Showcase of Experiential Learning

Sponsored by the Office of Experiential Learning

Friday, September 27, 2013
6-8pm, Fintel Library

This event is free and open to the public

http://roanoke.edu/Academics/Real-world_Learning.htm
Roanoke College presents the

Showcase of
Experiential Learning

Friday, September 27, 2013

Roanoke College students from all disciplines will showcase their research, creative works and experiences from intensive learning travel courses.

6:00-6:15 Registration and Social
Drop by the registration table for more information on experiential learning opportunities, such as internships, service-learning, study abroad, artistic/creative works and research.

6:15-6:45 Keynote Speaker
Dr. Elizabeth Holbrook, Assistant Professor, Health & Human Performance
“Research fosters community? A translational research approach to enhancing the quality of life in the Roanoke Valley”

6:45-8:00 Student Poster Session
Attendees should roam throughout Fintel Library and stop to talk to students about their research, artistic/creative works, and experiences in Mayterm 2013 travel courses. Mayterm 2014 faculty will also be on hand to discuss their courses with students and parents.

For more info on RC Research:
http://roanoke.edu/research
http://facebook.com/RCResearch
http://RCResearch.org
research@roanoke.edu @RCResearch

2013 Summer Scholars
What is experiential learning?
At Roanoke, Experiential Learning opportunities place you in authentic, real-world contexts. You will draw deliberate connections between the knowledge and skills gained through classroom learning and those gained through real-world experiences. You will develop additional academic skills, grow personally and professionally, and find a passion for possible career paths.

How do I get involved?

<table>
<thead>
<tr>
<th>Type of Experiential Learning</th>
<th>Contact Person</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential Learning Program</td>
<td>Dr. Rich Grant</td>
<td><a href="mailto:experience@roanoke.edu">experience@roanoke.edu</a></td>
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<tr>
<td>Research</td>
<td>Dr. Julie Lyon</td>
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<td>Internships</td>
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<tr>
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<td>Study Abroad &amp; May Travel Courses</td>
<td>Dr. Pamela Serota Cote</td>
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<td>Mr. Scott Couchman</td>
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<td>Service Learning</td>
<td>Prof. Katie Elmore</td>
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<td>Mr. Jesse Griffin</td>
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</tr>
<tr>
<td>Artistic &amp; Creative Work</td>
<td>Dr. Rich Grant</td>
<td><a href="mailto:experience@roanoke.edu">experience@roanoke.edu</a></td>
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When are the next showcases?
Showcase of Experiential Learning: Thursday, November 21, 6-8pm, Fintel Library
- Featuring internships, service-learning, and study abroad experiences
Showcase of Research & Creativity: Friday, November 22, 6-8pm, Fintel Library
- Featuring research and artistic/creative works
Showcase of Experiential Learning: Thursday, April 10, 6-8pm, Fintel Library
- Featuring internships, service-learning, and study abroad experiences
Showcase of Research & Creativity: Friday, April 11, 6-8pm, Fintel Library
- Featuring research and artistic/creative works
Summer Scholars Research

Code Switching: The Impact of Vocabulary Acquisition in the Bilingual Text and Development of Spanish in Young Learners
- Ms. Kaitlyn Bell
- Faculty Mentor: Dr. Dolores Flores-Silva
- Department: Modern Languages

Assessing the Influence of School Nutrition Policies and Programs on Academic and Nutritional Behavior in the Republic of Palau
- Ms. Alexandra DeLarichseliecre
- Faculty Mentor: Dr. Chad Morris
- Department: Sociology (Anthropology)

Constituting the ‘Native Question’
- Ms. Katherine Frisch
- Faculty Mentor: Dr. Jesse Bucher
- Department: History

Risky Business—a study of the effect of government policies on foreign direct investment in post conflict countries
- Ms. Samantha Garst
- Faculty Mentor: Dr. Andreea Mihalache-O’Keef
- Department: International Relations
Texting: The Socially Reinforcing Techno-interruption for College Students
- Ms. Jessica Gladfelter
- Faculty Mentor: Dr. Denise Friedman
- Department: Psychology

The Influenced: An Analysis of the Interests of Artists and Influences of Patrons on Paintings of the Annunciation in the Italian Renaissance
- Ms. Katrina King (pictured on front cover)
- Faculty Mentor: Dr. Jane Long
- Department: Art History

Silica Sulfuric Acid as an Alternative Catalyst for the Synthesis of Diarylacetic Acid Derivatives
- Ms. Rose Kohinke
- Faculty Mentor: Dr. Skip Brenzovich
- Department: Chemistry

Turning Poetry into Art Song: Combining Schenkerian Analysis and the Study of Poetic Closure
- Ms. Emily Leimbach
- Faculty Mentor: Dr. Gordon Marsh
- Department: Music

#GraphTheory in 140 Characters or Less: An Analysis of Directed Social Networks
- Mr. Jon Marino
- Faculty Mentor: Dr. Karin Saoub
- Department: Mathematics

The Rationality of the Contractual Society
- Mr. Andrew Miles
- Faculty Mentor: Dr. Ned Wisnfske
- Department: Philosophy

A Manuscript Writing Process on “The Impact of a School Running Program on Health-Related Physical Fitness and Self-Efficacy of Sensory Impaired Youth”
- Ms. Caroline Mueller
- Faculty Mentor: Dr. Elizabeth Holbrook
- Department: Health and Human Performance

Characterization of a PurA in Mycobacterium tuberculosis
- Ms. Michelle Pasier
- Faculty Mentor: Dr. Cathy Sarisky
- Department: Chemistry
How Human Development Affects Bird Populations Along the Roanoke River
• Ms. Lauren Strong
• Faculty Mentor: Dr. Rachel Collins
• Department: Biology

Measuring College Student Wellness: More Than Booze and Biceps?
• Ms. Emma Webb
• Faculty Mentor: Dr. Alice Kassens
• Department: Economics

Artistic/Creative Works

Transition From 2D Art To 3D Art
• Mr. Min Thein
• Faculty Mentor: Prof. Elizabeth Heil
• Department: Fine Arts

Other Research Presentations

Investigation of Predicted PurP Enzymes from Archaeal Organisms
• Mr. Noah Aguayo & Dr. Catherine Sarisky
• Faculty Mentor: Dr. Catherine Sarisky
• Department: Chemistry

Monte Carlo Simulations of n-alkanes on explicit surfaces
• Ms. Salihah Ali
• Faculty Mentor: Dr. Kelly Anderson
• Department: Chemistry

Cloning and Characterization of PurD from *Sulfolobus solfataricus*
• Ms. Dannielle Allen & Dr. Catherine Sarisky
• Faculty Mentor: Dr. Catherine Sarisky
• Department: Chemistry

Impact of paper mill discharge on microbial communities in the Jackson River
• Ms. Marguerite Ballou, Dr. Brooks Crozier, & Mr. Reid Mizelle
• Faculty Mentor: Dr. Brooks Crozier
• Department: Biology

Progress Toward an Alteration of Substrate Specificity in InhA, the Enoyl-ACP Reductase from *Mycobacterium tuberculosis*. Investigations into the Substrate-Binding Loop
• Ms. Samantha Barker
• Faculty Mentor: Dr. Timothy Johann
• Department: Chemistry
Characterization of the PurF enzyme in *Sulfolobus solfataricus*
- Ms. Maura Belanger
- Faculty Mentor: Dr. Catherine Sarisky
- Department: Chemistry

Using reflection essays to assess learning for high impact practices: Automating analysis for large-scale implementation
- Ms. Jennifer Blaney, Dr. Julie Lyon, & Dr. Kim Filer
- Faculty Mentor: Dr. Julie Lyon
- Department: Office of Experiential Learning

Overexpression of ThyX from *Mycobacterium tuberculosis* in *E. coli*
- Ms. Kate Bradford
- Faculty Mentor: Dr. Tim Johann
- Department: Chemistry

Characterization of Transposable Elements in *Coprinopsis cinerea*
- Ms. Colleen Britain
- Faculty Mentor: Dr. Marilee Ramesh
- Department: Biology

Blackjack Switch: An Optimal Play Strategy
- Ms. Heather Cook
- Faculty Mentor: Dr. David Taylor
- Department: Mathematics

Silica Sulfuric Acid as an Efficient and Environmentally Friendly Catalyst for the Synthesis of Various Diaryl-acetic Acid Derivatives
- Mr. Brandon Craig
- Faculty Mentor: Dr William Brenzovich
- Department: Chemistry

Synthesis of Diarylacetic Acid Derivatives
- Ms. Allison Denton
- Faculty Mentor: Dr. Skip Brenzovich
- Department: Chemistry

Alexander Falconbridge: The Unsung Abolitionist
- Mr. Patrick Dowling
- Faculty Mentor: Dr. Jesse Bucher
- Department: History
Circulatory Function in the Atlantic Blue Crab (*Callinectes sapidus*)
- Ms. Grace England
- Faculty Mentor: Dr. Dar Jorgensen
- Department: Biology

An Analysis of the Rally 'round the Flag Effect: International Conflicts, Presidential Approval Ratings, and Multilateralism
- Ms. Katherine Frisch
- Faculty Mentor: Dr. Andreea Mihalache-O'Keef
- Department: Public Affairs

Effects of Auxin and Ethylene on Root Cell Division in Various Lines of *Arabidopsis thaliana*
- Mr. Daniel Garber
- Faculty Mentor: Dr. Leonard Pysh
- Department: Biology

Understanding Japanese Political Leadership Trends Post-World War II: Do the Leaders' Personal Traits Matter?
- Mr. Adrian Gillem
- Faculty Mentor: Dr. Andreea Mihalache-O'Keef
- Department: Public Affairs

Beat and Emotion Tracking Mobile Radio
- Mr. John Guidry
- Faculty Mentor: Dr. Durell Bouchard
- Department: Computer Science

How Ethylene Affects Cellulose-Deficient Mutant Lines of *Arabidopsis thaliana*
- Ms. Sara Hunter
- Faculty Mentor: Dr. Len Pysh
- Department: Biology

Music genre preference alters alpha and tempo alters beta wave activity patterns in human non-musicians: A pilot EEG study
- Ms. Nicole Hurless, Ms. Aldijana Mekic, Mr. Sebastian Peña, Mr. Ethan Humphries, Mr. Hunter Gentry, & Dr. David F. Nichols
- Faculty Mentor: Dr. David Nichols
- Department: Psychology

Overexpression and Mutagenesis of the IMPDH guaB2 in *Mycobacterium tuberculosis*
- Ms. Taryn Johnson
- Faculty Mentor: Dr. Catherine Sarisky
- Department: Chemistry
Synthesis of Melt Processable Poly(acrylonitrile-co-methyl acrylate) statistical copolymers via RAFT polymerization
- Mr. Ronald Joseph, Mrs. Susan Beck, Dr. Sue Mecham, & Dr. James McGrath
- Faculty Mentor: Dr. James McGrath
- Department: Chemistry Department, Virginia Tech

A correlational study of dementia types and age
- Ms. Lauren Kennedy & Ms. Ciara Sims
- Faculty Mentor: Dr. Brian Shenal
- Department: VA Medical Center

Methane Emissions from Trees
- Mr. Kyle King
- Faculty Mentor: Dr. Katherine O'Neill
- Department: Environmental Studies

Continuation of Identifying Carboniferous Fern Fossils Found in Beckley WV
- Mr. Travis Lumpkin & Dr. Dorothybelle Poli
- Faculty Mentor: Dr. Dorothybelle Poli
- Department: Biology

Analysis of Sensors for Robotic Localization and Mapping
- Mr. Thomas Lux & Mr. Randall Pittman
- Faculty Mentor: Dr. Durell Bouchard
- Department: Computer Science

Through the Eyes of Teachers: Implementing Blended Learning in a Public School District
- Ms. Carolyn Miesen, Dr. Kimberly Filer, & Dr. Matt Rearick
- Faculty Mentor: Dr. Matt Rearick
- Department: Health and Human Performance

Use of microinvertebrates as bioindicators of soil quality in pine-switchgrass intercropped systems over long time scales
- Ms. Lydiah Fridah Mpyisi & Dr. Katherine O'Neill
- Faculty Mentor: Dr. Katherine O'Neill
- Department: Environmental Studies

Cloning and Expression of Methyltransferase RumB
- Mr. Jordan Pritts & Dr. Egidijus Zilinskas
- Faculty Mentor: Dr. Egidijus Zilinskas
- Department: Chemistry
Neighborhood Surveillance Enhances Quality of Participatory Action Research in the Roanoke Valley
- Ms. Lauren Roth, Ms. Leah Hall, & Dr. Elizabeth Holbrook
- Faculty Mentor: Dr. Elizabeth Holbrook
- Department: Health and Human Performance

Can we predict walking pace based on mood? Examining a dual-valence model of affect
- Ms. Annie Shreckhise & Dr. Matt Rearick
- Faculty Mentor: Dr. Matt Rearick
- Department: Health and Human Performance

Recommended Service Expansion for the Voice of the Blue Ridge: Results of the Roanoke Valley Needs Assessment for the Blind
- Ms. Chelsea Stone & Dr. Elizabeth Holbrook
- Faculty Mentor: Dr. Elizabeth Holbrook
- Department: Health and Human Performance

Monte Carlo Simulations of Alcohol/Alkane Mixtures near an Implicit Gold Surface, Nucleation of Polar & Non-polar Model Systems
- Mr. Tyler Stoneham & Dr. Kelly Anderson
- Faculty Mentor: Dr. Kelly Anderson
- Department: Chemistry

Project Endeavor: Bringing the Fundamentals back to Gaming
- Mr. Jared Thomas
- Department: Pre-Engineering

Fluorescent microscopy to visualize organ development in transgenic zebrafish embryos (*Danio rerio*)
- Mr. Benjamin Walker & Dr. Chris Lassiter
- Faculty Mentor: Dr. Chris Lassiter
- Department: Biology

Evaluation of earthworm communities and the effects on forest diversity dynamics in Southwestern Virginia
- Ms. Elsa Wieboldt & Dr. Rachel Collins
- Faculty Mentor: Dr. Rachel Collins
- Department: Biology

Investigations of Fluoroquinolone resistance in *Mycobacterium tuberculosis*
- Mr. Nicholas Wright
- Faculty Mentor: Dr. Tim Johann
- Department: Biochemistry

Variations in the Development of Atmospheric and Liquid Drop Clusters via Monte Carlo Simulations
- Ms. Amanda Wright
- Faculty Mentor: Dr. Kelly Anderson
- Department: Chemistry
May Term 2013 Travel Experiences

Mayterm 2013: Jesus in the Land of Israel
- Ms. Katharina Boltwood
- Faculty Mentor: Dr. Gerald McDermott
- Department: Religion & Philosophy

Mayterm 2013: National Parks
- Mr. Jason Gollan, Ms. Ellen McCumber, & Dr. Chris Lassiter
- Faculty Mentor: Dr. Chris Lassiter
- Department: Biology

Mayterm 2013: RC to Ghana
- Ms. Elsa Wieboldt
- Faculty Mentor: Dr. Richard Grant & Dr. Shannon Anderson
- Department: Sociology

Mayterm 2013: Service in Ghana
- Ms. Kelsey Reedy, Ms. Ashby McGarry, Ms. Erica Mullinix, Ms. Kalee Robinson, & Mr. Andrew Daniels
- Faculty Mentor: Dr. Richard Grant & Dr. Shannon Anderson
- Department: Sociology

Mayterm 2013: Reflections on Ghana
- Ms. Elizabeth Hord
- Faculty Mentor: Dr. Shannon Anderson & Dr. Rich Grant
- Department: Sociology

Mayterm 2013: Walking the Way: Spanish
- Ms. Scarlett Stover, Ms. Emily Herron, Ms. Laura Lee Wight, Ms. Julia Holahan
- Faculty Mentor: Dr. Lynn Talbot
- Department: Modern Languages

Mayterm 2013: Travel Writing in Cambodia
- Ms. Courtney Vaughan, Ms. Chalalin Giron, Ms. Liesl Stach, Mr. Jonathan Cribb, & Ms. Meghan Puckett
- Faculty Mentor: Dr. Paul Hanstedt
- Department: Creative Writing
May Term 2014 Travel Courses

INQ 177/ARTH 177  A Tale of Two Cities
Instructors: Dr. James Hargrove and Dr. Ken McGraw
Prerequisites: Permission, Fee: $4300
On location in Paris and London

INQ/HIST 277 American Tourist in Rome
Instructor: Dr. Mary Henold and Professor Giuliana Chapman
Prerequisites: Permission, Fee: $4600
On campus for one week and then on location in Rome

INQ 277 Comparative Education--France
Instructor: Dr. Tim Reynolds
Prerequisites: EDUC 210 and Permission, Fee: $4000*
On location in France

INQ 277 Fieldwork in Comparative Phonology
Instructor: Dr. Jim Ogier
Prerequisites: Permission, Fee: $3600
On location in Ireland

INQ 277 Contemporary India in the Shadow of Gandhi
Instructor: Dr. Michael Heller
Prerequisites: Permission, Fee: $4200*
On location in India

INQ 277/RELG 277 Political Religions in Europe: Fascism, Marxism, and Nazism
Instructor: Dr. Paul Hinlicky
Prerequisites: Permission, Fee: $3900*
On location in Slovakia

INQ 277/HIST 277 Korea's Modern Trajectory
Instructor: Dr. Stella Xu
Prerequisites: Permission, Fee: $4500*
On location in Korea

INQ 277 Stockhom on the Water
Instructor: Dr. James Peterson
Prerequisites: Permission, Fee: $3600*
On location in Stockholm

INQ 277 Service and Peacework in Belize
Instructor: Dr. Katie Elmore
Prerequisite: Permission, Fee: $4000
On location in Belize

INQ 277/ARTH 177 Pausanias' Tour of Greece
Instructor: Dr. Jason Hawke
Prerequisites: Permission, Fee: $4600
On location in Greece

INQ 277 Promotions in Paris
Instructor: Dr. Pamela Galluch
Prerequisites: BUAD 233 and Permission,
Fee: $4250*
On location in Paris

INQ 177 Rhetoric of Tourism
Instructor: Dr. Erica Cooper
Prerequisite: COMM 101 and Permission, Fee: $4850
On location in South Africa

INQ 177 Adventure into Nature
Instructor: Dr. Steve Powers
Prerequisites: Permission, Fee: $310
Domestic travel course

*Eligible for Fowler Scholarships
Top: RC to Ghana: Roanoke College students explored Ghana through the lens of service and travel. They taught in schools and after-school programs, assisted in a rural, regional hospital, planted trees, and constructed in computer labs and internet cafes.

Left: RC to Spain: 6 days! 120 kilometers! 14 RC students hiked the Camino Portugués to Santiago de Compostela.