balesteri
Morgan Dudley
Megan Elwell
Justin Fregona
Thomas Frigullette
Corey Gallagher
Patrick Grasso
Dylan Hogan
Nicholas O’Neil
Ayden Ricker
Joseph Sacco
Samrawit Silva
Michael Sullivan
Emily Tennis
Gavin Tierney

Brendan van Riemsdyk
Courtney White
Ryan Wickey
Business Administration
Joseph LaRocca
Economics BS
Anthony Rizzo
Business Administration and Management Marketing

Team: Elite 8
Adviser: Kyle Hurley
Haley Burns
Catherine Francis
Nguyen Phuong Khanh Huynh
Derin Josephson
Phillip Kimera
Brian Letourneau
Alexandra Lipinski
Annalee May
Brennan McGuirk
Craig Millard
Benjamin Moy
Conor Osborn
Olivia Patrick
Korey Paull
Isabella Zampieri
Business Administration

Grand Challenge: Medical Breakthroughs
Simran Kaur  
Bailee McNamara  
Kevin Murphy  
Business Administration  
Amanda Berry  
Accounting  
Jeffrey Campanile  
Finance  
Kelly Cheng  
Undeclared  

Team: Legion of Business  
Adviser: Nicholas Doucette  

Eric Buckenmaier  
Finance  
Gwenyth Hale  
Gianna Lanzillo  
Vincent LoBuono  
Madelyn McAteer  
Erinn McCarthy  
Porter McManus  
Mark Melanson  
Jordan Murray  
Andrew Palmer  
Cameron Richall  
Thomas Roark  
Reid Shostak  
Lauren Silver  
Maxwell Whyman  
Business Administration  
Nicholas LaCreta  
Finance and Information Systems  
Management  
Brendan Paulsen  
Accounting  
Nicholas Stuart  
Entrepreneurial Studies and Finance  
Derek Sturm  
Information Systems Management  

Team: Paul Patriots  
Adviser: Jordan Collins  

Matthew Alexander  
Katherine Auger  
Noah Auger  
Madison Blais  
Victoria Burns  
Timothy Collins  
Connor Czerepuzko  
Colin Daly  
Kallie Dougherty  
Paige Duffy  

Grand Challenge: Threats from Cyberspace  

Team: Fire Proof  
Adviser: George Pantelis  

Alexei Baranov  
Jack Barnes  
Autumn Becker  
Collin Belt  
Sarah Cassandro  
Alyson Cote  
Patrick Cross  
Micheal Curley  
Margaret Dauphinais  
Maxamillian DiBella  
Zachary Doss  
Nicholas Doubleday  
Jamie Driscoll  
Mohamed Eassy  
Andrew Iannuzzi  

Team: Legion of Business  
Adviser: Nicholas Doucette  

Eric Buckenmaier  
Finance  
Gwenyth Hale  
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Information Systems Management  

Team: Paul Patriots  
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Colin Daly  
Kallie Dougherty  
Paige Duffy  

Simran Kaur  
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Kelly Cheng  
Undeclared  

Team: Legion of Business  
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Derek Sturm  
Information Systems Management  

Team: Paul Patriots  
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Noah Auger  
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Victoria Burns  
Timothy Collins  
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Colin Daly  
Kallie Dougherty  
Paige Duffy  

Simran Kaur  
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Finance  
Kelly Cheng  
Undeclared  

Team: Legion of Business  
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Nicholas LaCreta  
Finance and Information Systems  
Management  
Brendan Paulsen  
Accounting  
Nicholas Stuart  
Entrepreneurial Studies and Finance  
Derek Sturm  
Information Systems Management
Team: Stop, Drop, and Roll Cats
Adviser: Dakota Hippern
Nicholas Cambra
Cameron Chrystal
Devin Cowhig
Corey Lynn Danby
Luke Doverspike
John Driscoll
Caroline Dunn-Packer
Tiemo Fenner
William Fraser
Christian Goodwin
Riley Green
Jeffrey Kearns
Nicholas Kenney
Jennifer Luetters
Carter Mercer
Skyla Mrosk
Harrison Zarak-Croke
Business Administration
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Team: The Economists
Adviser: Samantha Barrett
Nooran Alhamdan
Andrew Bisbee
Michael Brideau
Trevor Deane
Sarah Hobbs
Alexander McKenna
Sarah Nadeau
Daniel Norcross
Charlotte Sweetman
Economics BA

Grand Challenge: Water Is Life
Team: F1R3 Goodell
Adviser: Kevin Johnson
Joseph Colasuono
Makenzie Donahue
Carly Dotson
Brendan Gallagher
Emma Gilmartin
Kyle Gourley
Andrew Groch
Ri Gulotta
Philip Hughes
Lindsey Innaimo
Timothy Larkin
Dana Levine
Kyle Lorenz
Sarah MacEachern
Nicole MacLellan
Olivia MacLellan
Kelly Marshall
Emily O’Connor
Justin O’Donnell
Evan Royer
Peter Steckowych
Business Administration

Team: The Fire Cats
Adviser: Timothy Closson
Alonzo Addae
Aidan Brown
Regan Carriere
Alyssa Colbert
John Crawford
Dylan Feliciano
Christopher Grande
Evan Horn
Jason Hughes
Julia Hyatt
Joseph Lavery
Christian Lupoli
Justin Maguire
Austin McKenna
Blain Ouellette
Erica Perkins
William Pollard
Victoria Rice
Business Administration

Team: The Economists
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Nooran Alhamdan
Andrew Bisbee
Michael Brideau
Trevor Deane
Sarah Hobbs
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Daniel Norcross
Charlotte Sweetman
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Teresa Chen
Joseph Hook
Charles McKelvey
Richard Planchet
Andrea Scarfo
Evrain Sevingil
Jessica Shah
Economics BS
Isaiah Dubois
Amanda Lee
Business Administration
Andrew Griffin-Leon
Economics

Team: FIRE Team 6
Adviser: Jon Tamposi
Robert Anderson
Joshua Andonian
Michael Dateo
Erin DeWolfe
Claire Durfee
Benjamin Factor
Jared Joy
Kyle Jutras
Kristine Keller-Miller
Page Laurendeau
Kathleen McDermott
Edward McNulty
Divyaasree Mudhireddy
Hanzla Sheikh
Cole Spencer
Alyson Veo
Emily Vien
Chasia Warshow
Business Administration
Daniel Pinheiro
Economics BA
Devin Pronco
Accounting
**Team: FORTUNE 500**
Adviser: Julianne Calef

Elizabeth Brandt
Ryan Brooks
Alexander Haslam
Heather Hill
Sabrina Jawors
Alexa Ladue
Lauren Lumbra
Theresa MacDowell
Sarah Mahon
Daniel McDougall
Nora Miller
Corey Mills
Andrew Noyes
Daniel O’Leary
Reed Pfeffer
Nathan Ralston
Hannah Saulnier
Jillian Sellers
Nathalie St. Pierre
Amanda Tongue
Dylan Whitaker
Business Administration

**Team: The 7 Wonders of Paul**
Adviser: Alexys Gilcreast

Jessica Doherty
Jonathan Dryja
Charles Dunod
Holly Eisenberg
Nicholas Fay
Alexandra Fogarty
Stefanie Green
Devon MacLeod
Valerie Mattice
Dylan McAteer
Christopher McCarthy
Ian Moscaritolo
Reece Paquette
Christina Pescatore
Kyle Sedler
Liam Seerack
Laura Shea
Bridget Stockwell
Lucas Townsend
Ryan Weinberg
Cole Whitaker
Business Administration

**Team: The Wolf of Paul Street**
Adviser: Hannah Coffey

Jared Farley
Daniel Johnson
Daniel Krivitsky
Kevin Lawton
Julie Montgomery
Sean Psaledas
Madeline Ragno
Juliana Rinaldi
Gregory Surgenor
Robert Sweeney
Matthew Sylvestre
Russell Tam
Skyler Tarczali
Clare Wetmore
Paul Wolstromer
Samantha Woodward
Jeremy Worden
Shiyue Yuan
Qixin Yang
Business Administration

**Chemistry Department Poster Exhibition**

**Friday, May 5**
3–4:30 p.m.
Parsons Hall, Southwest Lobby

The Chemistry Department Poster Exhibition is the result of students’ year-long senior thesis research in such areas as organic, inorganic, physical or analytical chemistry, and under the direction of their research adviser.

**Graham Beaton**
Chemistry
Synthesis and Characterization of Porphyrin Containing Nanoparticles to Model Heme Proteins
Adviser: Samuel Pazicni

**Robert Biro**
Chemistry
Precise Spacing of Pendant Vinyl Crosslinking Functionality along a Polymer Chain
Adviser: John Tsavalas

**Jennifer Chouinard**
Chemistry
Exploring the Synthesis and Internal Cross-Linking Abilities of Single Polymer Chains via Diels-Alder Reactions
Adviser: Erik Berda

**Luke Daly**
Biomedical Science
Does Type III Adenylyl Cyclase Regulate Memory Formation in Adult Mice?
Adviser: Xuanmao Chen

**Marissa DelConte**
Chemistry
Forensic Analysis by Scanning Electron Microscopy
Adviser: Patricia Wilkinson

**Madison Dombrowski**
Chemistry
Synthesis of a Bifunctionalized Bipyridine Ligand for Iron Coordination and Chain-Transfer Polymerizations
Adviser: Samuel Pazicni
Ann Manchester Kelley
Nursing Inquiry Day

Tuesday, May 9
8:15 a.m.–4 p.m.
Memorial Union Building
Granite State Room

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

Lauren Barker
Nursing
Self Care of T2DM Patients with Chronic Wounds in Ghana
Adviser: Gene Harkless

Celine Boutin
Nursing
Stress Levels and Their Relationship to Coping Mechanisms and Personality Traits in Nursing Students
Adviser: Rosemary Taylor

Joanna Foos
Nursing
The Effects of Alcohol Prep Pads and Blood Drop Number on Capillary Blood Glucose Results
Adviser: Susan Fetzer

Alexa Gilmore
Nursing
Women’s Experiences in the CenteringPregnancy™ Program
Adviser: Joyce Cappiello

Mary Kate Visnic
Nursing
Neutropenic Diet: Standardizing the Practice Using Evidence-Based Practice Methods
Adviser: Gene Harkless

Eleni Zotos
Nursing
Urinary Incontinence among Female High School Athletes: A Pilot Study
Adviser: Gene Harkless

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

Championship Round

Tuesday, May 9
1 – 5:30 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.
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 2017 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 and Other Research Advisers
Hamel Center for Undergraduate Research
Memorial Union Building Administrative Staff
Town of Durham, Public Works
UNH Advancement
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

Department of Chemical Engineering
Department of Civil Engineering
Department of Computer Science
Department of Mechanical Engineering
The Joan and James Leitzel Center for Mathematics, Science, and Engineering Education
UNH InterOperability Laboratory
UNH Phi Beta Kappa Chapter
Office of the Senior Vice Provost for Academic Affairs

Thanks to the 2017 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
Kate Berry, Associate Director, Development, University Initiatives Development
Summer Cook, Associate Professor, Kinesiology
Sarah Daigle, Event Coordinator, Paul College USC
Katie Donnelly, Co-chair, All Colleges Undergraduate Research Symposium; URC Coordinator, Hamel Center for Undergraduate Research
Molly Doyle, Co-chair, All Colleges Undergraduate Research Symposium; Administrative Director, Hamel Center for Undergraduate Research
Nora Draper, Assistant Professor, Communication
Andrew Earle, Chair, Holloway Competition; Assistant Professor, Marketing
Kate Gaudet, Assistant Director, University Honors Program
Hannah Hamalainen, Geospatial and Earth Sciences Librarian; Assistant Professor
Tara Hicks Johnson, Co-chair, ISE Symposium; Outreach Specialist, CCOM
Scott Jones, Director of Client Services, CPA
John Larsen, Associate Director, UNH Admissions
Eileen Laskoski, Marketing Events Manager, Paul College
Myles Lynch, Graduate Assistant/Coordinator, Graduate Research Conference
Laura Martin, Assistant Director, Donor Stewardship, Advancement
Cari Moorhead, Chair, GRC; Interim Dean, Graduate School
Tom Payne, Chair, Naked Arts; Associate Professor, English
Beth Potter, Manager, Research & Outreach Communication, CPA
Dan Reagan, Chair, UNH Manchester URC; Associate Dean, Academic Affairs, UNH Manchester

Chris Reardon, Professor, Political Science
Richard Smith, Co-chair, COLSA URC; Assistant Professor, Natural Resources and the Environment
Sean Stewart, Program Coordinator, Paul College, Undergraduate Advising, First-Year Innovation and Research Experience (FIRE)
Molly Tetreault, Director, Connors Writing Center; Adjunct Faculty, English
Paul Tsang, Faculty Director, Hamel Center for Undergraduate Research; Professor, Molecular, Cellular and Biomedical Sciences
Pam Wildes, Co-chair, COLSA URC; Administrative Coordinator, COLSA, MCBS
Mary Young, Project Manager, Services Enhancement Initiatives, Dean's Office, UNH Manchester

2017 URC Event Chairs/Co-Chairs:
Mike Annichiarico, Student Composers’ Concert
Carole Berry and Tara Hicks Johnson, Interdisciplinary Science & Engineering Symposium
Anne Broussard, CHHS Grimes Award Competition
Sarah Daigle and Eileen Laskoski, Paul College USC
Katie Donnelly and Molly Doyle, All Colleges Undergraduate Research Symposium
Andrew Earle and Eileen Laskoski, Paul College Holloway Prize Competition; Nelson Poster Competition
Diane Freedman, Honors English URC
Steven Gorman, Thompson School of Applied Science Student Showcase
Ben Harris and Maureen Gillespie, Psychology Department George M. Haslerud URC
Jessica Lepler, History Department URC
Cari Moorhead and Myles Lynch, Graduate Research Conference
Tom Payne, Naked Arts—Creativity Exposed!
Dan Reagan and Mary Young, UNH Manchester URC
Cindi Rohwer, Chemistry Department Poster Exhibition
Joanne Samuels, Ann Manchester Kelley Nursing Inquiry Day
Nick Smith, Philosophy Department URC
Richard Smith and Pamela Wildes, COLSA URC
Sean Stewart, Paul College FIRE URC
Avary Thorne, Languages, Literatures, and Cultures Department URC
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