Welcome to the Undergraduate Research Conference at the University of New Hampshire. In its seventh year, the URC celebrates the research, scholarship, and creative activities of our undergraduate students. Students in all disciplines present their faculty-mentored projects to audiences of peers, parents, faculty, administrators, and staff through live performance, oral and poster presentations, or displays. We are pleased that the URC provides a professional venue to showcase the results of their hard work.

We take pride in the efforts of our students and in the skill and dedication of the faculty who have guided them. Undergraduate research is one of the distinctive features of the University of New Hampshire. These extraordinary learning opportunities vary from field studies to empirical research to outreach scholarship to creative works. This research experience provides our undergraduate students with the unique opportunity to gain skills essential to pursuing graduate study and meaningful careers. There are also benefits for the faculty, who report that the teamwork essential to these efforts strengthens instruction and lays the groundwork for future challenges.

Join us in commending some of our most accomplished students. We encourage you to read the posters, listen to presentations carefully, and ask questions of the student researchers. We believe you will be impressed with their answers and the depth and breadth of their knowledge and understanding.

Ann Weaver Hart, President, University of New Hampshire
John D. Aber, Vice President, Research and Public Service
The Undergraduate Research Conference (URC) is now a highlight of every spring semester and has become a signature event for our University. Our goal is to provide a unique opportunity for undergraduate students to inquire and discover. We do this by providing a professional venue for our undergraduate students to present faculty-mentored undergraduate research, scholarship, and creative performances. These faculty-student partnerships are a vital component of higher education. They enrich undergraduate teaching and learning by providing opportunities for students to experience the workings of their discipline firsthand.

There are several benefits for students and faculty who participate in the Undergraduate Research Conference. For example, URC participation highlights and promotes the awareness of undergraduate research, scholarship, and creative work occurring in a range of disciplines across campus. By presenting in professional venues, students are encouraged to pursue advanced study and academic careers. The weeklong schedule of events communicates and celebrates the powerful outcomes resulting from student-mentor relationships. Finally, the URC fosters a multidisciplinary and multicultural community of researchers, scholars, and artists linked by a common enthusiasm for life-long learning.

The growth and the success of the URC rests upon the enthusiastic participation of students and the dedication of faculty and staff. This year the URC is pleased to host a campus and community lecture by Laurie Garrett on pandemic security, an expanded Festival of Creativity and Culture, and a broader range of events at the UNH Manchester campus. In addition, guest presenters from Elizabeth City State University in Elizabeth City, North Carolina, enrich this year’s conference. We are pleased to welcome these undergraduates and their faculty mentors who collaborate with UNH researchers in a productive research and education partnership.

In all of these activities, the URC embodies the UNH mission to combine the living and learning environment of a small New England liberal arts college with the breadth, spirit of discovery, and civic commitment of a land-, sea-, and space-grant research institution.

Eleanor Abrams, Cameron Wake,
Director of Outreach Scholarship, Chair, URC Planning Committee
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All events are free and open to the public.
Accessibility accommodation requests may be directed to Lynne Cooper at (603) 862-1997.
URC ‘06 Calendar

Friday, April 21
6–8 p.m.
2006 Senior B.A. and B.F.A.
Exhibition and Preview Reception
The Art Gallery,
Paul Creative Arts Center ①

7 p.m.
Pulitzer Prize-winning author
Laurie Garrett, Keynote Lecture
“Pandemic Security”
Johnson Theatre,
Paul Creative Arts Center ①
Seating is limited. To reserve free
tickets call (603) 862-0598 or visit
www.unh.edu/urc.

Tuesday, April 25
9–11 a.m.
UNH Manchester Undergraduate
Research Conference
Oral Presentations
UNHM Auditorium

12:40–2 p.m.
History Undergraduate Presentations
Horton Social Science Center, ②
Room 201

Wednesday, April 26
10:30 a.m.–Noon
Seacoast Reads Exhibition
MUB, Rooms 330, 332, 334 ③

UNH Office of Community Service
Partnerships
MUB, Rooms 330, 332, 334 ③

Thompson School Community Service
& Leadership Program
MUB, Rooms 330, 332, 334 ③

11 a.m.–2 p.m.
Thompson School Undergraduate
Student Showcase
“Stacey’s” at Cole Hall ④

2–5 p.m.
Interdisciplinary Science and
Engineering Symposium
Morse Hall Atrium ⑤

4–6 p.m.
UNH Manchester Undergraduate
Research Conference Poster
Presentations
UNHM, 3rd Floor Lounge

Thursday, April 27
11 a.m.–1 p.m.
UNH Manchester Student Film
Presentations
UNHM Auditorium

Friday, April 28
9 a.m.
Breakfast with University President
Ann Weaver Hart & Vice President for
Research and Public Service John Aber
MUB, Granite State Room ③

9:30 a.m.–Noon
Vice President’s University-wide
Symposium Poster and Oral
presentations
MUB ③

12:30–3:30 p.m.
School of Health and Human Services
Grimes Award Competition
Pettee Hall, Room G10 ⑦

1–4 p.m.
Psychology George M. Haslerud
Undergraduate Research Conference
Conant Hall, Room 101 ⑧

3:30–5:30 p.m.
Festival of Creativity and Culture
Hennessy Theatre,
Paul Creative Arts Center ①

4–8:30 p.m.
Philosophy Undergraduate Research
Conference
The Waysmeet Center, ⑨
15 Mill Road

8 p.m.
Student Composers Concert
Bratton Recital Hall,
Paul Creative Arts Center ①

Saturday, April 29
7:45 a.m.–2 p.m.
15th Annual COLSA Undergraduate
Research Conference
New England Center, Great Bay Room ⑩

ADDITIONAL EVENTS:

Wednesday, May 3
8 a.m.–2 p.m.
Whittemore School of Business
and Economics
Paul J. Holloway Business Plan
Competition
Holloway Commons, ⑩
Piscataqua and Swampscott Rooms

8 a.m.–12:30 p.m.
Mary Louise Fernald Nursing
Research Symposium
MUB, Strafford Room ③

Friday, May 5
2:30–4 p.m.
Chemistry Department Poster
Exhibition
Parsons Hall, Iddles Wing ⑫
 Campus Map

BUILDING KEY

1. Paul Creative Arts Center
2. Horton Hall
3. Memorial Union Building (MUB)
4. Cole Hall, TSAS
5. Morse Hall
6. Hamilton Smith Hall
7. Pettee Hall
8. Conant Hall
9. Waysmeet Center
10. New England Center
11. Holloway Commons
12. Parsons Hall

UNH Manchester
400 Commercial Street
Manchester, NH
For directions to UNH Manchester go to
www.unhm.unh.edu/directions.html
or call (603) 641-4321.
The Undergraduate Research Conference is proud to present

**Laurie Garrett on “Pandemic Security”**

Garrett is an authority on newly emerging and re-emerging diseases, public health, and their effects on foreign policy and national security. She is a senior fellow for global health at the esteemed Council on Foreign Relations and is the author of the best-selling books *The Coming Plague: Newly Emerging Diseases in a World Out of Balance* and *Betrayal of Trust: The Collapse of Global Public Health.*

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**2006 Senior Bachelor of Arts and Bachelor of Fine Arts Exhibition Preview Reception**

**FRIDAY, APRIL 21**

6–8 PM

**The Art Gallery, Paul Creative Arts Center**

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

Participants include:

*B.A. Studio Art degree candidates:*
Tenner Bradley, Painting
Shane Chick, Wood/Furniture Design
Adam D. Getz, Ceramics
Rachel Huckins, Ceramics
Sara Korpi, Wood/Furniture Design
Bethany Lowe, Painting
Kathleen McCaffery, Ceramics
Alexis McConnell, Photography
Erin Elizabeth Miley, Ceramics
Kate E. Muckenhrn, Photography
Rebecca O’Brien Pani, Painting
Brandy Reeves, Ceramics

*B.F.A. degree candidates:*
Thomas C. Call, Photography
Sofie H. Larsen, Painting
Kathryn Niboli, Painting
Toby M. Schreier, Printmaking
Rebecca Simpson, Painting

This exhibit runs from April 22 through May 20 (closed May 4–9).
UNH Manchester Oral Presentations

TUESDAY, APRIL 25
9–11 AM
UNHM Auditorium

The oral presentations are formal scholarly lectures and/or multimedia presentations reflecting students’ research interests.

Clayton Groves
Major: Psychology
Use it or Lose it, a Discussion of Adult Psychology and Service Learning
Adviser: Alison Paglia

Troy Maynard
Major: Communication Arts
Survivor, the Ultimate Survivor of Pop Culture
Adviser: Skip Tenczar

Devon Mercer
Major: History
Wrongful Life Cases-The Role of the Courts in Individual Morality
Adviser: John Cerullo

Kristen Montour
Major: Psychology
Internship at the New Hampshire Task Force on Women & Addiction
Adviser: Alison Paglia

Catherine Overson
Major: Psychology
The Role of Eros in Plato and Freud
Adviser: Terry Savage

Catherine Overson
Major: Psychology
Perinatal Loss: Possible Caregiver Barriers
Adviser: Gary Goldstein

History Undergraduate Research Conference

TUESDAY, APRIL 25
12:40–2 PM
Horton Social Science Center, Room 201

At this event, the history department hosts a panel of undergraduate history majors, who present the research projects from their academic classes, research seminars, and Honors theses.

Andrew Begley
Major: History
Disintegration: Ross Barnett, the Kennedys, and the Politics of Integration at Ole Miss
Adviser: Harvard Sitkoff

Caitlyn Daniuk
Major: History
Anti-Catholicism and the Ku Klux Klan in New Hampshire
Adviser: Jeff Bolster

Christopher Eaton
Major: History
An Unfortunate Lack of Knowledge: The United States, World War II, and the Gulag
Adviser: Kurk Dorsey

Roger Eichorn
Major: History and Philosophy
Theories of Historical Knowledge
Adviser: Jennifer Selwyn

Seacoast Reads Exhibition

WEDNESDAY, APRIL 26
10:30 AM–NOON
MUB, Rooms 330, 332, 334

Through the Seacoast Reads program, UNH students from all academic disciplines tutor elementary school children in the subjects of literature and writing. Twice each week, student volunteers head into schools and after-school programs across the seacoast area of New Hampshire to work with children. Seacoast Reads is one of the largest service and outreach organizations on campus. Since 1998 nearly 1,000 UNH students have volunteered for the program.

UNH students serving Children in New Hampshire Schools

Special guest: Abby Pyle, VISTA Coordinator of Seacoast Reads, Department of Education
Advisers: John J. Carney and Grant Cioffi
Thompson School Community Service and Leadership Program

WEDNESDAY, APRIL 26
10:30 AM–NOON
MUB, Rooms 330, 332, 334

The Community Service and Leadership Program is an innovative associate degree and diploma program that prepares students of all ages to work effectively within community organizations and to be active, influential citizens.

Amanda Adams
Thomas Brennan
Peter Dunbar
Andrew Grassie
Vicki Hebert
Jennifer McGrath
Melissa Podaski
Major: Community Service and Leadership
Senior Portfolios of Learning, Service, and Leadership
Advisers: Tim Barretto and Kate Hanson

Marc Ambrosi
Jane Borkland
Jeremy Bourgeois
Darren Cantor
Jessica Carter
Oliver Fisher
Christopher Forbes
John Brady
Erica Jannino
Andrew Jensen
Nicole LaBranche
Kelly McGrail
Melissa Morris
Tyler Parkhurst
Lori Parent
Emily Quigley
Erica Raizes
Brian Reed

Marybeth Schofield
James Sorbie
Kerrie Sullivan
Robert Sullivan
Alicia Swain
Louisa Turcotte
Major: Various majors
Presentation of Partnership Projects with Cornucopia Food Pantry
Advisers: Deborah Sugerman and Kate Hanson

Office of Community Service Partnerships

WEDNESDAY, APRIL 26
10:30 AM–NOON
MUB, Rooms 330, 332, 334

This display showcases the work of student service organizations and student groups engaged in community and service-learning projects throughout the year. These activities range from spring break service trips to campus-wide events such as Relay for Life.

Adviser: Marianne Fortescue

Thompson School Undergraduate Student Showcase

WEDNESDAY, APRIL 26
11 AM–2 PM
“Stacey’s” in Cole Hall

Thompson School of Applied Science students translate academic instruction into practical presentations at this year’s URC. Join selected students who showcase their expertise in such diverse areas as dairy management, restaurant management, forest management, and tropical floral design.

Jennifer Bleakney
Johanna Bleakney
Amanda Brown
Nicole Verville
Major: Applied Animal Science in Dairy Management
CREAM (Cooperative Real Education in Agricultural Management): Experiential Education at its Best
Adviser: Andrew Conroy

Ryan Audet
Josh Bennet
Andy Crowder
Shawn Fales
Dave Faller
Ed Frank
Barn Heckler
Caleb Holden
Matt Lassonde
Chris Plourde
Mary Beth Schofield
Holly Spinney
Chris Taylor
Marie Wright
Major: Civil Technology: Architectural Technology
Alumni Co-housing at UNH
Adviser: Guy Petty

Tania Drown
Andrew Friedman
Henry Stebbins
Major: Food Services Management in Restaurant Management
Restaurant Management Students Present a Special Buffet Featuring International Fare
(Buffet served 12–1 PM, Public Invited—Reservations Recommended, 862-1025)
Advisers: Charles Caramihalis and Eugene Alibrio
Michael Simmons  
Major: Forest Technology  
*Using ArcView GIS (Geographic Information Systems) Software and the GRANIT Database to Map Natural Resources*  
Adviser: Matthew Chagnon

Rebecca Collins  
Jason Goodall  
Mary Nicholson  
Amenda Pereira  
Jay Whitehouse  
Major: Horticultural Technology  
*Horticultural Technology Student Floral Designs: Tropical Designs*  
Advisers: John Hart, Rene Gingras, and Dana Sansom

Interdisciplinary Science & Engineering (ISE) Symposium  
**WEDNESDAY, APRIL 26 2–5 PM**  
**Morse Hall Atrium**  
Learn about the exciting research underway in UNH’s science and engineering disciplines at the ISE Symposium, featuring the presentations of engineering students’ capstone experiments and interdisciplinary science research from departments across campus. This event features poster presentations and an awards ceremony.

Christopher Anderson  
Jeremy Blanchard (team leader)  
Jason Finnie  
Michael Magri  
Phillip Maurice  
Lisa Panneton  
David Story  
Sarah Stott (team leader)  
Major: Mechanical Engineering  
*Mini Baja*  
Adviser: Gerald Sedor

Lawrence C. Reardon  
*Associate Professor*  
“Leave your academic baggage at the door” might be a good sign for the entrance to Chris Reardon’s office. In his 15 years at UNH, he’s witnessed thousands of students ditch their notions of the “chore” of learning. “Suddenly, they begin discovering new things about the world and about themselves,” he says, “and they realize ‘academics’ are not about the grades and quizzes, not a burden they must bear, but something they find fascinating.”

He describes his students as the Indiana Joneses of the undergraduate world. “They are on a quest,” he says. “Not for lost treasures, but for knowledge.” Reardon works with students in the increasingly popular international affairs dual major where, on location, students examine such issues as corruption in Kenya, reproductive rights in communist nations, race, terrorism, cultural tensions, and more.

At this week’s URC you’ll recognize their work by the project titles. They can be attention-getting: “Switzerland is Missing...from the European Union!”; provocative: “A Nuclear Iran?”; even seemingly ironic: “Euskal Herria: A Culture in Search of a Nation.”

Where do the student explorers find inspiration for these timely, global investigations? Simply by opening their eyes to the world around them. “When they go abroad they should be thinking about what intrigues them,” says Reardon. Upon return, the first thing they have to do is define the question, and the research flows from that point to the point at which they culminate their explorations by defending their findings to a greater audience.

“Presenting helps them complete the learning process,” says Reardon. “It’s a fantastic opportunity for them to disseminate their knowledge.”

What’s the payback for this faculty mentor? “I learn something every day,” he says. “There are students here who have had experiences that I’ve never had. I can teach them how to analyze, but when they develop their argument, they bring their own perspective and experiences.

“I’m extremely proud of these people,” adds Reardon. “They show what somebody at a public university can do, and that’s top notch work.”
Mark Joseph ’06

Can Kant Accommodate Supererogation?

Can Immanuel Kant’s ethics accommodate the moral category of the supererogatory, that is, the class of actions which typically go beyond the call of duty and exemplify human beings at their very best? That’s the question senior Mark Joseph set out to answer in his investigation of the philosopher’s ethical framework.

“The roughewn conclusion,” he says, is that Kant can accommodate the supererogatory, in a limited sense. But “for a more in-depth analysis of my conclusion, go to the philosophy department’s undergraduate research event.”

When Joesph is not knee-deep in intellectual reasoning, he is studying another one of his many interests: scratch baking. Can’t stomach Kant? Perhaps his Italian herb and honey whole-wheat bread might be the draw for you.

Follow your nose to the Waysmeet Center on Friday, April 28, 4:00–8:30 p.m., 15 Mill Road.
John Brackett  
David Ciasulli  
Cameron Ciccone  
David Hopkins (team leader)  
Brett Schuster  
Ervin Weed (Electrical & Computer Engineering)  
Major: Mechanical Engineering  
SAE Formula Vehicle  
Adviser: May-Win Thein

Paul Bruillard  
Major: Physics and Mathematics  
Fast Neutron Imaging Telescope  
Adviser: James Ryan

Liz Burakowski (Earth Sciences)  
Stephanie Jelliffe (Education)  
Cory Morin (Geography)  
Alex Sink (Natural Resources)  
The Effects of an Urban Environment on Cloud Formation and Temperature  
Advisers: George Hurtt and Cameron Wake

Berkley Cline (Biology)  
Whitney McCormack (Undeclared)  
Samuel Sylvester (Forestry)  
Thomas Welsh (Forestry)  
Benjamin Wilson (Biology)  
Solving the Mystery of Salt in the Portsmouth Coffin Woods  
Adviser: Barrett N. Rock

Salimah Cogbill (special guest from Elizabeth City State University)  
Major: Biology  
Shoot Regeneration from Cotyledons of Rapid-Cycling Fast Plants  
Adviser: Cheryl Lewis (ECSU)

Chelsea Corr  
Major: Earth Sciences  
Measurements of Aerosol Chemical Composition and Optical Properties in the Polluted Summer Marine Boundary Layer  
Adviser: Robert Griffin

Scott Crawford  
Jonathan Oppelaar  
Major: Computer Engineering  
FFT Component Project  
Adviser: Andrzej Rucinski

Adam Csakai  
Major: Chemistry  
Tandem Chain Extension Aldol Reaction of β-Keto Imides  
Adviser: Charles Zercher

Matthew Cullen  
Major: Electrical Engineering  
Port Security  
Adviser: Andrzej Rucinski

Elie Dagher  
Major: Computer Engineering  
FFT Library Component: 16 Bits Complex Multiplier  
Adviser: Andrzej Rucinski

Jason Dahlstrom (Computer Engineering)  
Christopher Glynn (Electrical Engineering)  
Computer Brain Interfaces and Computational Modeling  
Adviser: Kent Chamberlin

Matthew Derov  
Major: Mechanical Engineering  
Validation of a Stress Based Failure Criterion in Sheet Metal  
Adviser: Brad Kinsey

Susan Deuell  
Major: Computer Engineering  
Standard Test Access Port and Boundary-Scan Architecture: The IEEE 1149 Standard  
Adviser: Kuan Zhou

Sarah Eisenlord  
Major: Microbiology  
The Effects of Warming on Soil Microbial Metabolism  
Adviser: Serita Frey

Thomas Fogal  
Major: Computer Science  
Adaptive Mesh Refinement  
Adviser: Phil Hatcher

Owen Friend-Gray  
Major: Environmental Engineering  
Chromium Adsorption by Apatite  
Adviser: Jeffrey Melton

Kaiem Frink (special guest from Elizabeth City State University)  
Major: Computer Science  
Study on the Implementation of Macromedia Coldfusion as a Web Server Application  
Adviser: L. Gordon Kraft

David Gillespie  
Brett Hunter  
Major: Electrical Engineering  
Automated Radio Direction Finding System  
Adviser: Michael Carter

Timothy Henderson  
Major: Chemistry  
Attempted Stereo Selective Synthesis of Tetrahydrofuran Rings  
Adviser: Charles Zercher

Ian Honsberger  
Major: Earth Science  
Magmatic Processes Beneath the East African Rift Valley in Turkana, Kenya  
Adviser: Julie Bryce

Shin Horiuchi  
David Schwarzenberg  
Major: Electrical Engineering  
FFT Component Project  
Adviser: Andrzej Rucinski
Grace Hwang
Major: Mechanical Engineering
*Design and Implementation of Spatial Ability Tests and Devices*
Adviser: Brad Kinsey

Kevin Jerram
Ashley Risso
Major: Mechanical Engineering
*Measurement of Waterborne Construction Noise in Estuaries*
Adviser: Ken Baldwin

Gieira Jones (special guest from Elizabeth City State University)
Major: Biology
*Electroporation of Crithidia ricardoi with pNUS-GFP*
Adviser: Cheryl Lewis (ECSU)

Ashley Keller (Physics)
Chato Osio (Natural Resources)
Matt Szymanowicz (Natural Resources)
*Permafrost and Carbon*
Advisers: George Hurtt and Cameron Wake

David Klimaszewski
Randy Williams
Major: Computer Engineering
*Complex Multiplier*
Adviser: Andrzej Rucinski

Stephanie Kloek
Major: Marine and Freshwater Biology
*The Investigation of Anchor Attachment Designs for Pop-up Satellite Tags Used on Atlantic Bluefin Tuna, Thunnus thynnus*
Adviser: Ken Baldwin

Russell Lemire
Major: Civil Engineering
*Warm Mix Asphalt Technology*
Adviser: Jo Daniel

Ben MacBride
Major: Physics
*Kolmogorov’s 4/5 Law and its Magnetohydrodynamic Analogues in the Solar Wind*
Adviser: Charles Smith

Krystian Manitius-Kozlowski
Major: Civil Engineering
*Concept Cable Stayed Bridge*
Adviser: Erin Bell

Rory Martell
Major: Electrical Engineering
*EEG and Method of Moments: Bridging Time and Space*
Adviser: Kent Chamberlin

Michael Mason
Major: Physics
*3He Neutron Spin Filter with Spectrally Narrowed Diode Laser*
Adviser: Bill Hersman

Benjamin McMahon
Major: Electrical Engineering
*Modeling Diurnal Variations in a Short Range Wireless Communication System*
Adviser: Kent Chamberlin

Elizaveta Meleshkina
Major: Earth Sciences
*Correlation Between First Snowfall, Temperature, and the Length of Winter in Western Russia*
Adviser: James Pringle

Jerome Mitchell (special guest from Elizabeth City State University)
Major: Computer Science
*Using Ensemble Learning to Detect Data Abnormalities in Databases*
Adviser: Linda Hayden (ECSU)

Abebe Negash
Major: Chemical Engineering
*Biodiesel*
Adviser: Ihab Farag

Jonathan Nguyen
Major: Chemical Engineering
*Fracture Testing for the Evaluation of Self Healing Composites*
Adviser: Donald Sundberg

Nathan Purmont
Major: Electrical Engineering
*Standalone Data Acquisition System for the UNH Precision Racing Formula SAE Car*
Adviser: Frank Hludik

Michael Rayno (team leader)
Cory Timoney
Major: Mechanical Engineering
*Xenon Polarizer*
Adviser: F. W. Hersman

Christopher Robert
Major: Civil Engineering
*UNH Concrete Canoe*
Adviser: Jo Daniel

Christopher Robert
Major: Civil Engineering
*Reinforced Concrete Guard Rail*
Adviser: Charles Goodspeed

Mark Santos
Major: Microbiology
*Transnasal Delivery of a GnRH Analog in Miniature Swine*
Adviser: Stacia Sower

Lindsay Scott
Major: Environmental Conservation
*Effects of Long Term Soil Warming on Soil Respiration*
Adviser: Serita Frey

Rachel Scudder
Major: Earth Sciences
*Mineralogic Control on the Geochemical Signature of Water-Rock Interactions at Pawtuckaway State Park*
Adviser: Julia Bryce

Michael Siopis
Major: Mechanical Engineering
*Microforming: Hardness Testing and Analysis*
Adviser: Brad Kinsey
David Sodaitis  
Major: Physics  
Wave Excitation and Thermal Particle Acceleration by Interplanetary Shocks  
Adviser: Charles Smith

Vasilii Vorotnikov  
Major: Chemical Engineering  
Automated Shock Identification and Solutions for Space Weather Applications  
Adviser: Charles Smith

Jonathan Waters  
Major: Computer Engineering  
Project54 Wireless Location Awareness  
Adviser: Andrew Kun

Anna Weaver  
Major: Chemistry  
EPR Spectroscopy for the Forensic Analysis of Glass  
Adviser: N. Dennis Chasteen

Joshua Gehling  
Major: English  
The Changing Picture of Crime in Manchester  
Adviser: Deborah Brown

Caitlin Hampson  
Major: Undeclared  
An Attorney’s Eye View Exploring Changing Crime Trends in Manchester  
Adviser: Deborah Brown

Larry Habel  
Major: History  
McCarthyism and Freedom of Speech  
Adviser: Jack Resch

Kayla Ingham  
Major: Undeclared  
What I Saw Exploring Changing Crime Trends in Manchester  
Adviser: Deborah Brown

Jaclyn Kabat  
Major: Nursing  
At the Restaurant Exploring Changing Crime Trends in Manchester  
Adviser: Deborah Brown

Nickolas Levasseur  
Major: Biology  
Investigations Exploring Changing Crime Trends in Manchester  
Adviser: Deborah Brown

Catherine Overson ’06  
Perinatal Loss: Possible Caregiver Barriers

As a nurse in the Labor and Delivery unit of Elliot Hospital in Manchester, Cathy Overson sees firsthand the distress of bereaved parents experiencing a pregnancy or newborn loss. As a psychology major, she wanted to explore the factors contributing to nurses’ experiences as they care for these patients.

With the help of a Summer Undergraduate Research Fellowship (SURF), Overson evaluated the role of nurses’ anxiety levels in this setting. Her results suggested that offering a mentoring program and supportive counseling to nurses who care for these patients might be beneficial.

“Implementing the study and interpreting the results provided me with invaluable experience that I can carry along to my graduate activities,” says Overson.

As a third-time participant in the URC, Overson finds that presenting “add a sense of credibility and acknowledgement that my research has value.”

Hear about Overson’s findings at the UNHM oral presentations on Tuesday, April 25, 9–11 a.m., or read her published article online at www.unh.edu/inquiryjournal.
Jonathan Burg ’06
The Effects of Athlete Goal Orientation on Preferred Coach Leadership Behavior

Jonathan Burg knew he wanted to be a sport psychologist at a young age. Today, he is well on his way.

Burg is a Division I soccer player at UNH and is completing majors in both psychology and sport studies. Through the course of his latest research project, he established professional relationships with scholars in both fields.

Why research? He says initially it was the excitement of the challenge that motivated him to explore a topic on which others had only hypothesized. "In the later stages of my research, I realized that I’m capable of adding knowledge to my chosen field of study."

The field will have to wait for Burg just a bit longer. He will start graduate school next year where he plans to continue his scholarly investigations. But first he defends his research at the Vice President’s University-wide Symposium on Friday, April 28 at the MUB.

“The URC brings a sense of professionalism to undergraduate education,” says Burg. "It has opened my eyes to the amount of hard work and intellect found on our campus.”
**Poster Presentations; Session A**

**FRIDAY, APRIL 28**
9:30–10:40 AM

**MUB, Granite State Room**

**Nicholas Adams**
Jenna Darling
Major: Psychology
The Effects of Norepinephrine and Dopamine in Remediating Selective Attention Deficits
Adviser: Jill McGaughy

**Devin Avery**
Eric Ely
Major: Computer Science
Network Traffic Trace Generator and Discrete Event Simulator
Adviser: Radim Bartos

**Jessica Cawley**
Major: Music Education
Investigating the Ways the Irish Learn Music
Adviser: Susan Hatfield

**Rachael Corr**
Major: Nursing
Cigarette Smoking as a Risk Factor for Abnormal Pap Smears: An Integrative Literature Review
Adviser: Lynette Ament

**Rachel Croft**
(McNair Graduate Program)
Major: Communications
Types of Motivation and Definitions of Success Among College Students
Adviser: Rosa Arriaga

**Hieu Doan**
Major: Biology: Molecular, Cellular, and Developmental
Effects of Aluminum and/or Cadmium on Growth and Cellular Metabolites in Suspension Culture of Red Spruce (Picea rubens)
Adviser: Rakesh Minocha

**Beth Friedman**
Jennifer Roussel
Major: Sociology
Nice Gals Finish Last: An Examination of Queen Bee’s Manipulative Techniques for Dominating Others in Teen Comedy Films
Adviser: Catherine Moran

**Sarah Grieve**
Nicole Young
Major: Animal Science
Cytokeratin 8/18 Intermediate Filaments and their Role in Regression of the Bovine Corpus Luteum
Adviser: David Townson

**Stephan Pirnie**
Evan Jordan
Major: Biology: Molecular, Cellular, and Developmental
Harnessing the Power of an Invasive Species: Creating a Bioremediator out of Purple Loosestrife
Adviser: Subhash Minocha

**Jennifer Perkins**
Major: Nursing
The Healthcare Experiences of International Students
Advisers: Gene Harkless and Carol Williams-Barnard

**Sarah Rabbet**
Major: Psychology
Antidepressant Reversal of Intermittent Cold Water Swim Stress Induced Swim Escape Behavioral Deficits in Rats
Adviser: Robert Dugan

**Dhandevi Singh**
(McNair Graduate Program)
Major: Political Science
Sino-Indian Security Dilemma: Offensive and Defensive Mobilization
Adviser: Lawrence Reardon

**Kristen Steinbacher**
Major: Sociology
Mental Health Activism, Psychiatric Survivors, and the Rejection of the Medical Model
Adviser: Catherine Moran

**Peter Widger**
Major: Chemistry
Synthesis and Characterization of New Tricyclic Tetraaamines
Adviser: Gary Weisman

**Social Work: An Overview of Practice and Service Learning**

**Laura Amaral**
Major: Social Work
An Overview of Three Common Mental Health Disorders
Adviser: L. Rene Bergeron

**Rachel Bloom**
Major: Social Work
Giving Families a Head Start
Adviser: L. Rene Bergeron

**Kelsey Boucher**
Major: Social Work
New Outlook Teen Center Program Overview
Adviser: Robert Jolley

**Justin Breton**
Major: Social Work
The Division for Children, Youth and Families: An Overview
Adviser: L. Rene Bergeron

**Kathryn Doherty**
Major: Social Work
Dover Teen Center: Services and Opportunities
Adviser: L. Rene Bergeron

**Erin Duchemin**
Major: Social Work
IMR: Illness Management and Recovery
Adviser: L. Rene Bergeron
Sarah Gagnon  
Major: Social Work  
Birth Control Options  
Adviser: L. Rene Bergeron

Frances E. Shepard  
Major: Social Work  
New Heights: Adventure for Teens  
Adviser: L. Rene Bergeron

Felicia Zoffka  
Major: Social Work  
Reaching the HIV and AIDS Population  
Adviser: L. Rene Bergeron

Laura Blake  
Major: Social Work  
Empowering Families of Children with Developmental Disabilities  
Adviser: Robert Jolley

Eric Esty  
Major: Social Work  
Refugee Resettlement Program  
Adviser: Robert Jolley

Patricia LaPan Gagnon  
Major: Social Work  
Domestic Violence—the Decision to Leave  
Adviser: Robert Jolley

Abby Malcolm  
Major: Social Work  
The Seymour Osman Community Center  
Adviser: Robert Jolley

Emily Newell  
Major: Social Work  
Sexual Assault Support Groups  
Adviser: Robert Jolley

Alexa Stern  
Major: Social Work  
Choosing a Method  
Adviser: Robert Jolley

Heather Tamilio  
Major: Social Work  
Program for Alzheimer’s and Related Disorders  
Adviser: Robert Jolley

Vice President’s  
University-wide Symposium

Oral Presentations;  
Session A

Friday, April 28  
9:30–10:40 AM  
Memorial Union Building (MUB)

MUB, Room 207

Magnolia Barrett  
Major: Communications  
Punishing Freaks: Brandon Teena and The Reinscription of Heteronormativity in U.S. Public Culture  
Adviser: Melissa Deem

Leah Igo  
Major: Communications  
The Kobe Bryant Trial: Celebrity, Race, and Rape in the United States  
Adviser: Melissa Deem

Emily Martin  
Major: Communications  
Female Monster: Eileen Wournos and the Transgressions of Public Sexuality  
Adviser: Melissa Deem

Corinne Schmitz  
Major: Communications  
A Good Ana Doesn’t Die: Pro Anorexia Websites as Contemporary Manifestoes  
Adviser: Melissa Deem

MUB, Room 330

Contemporary Issues in Modern Society  
Moderator: Sharyn Potter

Brian Collins  
Major: Sociology  
The Effects of Undergraduate Employment on Academic Achievement  
Adviser: Sharyn Potter

Emily Duynstee  
Major: Sociology  
Non-medical Use of Prescription Drugs on College Campuses  
Adviser: Sharyn Potter

Loryn Gadbois  
Major: Sociology  
Corporal Punishment and How it Effects Later Partner Violence  
Adviser: Sharyn Potter

Kristin Harris  
Major: English  
Financing the Evolutionary Machine: Capitalist Ideology and Social Darwinism in Zola’s, The Ladies Paradise and Dreiser’s Sister Carrie  
Adviser: Sarah Sherman

Elizabeth Milliken  
Major: Sociology  
Alumni Reflections on the UNH Undergraduate Research Conference  
Adviser: Sharyn Potter
Vicki Hebert ’06
Senior Portfolio of Learning, Service, and Leadership

Vicki Hebert is passionate about cancer prevention. She spent hundreds of hours setting up the UNH chapter of Colleges Against Cancer, then showed her work on this massive initiative at URC ’05, winning a scholarship for her presentation.

Passionate and savvy, Hebert knew that bringing her work to the conference would not only give her valuable academic experience, but also would be great exposure for her fledgling organization. It “did just that,” she says. “Several people expressed interest in joining the organization and we found a faculty adviser for the group, as well.”

Passionate about presenting, this year Hebert will have her senior portfolio on display at the Thompson School Community Service and Leadership event on Wednesday, April 26, from 10:30 a.m.–noon at the MUB.
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<th>Name</th>
<th>Major</th>
<th>Title</th>
<th>Adviser</th>
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<tr>
<td>Justin Gelinas</td>
<td>Political Science</td>
<td>Euskal Herria: A Culture in Search of a Nation</td>
<td>Lawrence Reardon</td>
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<tr>
<td>Emily Hardy</td>
<td>Humanities</td>
<td>Culture Clash in Southern France: Effect of Maghreb Immigration from Northern Africa</td>
<td>Lawrence Reardon</td>
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<tr>
<td>Nora Larkin</td>
<td>German</td>
<td>Changing Ethnic Identities in Post-National Germany: A Study of Turkish-German Literature, Politics, and Society</td>
<td>Lawrence Reardon</td>
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<td>Justin Laurion</td>
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<td>Governmental Impact on Tolerance in Multicultural Environments: A Montreal Case Study</td>
<td>Lawrence Reardon</td>
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<tr>
<td>Erin Margentino</td>
<td>Political Science</td>
<td>Argentina: A Divergent National Identity</td>
<td>Lawrence Reardon</td>
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<tr>
<td>Jessica Gauthier</td>
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<td>Modern Military Means: Considerations for Effective Uses of Force</td>
<td>Lawrence Reardon</td>
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<td>Dan Jasinski</td>
<td>History</td>
<td>State Sovereignty and the International Criminal Court</td>
<td>Lawrence Reardon</td>
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<td>Christine Leonard</td>
<td>Political Science and International Affairs</td>
<td>A Test of Will: Darfur and the International Debate for Intervention</td>
<td>Lawrence Reardon</td>
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<td>Katie Smith</td>
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<td>A Nuclear Iran</td>
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<tr>
<td>Michael Smith</td>
<td>Political Science</td>
<td>Perspectives on the Use of Force for the Twenty-first Century</td>
<td>Lawrence Reardon</td>
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Jerome Mitchell ’07
ELIZABETH CITY STATE UNIVERSITY

Using Ensemble Learning to Detect Data Abnormalities in Databases

Jerome Mitchell majored in computer science because he enjoys solving complex problems using methodological steps. But it’s not the only kind of science that interests him. “Since freshman year I’ve worked on projects concerning glacier dynamics,” says Mitchell. Now a junior, Mitchell uses his technological know-how to help study global climate change. He collects data abnormalities in databases, which helps researchers measure changes and make predictions about polar ice.

“We’re looking for data on melting glaciers to test the theories of global warming and its effect on the rise of sea levels,” he says.

Mitchell is one of four Elizabeth City State University (ECSU) students presenting at this year’s URC. ECSU, in Elizabeth City, N.C., and UNH have a research and education partnership which enables faculty and students at both institutions to collaborate on research, education, and outreach opportunities.

Mitchell says that coming to UNH is a way for him to get his research in front of people. “I hope that I can inspire someone to become interested in the kind of work I’m doing.” He’ll return to campus this summer to continue his research on ice sheets and sea level rise with research associate professor Mark Fahnstock in the Research and Discover Program.

Jerome Mitchell recently returned from a five-week Antarctic expedition where he worked 10–15 hours each day in sub-zero temperatures operating plane-wave radar to measure the annual accumulation of snowfall and digging snow pits to accurately test the results of the radar using density snow core samples.
Laurel Smith  
Major: Political Science  
*International Politics and the Ratification of the European Union Constitution*  
Adviser: Lawrence Reardon

**MUB, Room 336**

*Political Science: Political Thought*  
**Moderator:** Marla Brettschneider  
**Discussant:** Nicolas Noloboff

Paul Brachman  
Major: Political Science  
*Competing Visions of the American Dream: From Frontiers to Ferraris*  
Adviser: Lawrence Reardon

Phillip Brand  
Major: Economics  
*Three Excesses in American Contemporary Democracy: A Tocquevillean Critique*  
Adviser: Lawrence Reardon

Jaci Lawson  
Major: English  
*Tocqueville and Poetry in a Democratic Age: Can Inspiration Survive the Daily Grind?*  
Adviser: Lawrence Reardon

Meghann McCluskey  
Major: English  
*Politics and Film: A Focus on Freedom Political*  
Adviser: Lawrence Reardon

Ian Pajer-Rogers  
Major: Political Science  
*Politics and Fear: The Supreme Court and the Executive After September 11*  
Adviser: Susan Siggelakis

MUB, Room 321

*Highlighting the Margins: Empowerment and Engagement I*  
**Moderator:** Mary M. Moynihan

Laura Haselton  
Major: English  
Adviser: Mary M. Moynihan

Gina Lalli  
Major: Sociology  
Adviser: Mary M. Moynihan

Elizabeth Martin  
Major: Sociology  
Adviser: Mary M. Moynihan

Nika Short  
Major: Women’s Studies  
Adviser: Mary M. Moynihan

Suzanne Tesoro  
Major: English and Women’s Studies  
Adviser: Mary M. Moynihan

MUB, Room 302

*Video Analysis of Police-Citizen Communication*  
**Moderator:** Mardi Kidwell

Kara Boucher  
Whitney Moore  
Meredith Zeicher  
Major: Communications  
*Some Interactional Problematics of Police Searches*  
Adviser: Mardi Kidwell

Taji Allen  
Megan Brown  
Garrett Donatelli  
Ben Johnson  
Major: Communications  
*Police Use of Force*  
Adviser: Mardi Kidwell

MUB, Wildcat Den

*Educating Students About Using Credit Wisely—Citibank Marketing Project*  
**Moderator:** Peter Masucci

Erin Donovan  
Emily Lawless  
Kerri O’Leary  
Jaime Staples  
Major: Communications  
*Body Positioning in Police-Citizen Encounters*  
Adviser: Mardi Kidwell

Michael Haney  
Adrian Kerrison  
Tom Sanchez  
Major: Communications  
*“Gettin’ Schooled:” Police Lecture Citizens*  
Adviser: Mardi Kidwell

Bryce Casper  
Andrew Davis  
Nick Laliberte  
Mike Zengilowski  
Major: Communications  
*Accusation and Denial in Police-Citizen Encounters*  
Adviser: Mardi Kidwell

MUB, Room 300

Derek Angove  
Lindsay Cunningham  
Sarah Faasse  
Hayley Holmes  
Juliana Maitan  
Jesse McKay  
Sydney Mikkelsen  
Alison Milioto  
Ian Mitchell  
Katelyn Moore  
Sheena Ruskowski  
Kyle Sevits  
Michael Trainor  
Lauren Tucker  
Stephen Woodruff  
Major: Business Administration  
Adviser: Peter Masucci
**Research on New Auto Purchasing—Ford Fusion Marketing Project**

*Moderator: Peter Masucci*

Jamie Adams  
Melinda Amaral  
Katie Bamberger  
Ryan Bernier  
Angela Blais  
Carrie Bourque  
Peter Burbank  
Matthew Clougherty  
John Cosco  
Andre DePaula  
LeeAnne Desrochers  
LeeAnn Flanagan  
Ian Frederick  
Amanda Guerin  
Zoey Gulmi-Landy  
Hayley Holmes  
Lindsey Jambard  
Niari Keverian  
Lindsay Lacher-Katz  
Brendan Leo  
Jennifer Livingstone  
Jesse McKay  
Thomas Moore  
Ethan Robinson  
Casey Rosinski  
Adam Sandler  
Rebecca Sandrue  
Michael Savage  
Corinne Schmitz  
David Tessier  
Michael Trainor  
Megan Woodman  

Major: Business Administration  
Adviser: Peter Masucci

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**Vice President’s University-wide Symposium**

**Poster Presentations; Session B**

**FRIDAY, APRIL 28**  
**10:50 AM–NOON**

**MUB, Granite State Room**

**Magdalen Balz**  
Major: Communication Sciences and Disorders  
Electronic Journal Writing: Communicative Freedom for Adults With Brain Injury  
Adviser: Michael Fraas

**Margaret Calvert**  
Major: Communication Sciences and Disorders  
Professionals’ Attitudes and Beliefs About Acquired Brain Injury  
Adviser: Michael Fraas

**Shellie Chiavetta**  
Major: Linguistics  
“That Was Totally Intense!": A Study of Emphatic Adverbial Modifiers in Male and Female Speech  
Adviser: Naomi Nagy

**Maureen Gillespie**  
Major: Psychology and English  
Hemispheric Sensitivity to Grammatical Agreement within a Sentence Context  
Adviser: John Limber

**Stephanie Kloek**  
Major: Biology: Marine and Freshwater  
The Investigation of Anchor Attachment Designs for Pop-up Satellite Tags used on Atlantic Blue fin tuna, Thunnus thynnus  
Adviser: Ken Baldwin

**Jennifer Lyckland**  
Major: Biology  
The Effects of Serotonin Depletion on Intermittent Cold Water Swim Stress-Induced Depression  
Adviser: Robert Drugan

**Jonathan Marshall**  
Major: Business Administration  
Expatriates in Global Commerce  
Adviser: Meera Venkatachalam

**Abebe Negash**  
Major: Chemical Engineering  
Biodiesel  
Adviser: Ihab Farag

**Jeffrey Nichols**  
Major: Computer Science  
Computer Engineering Improved Simulated Tile Mosaics by Tile Clipping  
Adviser: Alejo Hausner

**Satya Sardonicus**  
Major: Biochemistry  
Circulating Concentration of Interleukin-18 Binding Protein in Obese and Non-Obese, Asthmatic and Non-Asthmatic Women  
Adviser: Anthony Tagliaferro

**Joseph Shannon**  
Major: Natural Resources  
Forestry Effect of Forest Species in a Watershed on Stream Chemistry at Bartlett Forest  
Adviser: Jacqueline Aitkenhead-Peterson

**David Sodaitis**  
Major: Physics  
Wave Excitation and Thermal Particle Acceleration by Interplanetary Shocks  
Adviser: Charles Smith

**Andrew Van Hoogenstyn**  
Major: Psychology  
The Effects of Intermittent Cold Water Swim Stress on Navigation Learning and Memory  
Adviser: Robert Drugan
Alison Milioto ’06
Educating Students About Using Credit Wisely: Citibank Marketing Project

Alison Milioto is pretty responsible with a credit card. She's had one since she was 18 and has learned a lot about budgeting by owning it. So when presented with the opportunity to teach responsible credit card use to other students she jumped at the chance.

Last semester, Milioto and 15 of her classmates in Peter Masucci’s marketing class participated in a Citi/EdVenture program to teach students about avoiding financial problems by maintaining good credit.

Using $2,500 from Citi/EdVenture, a division of Citibank, Milioto and her peers created their own marketing agency, and set to work. The first step? Their agency, Etavonni (that’s “innovate” backwards) Creative Marketing, distributed surveys to more than 450 UNH students, with questions about their credit card use.

Based on the survey results, Etavonni built a campaign strategy, created brochures, a Web site, and even a “responsible credit” event at the Memorial Union Building, where students “traveled” to internationally themed tables (China, Italy, Jamaica) learning about credit, credit ratings, and APRs along the way.

But their work wasn’t over. Etavonni then presented the campaign results to its client, Citi Vice President Kerry Locke Bedard. “As a marketing professional, I’m very impressed with the quality of the campaign and the degree of thought put into it,” said Locke Bedard, who brought the results back to the corporate office for further analysis.

“What I liked most [about the project] was that we had real-time deadlines and we saw real results,” says Milioto. “It was a good experience and showed me how valuable research can be.”
Vice President’s University-wide Symposium

Oral Presentations; Session B

FRIDAY, APRIL 28
10:50 AM–NOON

Memorial Union Building (MUB) and Holloway Commons

MUB, Wildcat Den

Marketing Research Projects featuring Whittemore School of Business and Economics students
Moderator: Peter Masucci

Jennifer Livingstone
Major: Business Administration
Beauty and Advertising: Does Advertising Affect the Body Image of Adolescent Girls?
Adviser: Peter Masucci

Sarah Barthelmes
Padraigine Bush
Jillian Coleman
Lensey Dixon
Jonathan Gaffney
Brian Hersey
Rachel Larson
Laura Marandola
Tyler Morrison
Eden Orndorff
Michael Richardson
Jonathan Sears
David Smith
Andrew Tollner
Major: Business Administration
Hannaford Bros. Marketing Project: New Recruitment Campaign
Adviser: Peter Masucci

Jessa Baillargeon
Michael Card
Justin Connor
Erica Farley
Ethan Goodrich
Rachel Harrison
Justin Joyner
Adam Manley
John McDonough
Ryan Nicholson
Stephanie Olynk
Kristen Perry
Heidi Rowe
Christina Roy
Matthew Sperazzo
Major: Business Administration
USNH Marketing Project: Influencing Aspirations of 12-18 Year Olds to Attend College
Adviser: Peter Masucci

MUB, Rockingham Lounge

Insights into American and International Society
Moderator: Stephen Hale

Jonathan Burg
Major: Sport Studies and Psychology
The Effects of Athlete Goal Orientation on Preferred Coach Leadership Behavior
Adviser: Karen Collins

Kelsey Dennis
Major: Anthropology
Leaving Home: A Global Perspective on the Trends of Young Women
Adviser: Stephen Reyna

Kristin Harris
Major: English
Irrational Exuberance: Allegories of Economic Madness in Eighteenth-Century Literature
Adviser: Sean Moore

Kara Houghton
Major: French
Marketing in American and French Food Cultures
Adviser: Barbara Cooper

Caitlin Marrinan
Major: Linguistics and Spanish
Second Language Acquisition and the Critical Period Hypothesis: Are Children more Efficient Language Learners than Adults?
Adviser: Aya Matsuda

Ashley Ward
Major: Psychology
The Effects of Victim and Perpetrator Reputation on Physical Distance: Do Individual Differences Matter?
Adviser: Ellen Cohn

MUB, Room 233

Advances in Science at the Molecular Level
Moderator: Julian E. Torres

Florence Fong
(McNair Graduate Program)
Major: Microbiology
Rapid Detection of Enteric Viruses in Water Through Cell Suspension and Integrated Cell Culture Real Time RT-PCR
Adviser: Aaron Margolin

Loreen Fournier
Major: Biology: Molecular, Cellular, and Developmental
Phosphate Groups on Her2 Binding to Estrogen Receptors: Implications for Tamoxifen-resistant Breast Cancer
Adviser: Andrew Laudano
Leolene Jean  (McNair Graduate Program)
Major: Biochemistry
Molecular Diversity and Functional Analysis of the Opsin Genes Expressed in Daphnia
Adviser: W. Kelley Thomas

Mark Santos
Major: Microbiology
Transnasal Delivery of a GnRH Analog in Miniature Swine
Adviser: Stacia Sower

MUB, Room 207
Interaction and Representation: On Film, France, Feminism, and Sports
Moderator: Beverly James

Kristin Condon
Major: Communications
The F Word: Feminist Identity Declared or Disavowed by Callers on Talk Radio
Adviser: Beverly James

Ben Guerette
Major: Communications
Native American Sports Mascots: Analysis of the Arguments
Adviser: Beverly James

Rachel Kearns
Major: Communications
'What Made the Red Man Red?': Native American Discourse in Disney
Adviser: Beverly James

Kristen Lewis
Major: Communications
Three Perspectives on Social Problems in France Exposed through Film
Adviser: Beverly James

MUB, Room 302
Informational Exchange through the Mediums of Language, Music, and Computers
Moderator: Rob Haskins

Jessica Cawley
Major: Music Education
Investigating the Ways the Irish Learn Music
Adviser: Susan Hatfield

Chantelle Jacobs (McNair Graduate Program)
Major: English Literature
Evaluating the Feminine Voice in John Donne
Adviser: Janet Gardner

Kraig Lamper
Major: Music Performance and Philosophy
Fluxus as Fragmentation and Continuity
Adviser: Rob Haskins

Jason Lawrence
Major: Music
Beatles Get High with Lucy in the Sky
Adviser: Rob Haskins

Christina Leber
Major: Computer Science
Accelerated Spatial-Directional Queries for Dynamic Scenes
Adviser: Alejo Hausner

MUB, Room 321
Highlighting the Margins: Empowerment and Engagement II
Moderator: Mary M. Moynihan

Jaden Brulotte
Major: Sociology
Adviser: Mary M. Moynihan

Sarah Clinton
Major: Women's Studies
Adviser: Mary M. Moynihan

Meghann McCluskey
Major: English and Women's Studies
Adviser: Mary M. Moynihan

Lindsay Menard-Freeman
Major: English and Women's Studies
Adviser: Mary M. Moynihan

Kristen Mollomo
Major: Women's Studies
Adviser: Mary M. Moynihan

Courtney Strait
Major: Women's Studies
Adviser: Mary M. Moynihan

Holloway Commons, Lamprey Room
Perspectives on Gender-related Issues
Moderator: Catherine Moran

Blaine Butler
Major: Sociology
Masculinities: Gender Identity Development among Heterosexual and Homosexual Men
Adviser: Jean Elson

Erica Downing
Laura Keith
Major: Sociology
Media Effects on Perceptions of Female Attractiveness
Adviser: Jean Elson

Jillian Kalosky
Major: Sociology and Justice Studies
The Impact of Physical Attractiveness in Perceptions of Acquaintance Rape
Adviser: Catherine Moran

Gina Lalli
Major: Sociology
Gender Attitudes Among Men and Women at UNH
Adviser: Catherine Moran
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<td>The Similarities and Differences of Breastfeeding</td>
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<td><strong>International Affairs: People at War: Terrorism, Violence, and Civil War</strong></td>
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<td>Separatist Movements: The Fight against the Authoritarian Regimes</td>
<td>Lawrence Reardon</td>
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<td>Victor Florez</td>
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<td>Spanish</td>
<td>Spain and the United States: Unequal Rates of Violent Crimes</td>
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<td>Ioannis Karalis</td>
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<td>Nathan Smith</td>
<td>Political Science</td>
<td>When Do Terrorists Attack?</td>
<td>Lawrence Reardon</td>
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<td>Matias Wigozki</td>
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<td>Borders and Desperation: Separatist Movements around the World</td>
<td>Lawrence Reardon</td>
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<td>Lori Hopkins</td>
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<td>The Gypsy Subculture in Andalusia, Spain</td>
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<td>Rana Chakar</td>
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<td>The Fear of Acceptance</td>
<td>Lawrence Reardon</td>
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<td>Race Riots in France: New Development or Old News?</td>
<td>Lawrence Reardon</td>
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<td>French Kiss Goodbye: European Immigration Issues and Racism</td>
<td>Lawrence Reardon</td>
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<td>MUB, Room 338</td>
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<td><strong>International Affairs: Preserving Culture and Identity II</strong></td>
<td>Edward Larkin</td>
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<td>Elizabeth Bougie</td>
<td>Tourism Planning and Development</td>
<td>Food for Thought: France's Culinary Rise to International Recognition</td>
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<td>French Kiss Goodbye: European Immigration Issues and Racism</td>
<td>Lawrence Reardon</td>
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<td>MUB, Room 340</td>
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<td><strong>International Affairs: Building a More Civil Society</strong></td>
<td>Funso Afolayan</td>
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<td>Carrie Nichols</td>
<td>French</td>
<td>Où va notre langue? The Colonization of English in the French Language</td>
<td>Lawrence Reardon</td>
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<td>Andrew Masel</td>
<td>Spanish</td>
<td>God’s Black Mother: The Influence of Religion in State Censorship</td>
<td>Lawrence Reardon</td>
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<td>Moses Ajou</td>
<td>Economics</td>
<td>The Corruption of Kenya</td>
<td>Lawrence Reardon</td>
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Michelle Giguere
Major: English
The Censorship has Sailed: Spanish Media and Democracy
Adviser: Lawrence Reardon

Devin Morey
Major: Spanish
Government Oppression during Argentina’s Dirty War
Adviser: Lawrence Reardon

Jonathan Van Arsdell
Major: Political Science
State of Democracy: Italy and the Berlusconi Era
Adviser: Lawrence Reardon

Emina Zlotrg
Major: Political Science
Civil Society in Post-conflict State: Case of Bosnia and Herzegovina
Adviser: Lawrence Reardon

Ruth Varner
Research Assistant Professor

In the dark of night during a steamy stretch of North Carolinian midsummer weather, a team of two students climbs a 15-meter tower to the high branches of pine and sweet gum trees. For the next 45 minutes, they’ll take air samples and readings from instruments measuring gas emissions from the trees’ branches. It’s a process they’ll repeat every two hours, around the clock, for 10 straight days.

The students, a UNH undergraduate and Ph.D. candidate, are at the Duke Forest FACE (Free Air CO₂ Enrichment) site working with UNH research assistant professor Ruth Varner. They are studying how plants respond to an increased CO₂ environment and how this may impact future air quality. The work is as important as the schedule is grueling.

“We know CO₂ is increasing and will continue to increase,” says Varner. “What we’re not sure about is how the natural ecosystems will respond,” she adds.

Varner is part of UNH’s Climate Change Research Center. Closer to home, she and her students study gas emissions at diverse local field sites and in her Morse Hall lab, where she is working with UNH sophomore Jordan Goodrich to examine emissions of methyl halides from fungi as part of a National Science Foundation-funded study. “Methyl halides are important in the atmosphere because halogen atoms can destroy ozone,” the barrier protecting Earth from solar radiation, Varner says. “Jordan has been growing the fungi and running air samples on a gas chromatographer,” work he will continue during the upcoming summer break.

“What I like about working with undergraduates is they bring a fresh perspective to the research,” says Varner.
Political Science: Comparative Politics  
**Moderator:** Mary Malone  
**Discussant:** Stephanie Bramlett

Virginia de Freitas-Battersby  
Major: Political Science and International Affairs  
The Barriers between the Kitchen and the Campaign: Women's Political Participation in Latin America  
Adviser: Lawrence Reardon

Amanda Diegel  
Major: Sociology and International Affairs  
Struggling with Democracy: A Comparative Examination of Legitimacy in Venezuela and Argentina  
Adviser: Lawrence Reardon

Shana Friedman  
Major: Political Science  
A Comparative Analysis of the Democracies in Mauritius and Madagascar  
Adviser: Lawrence Reardon

Kelly Vogel  
Major: Political Science  
Reproductive Rights for Chinese Women  
Adviser: Lawrence Reardon

**MUB, Room 330**

Contemporary Configurations of Gender in the United States  
**Moderator:** Melissa Deem

Sarah Coleman  
Major: Communications  
Rushing Sisterhood: Sorority Culture and Rivalry within Gender  
Adviser: Melissa Deem

Jamie Dellorusso  
Major: Communications  
Outing the Secret: Hypersexuality on the Down Low  
Adviser: Melissa Deem

Honors English Undergraduate Research Conference

**FRIDAY, APRIL 28  
NOON – 5 PM**

Hamilton Smith Hall, English Department Lounge, Rooms 128 & 129

In order to complete Honors-in-English, students are required to conduct a semester-long research project, culminating in a 30–40 page senior thesis. The Honors English Undergraduate Research Conference provides these students with the opportunity to share their work with fellow students, professors, and families. The presentations are wide-ranging, from original poetry to autobiographical criticism to scholarship on literature, spanning the medieval period to the twenty-first century.

Lindsay Burke  
Major: English  
Women in Renaissance Drama  
Adviser: Douglas Lanier

Molly J. Cooper  
Major: English  
Bad Girls: Romantic Feminine Rebellion in Renaissance Drama  
Adviser: Douglas Lanier

John Eaton  
Major: English  
From This Point Onward, There Are No Maps: Short Stories  
Adviser: Alexander Parsons

Patricia Grennen  
Major: English  
The Sentimental Novel of the Eighteenth Century: A Discussion of Works by Mackenzie, Sterne, and Austen  
Adviser: Sean Moore
Catherine Huettner  
Major: English  
William Faulkner and the Endurance of Modern Man  
Adviser: Delia Konzett

Meaghan James-Rapp  
Major: English  
The Peyton Place Tradition: Breaking the Mold of Femininity in Small Town New England  
Adviser: David Watters

Jessica Nelson  
Major: English  
Last Dance: Alzheimer’s Rhythm  
Adviser: Andrew Merton

Jaclyne M. Salzillo  
Major: English  
Gossip as Narrative in the Eighteenth Century  
Adviser: Sean Moore

Jacqueline Silva  
Major: English  
One Last Bell: A Collection of Poetry  
Adviser: Lisa Miller

Psychology
George M. Haslerud Undergraduate Research Conference
FRIDAY, APRIL 28  
1–4 PM  
Conant Hall, Room 101

The George M. Haslerud Undergraduate Research Conference, named for the late professor emeritus of psychology, recognizes and celebrates undergraduate research conducted by psychology students.

Nicholas Adams  
Major: Psychology  
The Effects of Catecholaminergic and Cholinergic Enhancement on Covert Orienting and Alerting in Visuospatial Attention  
Adviser: William Stine

Laura Comley  
Major: Psychology  
Memory in the Classroom with Particular Attention to Math Conceptualization and How it Relates to Memory  
Adviser: Michelle Leichtman

Alyssa Fenton  
Major: Psychology  
The Protective Function of Spirituality on Depression in Older Adult Widows  
Adviser: Toni Bisconti

Jesse Gag  
Major: Psychology  
Attitudes and Knowledge of the Legal System as it Relates to the Level of Watching Crime-Related Dramas on Television  
Adviser: Carolyn Mebert

Amy Kaye  
Major: Psychology  
Parenting in Adult Survivors of Child Sexual Abuse: Examining Resilience  
Adviser: Victoria Banyard

Rebecca Peake  
Major: Psychology  
Romantic Relationships and College Students: A Study of Subjective Well-being in Undergraduates  
Adviser: Victor Benassi

Kristina Schmid  
Major: Psychology  
Autobiographical Memories of Parent-Adolescent Experience  
Adviser: David Pillemer

Andrew Van Hoogenstyn  
Major: Psychology  
The Effects of Intermittent Cold Water Swim Stress on Navigational Learning and Memory  
Adviser: Robert Drugan

Mary Veronica Vandoloski  
Major: Psychology  
Verb Tense as a Predictor of Listener’s Reactions to Autobiographical Narratives  
Adviser: David Pillemer

Kara Vigliatura  
Major: Psychology  
Memory in the Classroom  
Adviser: Michelle Leichtman

Erinn Walsh  
Major: Psychology  
Personal-event Memory in Adults with and without ADHD  
Adviser: Michelle Leichtman

School of Health and Human Services Grimes Award Competition
FRIDAY, APRIL 28  
12:30–3:30 PM  
Pettee Hall, Room G10

Jack and Marianna Grimes and family, all UNH graduates, endowed the funds for this celebration of excellence in undergraduate research. This oral presentation competition includes finalists who have been selected by School of Health and Human Services faculty after rigorous scientific review of written proposals. (Information on participants will be available at this event.)
Festival of Creativity and Culture

FRIDAY, APRIL 28
3:30 – 5:30 PM
Hennessy Theatre, Paul Creative Arts Center

At this event, students from various disciplines share their artistic projects through a unique combination of performance and scholarly presentations. Students will discuss how they were inspired, how they prepared for the event, and how their UNH experiences are preparing them for careers in the arts.

Albert Craig
Major: Music
The Trek of John Jacob Niles
Adviser: Rob Haskins

Rachel Brodeur
Rachel Elias
Megan O’Connor
Courtney Trudeau
Major: Theatre and Dance
Sapphire Project
Adviser: David Richman

Chris Jackson
Major: Theatre and Dance
The Sunglass Variations: The Actor as Creative Artist
Adviser: David Kaye

Kraig Lamper
Major: Music
Fluxus as Fragmentation and Continuity
Adviser: Rob Haskins

Jason Lawrence
Major: Music
Music Beyond Words: Sonic Representations of Drug Euphoria
Adviser: Rob Haskins

Harmony Stempel
Major: Theatre and Dance
Last Chance for Power
Adviser: David Richman

Amanda Putnam ’06
The Role of Cytokeratin-8/18 in Cell Death within the Corpus Luteum

Amanda Putnam spent the summer of 2005 analyzing the ovarian structure of cows in an effort to better understand bovine infertility. She divided her time between the UNH dairy facility, where she collected cell samples from ovaries of cows in their luteal or pre-pregnancy phase; and the lab, where she stained the cells with fluorescent markers and analyzed them for incidence of cell death using a sophisticated cell-sorting machine.

“I liked how the research was contingent upon many different procedures and processes. It was never boring,” says Putnam, an animal science major who is planning a career in biotechnology. She defends her research at the 15th annual COLSA Undergraduate Research Conference on Saturday, April 29.

“If one could capture lightning in a bottle, Amanda personifies this,” says David Townson, associate professor and adviser to Putnam over the past four years. “She’s an exceptional student, an eager investigator, and a wonderful person.”

Earlier this month, Putnam received the prestigious 2006 University Women’s Award, which recognizes a student who shows the greatest promise through character, scholarship, leadership, and usefulness to humanity.

Philosophy Undergraduate Research Conference

FRIDAY, APRIL 28
4 – 8:30 PM
The Waysmeet Center, 15 Mill Road (see map page 5)

The Philosophy URC is a mosaic of concise and meaningful student presentations, varying from such philosophical topics as deontological ethics to Pyrrhonian skepticism to social justice. Presentations are
followed by a brief question and answer period. All are welcome and sincerely encouraged to attend. Refreshments will be served.

Elias Abdallah
Major: Philosophy, Political Science, and Humanities
Dying Souls
Adviser: Drew Christie

Ryan Abbott
Major: Philosophy
Habermas' Critique of Adorno
Adviser: Nick Smith

Roger Eichorn
Major: Philosophy and History
Philosophy and Common Life: Skeptical Crisis or Dogmatic Crisis?
Adviser: David Hiley

Mark Joseph
Major: Philosophy and English
Can Kant Accommodate Supererogation?
Adviser: Paul McNamara

PJ Niver
Major: Philosophy and Humanities
Nietzsche as Educator
Adviser: David Hiley

Martin Rowley Jr.
Major: Philosophy
Individualism and the Self
Adviser: David Hiley

Hannah Varn
Major: Philosophy and English
What Words Can Do
Adviser: Kathy Miriam

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Student Composers Concert

FRIDAY, APRIL 28
8 PM

Bratton Recital Hall,
Paul Creative Arts Center

The UNH Student Composers Concert is an annual event featuring the works of undergraduate and graduate students in the Department of Music. The music is newly composed and is almost exclusively performed by fellow music students.

Joel Biedrzycki
Major: Music Performance
Woodwind Quintet
Adviser: Nicholas Orovich

Tom Bourgault
Major: Music Education
Quintet for Winds
Adviser: Mark DeTurk

Nat MacDonald
Major: Music
Piano Piece
Adviser: Chris Kies

Tim Miles
Major: Music Education
String Quartet: Music for Clarinet and Percussion
Adviser: Mark DeTurk

Dan Noronha
Major: Music
String Quartet No. 1
Adviser: Chris Kies

Nate Therrien
Major: Music Education
Piece for Clarinet, Vibraphone, and Bass
Adviser: Larry Veal

Scott Thibodeau
Major: Music Education
Solo for Unaccompanied Clarinet
Adviser: Andrew Boysen

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15th Annual COLSA Undergraduate Research Conference

SATURDAY, APRIL 29
7:45 AM–2 PM

New England Center, Great Bay Room

Student presentations at the 15th annual COLSA URC are based on research work done in any of the college’s departments and run the full gamut of research found in the college from field studies to developmental and molecular biology and genomics studies. A number of studies are collaborative efforts between work here at UNH and work carried out in foreign countries. The COLSA URC is funded by the College of Life Sciences and Agriculture, Dean’s Office and Departments; the Office of Academic Affairs, the Office of Research and Public Service, the Marine Program, the Office of Sponsored Research, and the Center for Undergraduate Research.

Elisha Allan
Major: Biology: Ecology, Evolution, and Behavior
Barcoding of the Growth Stages of Two Freshwater Calanoid Copepod Species
Adviser: James Haney
Lisa Bedford  
Major: Biology: Molecular, Cellular, and Developmental  
The Influence of Endogenous Circadian and Circatidal Clocks on Horseshoe Crab (Limulus polyphemus) Locomotion  
Adviser: Winsor Watson  

Janelle Bosse  
Major: Biology: Ecology, Evolution, and Behavior  
Effective Sampling of Beetles: A Comparison of Terrestrial Invertebrate Sampling Techniques in the Hunua Ranges, New Zealand  
Adviser: Kim Babbitt  

Jill Brelsford  
Major: Microbiology  
A Tale of Two Sigma Factors  
Adviser: Cheryl Whistler  

Jennifer Busse  
Major: Biochemistry  
In Vitro Studies of Mechanisms of Nutrient Supply to Oocytes During Oogenesis and Localization of Stem Cells in the Green Sea Urchin  
Adviser: Charles Walker  

Sarah Comeau  
Major: Microbiology  
Characterization of a Novel Bacteriophage in the Burkholderia cepacia Complex  
Adviser: Vaughn Cooper  

Steven Conaway  
Major: Environmental Horticulture  
Evaluation of Biological and Chemical Fungus Gnat (Bradysia spp.) Controls for Production of Vegetative Cuttings in Greenhouse Settings  
Adviser: Paul Fisher  

Hiue Doan  
Major: Biology: Molecular, Cellular, and Developmental  
Effects of Aluminum and/or Cadmium on Growth and Cellular Metabolites in Suspension Culture of Red Spruce (Picea rubens)  
Adviser: Rakesh Minocha  

Sarah Eisenlord  
Major: Microbiology  
The Effects of Warming on Soil Microbial Metabolism  
Adviser: Serita Frey  

Celeste Eno  
Major: Biology: Marine and Freshwater  
Production of Triploids and Karyotyping the Green Sea Urchin, Strongylocentrotus drobachiensis  
Adviser: Charles Walker  

Evan Jordan  
Stephan Pirnie  
Major: Biology: Molecular, Cellular, and Developmental  
Harnessing the Power of an Invasive Species: Creating a Bioremediator out of Purple Loosestrife  
Adviser: Subhash Minocha  

Loreen Fournier  
Major: Biology: Molecular, Cellular, and Developmental  
Phosphorylation of Her2/neu Creates a Binding Site for Estrogen Receptors: Implications for Tamoxifen-resistant Breast Cancers  
Adviser: Andrew Laudano  

Brianna Heath  
Major: Wildlife Management  
Home Range Establishment and Dispersal of Yearling Moose in Northern New Hampshire  
Adviser: Peter Pekins  

Leolene Jean  
Major: Biology  
Molecular Diversity and Functional Analysis of the Opsin Genes Expressed in Daphnia  
Adviser: Kelley Thomas  

Christie Klisz  
Major: Biochemistry  
Identification of Trans Acting Factors Controlling Opsin Gene Expression  
Adviser: Karen Carleton  

Angela Kuehn  
Major: Microbiology  
Expression Pattern of the CPK5 Gene in Arabidopsis thaliana  
Adviser: Estelle Hrabak  

Matthew Lubicky  
Major: Animal Science  
Expression Pattern of the CPK5 Gene in Aridiposis thaliana  
Adviser: David Berlinsky
Courtney Miller
Major: Microbiology
The Effects of Environmental Conditions on Photorhabdus temperata
Biofilm Formation
Adviser: Louis Tisa

Ethan Miller
Major: Bioscience and Technology
Facilitation and Inhibition of Trap Closure in D. muscipula through Manipulation of Membrane Aquaporin and Potassium Channels
Adviser: Wayne Fagerberg

Heather Moulton
Major: Wildlife Management
Using Site Occupancy to Assess Population Health of Hochstetter's Frogs (Leiopelma hochstetteri) in the Kokako Management Area
Adviser: Kimberly Babbitt

Jennifer Murphy
Major: Medical Laboratory Science
Effects of the Notch-1 Receptor on the Differentiation Status of Human Liposarcoma Cells
Adviser: Deena Small

Hristina Natcheva
Major: Biology
Targeted Mutagenesis in the Moss Physcomitrella patens
Adviser: Estelle Hrabak

Brenton Paolella
Major: Biology: Molecular, Cellular, and Developmental
Identifying Components of the Circadian Clock that may Entrain Germ-line Stem Cell Mitosis in the Green Sea Urchin, Strongylocentrotus drobachiensis
Adviser: Charles Walker

Anna Pape
Major: Dairy Management
Land Values Based on Corn and Hay Production in New Hampshire
Adviser: Doug Morris

Paul Pepler
Major: Environmental Science
Forest Canopy Recovery After Reduced Impact Logging in Amazonia
Adviser: Michael Keller

Amanda Putnam
Major: Animal Science: Bioscience and Technology
The Role Of Cytokeratin-8/18 in Cell Death within the Corpus Luteum
Adviser: David Townson

Jonathan Quade
Major: Biochemistry
Structure, Function, and Regulatory Differences of Rod and Cone Photoreceptor Phosphodiesterase (PDE6)
Adviser: Rick Cote

Mark Santos
Major: Microbiology
Transnasal Delivery of a GnRH Analog in Miniature Swine
Adviser: Stacia Sower

Chris Glynn ’06
Brain Computer Interfaces and Computational Modeling

Why is an electrical engineering major studying the prehistoric lamprey, the oldest living representative of the first vertebrates? Chris Glynn was driven by an interest in biological applications to electrical engineering. He teamed up with computer engineering major Jason Dahlstrom to study a lamprey brain-computer interface, then modeled the brain’s functions as the lamprey orients itself to ambient light.

Glynn says the project exposed him to many different aspects of electrical engineering, including signal processing, modeling, and components of controls and mechanics. “In my education, these were topics that were treated as independent,” he says. “In this project, all of these skills and subjects merged.”

Glynn presents his work at the Interdisciplinary Science and Engineering Symposium (ISE) on Wednesday, April 26 in the Morse Hall atrium.
Satya Sardonicus  
Major: Biochemistry  
*Circulating Concentration of Interleukin-18 Binding Protein in Obese and Non-Obese, Asthmatic and Non-Asthmatic Women*  
Adviser: Anthony Tagliaferro

Lindsay Scott  
Major: Environmental Conservation  
*Effects of Long Term Soil Warming on Soil Respiration*  
Adviser: Serita Frey

Kristine Seigars  
Major: Microbiology  
*Neutrophil Binding to Salmonella typhimurium and Salmonella enteritidis in their Wildtype, Mutant, and MBL-bound Forms*  
Adviser: Thomas Pistole

Joseph Shannon  
Major: Forestry  
*Effect of Forest Species in a Watershed on Stream Chemistry at Bartlett Forest*  
Adviser: Jacqueline Aitkenhead-Peterson

Daniel Vail  
Major: Biochemistry  
*North American Red Spruce Migration Pattern Inferences from Molecular Analysis of Intraspecific Genetic Variation*  
Adviser: Anita Klein

Nicole Young  
Major: Animal Sciences  
*Cytokeratin 8/18 Intermediate Filaments and their Role in Regression of the Bovine Corpus Luteum*  
Adviser: David Townson

Whittemore School of Business and Economics Paul J. Holloway Business Plan Competition

**WEDNESDAY, MAY 3  
8 AM–2 PM  
Piscataqua and Swamscott Rooms, Holloway Commons**

The Paul J. Holloway Business Plan Competition is an integral part of the undergraduate experience at the Whittemore School. Students are required to research and prepare business plans, which they present to a panel of industry leader judges. Prizes are awarded for the most feasible and fundable plans for starting, acquiring, or expanding a business venture.

(Information on participants will be available at this event.)

Mary Louise Fernald Nursing Research Symposium

**WEDNESDAY, MAY 3  
8 AM–12:30 PM  
MUB, Strafford Room**

The Mary Louise Fernald Nursing Research Symposium is a program of scholarly presentations by undergraduate honors students and graduate students.

Sarah Belisle  
*Master’s Research Project: Healthy Start: A Prevention Program to Address Childhood Obesity*  
Adviser: Pam DiNapoli

Angela Braswell  
*Master’s Research Project: A Pilot Project to Identify Factors Affecting Nurses’ Decision to Administer As-needed Analgesics to Nursing Home Patients with Dementia*  
Adviser: Raelene Shippee-Rice

Roberta Compagna  
*Master’s Research Project: College Student’s Knowledge of HPV*  
Adviser: Lynette Ament

Rachel Corr  
Major: Nursing  
*Cigarette Smoking as a Risk Factor for Abnormal Pap Smears: An Integrative Literature Review*  
Adviser: Lynette Ament

Christine Crawford  
*Master’s Research Project: Women and Cardiac Rehabilitation: The Effect of In-patient (Phase I) Consultation on Referral to Out-patient (Phase II) Programs*  
Adviser: Susan Fetzer

Patricia Grobecker  
*Master’s Research Project: Comparison of Health Status of Adolescents Using BMI: A Study of Lowell High School Students*  
Adviser: Pam DiNapoli

Elizabeth Hale-Campoli  
*Master’s Research Project: Handoffs-Clarifying Communication and Improving Patient Care*  
Adviser: Gene Harkless

Shawna Healy  
*Master’s Research Project: Cardiovascular Risk Modification in the College Student*  
Adviser: Pam DiNapoli
Cheryl Laferriere  
**Master’s Research Project: Exploring Effects of Music on Anxiety of Patients Undergoing a Colonoscopy**  
Adviser: Susan Fetzer

Leslie Larsen  
**Master’s Research Project: The Evaluation of Teaching Undergraduate Nursing Students Pediatric Clinical Skills Through Simulation**  
Adviser: Pam DiNapoli

Dorothy Normile  
**Master’s Research Project: Do Nursing Homes in New Hampshire Use Alcohol Hand Rubs?**  
Adviser: Gene Harkless

Jennifer Perkins  
**Major: Nursing**  
**The Health Care Experiences of International College Students**  
Adviser: Gene Harkless

Susan Reeder  
**Master’s Research Project: Measurement of Health Status in Adult Burn Patients**  
Adviser: Gene Harkless

Rizwana  
**Master’s Thesis: Attitudes and Current Practices during Intrapartum Period of Maternity Care Providers in India**  
Adviser: Gene Harkless

Ashley Jeffery  
**Katie Roy**  
**Master’s Research Project: Over-the-Counter Emergency Contraception and Changes in Contraceptive Behaviors and Practices of College Students**  
Adviser: Gene Harkless

Jane Sobolov  
**Master’s Research Project: The Forfeiture of a Driver’s License by an Elder: The Experience of Family**  
Adviser: Janice Foust

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**Chemistry Department Poster Exhibition**

**FRIDAY, MAY 5 2:30 – 4 PM**

**Parsons Hall, Iddles Foyer**

**This exhibition is the result of students’ yearlong senior thesis research in such areas as organic, inorganic, physical, or analytical chemistry, and under the direction of their research adviser.**

Adam Csakai  
**Major: Chemistry**  
**Tandem Chain Extension Aldol Reaction of β-Keto Imides**  
Adviser: Charles Zercher

Joseph Dunn  
**Major: Chemistry**  
Adviser: Glen Miller

Matthew Guay  
**Major: Chemistry**  
**Atmospheric Halocarbon Measurements: A Companion of Two in situ GC Systems to Canister Sampling**  
Advisers: Howard Mayne and Barkley Sive

Laura Gustafson  
**Major: Chemistry**  
**Diaminosarcophagine, CB-TE2A and TMpyP: A Comparative Kinetics Study of Inertness and Stability**  
Adviser: Edward Wong

Timothy Henderson  
**Major: Chemistry**  
**Attempted Stereo Selective Synthesis of Tetrahydrofuran Rings**  
Adviser: Charles Zercher

Richard Luciano  
**Major: Chemistry**  
Advisers: Howard Mayne and Barkley Sive

Tara Rix  
**Major: Chemistry**  
**Trace Gas Detection using Cavity Ring-down Spectroscopy**  
Adviser: John Dudek

Anna Weaver  
**Major: Chemistry**  
**EPR Spectroscopy for the Forensic Analysis of Glass**  
Adviser: N. Dennis Chasteen

Peter Widger  
**Major: Chemistry**  
**Synthesis and Characterization of New Tricyclic Tetraamines**  
Adviser: Gary Weisman
Many students broaden their research experience by taking their findings on the road to present at national conferences and professional meetings.

Junior Maggie Balz is one of them. Last semester she headed west to the American Speech, Language, and Hearing Association’s national convention in San Diego to present the results of her study on how electronic journal writing helps persons with brain injuries communicate.

In addition to having the chance to present her work to future colleagues, Balz says “it was really great to see how many career choices I’ll have with my degree. I didn’t realize how many specialties of speech pathology existed until I attended this conference.”

See Balz’s poster presentation “Electronic Journal Writing: Communicative Freedom for Adults with Brain Injury” at the Vice President’s University-wide Symposium on Friday, April 28 at the MUB.

Math majors Kirsten Hutchison and Derek Pouliot spent ten summer weeks searching for unexplored based rings and disproved Kaplansky’s 1973 Conjecture in the process. A based ring, a collection of characters that can be added and multiplied, is worth studying, according to Pouliot, because there’s still a lot to be discovered about them. “It’s something that hasn’t been the focus of a lot of research,” he says, “even at the graduate level.”

At the suggestion of their faculty mentor, Associate Professor Dmitri Nikshych, the pair applied for and was awarded a Summer Undergraduate Research Fellowship (SURF) which enabled them to work on computations and write a computer program that searches for based rings.

Earlier this month, Hutchison and Pouliot presented their findings at the National Conference on Undergraduate Research in Asheville, North Carolina.
Eleven student researchers represented the University of New Hampshire at the UNH Legislative Breakfast in Concord on April 19. An annual spring event, the breakfast brings New Hampshire Senators and key leadership from the New Hampshire House together with some of UNH’s finest student researchers to discuss their work and findings.

This year’s participants represented the diverse array of research underway at UNH in all disciplines; from music, to nursing, chemistry, animal science, and beyond.

2006 Legislative Breakfast presenters:
Abebe Negash, Concord, N.H.
Joe Pearson, Barrington, N.H.
Emmanuel Pitia, Manchester, N.H.
Chemical Engineering
Testing Biodiesel Fuel in Small Diesel Aircraft Engines

Jessica Cawley, Manchester, N.H.
Music Education
Investigating the Ways the Irish Learn Music

Magdalen Balz, Portsmouth, N.H.
Communication Sciences and Disorders
Electronic Journal Writing: Communicative Freedom for Adults with Brain Injury

Chad Saindon, Kingston, N.H.
Health Management & Policy
PhysicalBest Program Increases Children and Adolescent Fitness to Healthy Levels

Duane Hudgins, Sandown, N.H.
Naoufal Souitat, Rabat, Morocco
Mechanical Engineering
Emission Tomography

Catherine Overson, Weare, N.H.
Psychology
Perinatal Loss: Possible Caregiver Barriers

Amanda Putnam, Peru, Maine
Animal Science: Bioscience and Technology
The Role of Cytokeratin-8/18 in Cell Death within the Corpus Luteum

Anna Keim Weaver, South Berwick, Maine
Chemistry (Biology minor)
EPR Spectroscopy for the Forensic Analysis of Glass
Last year, the Undergraduate Research Conference distributed more than $12,000 in scholarships and travel grants to student participants for their award-winning work. The following University offices and departments sponsored these awards: The Office of the Vice President for Student and Academic Services, the Office of the Vice President for Research and Public Service, the Center for Undergraduate Research, the Institute for the Study of Earth, Oceans, and Space, the New Hampshire Space Grant Consortium, the College of Engineering and Physical Sciences, the Environmental Research Group, and the Marine Programs.

The following returning undergraduates received $500 scholarship awards of excellence.

Amy Blaisdell ’06  
The “Loaded Question” in Police Interrogations

Michael Bruce ’06  
Electron Microscopy of Shell Disease in Homarus americanus

Milena Doerfer ’06  
Post Traumatic Stress Disorder and EEG Asymmetry in Vietnam Nurses

Heather Drayton ’05  
Parents Perceptions of the Imaginary Companions of their Preschool Children

Jesse L. Gauthier ’06  
Obsessed

Victoria Lynn Hebert ’08  
Students against Cancer

Jillian Kalosky ’06  
Attitudes towards Rape Myths, Acquaintance Rape, and Reporting

Benjamin T. MacBride ’07  
Application of the Kolmogorov 4/5 Law to Interplanetary Turbulence

Emily Olsen ’06  
Writing as Activism

The following undergraduates received $750 travel grants to present their award-winning research at a professional conference.

Candice Carbone ’05  
The Many Languages of Spain: Linguistic Evolution and Influence on Contemporary Spain

Nicholas Dellas ’05  
Texture Formation in Thin Films During Sputter Deposition

Robert DiFabio ’05  
Energy Dependent Charge States in Impulsiv Solar Energetic Particle Events

Matthew Fortier ’05  
Active Noise Cancellation

Jacquelyn Frasca ’05  
Sondra Seppala ’05  

Stephen Hatfield ’05  
Identification of the Subcellular Localization of Calcium-Dependent Protein Kinases in Arabidopsis thaliana

Hallory Oberg ’06  
The Remaking of the Family in US Public Culture

Claire Treat ’05  
The Interannual Variations in Methane Emissions from a Temperate Peatland

Alexander Unrein ’05  
A Data Acquisition System for Biofouled Open Ocean Aquaculture Netting—The Design, Analysis and Construction

Lara Woolfson ’05  
The Photographic Self Portrait as a Rhetorical Genre

Bigger and better...More than $23,000 in scholarships and awards will be presented at this year’s URC. These awards are made possible by the Center for Undergraduate Research, the Office of the Vice President for Student and Academic Services, the UNH Parents Association, the College of Engineering and Physical Sciences dean’s office, the College of Life Sciences and Agriculture dean’s office, the College of Engineering and Physical Sciences Alumni Association, the Environmental Research Group, the New Hampshire Space Grant Consortium, the Institute for the Study of Earth, Oceans, and Space, and Phi Beta Kappa.
Passion for research: It's the defining factor of a UNH education and it is exactly what you will see at this week’s URC. The conference is an annual reflection of the remarkable work taking place among motivated undergraduates and active faculty researchers here at UNH.

This student-faculty collaboration is the backbone of the UNH experience. It begins in the classroom with research-intensive course work, but exists everywhere across campus and beyond. Look around and you'll find undergraduates in faculty labs, teaming up with their teachers to find solutions that benefit society. You'll see them in UNH's many living labs such as the greenhouses, the farms, and the New England Center; or at one of more than 40 centers and institutes dedicated to studying a wide range of issues, where undergraduates conduct research alongside experts in their fields.

One way these undergraduate-faculty relationships are developed is through UNH's Center for Undergraduate Research, which provides students with the opportunity to make research and creative explorations a more formal part of their academic experience. Each semester, dozens of students from varied academic disciplines apply for grants and fellowships from the center’s Undergraduate and International Research Opportunities Programs (UROP and IROP). The funds enable them to embark on their own projects, just as professional researchers do, and requires the same elements, from proposal to budget to research to report. Many of the students presenting here this week conducted their research using UROP and IROP grants.

The students you will meet at URC ’06 are searching for rare frogs in New Zealand rainforests, composing their own music, building a hovercraft, and growing fluorescent flowers. This direct participation in meaningful research is one of the unique characteristics of a UNH education, where students, together with faculty, are pushing back the frontiers of knowledge.

The URC is but one means for students to disseminate their findings. Some of the works you see here today might become the basis of an Honors or master’s thesis; others may find their way to national conferences and professional meetings where UNH undergraduates present their work to future colleagues and peers; still others may appear in Inquiry, UNH’s online journal of undergraduate research. Published annually, Inquiry features the research articles, briefs, and commentaries of undergraduates. The second volume is now online. In this edition, readers will find works on “painting as meditation,” an analysis of Guatemalan ceramics, a study of emphatic adverbial modifiers in speech, and much more, including a look at Lindsey Kendrick’s work on African violets. Kendrick, a senior pre-vet major, designed a research project aimed at producing fluorescent flowers and plants. Here is an excerpt from her commentary in Inquiry.

Sometime in December of 2004—I should really remember the date—I realized there was no better feeling than that of accomplishment. I was standing in a basic cell culture room in Rudman Hall, where fluorescent bulbs lit up Petri dishes containing plant cultures of all kinds. Tiny sprouts of new tissue grew from the five sections of leaves I had cut and placed on the simple agar only weeks before. Perfect little clones, they were bright green like new plants in the spring. I was only a month into my independent study in the plant biology department and nowhere near the completion of my project to create fluorescent African violets, but I will never forget the sense of pride that swept over me that day.

Read on at www.unh.edu/inquiryjournal.

Center for Undergraduate Research
www.unh.edu/undergrad-research

Centers and Institutes at UNH
http://www.unh.edu/orps

Research and Discover
www.eos.sr.unh.edu/researchanddiscover

University Honors Program
www.unh.edu/honors-program

Center for International Education
www.unh.edu/cie

URC ’07
To learn more about participating in the 2007 Undergraduate Research Conference, check out www.unh.edu/urc.
Acknowledgments

The UNH Undergraduate Research Conference has grown to become a signature event at the University and an annual highlight of the spring semester. One of the largest and most diverse conferences of its kind, bringing the URC to fruition each year is the result of a collaborative, behind-the-scenes network of a great many campus community members. Here, we acknowledge these individuals and thank them for helping make URC ’06 happen.

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UNH Marine Programs
UNH Parents Association
UNH Photographic Services
Web Solutions
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Pi Kappa Alpha

2006 URC Event Coordinators:

Mark Annicchiarico, Student Composers Concert
Janice Chadwick, Psychology George M. Haslerud URC
Grant Cioffi, Seacoast Reads Exhibition
Jane Dufresne, Mary Louise Fernald Nursing Research Symposium
Wayne Fagerberg, 15th Annual COLSA URC
Marianne Fortesque, Office of Community Service Partnerships
Rachel Trubowitz, English Undergraduate Honors Conference
Cynthia Giguere, Thompson School Undergraduate Student Showcase
Kate Hanson, Thompson School Community Service and Leadership Program
Rob Haskins, Festival of Creativity and Culture
George Hurtt, Interdisciplinary Science and Engineering Symposium
Mark Joseph, Philosophy URC
Regina McCarthy, UNH Manchester URC
Cynthia Nizzari-McClain, Whittemore School of Business and Economics, Paul J. Holloway Business Plan Competition
Cindi Rohwer, Chemistry Department Poster Exhibition
Lucy Salyer, History Department URC
Lisa Townson, Festival of Creativity and Culture
Neil Vroman, School of Health and Human Services, Grimes Award Competition
Catherine Wright, Senior B.A. and B.F.A Exhibition Preview Reception

2006 Conference Planning Committee:

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Cameron Wake, Faculty Fellow, Office of the VP for Research and Public Service and Research Associate Professor, Climate Change Research Center
Julie Williams, Ph.D., Associate Vice President, Research and Outreach Scholarship
Laurie Garrett on “Pandemic Security”

Can it still be assumed that the government can and will protect the populace’s health, or has that trust been betrayed in this complex and frightening time?

In a special appearance at the University of New Hampshire, Laurie Garrett talks about pandemic security.

Please join us
Friday, April 21, 7 p.m.
The Johnson Theatre (Paul Creative Arts Center)
University of New Hampshire

Garrett is an authority on newly emerging and re-emerging diseases, public health, and their effects on foreign policy and national security. She is a senior fellow for global health at the esteemed Council on Foreign Relations and the best-selling author of The Coming Plague: Newly Emerging Diseases in a World Out of Balance and Betrayal of Trust: The Collapse of Global Public Health. She is the only writer ever to have been awarded all three of the Big “Ps” of journalism: The Peabody, the Polk (twice), and the Pulitzer.

There is no charge to attend this event. Seating is limited. To reserve seats, RSVP at (603) 862-0598 (automated) or online at www.unh.edu/urc.

Doors open at 6:15 p.m. Parking is available in B-Lot.