

CELEBRATION

A COLLOQUIUM ON UNDERGRADUATE RESEARCH, CREATIVE ACTIVITY, AND COMMUNITY ENGAGEMENT

Do great work

Celebration

Celebration 2012

May 5th, 9:00 AM - 5:00 PM

Celebration Schedule 2012

Provost's Office
Gettysburg College

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Description

Full presentation schedule for Celebration, May 5, 2012

Location

Gettysburg College

Disciplines

Higher Education

From the Provost

I am most pleased to welcome you to Gettysburg College's Fourth Annual Colloquium on Undergraduate Research, Creative Activity, and Community Engagement.

Today is truly a cause for celebration, as our students present the results of the great work they've been engaged in during the past year. Students representing all four class years and from across the disciplines are demonstrating today what's best about the Gettysburg College experience— intentional collaborations between students and their mentors such that students acquire both knowledge and skills that can be applied to many facets of their future personal and professional lives.

The benefits for those who mentor these young adults may, at first, be more difficult to discern. Most of those who engage in mentoring do it because they enjoy being around students who are eager to learn what they have to teach them. They enjoy the one-to-one relationship that can be achieved mentoring a student through a research or creative project that they don't always have the opportunity to achieve when teaching in the classroom. Some faculty mentors do get assistance in their own research from their students and sometimes students come up with a novel way of thinking about a process or approaching a problem that also clarifies the faculty member's thinking. For the most part, however, those who serve as mentors derive satisfaction from passing on their intellectual legacy to the younger generation.

Thus, *Celebration* provides an excellent opportunity for the entire Gettysburg College community to reflect upon and share all that we have learned from one another over the past academic year.

I hope you enjoy the day as you choose among the many posters, panel presentation, plays, films, and musical performances given by our students. The excitement and energy generated by this event is made possible in no small measure because of those of you who will be attending the sessions. We are grateful for your support!

Sincerely,
Christopher J. Zappe, Ph.D.
Provost

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Posters

Poster Session I

10.00am - 11.30am

Science Center 2 Lobby

Abigail Kallin '12
Abigail Ziegler '13
Alexander Peters '12
Alexandra Annis '12
Alexandra Papada '13
Alexandra Van Tuyl '12
Alexis Cuneo '12
Alyson Buck '12
Alyssa Kull '12
Andrew Hoch '13
Anna Myavec '12
Anna de la Motte '12
Ashley Seeley '12
Ayana Spell '12
Branden Strohl '13
Caldwell Rohrbach '13
Carolyn Murphy '12
Carolyn Poehner
Cody Pollack '12
Colin Pryor '13
Corrina DaSilva
Daniel Weitzer '12

Danielle Berardinelli '12
Emily Miano '13
Erica Forzley '12
Erika Miller
Erin Tyrer '12
Forrest Jacobs '12
Francesco Siciliano '12
George Whitelaw '12
Hannah Garman '12
James Kane '12
Jason Ellis '12
John Servinskaskas '12
Katharine Wood '12
Kristen Stryker '13
Kyle Bauer
Lucien Ryan
Lyudmila Marinova '12
Maggie Tosten '13
Margaret Elliston '14
Matthew Crane '13
Meredith Kern '12
Michael Altman '12

Michael Behling '13
Morgan O'Connor '13
Munyaradzi Choga '12
Nathan Clark '12
Ondrej Krasny '12
Pembroke Emanuelson '12
Rachael Ward '12
Rahul Sinha '12
Riccardo Purita '13
Ronald Malone '13
Samantha Horneff
Sara Purifoy '13
Sarah Moses '12
Stephanie Tait '12
Stephen Gern '13
Steven Hnath '12
Zachary Turley '12

Poster Session II

12.00pm - 1.30pm

Science Center 2 Lobby

Aden Lessiak '15
Alayne Holland '12
Andrew Cinderella '12
Anna de la Motte '12
Anyia Pierson '15
Brian Lauderback '12
Carolyn Murphy '12
Chad Killen '15
Charles Gallagher '12
Christina Jasion '13
Christopher Strock '13
Cody Pollack '12
Daniel Kim '12
Derik Yager-Elorriaga '12
Elizabeth Royer '12
Elizabeth Stevenson '12
Emily Carlisi '15
Erica Forzley '12
Gabrielle Benson '15

Hannah Anthony '12
Hannah Loch '12
Ignacio Landaverde '15
Jacob Treinish '13
James Kane '12
Jessica Ballister '13
John Servinskaskas '12
John Vitarello '13
Jonathan Hibshman '12
Jonathan Pesce '12
Joseph Robinson '15
Karlina Kauffman '12
Kathleen Hillery '12
Kristen Kornsey '15
Krupa Patel '15
Lauren Wilson '15
Loren Deron '12
Luke Cuculis '12
Manhao Zeng '15

Mariesa Slaughter '12
Melissa Tighe '15
Michael DiCandia '15
Michael Marll '12
Minh An Nguyen '12
Munyaradzi Choga '12
Nicole Quinn '12
Olivia Ruth '13
Paula Eichner '13
Stacey Heaver '15
Stephanie Tait '12
Taylor Plank '12
Thomas Clements '12
Thomas Field '12
Trevor Kerstetter '12
Warren Campbell '15

Poster Session III

2.00pm - 3.30pm

Science Center 2 Lobby

Alice Wolfkill '12
Allison Barrett '12
Chandra Kirkland '13
Elena Rubino '12
Elizabeth Adams '12
Elizabeth Amrhein '12
Elizabeth Jones '14

Falon Deimler '13
James Myers '12
Jessica Vatnick '12
Julie Weisz '12
Keith Gromis '13
Kyra Jenney '12
Lyudmila Marinova '12

Matthew Mayer '12
Ondrej Krasny '12
Stephanie Gulden '13
Tesia Jankowski '12

Poster Session IV

10.00am - 11.30am

Weidensall Hall Lobby

Adam Newhard '12
Alex Ferraro '12
Annie Golovcsenko '12
Brenda Clark '12

Hanna Heuser '12
Kaitlyn Roman '12
Kyra Jenney '12
Lauren Javins '12

Richard Clough '12
Taylor Schow '12

Poster Session V

12.00pm - 1.30pm

Weidensall Hall Lobby

Allison Mion
Alyson Buck '12
Benjamin Schell '12
Caitlin Kaltenbach '12

Caroline Maggard
Christa Jaskir '12
Christine Walker
Hannah Tenenbaum '12

Kailey Smaczniak '12
Martha Slenker '12
Michael DeLue '12

Panels

Anthropology Capstone Session I		1.00pm - 2.00pm Breidenbaugh Hall 112
Catherine Rossi '12 Christopher Burkett '12	Siobhan Tooze '12	
Anthropology Capstone Session II		2.00pm - 3.00pm Breidenbaugh Hall 112
Cynthia Downing '12 Erik Swanson '12	Kyra Fallon '12 Paige Phillips '12	
Art History Panel I		2.00pm - 3.00pm Breidenbaugh Hall 209
Emily Francisco '14 Francesca DeBiaso '12	Molly Reynolds '14	
Art History Panel II		3.00pm - 4.00pm Breidenbaugh Hall 209
Francesca DeBiaso '12	Marielle Bianchi '12	
Biology Oral Presentation Session I		10.00am - 10.45am Science Center 300
Elizabeth Heisler '12 Mary Fakunle '12	Trevor Kerstetter '12	
Biology Oral Presentation Session II		11.00am - 12.00pm Science Center 300
Hannah Anthony '12	Jonathan Hibshman '12	

Biology Oral Presentation Session III

2.00pm - 2.45pm

Science Center 300

Amanda Miller '12
Charles Gallagher

Michael Marll

Biology Oral Presentation Session IV

3.00pm - 3.45pm

Science Center 300

John Vitarello '13
Kendra Hayden '12

Mariesa Slaughter '12

Blogging the Battlefield: Exploring Gettysburg's Past Through Social Media

12.00pm - 1.00pm

Breidenbaugh Hall 311

Brian Johnson '14
Mary Roll '12

Natalie Sherif '14

Eisenhower and His Times

11.00am - 12.00pm

Breidenbaugh Hall 205

Austin Clark '12
Elizabeth Amrhein '12

Nicholas Scerbo

Eisenhower Institute Session

11.00am - 12.00pm

Science Center 151

Abigail Conner '15
Adaeze Duru '12
Allan Kawala '13
Anna Baldassarre '14
Chelsea Broe '14

Declan Sullivan '15
Eric Harris '15
Kaeley McEvoy '14
Lauren Dunne '13
Maria Lombardi '15

Michael Pipa
Rachel Fry '15
Sarah Fodero

Environmental Studies 400 Session I

11.00am - 12.00pm

Science Center 200

Catherine Leech '12
Christian Neumann '12
Erik Hughes '12

John Ryder '12
Nicole Moody '12
Sara Tower '12

Taylor McGrath '12

Participants listed by session and time

Environmental Studies 400 Session II

12.00pm - 1.00pm

Science Center 200

Andrea Carson '12
Joseph Boone '12
Mary Ranii '12

Megan Sherman '12
Sarah Hecklau '12
Sarah Weinstein '12

Environmental Studies 400 Session III

1.00pm - 2.00pm

Science Center 200

Annie Golovcsenko '12
Caitlin Shubick '12
Daniel Chibbaro '12

Ian White
Jessica Bozzo '12
Kurt Hinck '12

Environmental Studies 400 Session IV

2.00pm - 3.00pm

Science Center 200

Clair Pomponi '12
Danielle Carty '12
Eleanor Testa '12

Julia Ivers '12
Matthew Moyer '12
Matthew Toich '12

Environmental Studies 400 Session V

3.00pm - 4.00pm

Science Center 200

David Curtis '12
James Fellows '12

Kevin Blake '12
Michael Nemeth '12

Robert Martz '12

Environmental Studies Honors 460 Presentations

10.00am - 11.00am

Science Center 200

Alyse Yeager '12
Brittany Jones '12

Elena Rubino '12
Mitchell Jones '12

From Politics to Lemonade

1.00pm - 2.00pm

Glatfelter Hall 105

Ann-Marie Valentine '12
Brenda Clark '12

Brooke Elmi '12
William Segraves '14

Globalization Studies Capstone Session I

1.00pm - 2.00pm

Science Center 151

Ian Smith '12
Luke Feltz '12

Sara Tower '12

Globalization Studies Capstone Session II

2.00pm - 3.00pm

Science Center 151

Andrea Carson '12
Kimberly Wheeler '12

Lucy Sargent '12
Tyler Geer '12

Humanities Panel

12.00pm - 1.00pm

Breidenbaugh Hall 112

John Hill '13
Lauren Javins '12

Rachel Wynn '12
Shelby Glass '12

Mellon Summer Scholars Panel I

10.00am - 11.00am

Breidenbaugh Hall 209

Evan Singer '12
Joseph Miller '13

Loren Deron '12

Mellon Summer Scholars Panel II

11.00am - 12.00pm

Breidenbaugh Hall 209

Jeanna Robb '12
Lauren Roedner '13

Paige Phillips '12

Mellon Summer Scholars Panel III

12.00pm - 1.00pm

Breidenbaugh Hall 209

Elizabeth Adams '12
Kathleen Ragon '13

Ryan Becker '13
Steven Hnath '12

Participants listed by session and time

Philosophy Panel		1.00pm - 2.00pm Breidenbaugh Hall 209
Alyssa Oursler '12 John Hill '13	Karenn Genzlinger '14 Kristen Stryker '13	Michael Behling '13
Reflections on Nicaragua: A Discussion on 2012 CPS Experiences in Leon		3.00pm - 4.00pm College Union Ballroom
Abigail Ziegler '13 Alexandra Isaacson '15 Anna Marie Conrad '13 Caleb Sisak '12 Christine Serwan '13 Christopher Dellana Drew Brooks Hannah Diehl	Kaeley McEvoy '14 Krupa Patel '15 Laura Koenig '13 Mary Ranii '12 Nicholas Redman Nicole Moody '12 Olivia Ruth '13 Rebecca Croog '14	Riccardo Purita '13 Richard Aime '12 Samuel Holmes Shane Swink Stephanie Angelo '14
San Carlos Apache Immersion Trip		10.00am - 11.00am Breidenbaugh Hall 112
Katelyn Burke Lily Coryell-Moore '14	Nicole Dibble '14 Rebecca Taormina '13	
Science and Public Policy		2.00pm - 3.00pm Glatfelter Hall 212
Gianina Galatro '12	Valerie Leone '13	
Sociology Methods Session I		10.00am - 11.00am Glatfelter Hall 212
Allison Serina '13 Chandra Kirkland '13 Elizabeth Mueller '13	Lindsay Menton '13 Madison Hughan '14 Matthew Moyer '12	
Sociology Methods Session II		11.00am - 12.00pm Glatfelter Hall 212
Hannah Church '12 James Patton Josiah Adlon '12	Mary Bridget Shouvin '13 Mia Rawleigh '14 William Worthy '12	

Participants listed by session and time

Sociology Methods Session III		12.00pm - 1.00pm Glatfelter Hall 212
Alexis Bralow '14 Anna Baldasarre '14 David Harty '13	Jacey Dold Karla Cobos '14 Lauren Niess '12	
Spanish 400 Seminar Session I		10.00am - 11.00am Breidenbaugh Hall 311
Andrew Peiffer '12 Katelyn Bigelow '12	Taylor Plank '12	
Spanish 400 Seminar Session II		11.00am - 12.00pm Breidenbaugh Hall 311
Bryan Harris '12	Rachel Ciniewicz '12	
Spanish 400 Seminar Session III		1.00pm - 2.00pm Breidenbaugh Hall 311
Bridget Footit '13 Erin McCarthy '12	Katelyn McLimans '12	
Spanish 400 Seminar Session IV		2.00pm - 3.00pm Breidenbaugh Hall 311
Adam Newhard '12 Daniela Yager-Elorriaga '12	Kailey Smaczniak '12	
Spanish 400 Seminar Session V		3.00pm - 4.00pm Breidenbaugh Hall 311
Amanda Reynolds '12	Mary Cathey '12	

Speaking Chinese, Articulating China.

11.00am - 12.00pm

Breidenbaugh Hall 112

Allison Gross '15
Helena Yang '14

Kevin Bond '13
Michael Boyland '13

William Segraves '14

The Nation's Conscience?

1.00pm - 2.00pm

Glatfelter Hall 212

Carter McClintock '12

Cory Rosenberg '12

The Struggle for Equal Rights at Gettysburg College- 1961-1977

10.00am - 11.00am

Breidenbaugh Hall 205

Gabriella Hornbeck '13
John Nelson '13

Joshua Poorman '13
Lauren Roedner '13

**The Third Reich, the Cold War, and the Two German States:
Reports from a visit to Berlin**

11.00am - 12.00pm

Glatfelter Hall 105

Alison Moody '12
Amanda Reynolds '12
Brian Engelsma '12
Carter McClintock '12

Laura Koenig '13
Luke Feltz '12
Lyndsie Guy '12
Sarah Hecklau '12

Trinh Hagedorn '12

Art

Art Session

1.00pm - 2.00pm

Breidenbaugh Hall 205

Eric Lee '15

Film

Individual Film Festival 1

10.00am - 1.00pm

Breidenbaugh Hall 201 Joseph T

Caleb Sisak '12
Deonne John '12

Stephanie Hoover '12

Voices of Resistance Session

2.00pm - 3.00pm

Breidenbaugh Hall 201 Joseph T

Allan Kawala '13
Chelsea Broe '14
Christine Serwan '13
Dinesh Manandhar '12

Gianina Galatro '12
Kurt Mathisen '15
Marcin Malec
Melanie Meisenheimer '14

Molly Reynolds '14
Talia Concepcion
Yaou Liu

Music

Jazz dispatch NYC tour home concert		1.00pm - 2.30pm College Union Patio*
Julie Blum '15 Kevin Psolka-Green '13 *Rain Venue : College Union Junction	Robert Whipple '12 Ryan Stones '12	Thomas Neufeld '13
Lift Every Voice and Sing: The Role of Gospel Music and Choirs in Music Education		1.00pm - 2.00pm Schmucker Hall 214
Leroy Smith '12		
Music Capstone Poster Session		10.45am - 11.30am Schmucker Hall 222 Recital Hal
Alyssa Clark '12 Brendan Michalko '12	Melinda Harrison '12	
Piano Sonata Recital		11.30am - 12.30pm Schmucker Hall 222 Recital Hal
Bradley Bissell '12 Elizabeth Andresen	Emily Watkins Kristin Staub '13	Vincent Casmirri '13
South-Central Pennsylvania Music Teachers' Musical Identities and Their Perceptions of Popular Music		10.00am - 10.45am Schmucker Hall 222 Recital Hal
Emma Sheffer '13 Keith Gromis '13	Kristin Staub '13 Matthew Carlson '13	Michelle Stukane '13

Theater

"Novacane"

12.00pm - 1.00pm

Brua Hall 200 Kline Theatre

Isabelle Boguski '15

Ryan Bonner '14

Posters

Poster Session I

10.00am - 11.30am

Science Center 2 Lobby

Center for Public Service

Lyudmila Marinova, Munyaradzi Choga

Bougounam Library

Computer Science

Forrest Jacobs, Munyaradzi Choga, Ondrej Krasny, Rahul Sinha

Speech therapy iPad application

Jason Ellis, Kyle Bauer, Nathan Clark, Zachary Turley

Programming the Youth

Health Sciences

Alexandra Annis, Cody Pollack

From Synthesis to Treatment: The Effects of Resveratrol on Mammalian Targets

Danielle Berardinelli

Effect of endurance exercise training on fasting and postprandial serum retinol-binding protein 4 concentrations

Hannah Garman

Creatine Supplementation Decreases Lactate Response Following Acute Ingestion of a Beverage Containing Fructose or Glucose

Michael Altman

Introducing clean water access and creating foundation for income generation for clients living with HIV/AIDS in Kyamuyimbwa, Uganda (Tulina Esuubi group)

Mathematics

Steven Hnath

Exploring Board Game Folklore

Physics

Alexander Peters, Kristen Stryker, Margaret Elliston

Modeling neutron events in MoNA-LISA using MCNPX

Ronald Malone

Simulation of an Apparatus to Measure the Parity-Violating Neutron Spin Rotation in ^4He

Psychology

Abigail Kallin, Alexis Cuneo, Pembroke Emanuelson

Does the Interaction Between Color and Temperature Have an Effect on Social Proximity?

Abigail Ziegler, Alyson Buck

Modulation of the Aesthetic Experience

Alexandra Papada, Erica Forzley

The Medial Prefrontal Cortex and Its Effects on Prosocial Behavior

Alexandra Van Tuyl, George Whitelaw, Matthew Crane

Athletes and Self-Esteem

Alyssa Kull, Branden Strohl

Effects of Stereotypes and Aggression

Andrew Hoch, Maggie Tosten

The Effects of Familiarity on Preschoolers' Perceptions of Life in Various Types of Media

Anna de la Motte

Self-Regulation: An Illusion of Perception?

Anna Myavec, Emily Miano

The Effects of Gender Priming on Preschoolers' Responses to Aggression

Ashley Seeley, Morgan O'Connor

Gender Stereotypes, Perceptions of Parents, and Toy Choice among Preschoolers

Ayana Spell, Francesco Siciliano

The Effect of Temperature on Own-Race Bias in Facial Recognition

Caldwell Rohrbach, Stephen Gern

Power and Superstition's Effect on Self-Efficacy

Carolyn Murphy, Lucien Ryan

The Smell of Music: Pitch and Consonance Influences on Olfactory Perception

Carolyn Poehner, Sarah Moses

Children's Perception of Gender Through Drawing

Colin Pryor, Samantha Horneff

Does Priming Emotions Influence the Expression of Effortful Control?

Corrina DaSilva, Daniel Weitzer

The Role of the Medial Prefrontal Cortex In Romantic Relationships

Erika Miller, Erin Tyrer

Loneliness and solitude: will they bring out the aggression in you?

How Isolation and Agreeableness Affect Aggression

James Kane, John Servinskis

The effect of spatial limits on embodied perceptions

John Servinskis, Riccardo Purita

Understanding the Role of Specific Personality Traits In Assessing Death Qualification

Katharine Wood, Meredith Kern, Stephanie Tait

Effect of Family Size in Predicting Selfless Behavior

Michael Behling, Sara Purifoy

Priming and the Inverse Halo Effect

Rachael Ward

How the World Looks When You're Hopeless: Distance Perception as a Function of Hopelessness and Social Support

Poster Session II

12.00pm - 1.30pm

Science Center 2 Lobby

Biology

Aden Lessiak, Emily Carlisi, Krupa Patel, Manhao Zeng

Determination of One-Step Growth Curve of Mycobacteriophage Avani

Anya Pierson, Kristen Kornsey, Melissa Tighe, Warren Campbell

Lysogeny and Immunity Group

Chad Killen, Joseph Robinson, Michael DiCandia, Stacey Heaver

Ecology of Bacteriophage Diversity on Gettysburg College Campus

Charles Gallagher

Influences of soil microbes with an analysis of an Intercrop of *Lolium perenne* with *Phaseolus vulgaris*, and a bacterial seedling inoculation of *Lolium perenne* with *Rhizobium etli* (CFN 42)

Christina Jasion, Christopher Strock

Microhabitat needs and preferences of wood and box turtles in Fairfield, Pennsylvania.

Gabrielle Benson, Ignacio Landaverde, Lauren Wilson

Annotation of Mycobacteriophage Melvin

Hannah Anthony

Pathogen response gene expression patterns in *Caenorhabditis elegans* upon *Pseudomonas aeruginosa* infection

John Vitarello

DOES THE PULSE EXAMINATION ACCURATELY DIAGNOSE PERIPHERAL ARTERY DISEASE?

Jonathan Hibshman

C-type lectin, clec-67, acts intestinally in the innate immune response of *C. elegans*

Joseph Robinson

Epitope-tagging the G-Protein Coupled Receptor FSHR-1

Mariesa Slaughter

Genetic Variation for Dipeptidase-B mRNA Isoforms in *Drosophila melanogaster*

Michael Marli

Coping with stalled replication forks: investigating the roles of DNA repair genes and checkpoint regulators in the S phase DNA Damage Response.

Nicole Quinn

A bioacoustic survey of Microchiroptera in Kruger National Park, South Africa.

Olivia Ruth

Constructing the *C. elegans* FSHR-1 Signaling Pathway

Stacey Heaver

Annotation of the Genome of a Novel Bacteriophage Isolated from the Gettysburg College Campus

Trevor Kerstetter

Subdomain analysis of the BRDF checkpoint motif of the nimODbf4 regulator of DNA synthesis.

Chemistry

Andrew Cinderella

Green Methylation of Phenols with Dimethyl Carbonate and the Controlling Mechanism

Brian Lauderback

Determination of differences in transactivation activity of wild-type and Rdy CRX transcription factor

Daniel Kim

Oppenauer--type oxidations using an air-stable, nitrile-ligated (cyclopentadienone)iron dicarbonyl catalyst

Hannah Loch

Synthetic Explorations of Alkyne Derivatives and Shape-Persistent Molecules of Tröger's Base

Karlina Kauffman

The role of protein context in disease-related huntingtin protein/lipid interface interactions

Kathleen Hillery

The photodissociation of dimethyl disulfide in solution using UV-light Or Raman Spectra: Noodling with the bonds

Luke Cuculis

Nanoparticle and Surfactant Interactions with Model Cell Membranes

Minh An Nguyen

DON'T BE SO NEGATIVE!

Shifting the Redox Potential of Cobalt Clathrochelate Complexes

Taylor Plank

Synthesis of Iron Catalysts for Use in Oxidation and Reduction Reactions

Thomas Field

Investigation of the Mechanism of
Troger's Base Racemization

Computer Science

Munyaradzi Choga

Pocket Manager

Interdisciplinary Studies

Erica Forzley

The role of Buddhist meditation in the treatment of depression

Psychology

Alayne Holland

Quantifying and Comparing Oxytocin Neurons Between Two Rat Strains: Fischer
344 and Sprague-Dawley Rats

Anna de la Motte, Paula Eichner

The Role of Social Exposure on Attenuating the Fear Response

Carolyn Murphy

The Role of Behavioral Inhibition and Activation Systems in Olfactory and Taste
Perception

Cody Pollack, Derik Yager-Elorriaga

The Effect of Social Play and Amphetamine on Prepulse Inhibition

Elizabeth Royer, Elizabeth Stevenson

The Effects of Cat Odor and Tickling on Anxiety in the Juvenile Rat

Jacob Treinish, Jessica Ballister, Loren Deron

Effects of Endocannabinoids on Cat-odor Induced Anxiety in Rats

James Kane, John Servinskis

Does a Simple Smile Make Others Seem to be More Socially Adjusted?

Jonathan Pesce, Thomas Clements

Amphetamine and Nicotine on Pre-Pulse Inhibition of the Acoustic Startle Response

Stephanie Tait

Order Effects on Preference Judgments for Visual Stimuli

Poster Session III

2.00pm - 3.30pm

Science Center 2 Lobby

Economics

Elena Rubino

Endangered Species Conservation as a Common Pool Resource Game:
Experimental Evidence

Elizabeth Adams

Debt and Deforestation: An Updated Analysis

James Myers

From Hubs to Zones and Zones to Nodes: Differences of Risk and Abnormal Profits

Julie Weisz

Effects of Price Feedback on Residential Demand for Electricity in Demand-Side
Management Programs

Lyudmila Marinova

The Impact of Health Insurance Consolidation on Health Insurance Premiums

Ondrej Krasny

The impact of local knowledge on fiscal policy multipliers

Interdisciplinary Studies

Tesia Jankowski

Jamaican Creole and National Identity

Music

Elizabeth Amrhein

The Cinderella of the Orchestra

Keith Gromis

The Effect of Per WWI British Nationalism on the Compositions of Gustav Holst and
Ralph Vaughan Williams

Organization and Management Studies

Allison Barrett, Stephanie Gulden

Family Supportive Supervisor Behaviors, Occupational Level, and Organizational Outcomes

Political Science

Jessica Vatnick

The Impact of Globalization on Voter Turnout in Established Democracies

Matthew Mayer

The Effect of Globalization On Healthcare in the Developing World

Religious Studies

Kyra Jenney

The Jewish Sabbath: The Eternal Unity of God and Socio-Spiritual Ethics

Sociology

Alice Wolfkill

Perceptions of Masculinity in Singaporean Heterosexual Mate Selection

Chandra Kirkland

Feeling at Home Away from Home: Gay Tourism and the Creation of the "Safe" Vacation

Elizabeth Jones

The Marketing of Authenticity by Chinatown

Falon Deimler

"You Are What You Eat" - Food and Identity: Authenticity, Modernity, and Ethnic Symbolism in Singaporean Cuisine

Poster Session IV

10.00am - 11.30am

Weidensall Hall Lobby

Global Leadership Gettysburg College

Adam Newhard

GLGC final reflection presentation

Alex Ferraro

Global Leaders of Gettysburg College: Study Abroad Experience In and After South Africa

Annie Golovcsenko

Global Leaders of Gettysburg College Reflection - My Experience in South Africa during Spring 2012

Brenda Clark

Final GLGC Reflection

Hanna Heuser

Melbourne Madness: My Experience Abroad and in Global Leaders of Gettysburg College

Kaitlyn Roman

GLGC Athens, Greece

Kyra Jenney

Study Abroad and GLGC: Mentorship, Scholarship and Activism from Brisbane to Gettysburg

Lauren Javins

Global Leaders of Gettysburg College Reflection: China

Richard Clough

Rich Clough Global Leaders of Gettysburg College (GLGC)

Taylor Schow

Global Leaders of Gettysburg College

Poster Session V

12.00pm - 1.30pm

Weidensall Hall Lobby

Global Leadership Gettysburg College

Allison Mion

GLGC session

Alyson Buck

Study Abroad Presentation on Vienna, Austria

Benjamin Schell

Abroad and Beyond: Mexico, Nicaragua, Gettysburg, and the GLGC

Caitlin Kaltenbach

GLGC poster session

Caroline Maggard

GLGC

Christa Jaskir

My experience "down unda".

Christine Walker

GLGC poster session

Hannah Tenenbaum

GLGC - Hannah Tenenbaum

Kailey Smaczniak

Gettysburg Goes Global with the GLGC

Martha Slenker

A Semester in Ireland & Northern Ireland (GLGC Presentation)

Michael DeLue

GLGC poster session

Panels

Anthropology Capstone Session I

1.00pm - 2.00pm

Breidenbaugh Hall 112

Anthropology

Catherine Rossi, Christopher Burkett, Siobhan Tooze

Anthropology Capstone Project Presentations

Anthropology Capstone Session II

2.00pm - 3.00pm

Breidenbaugh Hall 112

Anthropology

Cynthia Downing, Erik Swanson, Kyra Fallon, Paige Phillips

Anthropology Capstone Project Presentations Part 2

Art History Panel I

2.00pm - 3.00pm

Breidenbaugh Hall 209

Art and Art History

Emily Francisco, Francesca DeBiaso, Molly Reynolds

Art & Politics: Contextualizing Material Culture

Art History Panel II

3.00pm - 4.00pm

Breidenbaugh Hall 209

Art and Art History

Francesca DeBiaso

Judy Chicago: Visions for Feminist Art

Marielle Bianchi

Robert Rauschenberg's ROCI Tour: A Global Optimist in a Volatile World

Biology Oral Presentation Session I

10.00am - 10.45am

Science Center 300

Biology

Elizabeth Heisler

The Effects of Exogenous Midbrain Dopamine Antagonists on Vocalizations of a Teleost Fish, *Porichthys notatus*

Mary Fakunle

Phagocytosis in Metastatic Melanoma Cells: Is it a Part of Autophagy?

Trevor Kerstetter

Subdomain analysis of the BRDF checkpoint motif of the nimODbf4 regulator of DNA synthesis.

Biology Oral Presentation Session II

11.00am - 12.00pm

Science Center 300

Biology

Hannah Anthony

Pathogen response genes mediate *Caenorhabditis elegans* innate immunity.

Jonathan Hibshman

C-type lectin, clec-67, relies on FSHR-1 to function in the innate immune response of *C. elegans*

Biology Oral Presentation Session III

2.00pm - 2.45pm

Science Center 300

Biology

Amanda Miller

Localization of Dopamine Receptors in the Brain of Midshipman Fish by Visualization of Fluorescent Dopamine Receptor Ligands

Charles Gallagher

Influences of soil microbes with an analysis of an Intercrop of *Lolium perenne* with *Phaseolus vulgaris*, and a bacterial seedling inoculation of *Lolium perenne* with *Rhizobium etli* (CFN 42)

Michael Marli

Coping with stalled replication forks: investigating the roles of DNA repair genes and checkpoint regulators in the S phase DNA Damage Response.

Biology Oral Presentation Session IV

3.00pm - 3.45pm

Science Center 300

Biology

John Vitarello

DOES THE PULSE EXAMINATION ACCURATELY DIAGNOSE PERIPHERAL ARTERY DISEASE?

Kendra Hayden

Ecological and genetic characterization of *Bacillus subtilis* bacteriophages: defining host-range patterns

Mariesa Slaughter

Genetic Variation for Dipeptidase-B mRNA Isoforms in *Drosophila melanogaster*-Oral

Blogging the Battlefield: Exploring Gettysburg's Past Through Social Media

12.00pm - 1.00pm

Breidenbaugh Hall 311

History

Brian Johnson, Mary Roll, Natalie Sherif

Blogging the Battlefield: Exploring Gettysburg's Past Through Social Media

Eisenhower and His Times

11.00am - 12.00pm

Breidenbaugh Hall 205

History

Austin Clark, Elizabeth Amrhein, Nicholas Scerbo

Eisenhower and His Times

Eisenhower Institute Session

11.00am - 12.00pm

Science Center 151

Eisenhower Institute

Abigail Conner, Adaeze Duru, Allan Kawala, Anna Baldassarre, Chelsea Broe, Declan Sullivan, Eric Harris, Kaeley McEvoy, Lauren Dunne, Maria Lombardi, Michael Pipa, Rachel Fry, Sarah Fodero

2012 Leadership Institute: Exploring Leadership in the Context of Civil Rights Movement

Environmental Studies 400 Session I

11.00am - 12.00pm

Science Center 200

Environmental Studies

Andrea Carson, Joseph Boone, Mary Ranii, Megan Sherman, Nicole Moody, Sara Tower

Gettysburg College Sustainability Proposal: Fall 2011 Environmental Studies Senior Seminar

Catherine Leech, Christian Neumann, Erik Hughes, John Ryder, Sarah Hecklau, Sarah Weinstein, Taylor McGrath

Gettysburg College Sustainability Plan (Part One)

Environmental Studies 400 Session II

12.00pm - 1.00pm

Science Center 200

Environmental Studies

Andrea Carson, Joseph Boone, Mary Ranii, Megan Sherman, Nicole Moody, Sara Tower

Gettysburg College Sustainability Proposal: Fall 2011 Environmental Studies Senior Seminar

Catherine Leech, Christian Neumann, Erik Hughes, John Ryder, Sarah Hecklau, Sarah Weinstein, Taylor McGrath

Gettysburg College Sustainability Plan (Part One)

Environmental Studies 400 Session III

1.00pm - 2.00pm

Science Center 200

Environmental Studies

Annie Golovcsenko, Caitlin Shubick, Jessica Bozzo

I'm Idlin' It

Idling Vehicle Emissions at the McDonald's Drive-Thru Locations and their Impact on Air Quality in Gettysburg, Pennsylvania

Daniel Chibbaro, Ian White, Kurt Hinck

The Art Car Journey: A Vehicle for a Sustainable Message

Environmental Studies 400 Session IV

2.00pm - 3.00pm

Science Center 200

Environmental Studies

Clair Pomponi, Danielle Carty, Eleanor Testa

From Football to Fenders: An Analysis of the Portrayal of Automobiles in Super Bowl Commercials from 1969 to 2012

Julia Ivers, Matthew Moyer, Matthew Toich

Driving Progress: Examining the implementation of environmental technology in the automobile

Environmental Studies 400 Session V

3.00pm - 4.00pm

Science Center 200

Environmental Studies

David Curtis, Michael Nemeth, Robert Martz

An Analysis of Perceptions Pertaining to the Gettysburg Inner Loop and
Transportation Issues in Gettysburg, Pennsylvania

James Fellows, Kevin Blake

COMPRESSING PENNSYLVANIA'S GAS CRISIS:
ASSESSMENT OF FUEL-CYCLE EMISSIONS AND DOMESTIC SUPPLIES FOR
UTILIZING COMPRESSED NATURAL GAS VEHICLES

Environmental Studies Honors 460 Presentations

10.00am - 11.00am

Science Center 200

Environmental Studies

Alyse Yeager, Brittany Jones, Elena Rubino, Mitchell Jones

Environmental Studies 460 Presentations

From Politics to Lemonade

1.00pm - 2.00pm

Glatfelter Hall 105

Interdisciplinary Studies

Brenda Clark

"I like it to lemonade": the status of free online machine translation

Latin American Studies

Brooke Elmi

U.S. Immigration Policy Since 9/11: What triggered Arizona Senate Bill 1070

Political Science

William Segraves

Blacking Out the Revolution: The Mainstream Media and the Ron Paul Campaign

Religious Studies

Ann-Marie Valentine

Dimensions of Identity: Exploring Religious Intolerance in Pakistan

Globalization Studies Capstone Session I

1.00pm - 2.00pm

Science Center 151

Environmental Studies

Ian Smith

Physical Structures of Re-embedding in Israel/Palestine

Globalization Studies

Luke Feltz

Civil War and Globalization: The Effect of Colonialism on Political Globalization

Sara Tower

Regimes and Resilience in the Modern Global Food System

Globalization Studies Capstone Session II

2.00pm - 3.00pm

Science Center 151

Globalization Studies

Andrea Carson

Global Trade of Virtual Water Resources

Kimberly Wheeler

LifeChurch and Christian Faith Online: The Globalization and Virtualization of Religious Practice, Expression, and Community

Lucy Sargent

Austrian Radical Right-Wing Populism: Political Presence, Ideology and Influence

Tyler Geer

Conflict and the Implications of Middle Eastern Labor Movements

Humanities Panel

12.00pm - 1.00pm

Breidenbaugh Hall 112

Asian Studies

Lauren Javins

The Search for a Chinese Identity: The Spatial Significance of Tiananmen Square

Interdisciplinary Studies

Rachel Wynn

Digital Americana Magazine: A Case Study on the Evolution of the Literary Magazine iPad App

Shelby Glass

Communicating Environmental Ethics: Bringing about Awareness of the Corrupt Intensive Agriculture Industry through Media Studies

Philosophy

John Hill

Unstructured Content: Open Worlds vs Fragmentation

Mellon Summer Scholars Panel I

10.00am - 11.00am

Breidenbaugh Hall 209

Interdisciplinary Studies

Evan Singer, Joseph Miller, Loren Deron
Mindfulness, Dignity, & Meritocracy

Mellon Summer Scholars Panel II

11.00am - 12.00pm

Breidenbaugh Hall 209

Mellon Summer Scholars

Jeanna Robb, Lauren Roedner, Paige Phillips
Mellon Scholars: Understanding the Past

Mellon Summer Scholars Panel III

12.00pm - 1.00pm

Breidenbaugh Hall 209

Interdisciplinary Studies

Elizabeth Adams, Kathleen Ragon, Ryan Becker, Steven Hnath
Mellon Summer Scholars Panel

Philosophy Panel

1.00pm - 2.00pm

Breidenbaugh Hall 209

Interdisciplinary Studies

Alyssa Oursler
FROM HABERMAS TO HUFFINGTON: HOW BLOGS AFFECT LIBERAL
EDUCATION'S AIM OF A FUNCTIONING PUBLIC SPHERE

Philosophy

John Hill, Karenn Genzlinger, Kristen Stryker, Michael Behling
A 'Great Philosopher': Perspectives on the Thought of William James

Reflections on Nicaragua: A Discussion on 2012 CPS
Experiences in Leon

3.00pm - 4.00pm

College Union Ballroom

Center for Public Service

Abigail Ziegler, Alexandra Isaacson, Anna Marie Conrad, Caleb Sisak, Christine Serwan, Christopher Dellana, Drew Brooks, Hannah Diehl, Kaeley McEvoy, Krupa Patel, Laura Koenig, Mary Ranii, Nicholas Redman, Nicole Moody, Olivia Ruth, Rebecca Croog, Riccardo Purita, Richard Aime, Samuel Holmes, Shane Swink, Stephanie Angelo

Reflections on Nicaragua: A Discussion on 2012 CPS Experiences in Leon

San Carlos Apache Immersion Trip

10.00am - 11.00am

Breidenbaugh Hall 112

Center for Public Service

Katelyn Burke, Nicole Dibble

San Carlos Apache Immersion Trip 2

Lily Coryell-Moore, Rebecca Taormina

San Carlos Apache Immersion Trip

Science and Public Policy

2.00pm - 3.00pm

Glatfelter Hall 212

Environmental Studies

Valerie Leone

¿A Geographical Context of Primary Environmental Education: A Study of Rural Loma Bonita and Panama City Schools

Interdisciplinary Studies

Gianina Galatro

Impact of Hannah Penn School-Based Health Clinic on Public Health

Sociology Methods Session I

10.00am - 11.00am

Glatfelter Hall 212

Sociology

**Alexis Bralow, Allison Serina, Anna Baldasarre, Chandra Kirkland, David Harty,
Elizabeth Mueller, Hannah Church, Jacey Dold, James Patton, Josiah Adlon,
Karla Cobos, Lindsay Menton, Madison Hugan, Mary Bridget Shouvin,
Matthew Moyer, Mia Rawleigh, William Worthy**
Social Methods Research at Gettysburg

Sociology Methods Session II

11.00am - 12.00pm

Glatfelter Hall 212

Sociology

**Alexis Bralow, Allison Serina, Anna Baldasarre, Chandra Kirkland, David Harty,
Elizabeth Mueller, Hannah Church, Jacey Dold, James Patton, Josiah Adlon,
Karla Cobos, Lindsay Menton, Madison Hugan, Mary Bridget Shouvin,
Matthew Moyer, Mia Rawleigh, William Worthy**
Social Methods Research at Gettysburg

Sociology Methods Session III

12.00pm - 1.00pm

Glatfelter Hall 212

Sociology

**Alexis Bralow, Allison Serina, Anna Baldasarre, Chandra Kirkland, David Harty,
Elizabeth Mueller, Hannah Church, Jacey Dold, James Patton, Josiah Adlon,
Karla Cobos, Lindsay Menton, Madison Hugan, Mary Bridget Shouvin,
Matthew Moyer, Mia Rawleigh, William Worthy**
Social Methods Research at Gettysburg

Lauren Niess

Eating Habits and Attitudes Toward Body Image

Spanish 400 Seminar Session I

10.00am - 11.00am

Breidenbaugh Hall 311

Spanish

Andrew Peiffer

La influencia del género del hablante en el uso de tú y usted entre la gente de España

Katelyn Bigelow

Learning how to speak dos lenguas a la misma vez:
El reconocimiento de las estructuras típicas de cambios de código en estudiantes de español

Taylor Plank

La adquisicion de la concordancia en la escritura de una segunda lengua

Spanish 400 Seminar Session II

11.00am - 12.00pm

Breidenbaugh Hall 311

Spanish

Bryan Harris

Spanish Panel: Sobre la asimilación de /s/ ante /r/ en la norma radiofónica del español estándar europeo y mexicano

Rachel Ciniewicz

Subject Pronoun Expression and the Effect of Syntactic Priming in Advanced Students of Spanish

Spanish 400 Seminar Session III

1.00pm - 2.00pm

Breidenbaugh Hall 311

Latin American Studies

Bridget Footit

500 años luchando en contra el colonialismo:
La concepción actual de la descolonización en el Estado Plurinacional de Bolivia

Spanish

Erin McCarthy

El Espacio de texto en The House on the Lagoon y el Manuscrito de Miramar

Katelyn McLimans

Un espacio caótico: la Ciudad Juárez y la frontera (A Chaotic Space: Ciudad Juárez and the Border)

Spanish 400 Seminar Session IV

2.00pm - 3.00pm

Breidenbaugh Hall 311

Spanish

Adam Newhard

The Tavern: The Ubiquitous Space of The Early Modern World

Daniela Yager-Elorriaga

Brothels in Puerto Rico: A look at its space and how it's being used

Kailey Smaczniak

La iglesia española a través de los años

Spanish 400 Seminar Session V

3.00pm - 4.00pm

Breidenbaugh Hall 311

Spanish

Amanda Reynolds

Importance of "The Train" in Spanish Literature and Film

Mary Cathey

El espacio del ferrocarril en la literatura

Speaking Chinese, Articulating China.

11.00am - 12.00pm

Breidenbaugh Hall 112

Asian Studies

Allison Gross, Helena Yang, Kevin Bond, Michael Boyland, William Segraves
Speaking Chinese, Articulating China.

The Nation's Conscience?

1.00pm - 2.00pm

Glatfelter Hall 212

German

Carter McClintock, Cory Rosenberg
The Nation's Conscience?

The Struggle for Equal Rights at Gettysburg College- 1961-1977

10.00am - 11.00am

Breidenbaugh Hall 205

History

Gabriella Hornbeck, John Nelson, Joshua Poorman, Lauren Roedner
The Struggle for Equal Rights at Gettysburg College- 1961-1977

The Third Reich, the Cold War, and the Two German States:
Reports from a visit to Berlin

11.00am - 12.00pm
Glatfelter Hall 105

International Affairs

Alison Moody, Amanda Reynolds, Brian Engelsma, Carter McClintock, Laura Koenig, Luke Feltz, Lyndsie Guy, Sarah Hecklau, Trinh Hagedorn
The Third Reich, the Cold War, and the Two German States: Reports from a visit to Berlin

Art

Art Session

1.00pm - 2.00pm

Breidenbaugh Hall 205

Interdisciplinary Studies

Eric Lee

People

Film

Individual Film Festival 1

10.00am - 1.00pm

Breidenbaugh Hall 201 Joseph T

Interdisciplinary Studies

Deonne John

Heart of the City: Police Brutality and the Media

Stephanie Hoover

Briar Bush Nature Center

Philosophy

Caleb Sisak

Following Thoreau: An Exploration of the Settings of Henry David Thoreau's
Philosophy

Voices of Resistance Session

2.00pm - 3.00pm

Breidenbaugh Hall 201 Joseph T

Interdisciplinary Studies

**Allan Kawala, Chelsea Broe, Christine Serwan, Dinesh Manandhar, Gianina
Galatro, Kurt Mathisen, Marcin Malec, Melanie Meisenheimer, Molly Reynolds,
Talia Concepcion, Yaou Liu**

Voices of Resistance

Music

Jazz dispatch NYC tour home concert

1.00pm - 2.30pm

College Union Patio*

Music

Julie Blum, Kevin Psolka-Green, Robert Whipple, Ryan Stones, Thomas Neufeld
Explorations in Jazz Improvisation

*Rain Venue : College Union Junction

Lift Every Voice and Sing: The Role of Gospel Music and Choirs in Music Education

1.00pm - 2.00pm

Schmucker Hall 214

Music

Leroy Smith
Lift Every Voice and Sing: The Role of Gospel Music and Choirs in Music Education

Music Capstone Poster Session

10.45am - 11.30am

Schmucker Hall 222 Recital Hal

Education

Alyssa Clark
Music Education Student Teaching

Brendan Michalko
Teaching Music K-12

Melinda Harrison
Student Teaching in Elementary and Middle School Music Classrooms

Piano Sonata Recital

11.30am - 12.30pm

Schmucker Hall 222 Recital Hal

Music

Bradley Bissell

Joseph Haydn (1732–1809)
Sonata in G major, Hob. XVI/ G1; L.4
I. Allegro

Elizabeth Andresen

piano piece

Emily Watkins

piano piece

Kristin Staub

Beethoven Piano Sonata in f minor, Op. 2 no. 1
I. Allegro

Vincent Casmirri

Sonatine for Piano by Maurice Ravel

**South-Central Pennsylvania Music Teachers' Musical Identities
and Their Perceptions of Popular Music**

10.00am - 10.45am

Schmucker Hall 222 Recital Hal

Music

Emma Sheffer, Keith Gromis, Kristin Staub, Matthew Carlson, Michelle Stukane

South-Central Pennsylvania Music Teachers' Musical Identities and Their
Perceptions of Popular Music

Theater

"Novacane"

12.00pm - 1.00pm

Brua Hall 200 Kline Theatre

Theatre Arts

Isabelle Boguski, Ryan Bonner

"Novacane"

Anthropology

Anthropology Capstone Project Presentations (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Catherine Rossi, Christopher Burkett, Siobhan Tooze	Amy Evrard	1:00pm - 2:00pm Breidenbaugh Hall 112

Christopher Burkett

Individual Abstract

Homeless Youth: Aid Programs, Agency, and the Benefit of Ethnography

This paper provides an overview of the existing anthropological literature on populations of homeless youth while simultaneously addressing existing gaps in research as means of calling attention to questions that need to be addressed by scholars. At its core, this paper examines a body of ethnographic research that looks closely at the development of new programs that allow greater agency to the homeless youths they serve, and the theoretical questions their practices might raise for scholars.

To provide context, I begin with a discussion of the process of defining “homeless youths,” followed by a discussion of theories of agency and power relationships. Additionally, I briefly discuss the existing sociological literature on homeless youths as a way of highlighting the weaknesses of dismissing ethnographic research, followed by an overview and discussion of the theoretical frameworks used by anthropologists. While this paper addresses the question of whether or not issues concerning homeless youths can ever really be resolved, its ultimate aim is to problematize the research of both sociologists and anthropologists as a means of calling attention to the complex relationship between these young agents and the institutions through which they navigate.

Anthropology Capstone Project Presentations Part 2 (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Cynthia Downing, Erik Swanson, Kyra Fallon, Paige Phillips	Amy Evrard	2:00pm - 3:00pm Breidenbaugh Hall 112

Cynthia Downing

Individual Abstract

A Revised Anthropology of Religion: Accounting for Disbelief

Certain anthropological studies and theories, when put together, can offer a source of great support to the perspective of those who do not have religion, or who recognize the power of religion for others but cannot accept it personally. Anthropology offers ways of looking at religion that, without denying the entire value of belief systems for believers, may also help nonbelievers to reconcile themselves to the practices and faith of others. My thesis addresses the question: "How could anthropologists develop and apply an approach to religion that addresses how we can study religion and its meaning to people, whether they are a believer or not?"

Erik Swanson

Individual Abstract

"Invisible in the Light:"

Perceptions of Mental Health and Sociocultural Stressors among Adult Latinos with a Migrant Background in the United States

This paper is an examination of the literature available concerning the mental health of Latinos with migrant backgrounds and their experiences while living in the United States. In addition to a discussion of the literature, this paper examines the fieldwork that I completed in Gettysburg, PA and Moorpark, CA. The largest question that I sought an answer for was how Latinos with a migrant background perceived their mental health and the health of their family members and peers. A Latino with migrant background is a Latino male or female who came to the United States as a migrant worker and after a few seasons of travelling back and forth from Mexico and California decided to settle down in the United States. I was also interested in finding out if migrant families perceived mental health issues as a prevalent concern in their lives and what stressors they perceived as negatively impacting the psychological health of their families and friends. There are a multitude of factors that negatively affect the mental health of Latinos with a migrant background, with the most prevailing factors being money, citizenship status, and the cultural differences between Mexico and the United States. While these factors are the main stressors that result in adverse mental health, Latinos with a migrant background rely on coping mechanisms such as family and machismo in order to uplift themselves and their families with hope for their futures.

Art and Art History

Art & Politics: Contextualizing Material Culture (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Emily Francisco, Francesca DeBiaso, Molly Reynolds	Carolyn Sautter Shannon Egan	2:00pm - 3:00pm Breidenbaugh Hall 209

The goal of this project, initiated in the course “Art and Public Policy” taught by Dr. Shannon Egan in Fall 2011, is to provide a historical and social context for material culture using artifacts available in Special Collections at the Musselman Library. The objects examined span a half a century of American history, starting with the exhibition pamphlet for the Gettysburg cyclorama showcased in the 1933 Chicago World’s Fair, a 1944 World War II cadet nurse recruiting poster, and home-made Vietnam War protest pins constructed between 1965 and 1975. Through meticulous research in Special Collections and Musselman Library, we crafted curatorial essays to accompany the objects in an exhibition in Schmucker Art Gallery, as well as presenting our research at a Friends of the Library event. During this project we contextualized the objects and created a space beneficial to expressing our findings to the public. We discuss the nuances of the aesthetic aspects of each object, while exploring more deeply the social environments which demanded their creation.

Judy Chicago: Visions for Feminist Art (Panel)**Student(s):****Francesca DeBiaso****Mentor(s):****Shannon Egan****Time/Location:****3:00pm - 4:00pm****Breidenbaugh Hall 209**

Controversy, awe, and revelation distinguishes Judy Chicago's now 40 year career in the art world. As a pioneer within the feminist art movement, Chicago defined feminist art as art which is authentic to one's physical, emotional, and social experience as a woman. Chicago was committed to creating visually understandable, widely relevant, and democratically exhibited art that could reflect women's experiences and expand the traditional definition of art.

Chicago's two most ambitious artistic endeavors, 'The Dinner Party' and the Birth Project, both exemplify how she created women centered art, in content and media. Both projects also demonstrate how Chicago established and utilized an innovative process of art making and exhibition. 'The Dinner Party' is an epic, multi-media installation reflecting the, relatively unknown, monumental contributions of women to history, culture, and politics. The Birth Project is a series of 85 different needle and fabric work pieces which illustrate mythological and truthful renditions of a woman's unique, universalized birth.

My presentation will discuss Chicago's development of a personal feminist art style, the use of controversial depiction of female genitalia in her work, and the history behind the two Birth Project pieces that she gifted to Gettysburg College.

Robert Rauschenberg's ROCI Tour: A Global Optimist in a Volatile World (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Marielle Bianchi	Felicia Else Shannon Egan	3:00pm - 4:00pm Breidenbaugh Hall 209

“I feel strong in my beliefs, based on my varied and widely traveled collaborations, that a one-to-one contact through art contains peaceful powers, and is the most non-elitist way to share exotic and common information, seducing us into creative mutual understandings for the benefit of all.” Robert Rauschenberg made this statement in 1984 in Tobago before his global tour de force began. ROCI, the Rauschenberg Overseas Culture Interchange was a motivated, non-profit, and apolitical art project conceived by Rauschenberg who truly believed that art held the power of peace and the ability to unite the most different countries, cultures, and people together. Between 1984 and 1991, Rauschenberg and his team of about 30 people traveled to eleven different countries, urban and indigenous, hoping to bridge the most different parts of the world with a greater understanding of art and its ability to forge communication between these locations. Working with local artists, citizens, and diplomats, Rauschenberg would learn new artistic techniques particular to each location while finding objects and items to incorporate into the works. After creating/ assembling the works, Rauschenberg would return to the country where an exhibition would take place including pieces from his initial visit, other ROCI locations, and core pieces of the artist’s portfolio made since the 70s. This thesis examines Rauschenberg’s mammoth undertaking in his global tour based on his confidence in the strength of art to foster understanding and release forces essential to peace. It will also investigate its true success while looking at the reviews made by critics at the time.

Asian Studies

Speaking Chinese, Articulating China. (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Allison Gross, Helena Yang, Kevin Bond, Michael Boyland, William Segraves	Jing Li	11:00am - 12:00pm Breidenbaugh Hall 112

Several students representing the Chinese studies department would like to showcase their language skills by both giving a speech and performing in Chinese. The students will pick a topic of their interest and using their Chinese language talent will give a presentation on their individual topic. After the student present their individual project, a group presentation will be given showcasing their various knowledge of Chinese culture

The Search for a Chinese Identity: The Spatial Significance of Tiananmen Square (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Lauren Javins	Dina Lowy	12:00pm - 1:00pm Breidenbaugh Hall 112

The name “Tiananmen Square” evokes among many people visions of the 1989 student protests and the subsequent backlash of the Chinese Communist Party. Unbeknownst to many, however, is that this space has been the epicenter of contention and connection between the Chinese people and their rulers throughout modern Chinese history. The major events that have unfolded here include the 1911 overthrow of the Qing Dynasty, the 1919 protest of the Versailles Treaty, the 1949 founding of the People’s Republic of China, the 1966 convention of the Red Guards, and ultimately the fateful 1989 student protests. Each movement has been significant in labeling this space as the medium between ruler and ruled, emperor and subject, Chairman and the people. Through a combination of history, sociology and spatial theory, this paper will seek to better clarify the spatial significance of the area encompassing Tianan gate and Tiananmen Square as the stage for the creation of the Chinese identity.

Biology

A bioacoustic survey of Microchiroptera in Kruger National Park, South Africa. (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Nicole Quinn	John Winkelmann	12:00pm - 1:30pm Science Center 2 Lobby

Kruger National Park, South Africa, is home to at least 39 species of Microchiroptera (echolocating bats). In an effort to gain a better understanding of their population ecology and distribution, we performed an acoustic survey using ultrasonic detection to quantify bat activity and to determine the habitat preferences of each identified species. Throughout 15 microsites, a total of 2398 recorded calls were identified as belonging to nine identified species and two unidentified species. We sampled around two main camps in the park and there was no significant difference found in the number of calls recorded between the camps. While it is clear that some species frequent some microsites more often than others, a statistical analysis concludes there was no significant difference in species-specific micro-site preference. Additionally, no significant difference was found in call abundance between disturbed, manmade microsites and natural microsites. This work should set the stage for further research on Microchiroptera distributions and habitat preferences in the park. Our findings can be added to in the hopes of creating a complete call library for monitoring and conserving Microchiroptera populations within the park.

Annotation of Mycobacteriophage Melvin (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Gabrielle Benson, Ignacio Landaverde, Lauren Wilson	Gregory Krukonis Veronique Delesalle	12:00pm - 1:30pm Science Center 2 Lobby

Bacteriophages are one of the most numerous and thus diverse entities on the planet. Bacteriophages are grouped into clusters based on their nucleotide similarity or dissimilarity to other bacteriophages. Melvin, a mycobacteriophage isolated from the Gettysburg College campus, was sequenced by the University of Pittsburgh and placed into the A4 subcluster. To gain a better understanding of Melvin's assignment into its cluster, thorough genomic annotation was completed using DNA Master, which relies on the programs Glimmer and GeneMark to identify bacterial and viral genomes. Melvin is more closely related to A4 bacteriophages, Peaches and Eagle, than to other Cluster A bacteriophages. These three phages all begin with one reverse gene, followed by about 30 genes forward genes, and then a switch to reverse genes. Further analyses showed that Melvin was more comparable to Peaches than to Eagle. Further analyses will compare Melvin's genome length, %GC content, number of ORFs, average ORF length, as well as the BLAST match alignment to that of other mycobacteriophages to better understand how cluster A phages evolve.

Annotation of the Genome of a Novel Bacteriophage Isolated from the Gettysburg College Campus (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Stacey Heaver	Gregory Krukonis Veronique Delesalle	12:00pm - 1:30pm Science Center 2 Lobby

As part of HHMI's PHAGES program, we have isolated and sequenced a new virus that can lyse *Mycobacterium smegmatis* strain mc2 155. This phage, named Avani, was isolated by Stacey Heaver. It was sequenced at the University of Pittsburgh and found to belong to the F cluster and, more specifically, to be a F2 phage. Only two other F2 phages have been sequenced and described. Phages of the F cluster share a number of similarities: they have genomes that average 57,545 bp, with a %GC content of 61.4%. They have 105 putative genes with an average length of 521.5 bp. The "early" part of their genome is highly conserved, while the latter part shows high mosaicism. The addition of Avani to the database of sequenced mycobacteriophages allows us to compare the two sub clusters, F1 and F2. F2 phages appear to be either rare or harder to isolate than F1 phages, with 44 F1 having been described as of March 2012. However, the few described F2 phages are widely distributed: Avani was isolated in PA (USA) and Yoshi in LA (USA), while Che9d was isolated in India. In comparison to F1 phages, F2 phages have more putative genes that are shorter in length. In addition, in Avani, reverse genes appear to be shorter than forward genes. Different parts of Avani's genome show different patterns of similarity to other phages: the early genes show greater similarity to genes of the other F2 phages, the middle genes only have matches to genes from F, A and J phages, while the later genes show additional matches to other phages. A number of Avani's genes have interesting features worthy of further exploration. Gene 11 had a lower %GC than other Avani genes, possibly indicating a recent horizontal transfer from an unknown donor with a lower %GC. A gene very similar to gene 41 is found in phage Halo of cluster G. Given Halo's higher %GC content, this suggests a potential lateral exchange of this gene from cluster F2 to Cluster G.

Constructing the *C. elegans* FSHR-1 Signaling Pathway (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Olivia Ruth	Jennifer Powell	12:00pm - 1:30pm Science Center 2 Lobby

WILL MODIFY

Coping with stalled replication forks: investigating the roles of DNA repair genes and checkpoint regulators in the S phase DNA Damage Response. (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Michael Marll	Steven James	2:00pm - 2:45pm Science Center 300

We study DNA damage checkpoint and repair pathways that enable cells to survive the stalling of replication forks (RFs) during DNA synthesis (S-phase). We are examining the roles of three checkpoint and DNA repair genes in the fungus *Aspergillus nidulans*: the Holliday Junction resolvase *mus81/eme1* aids in repair by performing structure specific cleavage at collapsed RFs; the checkpoint kinase *chkA* recruits several proteins that stabilize stalled RFs; and the DNA synthesis regulator *nimO* arrests S-phase progression via a N-terminal checkpoint domain, the BRDF (BRCT and Dbf4-similarity domain). Double mutants carrying deletions of *chkA* and *mus81* are synthetically lethal with a *nimO* mutant lacking the BRDF domain (*nimO*ΔBRDF Δ*chkA* and *nimO*ΔBRDF Δ*mus81*). This suggests that *nimO* acts in a pathway distinct from *chkA* and *mus81*. Each of these three single mutants enhances sensitivity to double strand break (DSB)-inducing chemicals. We have discovered mutations in a fourth gene, *snoARif1* (suppressor of *nimO*), that reduce the DNA damage sensitivities of *nimO*ΔBRDF and Δ*chkA* single mutants. To determine whether *chkA* and *mus81* act through different pathways and to identify other pathways that may be influenced by *snoA*, we are assessing genetic interactions in double mutants carrying, e.g., Δ*chkA* Δ*mus81* and Δ*mus81* Δ*snoA*, as well various triple mutant combinations.

Coping with stalled replication forks: investigating the roles of DNA repair genes and checkpoint regulators in the S phase DNA Damage Response. (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Michael Marll	Steven James	12:00pm - 1:30pm Science Center 2 Lobby

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C-type lectin, clec-67, acts intestinally in the innate immune response of *C. elegans* (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Jonathan Hibshman	Jennifer Powell	12:00pm - 1:30pm Science Center 2 Lobby

The innate immune response is the first line of response to infection. The roundworm, *Caenorhabditis elegans*, is an excellent model for studying the innate immune response. The G-protein coupled receptor FSHR-1 plays a role in the immune response of worms; however, little is known about the pathway in which it acts. In this work, we show that c-type lectin, clec-67, acts downstream of FSHR-1. C-type lectins are calcium-dependent, carbohydrate binding receptors with a conserved immune function – likely the recognition of pathogen associated glycosylation. Using a *clec-67p::GFP* reporter we find clec-67 is expressed intestinally in worms with the highest levels of expression at the anterior and posterior segments of the intestine. Further, expression is induced upon infection with *Pseudomonas aeruginosa*. Silencing FSHR-1 via RNAi reduces the expression levels of clec-67, suggesting it acts in an FSHR-1 dependent manner. However, clec-67 is also regulated directly by GATA transcription factor ELT-2. Thus, FSHR-1 may directly regulate ELT-2 or the pathway may converge with other known immune response pathways for regulating clec-67.

C-type lectin, clec-67, relies on FSHR-1 to function in the innate immune response of *C. elegans* (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Jonathan Hibshman	Jennifer Powell	11:00am - 12:00pm Science Center 300

The innate immune response is the first line of response to infection. The roundworm, *Caenorhabditis elegans*, is an excellent model for studying the innate immune response. The G-protein coupled receptor FSHR-1 plays a role in the immune response of worms; however, little is known about the pathway in which it acts. In this work, we show that c-type lectin, clec-67, acts downstream of FSHR-1. C-type lectins are calcium-dependent, carbohydrate binding receptors with a conserved immune function – likely the recognition of pathogen associated glycosylation. Using a clec-67p::GFP reporter we find clec-67 is expressed intestinally in worms with the highest levels of expression at the anterior and posterior segments of the intestine. Further, expression is induced upon infection with *Pseudomonas aeruginosa*. Silencing FSHR-1 via RNAi reduces the expression levels of clec-67, suggesting it acts in an FSHR-1 dependent manner. However, clec-67 is also regulated directly by GATA transcription factor ELT-2. Thus, FSHR-1 may directly regulate ELT-2 or the pathway may converge with other known immune response pathways for regulating clec-67.

Determination of One-Step Growth Curve of Mycobacteriophage Avani (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Aden Lessiak, Emily Carlisi, Krupa Patel, Manhao Zeng	Gregory Krukonis Veronique Delesalle	12:00pm - 1:30pm Science Center 2 Lobby

Bacteriophages are viruses that “eat” bacteria. As such, their population dynamics can be described by the same parameters that describe the growth of a population (the viruses) based on the availability of its resources (the bacterial hosts). One-step growth curves describe the rate at which viruses replicate within a host as well as their ability to replicate, known as their burst size (the number of viral progeny produced by the infection of one bacterial host). In the fall of 2011, the Biology 113 class isolated and characterized mycobacteriophages from the Gettysburg campus. Two of these phages, Avani and Melvin, were recently sequenced and annotated. Our project further analyzed the mycobacteriophage Avani, isolated by Stacey Heaver. Our goal was to determine Avani’s one-step growth curve. By infecting a known amount of *Mycobacterium smegmatis* with a known number of phages, we will be able to reveal the amount of time required for lysis as well as the burst size, or factor of multiplicity for this phage. Ultimately, our goal is to understand the relationship between latency (the time required to produce viral progeny) and burst size: do phages that require more time to produce viral progeny (possibly due to their lack of adaptations to their host) also produce fewer progeny?

DOES THE PULSE EXAMINATION ACCURATELY DIAGNOSE PERIPHERAL ARTERY DISEASE? (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
John Vitarello	Kay Etheridge	3:00pm - 3:45pm Science Center 300

Peripheral artery disease (P.A.D.) is the obstruction of blood flow in the arteries caused by the build up of plaque, a condition referred to as atherosclerosis. This results in inadequate blood flow to the affected areas. P.A.D. is believed to affect 20% of adults older than 55 years (Hankey 2006). But the true prevalence of P.A.D is relatively unknown (Criqui 1985), because physician awareness of the disease and diagnosis of P.A.D. remains low (Hirsche 2001). This study was designed to determine if a pulse examination can diagnose P.A.D. in an at-risk population. To assess how valuable the pulse examination is in diagnosing P.A.D the sensitivity, specificity, positive predictive value, and negative predictive value will be calculated. To calculate these statistical measures the ABI will be used as the gold standard. Ankle-brachial indexes (ABIs) are the most reliable and valid noninvasive test for P.A.D. (Criqui 1985). Pulse examinations, ABI's, and interviews to assess risk factors were performed on 102 patients in a Cardiovascular practice. I worked under a vascular cardiologist and certified technician to collect this data. The results of the study are forthcoming. I hypothesize that the pulse examination will have a high sensitivity and low positive predictive value. Meaning, a high proportion of people who have the disease will test positive for it but there will be many people who have a positive test but do not have the disease. This research may help doctors more readily diagnose P.A.D and do so in a cost-effective manner.

DOES THE PULSE EXAMINATION ACCURATELY DIAGNOSE PERIPHERAL ARTERY DISEASE? (Poster)

Student(s):

John Vitarello

Mentor(s):

Kay Etheridge

Time/Location:

12:00pm - 1:30pm
Science Center 2 Lobby

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Ecological and genetic characterization of *Bacillus subtilis* bacteriophages: defining host-range patterns (Panel)

Student(s):

Kendra Hayden

Mentor(s):

Gregory Krukonis
Veronique Delesalle

Time/Location:

3:00pm - 3:45pm
Science Center 300

Ten novel bacteriophages were isolated from nine strains of *Bacillus subtilis* from the Sonoran Desert in Tucson, Arizona. The phages were characterized ecologically and genetically. For genetic analysis, phage DNA was isolated, purified, and complete genome sequencing was performed. Bioinformatic analysis of these genomes revealed that all ten had diverse genome sizes, and were unique and previously uncharacterized viruses. However, comparison to previously sequenced bacteriophages revealed several shared genes. Ecological analysis of the phages was done by testing their ability to attack a suit of ten isolates of *B. subtilis* previously collected from the same area. Overall the ten bacteriophages showed a broad variety of host-ranges, from the ability to infect from one to nine strains, allowing the phages to be classified as either generalists or specialists.

Ecology of Bacteriophage Diversity on Gettysburg College Campus (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Chad Killen, Joseph Robinson, Michael DiCandia, Stacey Heaver	Gregory Krukonis Veronique Delesalle	12:00pm - 1:30pm Science Center 2 Lobby

Mycobacteriophages are one of the best studied families of bacteriophages and more of them have been sequenced and analyzed than any other type of phage. These phages are typically isolated from soil samples, but very few studies have been done to determine what types of soil are most likely to contain mycobacteriophages and their Mycobacterium hosts. Such a study would provide information on where future isolations of soil mycobacteriophages should be performed and can also contribute to understanding how the concentration and characteristics of a phage community in a given environment change over time. We intend to perform a long-term study evaluating the community of mycobacteriophages found under different conditions of moisture, temperature, pH, mycobacterial concentration, and organic soil content on the Gettysburg College campus. So far, we have collected soil samples from six locations that vary in these factors, and have analyzed these soil samples for bacteriophage content through direct plating. While we have had limited success, we are in the process of creating new protocols which will allow us to better measure mycobacterial and mycobacteriophage concentration in our soil samples. This study will allow us to gain better insight into the environmental conditions that are most suitable for phages, which will in turn contribute to our understanding of the ecology of bacteriophages.

Epitope-tagging the G-Protein Coupled Receptor FSHR-1 (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Joseph Robinson	Jennifer Powell	12:00pm - 1:30pm Science Center 2 Lobby

The Innate Immunity is the body's first line of defense against infection. The G-protein coupled receptor FSHR-1 defines an innate immune signaling pathway; however, much of where and how it functions within the cell is still unknown. Epitope tagging of the FSHR-1 protein would permit the use of several different biochemical tests, and allow us to determine where within the cell FSHR-1 acts. To generate this valuable tool, we have used fusion PCR to produce the FSHR-1 DNA with the HA tag sequence inserted at the end of the coding sequence. The next step is to use Mos1-mediated Single Copy Insertion to integrate the gene into a worm strain. The various tests that an epitope tagged FSHR-1 would allow us to perform will aid us in gaining a better understanding of this innate immunity pathway and its role in defense against infection.

Genetic Variation for Dipeptidase-B mRNA Isoforms in *Drosophila melanogaster* (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Mariesa Slaughter	Kazuo Hiraizumi	12:00pm - 1:30pm Science Center 2 Lobby

Peptidases, found ubiquitously among organisms, play an important role in protein hydrolysis (necessary for many processes, including digestion). The peptidase system in *Drosophila melanogaster* consists of leucine aminopeptidases and dipeptidases. The gene for dipeptidase-B (DIP-B), one of the three major dipeptidases found in *Drosophila*, encodes three mRNA isoforms, which differ only in the 5' untranslated region. Previous studies have indicated greater DIP-B enzyme activity during the adult stage than during the pupal stage of both CL55 and NC25III *Drosophila* strains and that DIP-B enzyme activity was overall significantly greater in the CL55 strain than the NC25III strain. The exact function of DIP-B is unknown, but analysis of the mRNA isoform expression levels might help to identify the functional role of DIP-B. Differences in mRNA isoform composition and quantities of isoforms between the strains were evaluated to determine possible correlation between DIP-B enzyme activity and transcript levels. The relative quantity of DIP-B isoforms was assessed at the adult and pupal stages using quantitative RT-PCR. Initial findings of this study will be reported.

Genetic Variation for Dipeptidase-B mRNA Isoforms in *Drosophila melanogaster*--Oral (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Mariesa Slaughter	Kazuo Hiraizumi	3:00pm - 3:45pm Science Center 300

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Influences of soil microbes with an analysis of an Intercrop of *Lolium perenne* with *Phaseolus vulgaris*, and a bacterial seedling inoculation of *Lolium perenne* with *Rhizobium etli* (CFN 42) (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Charles Gallagher	Jan Mikesell	2:00pm - 2:45pm Science Center 300

Intercropping with legumes has been a successful practice for many years because of the legumes' beneficial symbiotic relationships which can form between the plant species in the intercrop. This experiment discovered that an intercrop of grass species (*L. perenne*) and a legume (*P. vulgaris*) was, however, not a beneficial relationship and in fact was inhibitory with respect to the rye grass in above-ground dry weight and the number of leaves produced by the rye grass. The rye grass, however, demonstrated an increase in height of the longest leaf of the plants intercropped with the more common bean, most likely as a means to compete with the legume. These relationships between plant species can be analyzed even further with an investigation of the different bacterium, which have been isolated from the roots of the plants. Some bacteria have been analyzed and have been found to be plant growth promoting rhizobacteria (PGPR), which can aid plant growth through their own biological processes. This study found that rye grass seedlings, which were not rinsed with bleach and inoculated with CFN 42, had a significantly larger leaf height after 41 days ($MS=83.3311$, $F=3.94$, $P=0.016860$) and 48 days ($MS=103.9106$, $F=3.55$, $P=0.025191$) of growth under greenhouse conditions. The results suggest that CFN 42 helped the growth of perennial rye grass in regards to leaf size, and CFN 42 can possibly be a PGPR, specifically a biofertilizing bacterium.

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Student(s):

Charles Gallagher

Mentor(s):

Jan Mikesell

Time/Location:

12:00pm - 1:30pm

Science Center 2 Lobby

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Localization of Dopamine Receptors in the Brain of Midshipman Fish by Visualization of Fluorescent Dopamine Receptor Ligands (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Amanda Miller	James Kittelberger	2:00pm - 2:45pm Science Center 300

Porichthys notatus, or Plainfin Midshipman fish, are characterized by vocalizations that are essential for courtship and reproductive success. Territorial males have specialized brain circuitry that is involved in the production of humming sounds. The neurotransmitter dopamine (DA) may be involved in modulating reward, motivation and motor control for reproductive humming behaviors in these brain regions. It was hypothesized that incubation of brain slices with a fluorescent DA ligand would result in visible fluorescence due to receptor binding in some of these vocal structures, indicating that DA receptors are present and involved in vocal circuitry. In this study, two fluorescent DA receptor ligands (Dansyl labeled DA and 3-Bodipy-propanoic Acid N-Phenethylpiperone Amide) were used to identify the distribution of DA receptors in midshipman brains. Brains were sliced while frozen and the sections were placed onto slides, which were then incubated after 24 hours with one of the two fluorescent ligands. Although certain brain areas fluoresced after incubation, indicating receptor binding, fluorescence did not observably decrease once the fluorescent ligands were competed with a nonfluorescent competitor ligand, which was expected to reduce any specific receptor binding and its associated fluorescence. This indicates that the visible fluorescence is most likely nonspecific to DA receptors, which prevents us from drawing concrete conclusions about DA distribution in midshipman brains. This lack of specificity may be due to lipophilic solvation, which can cause drugs to cross the cell membrane and become trapped in compartments within the cell, causing nonspecific fluorescence.

Lysogeny and Immunity Group (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Anya Pierson, Kristen Kornsey, Melissa Tighe, Warren Campbell	Gregory Krukonis Veronique Delesalle	12:00pm - 1:30pm Science Center 2 Lobby

Bacteriophages are viruses that “eat” bacteria. Typically, a phage will enter a bacterium and immediately make copies of itself and lyse its host (the lytic cycle). However, under some circumstances such as limited resources, a phage will integrate its genome into its host bacterium, which is then called a lysogen. Lysogens are immune to other phage infections during the lysogenic cycle. Through a series of spot tests followed by plate incubation at 25°C, phages Avani, WAC4, Melvin, and Riddle were examined to determine whether they would enter into a lysogenic cycle. Through a series of streak tests, individual colonies were isolated that were found growing in spot tests with high concentrations of phage. To test for lysogeny, the isolated colonies were streaked in a lawn of *Mycobacterium smegmatis* mc2155 in an incubator at 37°C and inspected for possible phages exiting the bacteria during a lytic cycle. If no phage clear zones are identified, then the bacteria isolated is immune to infection from the phage tested.

Microhabitat needs and preferences of wood and box turtles in Fairfield, Pennsylvania. (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Christina Jasion, Christopher Strock	Gerardo Carfagno	12:00pm - 1:30pm Science Center 2 Lobby

As part of an ongoing research project, we examine some spatial and ecological relationships of wood turtles (*Glyptemys insculpta*) and box turtles (*Terrapene c. carolina*), at Strawberry Hill Nature Preserve (SHNP). These are primarily terrestrial species with numbers in the wild rapidly declining primarily due to habitat loss and collection by humans. The chief goal of the study is to determine the habitat preferences and spatial requirements of these coexisting species so that we can make better suggestions for managing these populations. This is particularly important for understanding the potential effects of recent logging on these populations. The project has been ongoing since May 2010 and consists of radio-tracking wild turtles and collecting data on behavior and habitat. Turtles were tracked every other day during the peak of their active season, and locations mapped using hand-held GPS units. Here we analyze this data in ArcGIS by overlaying turtle locations onto maps of the Preserve to examine some of the spatial relationships between the species, and with their environment.

Pathogen response gene expression patterns in *Caenorhabditis elegans* upon *Pseudomonas aeruginosa* infection (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Hannah Anthony	Jennifer Powell	12:00pm - 1:30pm Science Center 2 Lobby

Innate immunity is crucial in the response and defense against pathogens for invertebrates and vertebrates alike. The soil nematode *Caenorhabditis elegans* is a useful model to study the eukaryotic innate immune response to microbial pathogenesis. Prior research indicates that the protein receptor FSHR-1 plays an important role in the innate recognition of intestinal infection due to pathogen consumption. Determining what genes are controlled by FSHR-1 may uncover an unknown pathway significant to the *C. elegans* immune system as well as innate immunity in higher eukaryotes. A fluorescent transgenic reporter was constructed for a candidate pathogen response gene due to its FSHR-1-dependent transcriptional induction in worms infected with *Pseudomonas aeruginosa*. The spatial expression of this putative pathogen response gene was characterized in transgenic worms under both control and pathogenic conditions. RNA interference was performed to assess the FSHR-1 dependency of this expression pattern.

Pathogen response genes mediate *Caenorhabditis elegans* innate immunity. (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Hannah Anthony	Jennifer Powell	11:00am - 12:00pm Science Center 300

Innate immunity is crucial in the response and defense against pathogens for invertebrates and vertebrates alike. The soil nematode *Caenorhabditis elegans* is a useful model to study the eukaryotic innate immune response to microbial pathogenesis. Prior research indicates that the protein receptor FSHR-1 plays an important role in the innate recognition of intestinal infection due to pathogen consumption. Determining what genes are controlled by FSHR-1 may uncover an unknown pathway that could increase not only the comprehension of the *C. elegans* immune system but also innate immunity generally. To characterize the function of FSHR-1, four candidate pathogen response genes that appear to be regulated by FSHR-1 were evaluated in worms infected with *Pseudomonas aeruginosa*. Although intestine specific RNA interference of these four genes did not show immunity phenotypes, quantitative PCR suggests that FSHR-1 regulates the basal and/or infection-induced expression of three of the four genes. To explore this FSHR-1-dependent transcriptional induction, fluorescent transgenic reporters were constructed for the three candidate FSHR-1 target genes. The spatial expression of one putative pathogen response gene was characterized in transgenic worms under both control and pathogenic conditions. RNA interference was performed to assess the FSHR-1 dependency of this expression pattern.

Phagocytosis in Metastatic Melanoma Cells: Is it a Part of Autophagy? (Panel)**Student(s):****Mary Fakunle****Mentor(s):****Ralph Sorensen****Time/Location:****10:00am - 10:45am
Science Center 300**

Metastatic cancer cells, as opposed to primary cancer cells, have the ability to undergo autophagy, and phagocytosis as a means for survival. Due to the aggressive environment in which these cells live, metastatic cells have the ability to phagocytose both dead and live cells, to eliminate threatening immune responses, and for a source of nutrients. The processes, which both involve the degradation of materials, are initiated under conditions of nutrient deprivation. Autophagy involves the degradation of a cell's own cytoplasmic organelle, and phagocytosis is the process of degrading extracellular particles. Both processes involve the fusion of an innate membrane bound vacuole with a lysosome, before the degradation can occur. The similarities between the processes and their recruitment by metastatic cancer cells suggest that the processes are related. B16-F10, mouse melanoma cells were exposed to three compounds to see how phagocytosis would be affected, compared to control cells. For each, Phagocytic Index (Percent of cells with beads x Total beads phagocytosed) was measured and compared. 3-methyladenine (3-MA), a specific inhibitor of autophagy, was used in an assay at 20mM and 2mM concentrations. The results showed that phagocytosis was inhibited by both concentrations, but Phagocytic Index was significantly reduced by the 20mM concentration after 258 min, compared to the control ($t_{\text{calc}} = 6.42$, $df = 2$, $P_{2t} = 0.023$). Rapamycin, a complex macrolide antibiotic, which works by inhibiting mammalian target of rapamycin (mTOR) enhances autophagy in various cells, and a 20 μ M concentration was used to induce phagocytosis in B16-F10 cells. The results showed that the compound did increase phagocytosis of the fluorescent beads, although the increase was not significant ($t_{\text{calc}} = -2.98$, $df = 3$, $P_{2t} = 0.058$). A 10mM concentration of Azide, an inhibitor of oxidative phosphorylation, was used, and the results showed that there was a decrease in the phagocytic index of the cells exposed to

Subdomain analysis of the BRDF checkpoint motif of the nimODbf4 regulator of DNA synthesis. (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Trevor Kerstetter	Steven James	10:00am - 10:45am Science Center 300

In the filamentous fungus *Aspergillus nidulans*, nimODbf4 constitutes the regulatory subunit of the conserved Dbf4-dependent kinase (DDK). In all Dbf4 orthologs the N-terminus harbors a checkpoint domain, the BRCT and Dbf4-similarity domain (BRDF). nimODbf4 mutants lacking the BRDF motif (nimO Δ BRDF) become sensitive to a wide range of DNA damage agents, and surprisingly, arrest meiosis early in prophase I. We identified a gene, snoA (suppressor-of-nimO), loss of which rescues both of these nimO Δ BRDF defects. snoA is orthologous with Rif1, a conserved eukaryotic gene that, in mammals, plays a role in a S-phase DNA damage checkpoint and in the repair of double strand breaks (DSBs). Not known for any Dbf4 ortholog is whether the BRDF checkpoint and meiotic functions are separable into different subdomains. Based upon the predicted secondary structure of this domain, we are using a rational approach to eliminate individual BRDF subdomains. We are creating five different in-frame subdomain deletions and will test these nimODbf4 alleles in snoA⁺ and snoA mutant backgrounds for their effects on DNA damage responses and meiotic proficiency.

Subdomain analysis of the BRDF checkpoint motif of the nimODbf4 regulator of DNA synthesis. (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Trevor Kerstetter	Steven James	12:00pm - 1:30pm Science Center 2 Lobby

In the filamentous fungus *Aspergillus nidulans*, nimODbf4 constitutes the regulatory subunit of the conserved Dbf4-dependent kinase (DDK). In all Dbf4 orthologs the N-terminus harbors a checkpoint domain, the BRCT and Dbf4-similarity domain (BRDF). nimODbf4 mutants lacking the BRDF motif (nimO Δ BRDF) become sensitive to a wide range of DNA damage agents, and surprisingly, arrest meiosis early in prophase I. We identified a gene, snoA (suppressor-of-nimO), loss of which rescues both of these nimO Δ BRDF defects. snoA is orthologous with Rif1, a conserved eukaryotic gene that, in mammals, plays a role in a S-phase DNA damage checkpoint and in the repair of double strand breaks (DSBs). Not known for any Dbf4 ortholog is whether the BRDF checkpoint and meiotic functions are separable into different subdomains. Based upon the predicted secondary structure of this domain, we are using a rational approach to eliminate individual BRDF subdomains. We are creating five different in-frame subdomain deletions and will test these nimODbf4 alleles in snoA⁺ and snoA mutant backgrounds for their effects on DNA damage responses and meiotic proficiency.

The Effects of Exogenous Midbrain Dopamine Antagonists on Vocalizations of a Teleost Fish, *Porichthys notatus* (Panel)

Student(s):

Elizabeth Heisler

Mentor(s):

James Kittelberger

Time/Location:

10:00am - 10:45am

Science Center 300

Studies investigating the neural mechanisms underlying context-dependent social-vocal behavior have used the plainfin midshipman fish *Porichthys notatus* as a model organism. Territorial male fish demonstrate different vocal behaviors depending on social context, producing antagonistic grunts to warn off predators and courtship hums to attract female mates. The architecture of the vocal-acoustic circuit involved in producing such social vocalizations has been well-characterized, and components of this circuit have been evolutionarily conserved in mammals. To achieve a greater understanding of how social-vocal behavior is shaped in humans, we are thus interested in ascertaining the neural mechanisms of the toadfish social-vocal circuit. While the neural structures contributing to vocal output of toadfish have been identified, it is unknown what modulates the behavioral shifts apparent when social context is altered. The catecholamine neurotransmitter dopamine has been shown to play a role in social behavior, reward, and motor control. Previous lab work has identified tyrosine hydroxylase, involved in synthesizing dopamine, throughout the plainfin midshipman vocal circuit, and injecting exogenous dopamine focally into the periaqueductal grey (PAG) of the midbrain significantly and reversibly inhibited vocal production. This study attempts to further elucidate the effects of dopamine and identify what receptors are involved in vocal social behavior by focally injecting dopamine antagonists into the periaqueductal grey, a midbrain vocal structure. SCH-23390, Sulpiride, and Fluphenazine were used to block D1-like receptors, D2-like receptors, and both D1-and D2-like receptors, respectively. Vocal output was elicited by stimulating the forebrain vocal areas and midbrain neuronal activity was recorded through an extracellular recording electrode on the occipital nerve. Changes in response probability, response duration, and response latency were investigated. Results show

Center for Public Service

Bougounam Library (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Lyudmila Marinova, Munyaradzi Choga	Eileen Stillwaggon	10:00am - 11:30am Science Center 2 Lobby

Burkina Faso has one of the lowest literacy rates in the world. According to a 2009 UNESCO Report, adult literacy is just 26% and in 2006 youth literacy was 34% – both of which are well below the world average of 88%. Additionally, the literacy rate for women in Burkina Faso is among the lowest in the world, around 18%. Our project aims to promote literacy and increase people’s knowledge of health and education-related issues in the village of Bougounam in Northern Burkina Faso. We implemented the project in three phases: infrastructure remodeling, library resource purchase, and a reading camp. The remodeling involved making repairs to the ceiling and the roof, plastering the cracks inside and outside the building, and repainting the walls. We secured reliable electricity supply for the building, a photocopier, 5 bookshelves, 4 tables, 10 chairs, 4 benches, 2 mats, and around 500 books.

Reflections on Nicaragua: A Discussion on 2012 CPS Experiences in Leon (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Abigail Ziegler, Alexandra Isaacson, Anna Marie Conrad, Caleb Sisak, Christine Serwan, Christopher Dellana, Drew Brooks, Hannah Diehl, Kaeley McEvoy, Krupa Patel, Laura Koenig, Mary Ranii, Nicholas Redman, Nicole Moody, Olivia Ruth, Rebecca Croog, Riccardo Purita, Richard Aime, Samuel Holmes, Shane Swink, Stephanie Angelo	Gerardo Carfagno Jennifer Cole	3:00pm - 4:00pm College Union Ballroom

We will be presenting and discussing our experiences on the Winter Break 2012 trip and the Spring Break 2012 trip with Project Gettysburg-Leon through CPS. From here, we will provide context to our experiences and highlight the ways in which these experiences connect back to our lives in America, Adams County, and Gettysburg College. We will also seek to answer any questions concerning the trip or our experiences that the audience may have. Finally, we will participate in a "Sawdust Carpet" art activity that will provide hands-on experience with a traditional Nicaraguan art form.

San Carlos Apache Immersion Trip (Panel)

Student(s):

Lily Coryell-Moore, Rebecca Taormina

Mentor(s):

Michael Gibbons

Time/Location:

**10:00am - 11:00am
Breidenbaugh Hall 112**

A presentation on the San Carlos Apache, as observed during the Immersion trip in January 2012. We will cover a number of different social issues the Apache face including struggle between religion and tradition, poverty, unemployment, diet, power struggles, etc.

San Carlos Apache Immersion Trip 2 (Panel)

Student(s):

Katelyn Burke, Nicole Dibble

Mentor(s):

Michael Gibbons

Time/Location:

**10:00am - 11:00am
Breidenbaugh Hall 112**

Chemistry

Determination of differences in transactivation activity of wild-type and Rdy CRX transcription factor (Poster)

Student(s):**Brian Lauderback****Mentor(s):****Koren Deckman****Time/Location:****12:00pm - 1:30pm****Science Center 2 Lobby**

CRX is a transcription factor that acts to promote development of photoreceptor cells in the retina by activating genes such as rhodopsin. Mutations in this gene have been associated with pathologies of the human retina such as cone-rod dystrophy. A dominantly heritable mutation in this gene in *Felis catus* has been identified in cats that exhibit the Rdy phenotype, in which cats suffer from cone-rod dysplasia. The mutation involved in causing this phenotype is a single base pair deletion that results in a premature stop codon. This causes a truncated protein product to be produced that is lacking the transcriptional transactivation domain, which is the region of the protein that activates its target genes. Due to the similarity between cats exhibiting this phenotype and human patients suffering from pathologies caused by CRX mutations, these cats are a potential large animal model for studying and developing therapies for the human pathologies. In order to more fully understand how this mutation causes the Rdy phenotype, the differences in various activities between the mutant and wild type proteins must be explored. For example, the DNA binding activity and transactivation activity of both forms must be measured and compared. In order to measure transactivation activity, it was necessary to generate plasmid vectors for expression and purification of both types of protein, as well as a reporter vector to determine the relative rates of activity of both forms of the CRX protein.

DON'T BE SO NEGATIVE!**Shifting the Redox Potential of Cobalt Clathrochelate Complexes (Poster)****Student(s):****Minh An Nguyen****Mentor(s):****Joseph Grzybowski****Time/Location:****12:00pm - 1:30pm****Science Center 2 Lobby**

Clathrochelate complexes are compounds that consist of a metal ion encapsulated in a framework made of ligands. Pantani and associates (2008) discovered the potential of cobalt clathrochelate complexes for serving as hydrogen producing catalysts. Development of these complexes could potentially lead to replacing precious platinum metal with non-noble metal complexes as catalysts for the electrocatalysis of hydrogen production in hydrogen fuel cell.

Our research focused on designing and synthesizing new cobalt clathrochelates and ligands that can stabilize the cobalt(I) oxidation state. Theoretically, the more accessible the cobalt(I) oxidation state is, the more efficient the complex is as a catalyst in the electrocatalysis of hydrogen production. We had been able to synthesize new cobalt clathrochelates that demonstrate a more stable cobalt(I) oxidation state than those previously synthesized.

**Green Methylation of Phenols with Dimethyl Carbonate and the Controlling Mechanism
(Poster)****Student(s):****Andrew Cinderella****Mentor(s):****Donald Jameson
Timothy Funk****Time/Location:****12:00pm - 1:30pm
Science Center 2 Lobby**

A central theme of the organic laboratory curriculum at Gettysburg College is the demonstration of “green chemistry” concepts. Towards that end, experiments have been designed to minimize use of hazardous materials, utilize catalytic processes and exhibit atom economy. As part of this project, we were motivated to develop a process for the methylation of heteroatomic functional groups, which avoided the commonly used, but highly toxic reagents such as methyl iodide and dimethyl sulfate. Dimethyl carbonate has been widely explored as a “green” methylating agent, but its use has often required high temperatures and/or inconvenient reaction conditions. Using DABCO and DBU catalysts in DMSO/dimethyl carbonate mixtures, methylation of a wide variety of phenols and carboxylic acids as well as a limited numbers of nitrogen heterocycles are methylated in 45-150 minutes.

During the exploration of this method, it was discovered that the reaction occurs with an induction period. In other words, instead of consuming reactant rapidly at the beginning of the reaction, and gradually more slowly as reactant is consumed, the reaction went slowly initially and gradually increased in velocity. By manipulating the conditions of the reaction (amine base, inorganic base, added H₂O, addition of the presumed active catalytic intermediate) an investigation into the origin of the induction period was performed. Methylation of 4-t-butylphenol was followed by the ¹H NMR integration of aromatic protons. In light of the results of these studies, a reaction mechanism will be proposed.

**Investigation of the Mechanism of
Troger's Base Racemization (Poster)****Student(s):****Thomas Field****Mentor(s):****Donald Jameson****Time/Location:****12:00pm - 1:30pm
Science Center 2 Lobby**

Tröger's base is a molecule with many unique properties, among them the presence of two chiral nitrogens. This compound can be resolved with L-tartrate ester by taking advantage of the fact that one of the diastereomeric complexes selectively precipitates. The racemization of chiral Tröger's base is an acid-catalyzed reaction that can be monitored by polarimetry. The mechanism shown below was proposed in the mid 1980s.

Our goal was to investigate the mechanism by probing the effect of aromatic substituents on the reaction rate. Synthetic advances in our lab have allowed us to prepare a wide variety of substituted Tröger's base derivatives. Using Hammett's technique of linear free energy relationships, the effect of aromatic electron withdrawing and electron donating groups on the rate of racemization was investigated. Reactions were carried out in ethanol-water (polar protic) and dichloroethane (non-polar). It was expected that the intermediate positive charge in the mechanism would result in a significant negative rho value. Kinetic analysis by polarimetry showed the reaction to be first order in TB (with $\ln(\text{rotation})$ vs T having $R^2 \sim 0.99$ or higher). Surprisingly, the Hammett analysis yielded a rho value of less than 0.2, indicating very little sensitivity to substituents. The reaction proceeds much faster in ethanol-water. A mechanistic hypothesis that fits the Hammett data will be proposed.

Nanoparticle and Surfactant Interactions with Model Cell Membranes (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Luke Cuculis	Shelli Frey	12:00pm - 1:30pm Science Center 2 Lobby

Due to their small size, nanoparticles have the ability to penetrate cell membranes, and are therefore classified as potential human carcinogens. Nanoparticle insertion into targeted cells also proves beneficial for drug delivery and gene therapy applications, prompting a need to more thoroughly characterize nanoparticle/membrane interactions. Polystyrene nanoparticles with modifications in surface functionalization and detergent conditions were introduced to a Langmuir phospholipid monolayer, a model of the outer leaflet of the cell membrane. Negatively charged (COO- functionalized) detergent free nanoparticles introduced beneath a zwitterionic 1,2-dimyristoyl-sn-glycero-3-phosphocholine monolayer held at constant, physiological pressure solubilized the phospholipid layer, removing material from the air/water interface, to a greater extent than did positively charged (NH₃⁺ functionalized) nanoparticles. To further examine the role of lipid charge, negatively charged 1,2-dilauroyl-sn-glycero-3-phospho-(1'-rac-glycerol) and positively charged 1,2-dimyristoyl-3-trimethylammonium-propane lipid monolayers were used. Nanoparticles of opposite charge removed a larger percentage of the monolayer compared to like-charged particle/phospholipid systems illustrating the role of electrostatics.

Ionic and non-ionic surfactants, typically present in nanoparticle solutions to prevent aggregation, were introduced beneath the monolayer and all detergents showed significant insertion which directly correlated to surfactant hydrophobicity. Adding a low mol% of surfactant to detergent-free nanoparticle solutions decreased the amount of monolayer destruction compared to nanoparticles alone. At increased detergent concentrations in the nanoparticle solutions, insertion into the monolayers was intermediate in behavior between the particles and surfactant alone. To better understand how nanoparticles and detergents interact with each other and with the membrane, either nanoparticles or det

Oppenauer--type oxidations using an air-stable, nitrile-ligated (cyclopentadienone)iron dicarbonyl catalyst (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Daniel Kim	Timothy Funk	12:00pm - 1:30pm Science Center 2 Lobby

Platinum-group metals play an important and diverse role as catalysts in organic transformations. Unfortunately they are expensive and considered harmful even in low concentrations. For these reasons the replacement of platinum-group metal catalysts with catalysts based on abundant, inexpensive, and low-toxicity metals is an important step toward developing more sustainable chemical processes. For example, it was recently show by Casey and Guan that an air-sensitive iron hydride exhibited reactivity similar to Shvo's diruthenium bridging hydride catalyst. Our interest has been on developing air-stable pre-catalysts similar to the iron hydride and exploring their catalytic activity. The application of nitrile-ligated (cyclopentadienone)iron dicarbonyl complexes as catalysts in Oppenauer-type oxidations of alcohols as a practical replacement for the air-sensitive iron hydride will be presented.

Synthesis of Iron Catalysts for Use in Oxidation and Reduction Reactions (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Taylor Plank	Timothy Funk	12:00pm - 1:30pm Science Center 2 Lobby

Alcohol oxidations and carbonyl reductions are of fundamental importance in synthetic organic chemistry. The development of more efficient, environmentally benign catalysts is a key area of research. This project focused on the development and modification of (cyclopentadienone)iron carbonyl catalysts for use in oxidation and reduction reactions, as well as the refinement of reaction conditions in order to maximize the efficiency of these reactions. Previous laboratory work led to the development of an air-stable iron catalyst capable of oxidizing secondary alcohols to ketones. However, due to a necessary additive, the catalyst decomposed during the reaction, meaning a higher catalyst loading was needed. The iron catalyst was modified by varying the cyclopentadienone substitution and replacing a carbonyl ligand with a more labile ligand in order to increase the catalyst efficiency and stability. These new catalysts were then tested for reactivity in alcohol oxidations and carbonyl reductions. It was discovered that an iron catalyst with an acetonitrile ligand performed well in both oxidation and reduction reactions. This new catalyst was then tested in a variety of different oxidation and reduction reactions, and reaction conditions were varied in order to find optimal conditions. Other iron catalysts containing modified cyclopentadienone ligands were also explored in a variety of reactions. Current laboratory work explores how the cyclopentadienone substitution affects catalytic activity.

Synthetic Explorations of Alkyne Derivatives and Shape-Persistent Molecules of Tröger's Base (Poster)**Student(s):****Hannah Loch****Mentor(s):****Donald Jameson****Time/Location:****12:00pm - 1:30pm****Science Center 2 Lobby**

Tröger's base (TB), first synthesized by Julius Tröger in 1887, has become a molecule of interest due to the unique "V"-shaped geometry and chirality. This unique structure makes the base a nanometer-sized building block in supramolecular chemistry. Access to both racemic and chiral alkyne derivatives of Tröger's base prompted us to explore the synthesis of two new classes of molecules: a shape persistent "molecular square" possessing TB corners and a series of TB molecules that take advantage of alkyne reactivity.

Assembly of these two molecules depends on a variety of cross-coupling reactions (for which the 2010 Nobel Prize in Chemistry was awarded). The preparation of optically pure oligomeric TB derivatives relies on the availability of chiral TB "monomers". Alkyne substituted TB has been prepared by a Sonogashira sequence. Oligomeric TB derivatives may be prepared by Glaser or Cadiot-Chodkiewicz (CC) alkyne-alkyne couplings or Sonogashira alkyne-arene couplings.

A new strategy for cross coupling of alkynes based on a Glaser strategy led to the synthesis of a TB tetra-alkyne which failed by CC methods. A TB dialkyne was converted by a Diels-Alder reaction into two new octa-phenyl TB derivatives. Finally, a "3/4 square" molecule was constructed by a Sonogashira strategy.

**The photodissociation of dimethyl disulfide in solution using UV-light
Or Raman Spectra: Noodling with the bonds (Poster)**

Student(s):

Kathleen Hillery

Mentor(s):

Michael Wedlock

Time/Location:

12:00pm - 1:30pm

Science Center 2 Lobby

The photodissociation of dimethyl disulfide (DMDS) in solution was studied using 266nm light from a Nd:YAG laser and the Stokes scattering in the Raman spectrum. The hope was to locate the Raman peak corresponding to the breaking of the sulfur-sulfur bond. Water and methanol were used as calibrating solvents to determine appropriate levels of laser delay, integrator sensitivity, and photomultiplier voltage; these settings determined the background noise levels and intensity of solvent peaks. The peak locations of the pure solvents were measured first in order to know what peaks did not correspond to the DMDS dissociating in solution. Varying concentrations of DMDS were first mixed in solution with methanol, but no resulting peaks from the Raman spectra could be assigned to DMDS. Cyclohexane was then tried as a solvent, with some improvement: peaks not directly assignable to the cyclohexane solvent were discernable, however they were inconsistent. Ab initio calculations, a new component in the history of this particular laboratory, were done using the computer software program Hyperchem to determine the amount of energy contained in the bonds in DMDS.

**The role of protein context in disease-related huntingtin protein/lipid interface interactions
(Poster)**

Student(s):

Karlina Kauffman

Mentor(s):

Shelli Frey

Time/Location:

12:00pm - 1:30pm

Science Center 2 Lobby

Huntington's disease (HD) is a neurodegenerative disorder caused by an expansion of a poly-glutamine (poly-Q) region near the N-terminus of the huntingtin (htt) protein. Expansion of the poly-Q region above 35-40 repeats results in the disease that is characterized by inclusion body aggregates of mutated protein. The poly-Q region of htt is flanked by a 17 amino acid N-terminal sequence (N17) and a region of proline repeats (P11). As the cell membrane has been proposed to play a role in mediating htt aggregation, Langmuir trough techniques were used to investigate the effects of flanking regions on the surface activity and insertion of htt peptide constructs into a lipid monolayer. Four peptide constructs were tested: N17-Q35-KK, N17-Q35-P11-KK, KK-Q35-KK and KK-Q35-P11-KK, where the additional lysine residues were attached to improve solubility. Surface activity was measured to determine the affinity of each peptide for the air-water interface. The constructs containing the N-terminal sequence had higher surface activities compared to those without. Inclusion of the polyproline region with the N-terminal sequence contributed to the highest surface activity. To determine peptide association with a cell membrane, insertion of each peptide into a monolayer of 1,2-dimyristoyl-sn-glycero-3-phosphocholine (DMPC) held at a constant surface pressure was also investigated. Peptides with the flanking N-terminus showed appreciable monolayer insertion. The polyproline region only mediated and increased the degree of insertion when the N-terminus was also present. Rates of insertion of the constructs containing the N-terminus were comparable, while those without this region were markedly slower. Experiments were repeated using monolayers of total brain extract to better model a physiological environment with similar results. The amino acid environment surrounding the poly-Q region dramatically affects peptide association with the cell membrane and this may potentially mediate

Computer Science

Pocket Manager (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Munyaradzi Choga	Clifton Presser	12:00pm - 1:30pm Science Center 2 Lobby

Pocket Manager is a financial management application that aims to assist young professionals to achieve the task of basic budgeting and handling the inflow and outflow of personal funds.

Programming the Youth (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Jason Ellis, Kyle Bauer, Nathan Clark, Zachary Turley	Ivaylo Ilinkin	10:00am - 11:30am Science Center 2 Lobby

This collaborative effort sought to bring the world of programming to today's tech savvy youth, primarily the elementary school age group. Using the multi-user, multi-touch capabilities of the SMART Table, we developed a simple, yet elegant, interface that contains the fundamental programming constructs. Inspired by the Logo programming language, the application lets the children control a turtle using kid-friendly code blocks that represent various commands. By designing a friendly user interface combined with the intuitive nature of the language, we created a fun and engaging environment that introduces children to the basic concepts of programming and computer science.

Speech therapy iPad application (Poster)**Student(s):**

**Forrest Jacobs, Munyaradzi Choga, Ondrej
Krasny, Rahul Sinha**

Mentor(s):

Ivaylo Ilinkin

Time/Location:

**10:00am - 11:30am
Science Center 2 Lobby**

We present an iPad application that helps children practice their pronunciation. Specifically aimed at children with cleft lip and palate, the software prompts the child to repeat a randomly chosen word, records the pronunciation and performs statistical analysis on the sound wave. Results of the analysis, ie, if the word was pronounced correctly, are stored in a database and available to the parents and therapists.

Economics

Debt and Deforestation: An Updated Analysis (Poster)

Student(s):

Elizabeth Adams

Mentor(s):

John Cadigan
Michael Margolis

Time/Location:

2:00pm - 3:30pm
Science Center 2 Lobby

This research offers an analysis, using the most recent data available, of the relationship between national debt and deforestation levels. We hope to shed some light on the current debate among academics surrounding whether or not debt significantly impacts deforestation. The first step in our analysis is to use structural equation models (SEMs) to lay out a causal story of all of the influences on deforestation. This will aid us in the construction of our regression model and in further analysis with SEMs. The second step is to use regression analysis to find whether or not the data shows a significant impact of debt on deforestation. The third step is to use SEMs to offer a new perspective on this issue. It is our hope that SEMs will be able to help sort out the complexity of the deforestation issue and offer more concrete answers about this causal relationship. Our initial findings go against our hypothesis. Regression analysis shows that the debt levels are not a good predictor of deforestation levels. This paper not only offers a regression analysis similar to those used in past studies but it is also based on an updated panel data set and puts forth a new approach to studying the link between debt and deforestation that may be able to sort through this multifaceted debate.

Effects of Price Feedback on Residential Demand for Electricity in Demand-Side Management Programs (Poster)

Student(s):

Julie Weisz

Mentor(s):

Rimvydas Baltaduonis

Time/Location:

2:00pm - 3:30pm

Science Center 2 Lobby

New demand side management (DSM) programs have been developed in the hopes of increasing the efficiency of electricity markets currently being deregulated. However, there have been some difficulties in determining the most effective way of introducing and implementing DSM programs to better manage the cyclical demand for electricity and maximize efficiency. In California, an investigation completed by the CA Public Utility Commission revealed that utilities may not be offering enough information to consumers about new programs and changes associated with the deregulated electricity markets and associated changes. To further explore this topic, we test how differences in price feedback affect consumer demand, both when participating in a DSM program and when participating in flat rate program associated with markets that have not been deregulated. In order to control for many factors that cannot be controlled in field experiments, we test the effects of varying price feedback offered to consumers in a laboratory setting. Using a computer program modeled after the cyclical demand structure of electricity markets, subjects participate in programs reflecting flat rate and real-time pricing programs that offer different levels of price feedback. Results indicate that direct price feedback does increase overall market efficiency.

Endangered Species Conservation as a Common Pool Resource Game: Experimental Evidence (Poster)

Student(s):

Elena Rubino

Mentor(s):

John Cadigan
Rimvydas Baltaduonis

Time/Location:

2:00pm - 3:30pm
Science Center 2 Lobby

This is a preliminary exploration of the efficacy of externally versus internally sanctioning the hunting of endangered species. Like many natural resources, endangered species are a common pool resource that faces probabilistic destruction; they are capable of regeneration if utilization is kept low because there is a range of exploitation the resource can withstand, but once the safe yield is surpassed due to high levels of economic activity, the resource will be destroyed. This study investigates the hunting of endangered species in terms of banning the use of the resource (externally sanctioning) and licensing the controlled use of the resource (internally sanctioning through communication). A series of experimental treatments were employed to determine which sanctioning strategy showed the most efficiency. Both sessions of the baseline treatment without communication led to the destruction of the resource. In one session of the baseline treatment with communication and one session of the banning the resource was destroyed and in the other of both treatments the resource lasted the maximum twenty rounds. This indicates that both internal and external sanctioning methods can be viable in resource conservation. All subjects in each session also took the Holt Laury risk assessment experiment. The Holt Laury instrument results were used to determine if there was a relationship between high risk preference and increased utilization of the common pool resource.

From Hubs to Zones and Zones to Nodes: Differences of Risk and Abnormal Profits (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
James Myers	Rimvydas Baltaduonis	2:00pm - 3:30pm Science Center 2 Lobby

The purpose of this paper is to explore differences in risk and abnormal profits of FTR paths between PJM Hubs and PJM zones. In power markets, Financial Transmission Rights (FTRs) are used by generators and load serving entities to hedge congestion on the grid. These instruments are also used by speculators to capture profits in the price differential of congestion charges between locational marginal prices (LMPs). FTR positions are divided amongst Off-Peak and On-Peak hours. Due to the higher demand for energy during On-Peak hours it is expected that On-Peak FTR positions will have more volatile returns relative to a market index than their Off-Peak counterparts. It is also expected that abnormal returns will be different between On-Peak and Off-Peak positions. More specifically this paper will test the hypothesis that On-Peak FTR positions are different in riskiness and abnormal returns than their Off-Peak counterparts between the Western trading Hub and PJM Zones. Furthermore this paper will delve deeper to explore differences of risk and abnormal profits between PJM hubs and nodes within PJM zones. These questions will be examined by estimating the Sharpe-Lintner CAPM equation via an exponential GARCH process and then comparing the estimated Betas and Alphas.

The Impact of Health Insurance Consolidation on Health Insurance Premiums (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Lyudmila Marinova	Brendan Cushing-Daniels	2:00pm - 3:30pm Science Center 2 Lobby

Health insurance premiums have increased dramatically over the past decade, and the rising cost of medical provision and insurance continue to burden both public and private budgets. The highly concentrated health insurance market has been blamed for the increase in premiums; however, little research has been done to analyze the issue due to data scarcity. This paper examines the impact of mergers between health insurance companies on premiums in the period from 1999 to 2010. It uses data from the National Association of Insurance Commissioners. Two-stage least squares estimates are derived using a lag of the concentration measure as an instrumental variable. The results show that mergers do not lead to higher premiums; they actually lower premiums.

The impact of local knowledge on fiscal policy multipliers (Poster)

Student(s):

Ondrej Krasny

Mentor(s):

Rimvydas Baltaduonis

Time/Location:

2:00pm - 3:30pm

Science Center 2 Lobby

Theoretical and empirical macroeconomic research disagrees on the size of fiscal policy multipliers. We build a computer simulation that allows us to treat a macroeconomy as a controlled experiment. Our model is able to relax some of the strict assumptions of homogeneous agents and rational expectations necessary for solvability in traditional theoretical papers. We provide results to responses to fiscal policy actions in form of government spending and tax changes.

Education

Music Education Student Teaching (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alyssa Clark	Brent Talbot	10:45am - 11:30am Schmucker Hall 222 Rec

A presentation of my experience student teaching this past semester. Example lesson plans, handouts, and pictures from my time in Elementary Music and High School Music classes will be available.

Student Teaching in Elementary and Middle School Music Classrooms (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Melinda Harrison	Brent Talbot	10:45am - 11:30am Schmucker Hall 222 Rec

The presentation will include a portfolio of work from student teaching as well as reflections and work completed throughout the entire Gettysburg experience.

Teaching Music K-12 (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Brendan Michalko	Brent Talbot	10:45am - 11:30am Schmucker Hall 222 Rec

A presentation of my capstone experience teaching music to elementary and high school aged students.

Eisenhower Institute

2012 Leadership Institute: Exploring Leadership in the Context of Civil Rights Movement (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Abigail Conner, Adaeze Duru, Allan Kawala, Anna Baldassarre, Chelsea Broe, Declan Sullivan, Eric Harris, Kaeley McEvoy, Lauren Dunne, Maria Lombardi, Michael Pipa, Rachel Fry, Sarah Fodero	Andrew Hughes Jeffrey Blavatt Jeffrey Rioux Joseph Donnella	11:00am - 12:00pm Science Center 151

This panel, comprising of 12 students, each sharing their individual experiences of what they have learned going through the 2012 Leadership Institute, a semester long experience that explored social justice leadership in the context of civil rights movement and inspired the potential that we as individuals have to create and attain positive social change.

Environmental Studies

A Geographical Context of Primary Environmental Education: A Study of Rural Loma Bonita and Panama City Schools (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Valerie Leone	Rutherford Platt	2:00pm - 3:00pm Glatfelter Hall 212

The behavior of children is strongly influenced by their attitude, which in turn, is influenced by education. Education creates attitudes and then behaviors that lead to either irresponsible, or responsible environmental behavior. Therefore, environmental education, defined by 1) awareness and sensitivity 2) knowledge and understanding 3) attitudes 4) skills and 5) participation, is crucial to the future of the environment. With development of knowledge comes the ability to formulate views on how ecology, economics, and technology come together to impact the environment. Through a series of topical interviews and observation of class proceedings in Loma Bonita, Coclé, Panama, the implementation of environmental education in primary school was evaluated, as was the integration of environmental education materials in primary schools in Panama. In addition, challenges were assessed in the impact of location on the implementation of environmental education that students receive in Centro Educativo Basico General Loma Bonita (C.E.B.G.L.B.). Although didactic guides, training, and governmental departments do exist for environmental education, there is no direct supervision of the transverse axis of cross-curricular education to mandate that this education is occurring.

An Analysis of Perceptions Pertaining to the Gettysburg Inner Loop and Transportation Issues in Gettysburg, Pennsylvania (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
David Curtis, Michael Nemeth, Robert Martz	John Commito	3:00pm - 4:00pm Science Center 200

Over the course of the 20th century, the automobile became the primary mode of transportation in the United States. Increased bicycle use and pedestrian access in towns and cities mitigates automobile traffic and emissions, resulting in positive impacts for the environment, human health, and local businesses. In 2007, the Borough of Gettysburg, in conjunction with Healthy Adams Bicycle Pedestrian, Inc. (HABPI), decided to implement a system of bicycle trails through the center of town as a response to significant automobile congestion. Though parts of the trail have been constructed, organizers of the Gettysburg Inner Loop (GIL) have been unable to attain all of the necessary funds to complete a substantial portion of the bicycle path.

The primary goal of the project was to assess how local businesses perceive the GIL and transportation as it related to their business. The second objective was to use this information to highlight where knowledge gaps existed and to determine potential ways to raise funds and spread awareness for the GIL in the future. We hypothesized that businesses were neither as familiar with nor as interested in the implementation of the GIL as the planning committee and Borough authorities expected.

Our survey results indicated that our overall hypothesis is supported. We used 20 two-tailed chi-squared tests to examine the degree of independence for multiple survey variables. By examining important correlations, we were able to provide planners with recommendations for educating the business community on cooperative fundraising efforts and the GIL's benefits.

**COMPRESSING PENNSYLVANIA'S GAS CRISIS:
ASSESSMENT OF FUEL-CYCLE EMISSIONS AND DOMESTIC SUPPLIES FOR
UTILIZING COMPRESSED NATURAL GAS VEHICLES (Panel)**

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
James Fellows, Kevin Blake	John Commito	3:00pm - 4:00pm Science Center 200

Growing concerns about greenhouse gas emissions, global climate change, and our nation's dependency on foreign oil have made replacing petroleum-based fuels with a feasible, more environmentally friendly, and domestic source of motor vehicle fuel an emergent theme in the United States. Compressed natural gas (CNG) technology has gained momentum as a possible remedy, especially in Pennsylvania, where much of a significant natural gas reserve remains untapped below ground. Our study aimed to assess the effects of a hypothetical conversion of the Pennsylvania passenger car fleet to natural gas vehicles. We employed a fuel-cycle, wells-to-wheels analysis using the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) Model and asked a variety of related questions: how do the emissions from domestically-extracted CNG vehicle fuel compare to those of conventional gasoline typically burned in Pennsylvania? Does Pennsylvania have a large enough gas reserve to provide for a significant increase in demand, and how might other uses of natural gas be compromised with higher rates of consumption in automobiles? Is CNG technology feasible and desirable for the average consumer? Do the potential advantages of this alternative fuel outweigh the risks associated with its extraction? GREET model and efficiency figures suggest that, while somewhat limited by the volume available to be allotted towards vehicle use, natural gas can and should be further integrated into the Pennsylvanian automobile network. However, issues concerning fueling infrastructure and hydrofracking consequences are formidable hurdles that should be addressed in order to take advantage of this viable domestic fuel.

Driving Progress: Examining the implementation of environmental technology in the automobile (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Julia Ivers, Matthew Moyer, Matthew Toich	John Commito	2:00pm - 3:00pm Science Center 200

Our project seeks to analyze the relationship between the invention of an environmentally beneficial feature in a vehicle and its implementation in production line vehicles. Our first objective will be to determine the time between a feature's invention (as determined by copyright date), its introduction to concept cars, and its introduction into production line vehicles. Once this relationship has been determined, we will analyze the reasoning behind a feature's release in production line vehicles; we expect that some will have been pressured by the government or interest groups, but other environmentally beneficial features will have been demanded by consumers. It is possible for trends in lag time to appear between the development of the technology and its incorporation into a vehicle that is consistent between different technologies. Our study limits to several key technologies that will provide extrapolative insight into the process that future technology may expect to follow.

Environmental Studies 460 Presentations (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alyse Yeager, Brittany Jones, Elena Rubino, Mitchell Jones	John Commito	10:00am - 11:00am Science Center 200

Alyse Yeager

Individual Abstract

Catching Cane Toads: Determining Biological Differences in Cane Toad (*Rhinella marinus*) Trappability and Assessing the Effect of Acoustic Attractant Position on Cane Toad Capture Rates

The intentional introduction of cane toads (*Rhinella marinus*) to Queensland, Australia, in 1935 quickly turned into an invasion, and now the species is destroying many of the country's native and endemic species. Eradication methods have not yet been developed, but trapping is the most effective strategy for short-term management. The aims of this study were to identify any biological differences that increase cane toad trappability and to improve upon the efficiency of a cage trap modification, specifically the acoustic attractant placement. A 45m² arena with a cage trap in the middle was set up in Townsville, Australia, and 12 trials with 30 wild-captured toads per trial were run to determine capture rates under different light and auditory attractant conditions. Though a number of biological parameters were significantly correlated with trapped toads versus untrapped toads, a logistic regression showed that these parameters did not significantly impact trappability. Auditory attractant placement had little effect on male capture, but placement of the attractant inside the trap caught more females than placement on top of the trap. This modification may be applied directly to the use of this trap in order to increase capture rates of female cane toads, the subset of the population that contributes most to population growth.

Brittany Jones

Individual Abstract

Go With the Flow: Biogenic Structure Types Alter Bedload Transport and Dispersal Dynamics of Macrofauna and Meiofauna in Maine Mussel Beds

The blue mussel (*Mytilus edulis*) is a soft-bottom ecosystem engineer, influencing ambient community and sediment dynamics. However, mussel beds are not spatially uniform. At Carrying Place Cove, Harrington, Maine, mussels and shell material exist within a background matrix of bare muddy sand. We tested the hypothesis that bedload transport and dispersal of meiofauna and postlarval macrofauna differ according to cover type: bare muddy sand, live mussels, empty shells, and shell hash. The hypothesis was supported. The amount of fine sediment and silt-clay collected in empty shell traps was lower than that collected in live mussel traps. Although not significantly different, empty shell and shell hash traps collected more coarse sediment than bare sediment and live mussel traps. Shell hash traps consistently collected fewer meiofauna and postlarval macrofauna compared to other cover types, especially bare sediment and live mussels. Dispersal rates were linked more closely to amount of sediment collected than to ambient densities of organisms, suggesting the movement is largely passive as organisms are transported along with sediment. Our results indicate that live mussels and non-living biogenic structure play important roles in bedload transport and dispersal dynamics. Mussels have a dual impact on these processes – as live mussels that directly affect the hydrodynamic regime and as producers of an extensive cover of long-lived, flow-altering, empty shells and shell hash.

Elena Rubino**Individual Abstract****A Bioacoustic Survey of Microchiroptera in Kruger National Park, South Africa**

Kruger National Park, South Africa, is home to at least 39 species of Microchiroptera (insectivorous bats). In an effort to gain a better understanding of their population ecology and distribution, we performed an acoustic survey using ultrasonic detection to quantify bat activity and to determine the habitat preferences of each identified species. Throughout 15 microsites, a total of 2398 recorded calls were identified as belonging to nine identified species and two unidentified species. We sampled around two main camps in the park, Skukuza and Shingwedzi, and there was no significant difference found in the number of calls recorded between the camps. While it is clear that some species frequent some microsites more often than others, a statistical analysis concludes there was no significant difference in species-specific microsite preference. Additionally, no significant difference was found in call abundance between disturbed microsites and natural microsites. This work should set the stage for further research on Microchiroptera distributions and habitat preferences in the park. Our findings can be built upon with future research in hopes that, eventually, a complete call library is created and used to monitor and conserve Microchiroptera populations within the park.

Mitchell Jones**Individual Abstract****Mussel Beds Are Mostly...Mud and Shells, Not Mussels! Ecosystem Engineer Cover Types Alter Sediment, Macrofauna, and Meiofauna in Maine, USA**

Soft-bottom mussel beds are extensive ecosystem engineers that can control sediment characteristics and infaunal and epifaunal species composition. But beds are spatially complex -- not monolithic expanses of live mussels. At our site, GIS analysis revealed that live mussel patches covered only 4% of the bed, with 6-fold higher cover from patches of empty shells (12%) and shell hash (14%). We tested the hypothesis that these three biogenic types and bare muddy sand have different sediment characteristics, macrofauna, and meiofauna. The hypothesis was supported. Shell hash patches had significantly less silt-clay and more coarse material (mussel shell fragments) than did bare sediment. Individual taxa varied greatly across cover types. Live mussels harbored a higher macrofauna density than did the other three sediment cover types. Meiofaunal abundance was lowest in empty shell material and shell hash. At odds with some previous studies in different soft-bottom systems, our results indicate that non-living biogenic structure plays an important role in structuring soft-bottom assemblages in Maine. Live mussels, therefore, play two roles as ecosystem engineers. They have direct effects on sediment and animals as well as indirect, long-term effects as creators of persistent empty shells and shell hash.

From Football to Fenders: An Analysis of the Portrayal of Automobiles in Super Bowl Commercials from 1969 to 2012 (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Clair Pomponi, Danielle Carty, Eleanor Testa	John Commito	2:00pm - 3:00pm Science Center 200

Television commercials are a significant form of advertisement to the general public. The first Super Bowl aired in 1967 and has become the most heavily viewed television program in America. Due to such a large audience, automobile industries strive to display the car commercials that they believe will have the greatest appeal to customer demands. Automobiles are a large contributor to greenhouse gas emissions and the use of natural resources. Does the automobile industry produce new car models that reflect the demands that environmental and political changes create? We predicted that environmental changes resulting in updated regulations over time were reflected in Super Bowl commercials. In order to test this hypothesis, we viewed and documented every automobile-related commercial in the Super Bowl from 1969 to 2012. We analyzed the commercials by marking the frequency of specific words used to describe cars across the years. We created a timeline displaying the automobile changes reflected in the commercials juxtaposed with significant environmental events and automobile regulations over time. Results indicate that there has been a shift in the frequency of words such as “luxury” to “compact”, an increasing focus on engine size and miles per gallon, and a decrease in American cars. Moreover, there was a steady decline in the percentage of Super Bowl commercials advertizing automobiles until a sharp incline in recent years. Super Bowl commercials, and television commercials in general, reflect a trade-off between the types of cars Americans want to buy and the types that manufacturers want to sell.

Gettysburg College Sustainability Plan (Part One) (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Catherine Leech, Christian Neumann, Erik Hughes, John Ryder, Sarah Hecklau, Sarah Weinstein, Taylor McGrath	Rutherford Platt	11:00am - 1:00pm Science Center 200

Introduction, Green House Gas Emissions, Dining, and Campus Green Space.

Gettysburg College Sustainability Proposal: Fall 2011 Environmental Studies Senior Seminar (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Andrea Carson, Joseph Boone, Mary Ranii, Megan Sherman, Nicole Moody, Sara Tower	Rutherford Platt	11:00am - 1:00pm Science Center 200

In the fall of 2011, the Environmental Studies capstone class led by Professor Rutherford Platt was asked to write Gettysburg College's first Sustainability Plan. The goal of the plan was to develop specific sustainable practices for the campus related to the three pillars of sustainability: economic, social, and environmental, and how integrating diligent sustainable practices into each of these respected pillars will result in a more conscious campus, community, and future. This sustainability plan outlines the six priority areas that Gettysburg College recognizes to have the largest contribution to the sustainability efforts of the institution: progress of the American College and University Presidents' Climate Commitment, especially regarding greenhouse gas emissions, Dining Services, campus green space, community outreach, integration of sustainability into the curriculum, and the Sustainability Advisory Committee. Each portion recognizes the state of the issues at Gettysburg College and makes specific recommendations and time commitments to achieve the College's goal of carbon neutrality by 2032.

I'm Idlin' It**Idling Vehicle Emissions at the McDonald's Drive-Thru Locations and their Impact on Air Quality in Gettysburg, Pennsylvania (Panel)**

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Annie Golovcsenko, Caitlin Shubick, Jessica Bozzo	John Commito	1:00pm - 2:00pm Science Center 200

The automobile has altered many aspects of our society, including the built environment and the way we eat. There is no better example than the drive-thru restaurant, which introduced the quickest and most convenient way to purchase meals. This study analyzes the effects of the drive-thru restaurant on idling vehicle emissions and how these emissions have impacted air quality in Gettysburg, Pennsylvania. Data were collected from the two McDonald's locations in Gettysburg, one on York Road and one on Steinwehr Avenue. Collection took place over three days, Monday, March 26, Wednesday, March 28 and Friday, March 30, for two-hour intervals during mealtimes (7 am-9 am, 11 am-1 pm, 5 pm-7 pm). The number of vehicles, their make and model, their fuel type, and the air temperature were recorded. Stopwatches were used to time how long the vehicles idled in the drive-thru, starting when the vehicles stopped at the first ordering station and ending when they left the pick-up window. Since Gettysburg is a tourist town, visitor population data were used to account for seasonality. During data collection, a total of 793 vehicles used the drive-thru window. Each vehicle produced a mean of 17.38 g/hr of total emissions and an overall total of 13,781 g/hr of emissions. We found that the emissions produced at the two locations by idling vehicles at McDonald's drive-thru restaurants in Gettysburg have a negative impact on air quality. The impact of idling emissions at these two locations is discussed in the greater context of idling emissions, which are produced at truck weigh stations, bank drive-thrus, and other locations in our highway-oriented transportation system.

Physical Structures of Re-embedding in Israel/Palestine (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Ian Smith	Monica Ogra	1:00pm - 2:00pm Science Center 151

This presentation synthesizes the current literature about borders and globalization in the context of the border wall between Israel and the West Bank. It explores the ways in which globalization has prompted states to construct barriers demarcating their borders, and illustrates the profound consequences these actions have on human rights. The global trends of increased migration and human rights standardization have eroded state sovereignty and explain states' anxieties about their place in a globalized era. This presentation seeks to demonstrate that the construction of barriers represents states' reassertion of their authority over physical space, resources, and individuals. The continued construction of the border wall between Israel and the West Bank exemplifies this trend, and its repercussions on human rights in the region have aroused international criticism. This work contributes an application of contemporary border theory to the controversial border wall, suggesting that its effects on human populations on both sides of the border render its national security objectives unjustifiable.

The Art Car Journey: A Vehicle for a Sustainable Message (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Daniel Chibbaro, Ian White, Kurt Hinck	John Commito	1:00pm - 2:00pm Science Center 200

The automobile is a powerful symbol in American culture. In recent years many car owners have chosen to create pieces of art from their automobile in the form of art cars. Since their arrival in both American car and art culture, Art Cars have taken off as significant pieces of outsider and folk art. The American Visionary Art Museum in Baltimore's Inner Harbor includes permanent Art Car exhibits. Noted Art Car artist Larry Fuente has pieces of his, similar veined, modern folk art on display in the Smithsonian American Art Museum's Renwick Gallery. In his film *Wild Wheels* Harrod Blank, also an Art Car artist, examines art and automobile use in America with particular emphasis on the power of the Art Car to bring art to the people who have never visited an art museum.

Due to their unique ability to reach a vast array of people it is our goal is to create an Art Car in order to enhance our Capstone experience. We will focus on the process of making an Art Car, a piece of outsider and folk art. Our car will not only be a piece of art but will also bear a sustainable message, one that emphasizes reuse and sustainable living. We want to open our project up to input from both the Gettysburg College and Borough community, inviting members to join in the creation and interpretation of our car. In doing so we will record everything to answer all the foreseen and unforeseen questions that come from making an art car including: feasibility issues, budgeting, the car itself, design, how to actually make an art car and the reception of our final product.

The question we wish to answer is, how powerful can the automobile be, bearing a message as a piece of art and what it means to make an Art Car. Our project will be integrated into other presentation by member of our capstone on the impact of the automobile on America.

German

The Nation's Conscience? (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Carter McClintock, Cory Rosenberg	Laurel Cohen-Pfister	1:00pm - 2:00pm Glatfelter Hall 212

The Gedächtnis der Nation project proposes to capture German oral histories, but whose histories are these, and who is backing this project. Papers will be presented discussing the project's representation of German Jews and Holocaust history and the presentation of East Germany and German Unification.

Global Leadership Gettysburg College

A Semester in Ireland & Northern Ireland (GLGC Presentation) (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Martha Slenker	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

Martha Slenker's GLGC presentation on her Fall 2010 semester abroad in Ireland and Northern Ireland with the School for International Training

Abroad and Beyond: Mexico, Nicaragua, Gettysburg, and the GLGC (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Benjamin Schell	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

The pillars of the Global Leaders of Gettysburg College are Scholarship, Mentorship, and Activism. Since beginning my travels with an Immersion Trip to Nicaragua, the meaning of these pillars of been constantly developing. Over the course of two semesters abroad and a summer internship, these varying experiences contributed to the evolution of my understanding and in turn how I attempted to realize these qualities in my own life. Similar to the path of my life, my first semester in Mexico was in a university setting before I transitioned to working with a local NGO in Nicaragua for the summer and then engaging in an experiential learning program for the fall semester of that same year. The application of scholasticism is undoubtedly one of the greatest challenges I face with graduation and making the academic and intellectual part of my experiences congruent with the mentorship and activism portions. This poster is a culmination of my experiences in which I hope to articulate both the triumphs and struggles of this process and the current conclusion that they have left me.

Final GLGC Reflection (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Brenda Clark	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

Scholarship: After being abroad, I discovered my true learning style and real academic interests. One of my classes in Morocco helped me realize my interest in indigenous languages and influenced my decision to go to grad school. The philosophy class I took in Spain encouraged me to take another one here. My experiences help me make connections between my life and my classes, which makes me a more engaged student because I really have something to contribute to discussions.

Mentorship: I have had several opportunities to talk to prospective study abroad students, and I find that no matter how many times I do it, I frame my experience slightly differently each time. Explaining various aspects of the experience is gradually clarifying to me what I was actually doing for a year. I see myself in those students and it makes me aware of how far I have come since my pre-abroad time at Gettysburg.

Activism: The longer I was immersed in another culture, the more tiring it was to get questions and looks when I tried to buy groceries. Being a minority and having that curiosity focused on you all the time loses its charm. I now know just how condescending it can be. At Gettysburg, I participate in events and clubs that celebrate diversity, and I was inspired to do an immersion project through CPS. A global leader needs to be able to see multiple perspectives and weigh them equally to make a decision.

Gettysburg Goes Global with the GLGC (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Kailey Smaczniak	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

After spending my Junior year abroad in both Argentina and Spain, being a member of the Global Leaders of Gettysburg College has allowed me to transition back to Gettysburg and has provided me with the means to use the skills and experiences that I obtained while abroad in my daily life and academics at home.

GLGC - Hannah Tenenbaum (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Hannah Tenenbaum	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

As a member of the GLGC, I am creating a poster to show what I have done as a GLGC member. I will begin with my wonderful experience abroad in Florence and then continue with how I have been able to keep my experiences forever in my mind on the Gettysburg College campus as a member of the GLGC.

GLGC (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Caroline Maggard	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

GLGC

GLGC Athens, Greece (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Kaitlyn Roman	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

A presentation of my study abroad experience framed through the Global Leaders of Gettysburg College pillars of mentorship, activism and scholarship.

GLGC final reflection presentation (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Adam Newhard	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

This is a presentation with the Global Leaders of Gettysburg College that is to demonstrate our experience in the program.

GLGC poster session (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Caitlin Kaltenbach	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

GLGC poster abstract

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Christine Walker	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

GLGC poster

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Michael DeLue	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

This poster offers a reflection of my time in GLGC and the connections developed between my study abroad experience and my return to Gettysburg College.

GLGC session (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Allison Mion	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

GLGC abstract

Global Leaders of Gettysburg College (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Taylor Schow	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

This poster is a culmination of my year in the organization known as GLGC, or Global Leaders of Gettysburg College. It incorporates my abroad experiences with the three pillars of the GLGC. It is meant to showcase what I learned from my abroad experience in Aix-en-Provence, France, and how I used those memories to become a part of who I am and everything that I am involved with on campus.

Global Leaders of Gettysburg College Reflection - My Experience in South Africa during Spring 2012 (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Annie Golovcsenko	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

A visual representation of my study abroad experience and my future goals for being a global leader around the world.

Global Leaders of Gettysburg College Reflection: China (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Lauren Javins	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

Final reflection on being a member of the GLGC

Global Leaders of Gettysburg College: Study Abroad Experience In and After South Africa (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alex Ferraro	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

Poster presentation on my experience abroad in the Fall 2010 Semester at Rhodes University in Grahamstown, South Africa and after as a member of the Global Leaders of Gettysburg College. An exploration of the ways I have integrated my semester abroad into my everyday life and work on campus through scholarship, mentorship, and service.

Melbourne Madness: My Experience Abroad and in Global Leaders of Gettysburg College (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Hanna Heuser	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

My journey to Melbourne, Australia started in early February, 2011. As soon as I got off the plane, I knew I was in for something that was completely different from Gettysburg. I studied at the University of Melbourne as an international student, interacting with the locals on a daily basis. This experience allowed me to get a different perspective, and also to learn the "relaxed" culture of Australia, which is so different from Gettysburg. From camping ten days in the Outback, to snorkeling in the Great Barrier Reef, to walking around the trendy city of Melbourne, I found myself completely immersed within the Australian culture. This poster is a reflection of my experience abroad, and how I have continued this experience today. Australia is a wonderfully diverse country, with plenty of new experiences. I thoroughly enjoyed my time there, and I plan on returning when I can.

My experience "down unda". (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Christa Jaskir	Samantha Brandauer	12:00pm - 1:30pm Weidensall Hall Lobby

This poster is for the Global Leaders of Gettysburg College (GLGC) and will contain pictures and captions about my experience abroad in Melbourne, Australia and how GLGC has helped integrate my international experience academically and in my future endeavors.

Rich Clough Global Leaders of Gettysburg College (GLGC) (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Richard Clough	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

My poster will represent a combination of what I learned while abroad and afterwards with the GLGC, through the three pillars: Mentorship, Scholarship, and Activism. The poster will ultimately aim to show how being a member of the Global Leaders of Gettysburg College can help students align the unique learning experience they have while studying abroad with post-college life back on their school campus.

Study Abroad and GLGC: Mentorship, Scholarship and Activism from Brisbane to Gettysburg (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Kyra Jenney	Samantha Brandauer	10:00am - 11:30am Weidensall Hall Lobby

Study Abroad Presentation on Vienna, Austria (Poster)**Student(s):****Alyson Buck****Mentor(s):****Samantha Brandauer****Time/Location:****12:00pm - 1:30pm****Weidensall Hall Lobby**

This presentation features my study abroad experience in Vienna, Austria during my Sophomore year and how it affected my Gettysburg experience when I returned. My study abroad experience taught me to look at my educational experience in a new light, and resulted in a change of major when I returned to campus. This major change therefore changed my future career path. Since returning from abroad, I have been fortunate enough to be able to share my experience with other students on campus in many different capacities including panel discussions, presentations, and one-on-one meeting with students who are considering studying abroad. My experience studying in Vienna was completely life-changing both academically and personally. It has become a huge part of who I am today.

Globalization Studies

Austrian Radical Right-Wing Populism: Political Presence, Ideology and Influence (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Lucy Sargent	Monica Ogra	2:00pm - 3:00pm Science Center 151

The political presence and support of the radical right in Austria has increased in recent years, most successfully with the Freedom Party (FPÖ). Their parliamentary representation and electoral support has increased since the 90's, with an ideology that promotes a xenophobic and nationalist sentiment focused on preservation of the Austrian identity. The past and present growth of Austrian right-wing populism and the complexity of the Austrian identity is to be examined in both a contemporary and historical context. This will provide greater understanding of evolution of the radical right in Austria and its current manifestation in politics in correlation to the development and progression of the Austrian nation in the context of globalization. An examination of Austrian immigration and asylum policies in this context will attempt to determine whether the political progression of the FPÖ and the populist movement has directly influenced the direction of legislation or if other factors should be significantly accounted for. Greater potential implications of the outcome will be explored, in both a global and European context.

Civil War and Globalization: The Effect of Colonialism on Political Globalization (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Luke Feltz	Monica Ogra	1:00pm - 2:00pm Science Center 151

The purpose of this paper is to determine why civil war onset reduces political globalization in former British colonies. Through linear regression and logistic regression analyses, I test the effect of civil war onset and the presence of civil war on political globalization, controlling for former British colonies, French colonies, and other factors. More important, however, is the history behind British colonialism. Through setting up a unique institutional system and maintaining ties to its former colonies, the British have created an atmosphere conducive to international political engagement after the onset of civil war. This study shows that while civil war onset creates an immediate backlash in former British colonies, these same states actually increase their political globalization as the duration of conflict continues.

Conflict and the Implications of Middle Eastern Labor Movements (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Tyler Geer	Monica Ogra	2:00pm - 3:00pm Science Center 151

Considering the wide scope of the “Arab Spring” across many nations in the Middle East, there are a number of questions that arise as to what underlying and consistent factors are at work throughout the region. This project will address the question of to what extent has labor unrest contributed to the populist uprisings in the Middle East? To address this question, it is necessary to analyze both the historical development of labor movements and issues throughout the region since the end of colonialism along with contemporary interpretations of the events that have transpired as part of the “Arab Spring” both within nations and across the Middle East. These forms of analysis will then be synthesized to identify whether labor and economic issues can be seen to be at work behind populist uprising within the region including the “Arab Spring”. By seeking to determine a link between these factors and broader unrest, this work will serve to place the events of the “Arab Spring” into a broader historical narrative of unrest in the Middle East as well as help to establish some of the underlying factors that existed in many of the nations that were affected by these events.

Global Trade of Virtual Water Resources (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Andrea Carson	Monica Ogra	2:00pm - 3:00pm Science Center 151

As natural and human processes have both affected the rates of precipitation and extraction of water within countries, some countries have begun to experience water shortages while others are experiencing water abundances. In the most recent literature, one of the main human processes that have affected water levels within countries is the trade of water-intensive products. This global process can have positive and negative implications for countries that are either importing or exporting agricultural and industrial products. The standardization of the measurement of these trade flows have also added to the depth in which these processes can be analyzed. This paper will synthesize the current literature on the international trade of water-intensive products in order to ascertain the economic and geopolitical outcomes of this global trade. In particular, the impacts of this international trade will be framed in the context of case studies of India, China, and Israel. The best ways in which to avoid negative outcomes from this global process will also be discussed.

LifeChurch and Christian Faith Online: The Globalization and Virtualization of Religious Practice, Expression, and Community (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Kimberly Wheeler	Monica Ogra	2:00pm - 3:00pm Science Center 151

Advancements in technology have been a driving force of globalization, affecting our world on different economic, social, and cultural levels. This paper focuses on how religion is being “globalized” and “virtualized” through technology. It aims to address the role of technology, the Internet, and social media within modern Christian religion and to analyze the global reactions and responses to this role within the larger Christian Community. It focuses on the ways in which different Christian groups are using technology to virtualize and globalize religious practice, expression, and community formation using evidence from text-based research. LifeChurch, an online Evangelical-based Christian Church, is examined as an ethnographic case study of “online religion” and the anthropological data presented in this paper is analyzed through scholarly, text-based research, as well complimented by through other primary sources and texts authored by religious leaders.

Regimes and Resilience in the Modern Global Food System (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Sara Tower	Monica Ogra	1:00pm - 2:00pm Science Center 151

Much public discourse surrounding the modern global food system operates on the assumption of the primary agency of individual consumers in ensuring an equitable and sustainable food supply. However, this approach fails to account for the larger structural forces of the system which frame the limits of how we interact with and affect our food system. Taking a closer look at the environmental, political, and economic forces that have collectively shaped historical food regimes will reveal the deeper structural patterns that currently determine how we produce, distribute, and consume food around the world. Due to the underlying globalized structural processes of increasing distance and standardization, we have become highly disembedded from our food system and must look for clues from past periods of transition between food regimes to better position ourselves to work towards a global restructuring of, and human reembedding in, the modern global food system.

Health Sciences

Creatine Supplementation Decreases Lactate Response Following Acute Ingestion of a Beverage Containing Fructose or Glucose (Poster)

Student(s):**Hannah Garman****Mentor(s):****Eric Noreen****Time/Location:****10:00am - 11:30am****Science Center 2 Lobby**

PURPOSE: To determine the effect of supplemental creatine on lactate concentration following acute fructose ingestion. **METHODS:** A total of 7 men and 3 women (34.6 ± 9.6 y.o. ; 83.4 ± 22.0 kg; mean \pm SD). All testing was performed in the morning after an overnight fast. Following baseline measurements of blood lactate and glucose; heart rate and blood pressure; subjects ingested either a 80g glucose with 300mL of water (G) or 50g fructose and 30g glucose in 300mL of water (FG). Testing was repeated the following morning using the opposite drink. Subjects supplemented with creatine for two weeks (.3g Cr/kg for week 1, .08g Cr/kg for week 2). All tests were repeated following 2wk of treatment. Data were analyzed using a repeated measures ANOVA on log transformed data. Area Under the Curve (AUC) was calculated using the trapezoidal method. **RESULTS:** There was a significant weight gain following 2wk of creatine supplementation ($+0.9 \pm 1.5$ kg; $p=0.045$). Creatine treatment resulted in a significant decrease in lactate AUC for both drinks ($p=0.035$). Lactate AUC was significantly higher at all time points for FG versus G (FG pre= 141.6 ± 22.8 mmol/L for 60min, FG post= 130.0 ± 30.3 mmol/L for 60min; G pre= 74.9 ± 15.6 mmol/L for 60min, G post= 68.3 ± 20.8 mmol/L for 60min; $p=0.001$). There were no significant effects observed for AUC for glucose, heart rate, systolic and diastolic blood pressure. **CONCLUSION:** Two weeks of creatine supplementation significantly decrease lactate response to ingestion of beverages containing glucose or fructose.

Effect of endurance exercise training on fasting and postprandial serum retinol-binding protein 4 concentrations (Poster)**Student(s):****Danielle Berardinelli****Mentor(s):****Josef Brandauer****Time/Location:****10:00am - 11:30am
Science Center 2 Lobby**

Retinol binding protein 4 (RBP4) is a specific carrier for retinol and an adipokine that has been associated with insulin resistance. The purpose of this study was to determine the effect of six months of endurance training on serum RBP4 concentrations, and to determine whether serum RBP4 changes postprandially in response to high-fat meal ingestion. Sedentary 50- to 75-year-old men and women underwent endurance training (70% VO₂max, three to four time/week). Blood samples were obtained after an overnight fast and periodically for 4 hours after the ingestion of a high-fat meal. Concentrations of sRBP4 were assayed via Western blotting. Fasting sRBP4 levels remained unchanged after endurance training ($p=0.93$). There was a significant difference in postprandial sRBP4 concentrations at sixty minutes after endurance training ($p=0.02$). Postprandial sRBP4 increased $19\% \pm 14.8\%$ before training ($p = 0.02$), while RBP4 levels decreased $9\% \pm 15\%$ after endurance training ($p = 0.02$). In conclusion, fasting sRBP4 remained unchanged after six months of endurance training. Endurance training blunts the postprandial serum RBP4 response observed in sedentary individuals.

From Synthesis to Treatment: The Effects of Resveratrol on Mammalian Targets (Poster)**Student(s):****Alexandra Annis, Cody Pollack****Mentor(s):****Josef Brandauer****Time/Location:****10:00am - 11:30am
Science Center 2 Lobby**

Resveratrol is a phytoalexin polyphenolic compound found to have anti-aging effects mimicking those of calories restriction. Female ICR mice were treated with resveratrol and FK866, an inhibitor of resveratrol. Mice were divided into a control group and two treatment groups, resveratrol and resveratrol + FK866. The effects of resveratrol treatment on mammalian targets were analyzed.

Introducing clean water access and creating foundation for income generation for clients living with HIV/AIDS in Kyamuyimbwa, Uganda (Tulina Esuubi group) (Poster)

Student(s):

Michael Altman

Mentor(s):

Cindy Wright

Time/Location:

10:00am - 11:30am
Science Center 2 Lobby

After initial observation, interviews and participation in several groups of TASO clients, one can see that access to clean water sources is a major challenge for those living HIV/AIDS in Masaka District.

Project Sustainable Living, a social service that is provided via TASO, links with the Heifer International Program. Beneficiaries are provided livestock to help sustain income. However, there is no supplemental care other than the original services that TASO provides. Many of the TASO clients have no access to water taps for their families, crops or animals. Specifically, clients in the Tulina Esuubi group in Kyamulimbwa must travel far or pay 500 UGX to have any access to water. By training community members and building rainwater harvesting tanks, we have increased access to clean water. In addition, the project developed the community's skills, saves time, alleviates financial burden and creates further opportunities for income generation.

Seed grant funds were used to purchase some materials minus supplies that could be attained by the community. Funds were also used to run workshops on the importance of clean water, proper hygiene and created manuals on the proper upkeep of Rainwater Harvesting Tanks.

Future participants can support the project by expanding the training and construction of these water tanks in TASO peer support group communities. Other income generating projects can be perfectly paired with water tanks including kitchen gardens, farming projects and the rearing of animals.

History

Blogging the Battlefield: Exploring Gettysburg's Past Through Social Media (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Brian Johnson, Mary Roll, Natalie Sherif	Zachary Coble	12:00pm - 1:00pm Breidenbaugh Hall 311

In recent years, the study of history has experienced democratization through advances in and proliferation of technology. The most radical additions have been the rise of personal computers and the internet, both of which have allowed more people to access history in more varied forms. The Civil War Institute's "901 Stories from Gettysburg" blog seeks to engage a wide audience with concise, analytical pieces of writing. Each "blog post" explores Gettysburg's Civil War past by tying a piece of period-related material culture to a specific location and event on the battlefield. Our panel will discuss both the methodologies behind "blog" writing as well as specific Civil War topics discussed in recent posts.

Brian Johnson**Individual Abstract****A Veterans' Home That Wasn't: The Gettysburg Asylum for Invalid Soldiers and the Civil War's Aftermath**

In the Civil War's immediate aftermath, thousands of Union veterans faced economic hardship, disability, and a public that did not understand their experience with war. Northerners, however, were not indifferent to the veteran's plight and many devoted themselves to benevolent initiatives such as the Gettysburg Asylum for Invalid Soldiers. Although the veterans' home was never built because its New York backers were investigated for tax fraud, enthusiasm for the project and its proposed location amidst the Gettysburg battlefield make it a revealing story. The Gettysburg Asylum illustrated tension between the public's desire to aid veterans and its insensitivity to the veteran's experience it was either unwilling or unable to understand.

Mary Roll**Individual Abstract****The Inspiration and Methodology of Blogging for "901 Stories from Gettysburg"**

Is blogging legitimate historical scholarship? Do bloggers help advance the study of history, or do they prove detrimental? These questions and others like them are the basis for my portion of the panel "Blogging the Battlefield: Exploring Gettysburg's Past Through Social Media." The blog work done by the Civil War Institute's Fellows demonstrates that blogging about history can be as great an exercise in research and scholarship as more traditionally academic efforts. My presentation highlights my methodology of blogging for the "901 Stories from Gettysburg" site, and offers insight into how blog posts come together and the scholarly consideration they require. I explain how I choose topics and do the required research. I often write posts on subjects I am interested in and familiar with. However, I often find out new information, and my views change. I frequently draw the argument of my posts from disagreements with secondary works written by historians, though I never directly state those disputes or point to specific scholars. Many of my posts begin as germs of thought that become full responses to ideas circulating amongst American Civil War scholars. My original idea for a post rarely ever matches the final product. The process of writing blog posts is organic and evolutionary. My talk centers on the inspiration for my posts, and the formulation of plans for how to best use my interest in these topics as the basis of an engaging and insightful blog post that avoids merely repeating my opinions of other arguments.

Natalie Sherif**Individual Abstract****How Photographs Depict War**

The most intriguing element in my Civil War research is that of battlefield photography. Its raw depiction of war and the horrors of the battles emphasize the human aspect of an often misunderstood war. Perhaps the most mindless representation of the Civil War are the O'Sullivan photos taken at Gettysburg's Trostle Farm, the topic of my very first blog with the Civil War Institute. Being an equestrian myself, the image of a lawn strewn with dead horses forced me to contemplate the brutality of war and prompted me to ask questions such as: why did O'Sullivan and other battlefield photographers capture images of the dead? What impact did these photos have on the home front? How can modern historians utilize Civil War photographs in order to better understand the war, its purpose, its impact, and its meaning? It is with these questions in mind that I will use my blog on the Trostle Farm to explore photographers of the time, their works, and what they mean in the context of present-day scholarship. I seek to challenge established thoughts and present daring hypotheses in an attempt to understand and give meaning to Civil War photography.

Eisenhower and His Times (Panel)**Student(s):**

Austin Clark, Elizabeth Amrhein, Nicholas Scerbo

Mentor(s):

Michael Birkner

Time/Location:

11:00am - 12:00pm
Breidenbaugh Hall 205

Austin Clark**Individual Abstract****Opening America's Fourth Coast: Eisenhower and the Creation of the St. Lawrence Seaway**

The political battle for United State involvement in the construction of the St. Lawrence Seaway was long and obstructed by nearly every obstacle the imagination can conceive; war, intrigue, corporate interest, regionalism, even terrorism. Yet the struggle came to an end in 1954 under President Dwight D. Eisenhower and the St. Lawrence Seaway Act. The President's role in ending this struggle has so far evaded serious study - until now.

The Struggle for Equal Rights at Gettysburg College- 1961-1977 (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Gabriella Hornbeck, John Nelson, Joshua Poorman, Lauren Roedner	Michael Birkner	10:00am - 11:00am Breidenbaugh Hall 205

During C. Arnold Hanson's term as president of Gettysburg College, in the years 1961 to 1977, the college underwent many changes as it attempted to progress towards a more equality oriented institution. Through the turbulent and dynamic decades of the 1960s and 70s, American society as a whole underwent drastic changes as minority groups and women sought to gain a more equal footing. Gettysburg College was no exception to this national trend as women and minority members of the college struggled to overcome issues of sexism, bigotry, and prejudice. This was an era of challenges for Gettysburg College, as the administration sought to address issues of race and gender, as students faced prejudice and discrimination on campus, and as minority groups, as a whole, eventually overcame and achieved a higher level of equality through their own determination and strength of character. This study of how the college community, the administration, the faculty, and the individual students themselves struggled to overcome prejudice and inequality is a microcosm of the overarching equal rights movements of those decades in American society, while at the same time a testament to the uncommon fortitude of the individuals who strove to achieve equality on Gettysburg College's campus.

Interdisciplinary Studies

"I like it to lemonade": the status of free online machine translation (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Brenda Clark	Jennifer Bloomquist	1:00pm - 2:00pm Glatfelter Hall 105

This paper covers a brief history of machine translation, the various ways it has been done, and an analysis of the accuracy of a statistical model (Google Translate) and a rule-based model (Bing Translator) for translating between English, Spanish, and Arabic. The test is a series of 300-400 utterances divided into nine categories applicable to a tourist's needs: greetings, directions, transportation, purchases, restaurant, hotel, weather, other, and news (old slang and new slang are added to the English originals). Most are short sentences, with the addition of some individual words and longer sentences from the news. The resulting translations are categorized as okay, awkward, different (understandable, but the meaning has changed), or unintelligible.

The results show that both Google and Bing have an average success rate (combined okay and awkward ratings) of about 70 percent, but the actual numbers vary dramatically based on utterance category and language combination. The least successful category is slang, and it is clear that an example-based statistical system would most easily be able to improve this. However, the fact that weather is the second-worst indicates the need for a rule-based system that could handle the grammatical differences in the way that English, Spanish, and Arabic express the concept. The arguments for both the statistical and the rule-based approach in the data show the need to move toward hybridity. Disparities in accuracy by language combination show that there is still plenty of work to be done to establish the rules and examples that will be used.

Briar Bush Nature Center (Film)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Stephanie Hoover	James Udden	10:00am - 1:00pm Breidenbaugh Hall 201 Jo

This capstone film investigates Briar Bush, a nature center located in Abington, Pennsylvania (a suburb of Philadelphia). Through exploring the programs and services it offers, this film hopes to learn what nature centers like Briar Bush teach children and adults about the importance of preserving the environment and valuing nature.

Communicating Environmental Ethics: Bringing about Awareness of the Corrupt Intensive Agriculture Industry through Media Studies (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Shelby Glass	Lisa Portmess	12:00pm - 1:00pm Breidenbaugh Hall 112

Media exposure of the hidden realities of intensive animal agriculture is crucial in communicating to the public the devaluation of animals and their managed life cycles in such systems. This exposure through contemporary technologies allows for greater ethical awareness and choice in the consumption of animal products. By viewing media as a useful tool in breeding awareness, we can be confident that it is a powerful outlet for change. Ultimately, if it were not for the revealing of these horrors, this information would remain hidden, and our knowledge as buyers would remain static. With the opportunity to become more mindful humans, the media allows us to be a part of this ever changing system of justice.

Digital Americana Magazine: A Case Study on the Evolution of the Literary Magazine iPad App (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Rachel Wynn	Fred Leebron	12:00pm - 1:00pm Breidenbaugh Hall 112

The purpose of this work was to research Digital Americana Magazine (DAM) which was the first literary and culture magazine created specifically for the iPad and compose a 20-30 page case study on the shift from print to digital literary magazines for Apple's iPad. I conducted several interviews with DAM founder and editor in chief Anthony Fasciano '05, writers at the annual Association of Writers and Writing Programs (AWP), Gettysburg College English Department Faculty, and Staff of the Gettysburg Review. My goal was to write a case study on DAM and find out the reactions and opinions of those in the literary world on the growing number of print literary magazines that are transitioning to a digital format. Specifically, how are changing technologies, institutional models, and business plans expanding and limiting the creative possibilities of authors? In particular, how do literary magazines offered on Apple's iPad affect the writing process and outcome?

FROM HABERMAS TO HUFFINGTON: HOW BLOGS AFFECT LIBERAL EDUCATION'S AIM OF A FUNCTIONING PUBLIC SPHERE (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alyssa Oursler	Daniel DeNicola	1:00pm - 2:00pm Breidenbaugh Hall 209

In the context of a liberal arts education, this paper describes the common principles and preparation for the Habermasian public sphere than such an education aims for, providing a backdrop for an examination of the influence of new media on both concepts. Delving deeper into the public sphere, it then breaks down Habermas's ideal, focusing on its main principles and their common critiques in order to analyze how blogging in particular affects, maybe solving, maybe worsening, each aspect and the concept as a whole.

Heart of the City: Police Brutality and the Media (Film)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Deonne John	Thomas Journey	10:00am - 1:00pm Breidenbaugh Hall 201 Jo

I will be presenting a documentary on police brutality in inner cities, based on a series of interviews that I conducted during the semester.

Impact of Hannah Penn School-Based Health Clinic on Public Health (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Gianina Galatro	Amy Dailey	2:00pm - 3:00pm Glatfelter Hall 212

My capstone will review York's Hannah Penn Middle School's school based health clinic run by Family First through interviews and yearly data and backed by a literature review of studies done on school based health clinics. I am using this information to examine the impact this clinic may be having on the community, public, and individual health. I will also use this information to benefit the school clinic and Family First by compiling this information in a document that they can then use as a starting point into making a case to have more say in their school district or perhaps expand to nearby schools.

Jamaican Creole and National Identity (Poster)

Student(s):

Tesia Jankowski

Mentor(s):

**Jennifer Bloomquist
Leela Tanikella**

Time/Location:

**2:00pm - 3:30pm
Science Center 2 Lobby**

This project is looking at the sociolinguistic situation of Jamaican Creole with regards to national identity and language attitudes. There are many people and projects in Jamaica who have and are affecting how Jamaicans see their mother tongue, and this paper seeks to question how Jamaica's history has shaped its language attitudes today.

Mellon Summer Scholars Panel (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Elizabeth Adams, Kathleen Ragon, Ryan Becker, Steven Hnath	Brendan Cushing-Daniels Craig Lair Darren Glass Todd Neller	12:00pm - 1:00pm Breidenbaugh Hall 209

This panel is one of two highlighting the research done by 2011 Mellon Summer Scholar grant recipients. The Mellon Summer Scholar program promotes faculty-student collaboration and fosters a community of scholars by providing funds for selected students and their faculty mentors to carry out a research project of their design over ten weeks in the summer. These panel presentations represent the culmination of each project. This panel includes presentations related to the fields of economics, mathematics, computer science, and sociology.

Kathleen Ragon**Individual Abstract****Minimum Wages and Working Times in the EU**

Of all the great political economists it was Marx who emphasized the need to study economic processes in material terms. For Marx, one of the most important material elements of work and working was time since time is a structure through which the labor process takes place. In its most common form, the minimum wage is a legally mandated relationship between money and time. Traditionally studies of the minimum wage have focused on the money side of this relationship (e.g. how much do minimum wage workers earn) while ignoring its temporal aspects (e.g. how long someone has to work to receive a particular income). This is a significant oversight because it overlooks the temporal investments that minimum wage workers must make in order to achieve a specific sum of money (e.g. there is a significant temporal difference if a minimum wage workers can achieve an income above a poverty threshold by working part-time, full-time, or more than full-time). To address this oversight, we calculate the number of hours individuals and families earning the minimum wage would have to work in order to achieve both poverty- and median-level incomes in various European Union countries. Our findings show two things. One is that there are significant differences between how long minimum wage workers would have to work in order to achieve these income thresholds. The other is that while in some countries this amount is relatively stable over time, in others it can vary quite considerably. The significance of our findings in relation to the labor process are then discussed.

Mindfulness, Dignity, & Meritocracy (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Evan Singer, Joseph Miller, Loren Deron	Daniel DeNicola VoonChin Phua	10:00am - 11:00am Breidenbaugh Hall 209

This panel is one of two highlighting the research done by 2011 Mellon Summer Scholar grant recipients. The Mellon Summer Scholar program promotes faculty-student collaboration and fosters a community of scholars by providing funds for selected students and their faculty mentors to carry out a research project of their design over ten weeks in the summer. These panel presentations represent the culmination of each project. This panel includes presentations related to the fields of psychology, philosophy, and education.

Evan Singer**Individual Abstract****A Dignified Response to Kant: Justifying the Dignity of Non-Persons**

According to Immanuel Kant, only moral persons—free and autonomous, rational agents—have dignity and therefore must be treated with respect. But are there not many other entities—“non-persons”—which claim our moral consideration: human beings who do not meet Kant’s conditions, animals, significant cultural artifacts, for example? My thesis explores the meaning, justification, and applicability of dignity as a moral concept. I interpret dignity as a form of moral considerability having several types; I describe two methods for identifying necessary traits for the ascription of dignity; and I argue that dignified entities are irreplaceable, priceless, and morally self-sufficient—but need not be self-legislating moral agents.

Joseph Miller**Individual Abstract****Meritocracy as Dominant Ideology: Perceptions of Equal Opportunity in Singapore**

For decades, the Singaporean education system has proven itself on the international scene, constantly scoring top five in all categories on standardized international assessments. Singapore’s instructional methods, standardized tests, and streaming tracks have been scrutinized in the hope to replicate their results, but few researchers have attempted to understand how Singaporeans perceive their education system within the dominant ideology of meritocracy, and how that perception changes depending on the person’s race and their relationship to the education system. This research constitutes the next step in that direction. Semi-structured, in-depth interviews were conducted with 17 Singaporean adults, constituting all four state-recognized races, and covering a wide breadth of parents, students, former students and administrators. A qualitative content analysis was performed to identify common perceptions of meritocracy, with a special emphasis on how this perception differed by respondents’ characteristics—race, age, relationship to the educational institution. Results indicate that Chinese Singaporeans have a more favorable opinion of the outcome of the meritocratic education system than Malays, with all groups conforming to the dominant ideology, or the perception that Singapore’s education system is wholly meritocratic.

People (Art)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Eric Lee	H. Pete Curry	1:00pm - 2:00pm Breidenbaugh Hall 205

There are different types of people in this world. This is a photo essay compiled of random people from many different ethnic and cultural backgrounds

The role of Buddhist meditation in the treatment of depression (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Erica Forzley	Rebecca Fincher-Kiefer	12:00pm - 1:30pm Science Center 2 Lobby

I have examined the effects of Buddhist meditation on psychological well being. Mindfulness, a state of attention defined as a moment to moment, non judgemental awareness mediates the relationship between meditation and psychological well being. Mindfulness can be cultivated through individual practice, mindfulness based therapy programs, or meditation. Mindfulness is used in therapy treatment programs for a variety of disorders such as depression, stress, anxiety and addiction. It can also be used in everyday life to enhance ones quality of life. Mindfulness enhances ones psychological well being by changing ones perspective of themselves by taking on a less subjective awareness of oneself and becoming more aware of external stimuli. This change in perspective of oneself in addition to enhanced self regulation that mindfulness evokes improves ones psychological well being. I have identified neurotransmitters and immune system functions that are depleted in patients with depression. Buddhist meditation and the mindfulness it evokes have been proven to be effective in increasing immune system cells associated with depression. Meditation is also effective in making long term changes in the production of certain neurotransmitters and neural patterns associated with depression.

Voices of Resistance (Film)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Allan Kawala, Chelsea Broe, Christine Serwan, Dinesh Manandhar, Gianina Galatro, Kurt Mathisen, Marcin Malec, Melanie Meisenheimer, Molly Reynolds, Talia Concepcion, Yaou Liu	Jeffrey Rioux	2:00pm - 3:00pm Breidenbaugh Hall 201 Jo

Through various media, including video, art, and blog posts, a group of 11 students will present their experiences participating in the Voices of Resistance Immersion Experience with the Center for Public Service.

International Affairs

The Third Reich, the Cold War, and the Two German States: Reports from a visit to Berlin (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alison Moody, Amanda Reynolds, Brian Engelsma, Carter McClintock, Laura Koenig, Luke Feltz, Lyndsie Guy, Sarah Hecklau, Trinh Hagedorn	Eileen Stillwaggon	11:00am - 12:00pm Glatfelter Hall 105

The panel will include students from the Senior Seminar in International Affairs and Eisenhower Institute Undergraduate Fellows who participated in a week-long study tour in Berlin, Germany, in April 2012. They will discuss how their visit enhanced their understanding of political and social issues of the Third Reich, the Cold War, the Berlin Wall, and the events following the reunification of Germany. Among the places visited were the Jewish Museum, the Stasi Museum, a Stasi prison, Potsdam, surviving sections of the Berlin Wall, and the US Embassy.

Latin American Studies

500 años luchando en contra el colonialismo:

La concepción actual de la descolonización en el Estado Plurinacional de Bolivia (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Bridget Footit	Radost Rangelova	1:00pm - 2:00pm Breidenbaugh Hall 311

La nueva Constitución Política del Estado Boliviano (2009) declara la descolonización como una parte clave. Este tema constituye un paso más en la lucha contra el colonialismo que comenzó con la conquista española del siglo XVI.

Para entender mejor las nuevas políticas públicas en Bolivia, en la siguiente presentación trataré de responder a las preguntas, ¿Qué es el colonialismo? ¿Cómo se ve la colonialidad en la sociedad Boliviana? ¿Qué significa la descolonización? Y ¿Cómo se puede descolonizar la sociedad Boliviana? Para ello, he entrevistado a algunos de los funcionarios del Viceministerio de Descolonización, la Unidad de despatriarcalización y como complemento, a miembros del Colectivo 2 constituido por jóvenes estudiantes.

Profundizaré en cómo el Estado Plurinacional está tratando de descolonizar a la sociedad boliviana, que incluye lo siguiente: la restauración de la dignidad de hombres y mujeres indígenas y la reconstrucción del equilibrio entre sujetos a través de la recuperación de tecnologías y saberes antiguas, reducción de consumo excesivo, nueva estructura de la familia, el análisis de las concepciones actuales de la modernidad, y la participación activa de todos los sectores de la sociedad boliviana.

Aunque la lucha para la descolonización es un proceso que sin duda, durará por muchos años con cambios lentos, en mi opinión su futura implementación tiene mucho potencial. La imposición hegemónica de instituciones del primer mundo (capitalismo, religión, educación etc.) es una parte de la mentalidad colonial y la única manera de combatir esta estructura de poder es empezar a cuestionarlo críticamente. No significa rechazar todo lo que es de afuera sino adaptar ciertas tendencias, sabidurías, y tecnologías a la vez de reconocer lo tradicional.

U.S. Immigration Policy Since 9/11: What triggered Arizona Senate Bill 1070 (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Brooke Elmi	Alvaro Kaempfer	1:00pm - 2:00pm Glatfelter Hall 105

In this paper, I will look at how the terrorist attacks of 9/11 and concern for national security have transformed immigration policy in the United States. The terrorist attacks of 9/11 caused many Americans to rethink their presumed safety or immunity in the United States. The traumatic effect of 9/11 created space for speculation, rumors, and mistrust of others among Americans. This anxiety has had a lasting effect on Americans, who now look to the outside world with increased criticality.

On the overlap between immigration and national security matters, there are real concerns that underlie why countries strive to control their borders. The security interests that underlie immigration restrictions are based on the desire to limit violence and crime, maintain national identity, and protect economic interests. In this paper, I will look at how these real concerns have been transformed into group fear and anxiety about immigration. As a case study, I will look at Arizona's Senate Bill 1070 of 2010 as an example of how states have responded to the lack of comprehensive immigration reform with misguided and preempted initiatives that put immigration concerns above civil and constitutional rights.

I propose that this fear is and will be damaging for the United States, leading to racial polarization, civil rights violations, and intolerance.

Mathematics

Exploring Board Game Folklore (Poster)

Student(s):

Steven Hnath

Mentor(s):

Darren Glass

Time/Location:

10:00am - 11:30am

Science Center 2 Lobby

When learning the rules of a game, one can expect to also receive a bit of folklore as well, (e.g. which actions are "best"). This paper refutes two of these claims. We first examine the claim that in Risk, it is better to roll one die as the defender than two by calculating the expected values of one-die and two-dice defender strategies, revealing that the ratio of expected attacker damage to expected defender damage is 61% more favorable in the two-dice strategy. Then, we determine if Boardwalk is the most desirable space in Monopoly by constructing the transition matrix for the Monopoly board, and use it to find the frequency at which each space is visited. With this information we create a metric for determining profitability and find that the most profitable space in Monopoly is not, in fact, Boardwalk.

Mellon Summer Scholars

Mellon Scholars: Understanding the Past (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Jeanna Robb, Lauren Roedner, Paige Phillips	Eleanor Hogan Julia Hendon Sharita Thompson	11:00am - 12:00pm Breidenbaugh Hall 209

This panel includes three presentations of the summer of 2011's Mellon Summer Scholars. Paige Phillips will present a project which studied chemical methods used in studying soil at archaeological sites. Jeanna Robb will present her work studying the modernization of literature in England and Japan. Lauren Roedner will present her research on contraband camps and the roles of women in the Civil War.

Lauren Roedner

Individual Abstract

First Step Toward Freedom: Women in Contraband Camps In and Around the District of Columbia During the Civil War

A white Quaker abolitionist woman from Rochester, New York, and an escaped female slave who lived in an attic for years to avoid capture, were not likely to become friends during the Civil War. Racial inequality was just as rampant in the North as slavery was in the South. However, these two women, Julia Wilbur and Harriet Jacobs, befriended one another in Alexandria, Virginia where they both volunteered to work with "contrabands-of-war". More commonly known as fugitive slaves, these refugees needed shelter, medicine, food, clothes, and many other necessities of life as they continued toward true freedom. Julia and Harriet were allies who dedicated their lives to providing donated necessities, advocacy, schooling and hope for a brighter future. Through personal, intimate diaries and correspondence spanning over fifty years, the story of these two women; their friendship, hardships, successes, acquaintances and overall feistiness in the face of danger, moral inequality and established institutions is woven together in a unique, inspiring, unpublished story.

Music

Beethoven Piano Sonata in f minor, Op. 2 no. 1

I. Allegro (Music)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Kristin Staub	Jocelyn Swigger	11:30am - 12:30pm Schmucker Hall 222 Recital

Ludwig van Beethoven's Sonata No. 1 Op. 2 1st movement will be performed.

Explorations in Jazz Improvisation (Music)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Julie Blum, Kevin Psolka-Green, Robert Whipple, Ryan Stones, Thomas Neufeld	Paul Austerlitz	1:00pm - 2:30pm College Union Patio*

*Rain Veneue: College Union Junction

The Gettysburg College Jazz Dispatch is a select ensemble of musicians proficient in the jazz idiom. This performance will feature repertoire that covers the gamut of musical types found in contemporary jazz, stressing the bebop language and the popular song form but also including modal, Latin, and free approaches and including students' own compositions. The group performs both on and off campus, and has recently returned from a gig in New York City.

Joseph Haydn (1732–1809)

Sonata in G major, Hob. XVI/ G1; L.4

I. Allegro (Music)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Bradley Bissell	Jocelyn Swigger	11:30am - 12:30pm Schmucker Hall 222 Recital

A performance of the exposition of this classical sonata.

Lift Every Voice and Sing: The Role of Gospel Music and Choirs in Music Education (Music)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Leroy Smith	Paul Austerlitz	1:00pm - 2:00pm Schmucker Hall 214

Teaching students diverse styles of music is one of the many standards that needs to be addressed within any music education curriculum primary, secondary, and even higher education. Gospel music and choirs engage students in musical, social, cultural, and spiritual situations that enhance their musical abilities. This presentation will give helpful hints to music educators who want to begin, maintain, improve, and challenge gospel music/choir programs in their schools. This program will also reveal the importance of gospel music/choirs within the realm of music education keeping the nine national standards in mind.

piano piece (Music)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Elizabeth Andresen	Jocelyn Swigger	11:30am - 12:30pm Schmucker Hall 222 Recital

piano piece

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Emily Watkins	Jocelyn Swigger	11:30am - 12:30pm Schmucker Hall 222 Recital

piano piece

Sonatine for Piano by Maurice Ravel (Music)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Vincent Casmirri	Jocelyn Swigger	11:30am - 12:30pm Schmucker Hall 222 Recit

Maurice Ravel (1875-1937)
 Sonatine for Piano
 I. Modere
 II. Mouvement de Menuet
 III. Anime

South-Central Pennsylvania Music Teachers' Musical Identities and Their Perceptions of Popular Music (Music)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Emma Sheffer, Keith Gromis, Kristin Staub, Matthew Carlson, Michelle Stukane	Brent Talbot	10:00am - 10:45am Schmucker Hall 222 Recit

The purpose of this research study is to identify and describe through the use of surveys, observations and interviews to discover how popular music affects the musical identities of teachers and students and how teachers use popular music in schools in South-Central Pennsylvania.

The Cinderella of the Orchestra (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Elizabeth Amrhein	AnnaClaire Ballard-Ayoub	2:00pm - 3:30pm Science Center 2 Lobby

This is an examination of the relationship between the structure and repertoire of the bassoon. The communal and regional (French and German) technical and musical development were analyzed to discover the relationship between the historical context surrounding, the music composed for, and the technical advancements of the instrument.

The Effect of Per WWI British Nationalism on the Compositions of Gustav Holst and Ralph Vaughan Williams (Poster)

Student(s):

Keith Gromis

Mentor(s):

Marta Robertson

Time/Location:

2:00pm - 3:30pm

Science Center 2 Lobby

This project explores how the crisis of British nationalism before the First World War effected the compositions of Gustav Holst and Ralph Vaughan Williams. I specifically examine how the divergent aspects of British nationalism were reflected differently in Holst's Second Suite in F and Vaughan William's Fantasia on a Theme be Thomas Tallis. Holst and Vaughan Williams are associated with a period of time at the end of the 19th century and early 20th century widely known as the English Musical Renaissance. After a long absence native British composers began to gain recognition during this time. Prominent figures such as Edward Elgar, Frank Bridge, Gustav Holst and Ralph Vaughan Williams began to explore what it meant to compose in a distinctly British style. Because there was little precedence to draw upon each approached their writing differently. In Holst's Second Suite he chose to utilize folk music that was passed down orally among the lower classes in British society. He also composed for a wind ensemble, which reflected the popular English tradition of brass bands that flourished among the working class. Vaughan Williams' Fantasia on a Theme by Thomas Tallis on the other hand is based on an Anglican anthem written by one of Great Britain's greatest early composers, Thomas Tallis. His fantasia is harmonically rich and written for a triple orchestra that harkens back to the viol ensembles commonly used by the Stuart Dynasty. Both pieces draw upon aspects of British tradition but convey very different views of British society.

Organization and Management Studies

Family Supportive Supervisor Behaviors, Occupational Level, and Organizational Outcomes (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Allison Barrett, Stephanie Gulden	Heather Odle-Dusseau	2:00pm - 3:30pm Science Center 2 Lobby

Family supportive supervisor behaviors (FSSB) are the “behaviors exhibited by supervisors that are supportive of families” (Hammer, Kossek, Yragui, Bodner, & Hanson, 2009, p. 838). Past research shows that FSSB is positively linked to both employee and organizational outcomes (Odle-Dusseau, Britt, & Greene-Shortridge, 2012), demonstrating the benefits of FSSB in employees’ work and family realms and the positive outcomes that these benefits have for organizations.

While more research is emerging that demonstrates the importance of FSSB to organizations and their employees, research has yet to directly examine the differences FSSB has on employees across occupational levels. In addition, sex differences have yet to be explored within this field of study. Preliminary analysis of our data of men and women in low-wage jobs illustrates a strong disparity between the sexes and the benefits of FSSB. Specifically, while FSSB was significantly positively correlated with employee engagement and significantly negatively correlated with job stress and intention to leave among the females in the study, there were no significant correlations between FSSB and any of the employee well-being variables among the males in the study. Based on preliminary analysis, we hypothesize that there are differences between occupational levels in how FSSB impacts organizational variables among males and females.

Philosophy

A 'Great Philosopher': Perspectives on the Thought of William James (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
John Hill, Karennia Genzlinger, Kristen Stryker, Michael Behling	Daniel DeNicola	1:00pm - 2:00pm Breidenbaugh Hall 209

We present three final projects from our class on the philosopher William James (PHIL-366) on the life and work of William James, discussing and debating James's views of pragmatic philosophy and daily life, interpersonal relations, introspective psychology, and religion.

Following Thoreau: An Exploration of the Settings of Henry David Thoreau's Philosophy (Film)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Caleb Sisak	Kerry Walters	10:00am - 1:00pm Breidenbaugh Hall 201 Jo

Over Spring Break I made a trip to the town of Concord, the woods of Maine, and the old city of Quebec in order to better understand the importance of Place in the formulation of Thoreau's philosophy. Particularly found in Walden, however also evident in much of his other writings, Thoreau established his philosophy not only through his surroundings, but also within them. Walden Pond, Mt. Katahdin, and the walls of Quebec City each invoked a feeling of wildness that Thoreau saw as a vital part of moral understanding. I went to these places in order to experience them as Thoreau did, and I filmed the experiences in order to convey the power and significance found in these surroundings.

Unstructured Content: Open Worlds vs Fragmentation (Panel)**Student(s):****John Hill****Mentor(s):****Jeffrey Maynes****Time/Location:****12:00pm - 1:00pm
Breidenbaugh Hall 112**

Unstructured theories of mental content face several unique problems, in particular, they predict that rational agents believe all of the logical consequences of their beliefs and they always believe necessary truths. We evaluate the prospects of two recent proposals in the philosophy of language and mind which attempt to address these problems: theories which take content to be sets of circumstances and theories which take mental states to be fragmented.

Physics

Modeling neutron events in MoNA-LISA using MCNPX (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alexander Peters, Kristen Stryker, Margaret Elliston	Sharon Stephenson	10:00am - 11:30am Science Center 2 Lobby

The MoNA-LISA collaboration uses time-of-flight techniques and charged particle detectors to determine the structure of exotic nuclei such as ^{24}O and ^{12}Be . To determine the decay energy in particular, a neutron that hits the Modular Neutron Array and the Large multi-Institutional Scintillator Array has its energy, position and angle of incidence recorded if and only if the charged particle detector system detects an appropriate charged-particle fragment. However, the analysis uses only the first neutron to hit the detector array even in the case of $2n$ events, since the data acquisition system cannot distinguish between simultaneous but random $2n$ events and events due to $2n$ reactions. We are using MCNPX to model the reaction channels possible in the MoNA-LISA detector system in an effort to better improve the resolution on decay energy spectra for events with multiple neutrons.

Simulation of an Apparatus to Measure the Parity-Violating Neutron Spin Rotation in ^4He (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Ronald Malone	Bret Crawford	10:00am - 11:30am Science Center 2 Lobby

In order to better understand the nucleon-nucleon weak interaction, the Neutron Spin Rotation (NSR) collaboration performed an experiment at NIST that measured a parity-violating neutron spin rotation per unit length in liquid helium of $[1.7 \pm 9.1(\text{stat.}) \pm 1.4(\text{sys.})] \times 10^{-7} \text{ rad/m}$ [1]. A second experiment is planned using a more intense neutron beam to reduce statistical uncertainties, which was the limiting source of uncertainty in the measurement. This project focused on analysis of systematic effects in the experiment using a Monte Carlo computer simulation which traces neutrons down the beamline, calculating scattering from target materials, reflections from neutron waveguides, and rotations due to magnetic fields. Systematic effects resulting from small angle scattering coupled with different target locations and beam geometries were studied.

Political Science

Blacking Out the Revolution: The Mainstream Media and the Ron Paul Campaign (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
William Segraves	Sheila Hearne	1:00pm - 2:00pm Glatfelter Hall 105

The purpose of this study is to describe how the mainstream media coverage of the 2012 Republican Presidential Primaries has been skewed in such a way as to create a so-called "media blackout" of the Ron Paul campaign. Using data collected from debates, election coverage, and national polling data from various outlets, this study will show how the media has given coverage to the Republican candidates in quantities which are not consistent with their ratings in national polls. Another objective is to determine which media outlets have been more or less fair, based on the same data.

The Effect of Globalization On Healthcare in the Developing World (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Matthew Mayer	Caroline Hartzell	2:00pm - 3:30pm Science Center 2 Lobby

Many contend that globalization is creating a universal culture dominated by the developed world. If that is true, then the health standards of western nations should be becoming the norm. Developing nations should see their healthcare improving. Since globalization is not a new phenomenon, this improvement should already be occurring. Is it actually taking place, or is it simply an unfulfilled argument that proponents of globalization utilize to their advantage? In the case of sub-Saharan Africa, using the statistic of under-five mortality rates as a proxy for overall health, as countries become more globalized according to the KOF Globalization Index, health does improve.

The Impact of Globalization on Voter Turnout in Established Democracies (Poster)**Student(s):****Jessica Vatnick****Mentor(s):****Caroline Hartzell****Time/Location:****2:00pm - 3:30pm****Science Center 2 Lobby**

The purpose of this research is to investigate the impact of globalization on electoral turnout in established democracies. The theoretical framework of the study is based on the premise that globalization constrains the ability of national governments to shape outcomes. In turn, it is particularly difficult for partisan governments to pursue distinctive policies, forcing a convergence of partisan politics toward a middle ground. In light of these constraints on any elected politician, it is less likely that citizens will be inclined to cast a vote in national elections. Consequently, aggregate voter turnout will be lower in highly globalized nations. Analysis of data for parliamentary elections in 24 OECD democracies over the period 1970-2008 robustly supports this hypothesis. Interestingly, some components of globalization appear to be more influential than others. Economic globalization, for example, had a highly significant negative impact on voter turnout, whereas the negative impact of social globalization was insignificant.

Psychology

Amphetamine and Nicotine on Pre-Pulse Inhibition of the Acoustic Startle Response (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Jonathan Pesce, Thomas Clements	Stephen Siviyy	12:00pm - 1:30pm Science Center 2 Lobby

Pre-pulse inhibition (PPI) of the acoustic startle response is thought to be modulated by the neurotransmitter dopamine. Therefore an overactive dopaminergic system results in decreased PPI and impaired sensorimotor gating, which is commonly seen in individuals suffering from schizophrenia. A vast majority of schizophrenics regularly smoke cigarettes, which is thought to help with this impairment. The current experiment examines the effect nicotine has on the amphetamine induced impairment of PPI. It was hypothesized that nicotine would bring PPI back closer to normal. Results did not support this hypothesis. It is unclear why significant results were not obtained at this time.

Athletes and Self-Esteem (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alexandra Van Tuyl, George Whitelaw, Matthew Crane	Kathy Berenson	10:00am - 11:30am Science Center 2 Lobby

We would like to research self-esteem or confidence for athletes vs. non-athletes across multiple situations. We would create a questionnaire that has a wide variety of questions so the participants would not be able to identify what we were studying. The questionnaires would be distributed at either the gym or the library. Both locations are common areas, but one where athletes are more comfortable and typically feel superior. Participants classified as “athletes” will have to be a current or former collegiate athlete, and non-athletes would be those who have not competed on a collegiate sports team. We believe that the self-esteem of the athletes would be lower at the library due to the “dumb jock” stereotype. People have been conditioned to believe in that stereotype, including athletes themselves. We hypothesize that athletes will have a higher level of self-esteem at the gym in relation to the library. Non-athletes will stay more consistent across both situations.

Children's Perception of Gender Through Drawing (Poster)**Student(s):****Carolyn Poehner, Sarah Moses****Mentor(s):****Kathleen Cain****Time/Location:****10:00am - 11:30am
Science Center 2 Lobby**

Previous research has investigated the effects of race on children's notions of social distance (Holmes, 1995). However, little research has been conducted to explore the effects of gender on children's perception of social distance. The present study was designed to examine these specific effects of gender differences on children's drawing. Preschool aged children, with an equal number of boys and girls, were asked to draw themselves with a peer of the same and opposite sex, as well as with an adult of the same and opposite sex. The distance from the child to the other figure was measured. Analyses examined the hypothesis that boys will draw themselves closer to male peers, and that girls will draw themselves closer to female peers. We also examined the hypothesis that both genders would draw themselves closer to the female adult figure and farther from the male adult figure.

Does a Simple Smile Make Others Seem to be More Socially Adjusted? (Poster)**Student(s):****James Kane, John Servinskis****Mentor(s):****Jing Chen****Time/Location:****12:00pm - 1:30pm
Science Center 2 Lobby**

Smiling is a facial expression that is closely linked to subjective well-being (SWB). Four images were given to each participant in every condition. Between subjects variation was smiling vs. non-smiling images and a red-framed vs. non-framed image. Within subject variation for the images were two male images and two female images with one image of white individual and one image of Asian individual to test cultural and gender effects of smiling on perceived SWB. Results show that there was a significant main effect between smiling and attractiveness for gender, such that smiling females are rated higher in attractiveness. There was also a significant main effect for ethnicity and smiling, such that when Asians smiled they were seen as much happier and more social than when they were not smiling. This effect was very significant for the group of Asian males.

Does Priming Emotions Influence the Expression of Effortful Control? (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Colin Pryor, Samantha Horneff	Kathleen Cain	10:00am - 11:30am Science Center 2 Lobby

The purpose of the current study was to examine the effect of emotional priming on children's display of effortful control using a modified disappointment paradigm (Kieras et al., 2005). This study was conducted by measuring baseline effortful control through a Less is More task (Allan & Lonigan, 2011), reading stories that primed a positive or negative emotional response, then giving children a roll of tape as a disappointing gift and evaluating their response to the gift using a coding system adapted from Liew, Eisenberg, and Reise (2004). Current researchers hypothesized that there would be a significant effect of age and gender, with older children and females being better able to display emotional effortful control by suppressing a dominant feeling of disappointment in a gift and expressing gratitude. Previous studies have found similar results (Allan & Lonigan, 2011). Analyses examined the hypothesis that being primed by a positive story involving an exciting surprise would result in children displaying higher emotional effortful control than those who had been subject to listening to a negative story about receiving a disappointing gift.

Does the Interaction Between Color and Temperature Have an Effect on Social Proximity? (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Abigail Kallin, Alexis Cuneo, Pembroke Emanuelson	Rebecca Fincher-Kiefer	10:00am - 11:30am Science Center 2 Lobby

IJzerman and Semin (2009) demonstrated that experiencing warm compared to cold temperatures induced greater social proximity, providing support to the theory of grounded cognition, which asserts that bodily states can both cause cognitive states and be effects of them (Barsalou, 2008). Another variable that may affect social relations is color; previous research has shown that the perception of red elicits avoidance behavior (in an achievement context) and does so without conscious awareness (Elliot, Maier, Binser, Friedman, & Pekrun, 2009). Experiment 1 of the present study investigated the interaction between color and temperature on social proximity. We predicted that a warm environment would increase social proximity and thus the avoidance effects of red would be reduced, however, in the cold environment, participants perceiving red would show greater avoidance behavior compared to those perceiving gray. Results did not support this hypothesis. Experiment 2 modified materials used in Experiment 1 and further investigated the interaction between color and temperature on social proximity. Results did not replicate the effect of temperature on social proximity and also did not replicate any effects of color on performance.

Effect of Family Size in Predicting Selfless Behavior (Poster)**Student(s):****Mentor(s):****Time/Location:****Katharine Wood, Meredith Kern, Stephanie Tait Kathy Berenson****10:00am - 11:30am****Science Center 2 Lobby**

For our project, we intend to observe behavioral differences in participants with either a small family (0-1 siblings) or a large family (2+ siblings). We are interested in seeing how the different environment growing up influences how individuals behave in group settings, and in particular, how they differ in selfless behavior, for example, doing favors for others. We hypothesize that individuals who come from small families will be less selfless than individuals who come from large families.

Effects of Endocannabinoids on Cat-odor Induced Anxiety in Rats (Poster)**Student(s):****Mentor(s):****Time/Location:****Jacob Treinish, Jessica Ballister, Loren Deron****Stephen Sivi****12:00pm - 1:30pm****Science Center 2 Lobby**

Endocannabinoids have been shown to exhibit mixed effects on anxiety. This study will look at the influence of CB1 receptor agonist WIN 55, 212-2 in its ability to mimic marijuana and minimize anxiety at a small dose. All subjects will be acclimated to the testing chamber, and on testing day half of the rats will be exposed to a cat collar in a foreign cage, while the other rats will not be. Prior to cat color exposure, half of the rats will receive the drug, so the effects of the drug can be monitored in response to both anxious and non-anxious situations. Each rat will then be placed in the testing chamber and time spent in the hide box will be analyzed as a measure of anxiety.

Effects of Stereotypes and Aggression (Poster)**Student(s):****Alyssa Kull, Branden Strohl****Mentor(s):****Kathleen Cain****Time/Location:****10:00am - 11:30am
Science Center 2 Lobby**

The present study examined whether preschool children can be primed to perceive the aggression of a stranger and whether preschool children use racial stereotypes to judge the aggressiveness of a stranger. It was hypothesized that a story with negative behavior would be perceived as more aggressive, males would be perceived as more aggressive, and black children would be perceived as more aggressive. The participants were preschool children from the ages of three to five. Each participant was primed with either a negative behavior story or a neutral behavior story, shown a photograph of either a white or black child of the same gender, and then asked to rate the perceived aggression and personal preference for interaction of the child. The analyses tested the hypotheses that preschool children are able to associate negative behaviors with acts of aggression; males have more experience with physical aggression and are therefore more likely to identify aggressive behaviors; and that preschool children view black children as more aggressive because of the negative stimuli from stereotypes.

Gender Stereotypes, Perceptions of Parents, and Toy Choice among Preschoolers (Poster)**Student(s):****Ashley Seeley, Morgan O'Connor****Mentor(s):****Kathleen Cain****Time/Location:****10:00am - 11:30am
Science Center 2 Lobby**

Our study investigated the effects of gender roles in toy choice in a preschool classroom. Participants included twenty-six preschoolers, 13 female and 13 male, aged three to five years old. An experimenter administered 30 pre-categorized cards (10 same-sex toys, 10 neutral toys, and 10 opposite sex toys) and participants were asked to categorize which toys they like to play with. The experimenter then returned to the daycare over another session and laid out the same 30 cards and asked the participant, "What does your mom like you to play with?" The child chose from the pile of cards which toys they believed their mom would like them to play with. The experimenter then asked "What does your dad like you to play with?" The child chose from the pile of cards which toys they believed their father would like them to play with. Analysis address the hypothesis that there will be a main effect of gender for the number of opposite sex toys chosen. For same-sex toys, we predicted a target x gender interaction in that girls thought their parents would accept the same-sex toys as much as the girls themselves would. However, we hypothesized that boys thought their parents would want them to choose more same-sex toys than the boys chose themselves. As for neutral toys, experimenters anticipate parent's perceived choices will not differ from children's choices. Finally, it is also hypothesized that there will be a gender x target interaction for opposite-sex toys. Boys thought their parents would choose fewer opposite sex toys than girls expect their parents to choose. Through this study we hope to provide a launching point for future research in regards to gender stereotyping amongst different ages and cultures.

How the World Looks When You're Hopeless: Distance Perception as a Function of Hopelessness and Social Support (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Rachael Ward	Rebecca Fincher-Kiefer	10:00am - 11:30am Science Center 2 Lobby

Previous research has shown that hopelessness is an emotional state that reduces an individual's physiological resources (Lindeman & Ambramson, 2008). Physiological resources have been found to significantly affect people's perceptions of the physical world in judgments such as horizontal distance and slope perception (Proffitt, Stefanucci, Banton & Epstein, 2003). The current research examines how hopelessness affects perceptions of horizontal distance, and whether social support can serve as a replenishing resource that reduces the effect of hopelessness. In this experiment a state of hopelessness was induced in half of the participants and all participants then had to estimate a series of horizontal distances. Half of the hopeless and non-hopeless participants had a friend with them when they estimated distances, while the other half made distance estimations alone. It was predicted that hopelessness would cause participants to perceive objects as farther away due to their depleted physiological resources, but this effect would be reduced when they had a friend at their side. Results suggested that the effect of hopelessness did reduce resources, resulting in longer distance estimations, but social support did not moderate this effect.

Loneliness and solitude: will they bring out the aggression in you?

How Isolation and Agreeableness Affect Aggression (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Erika Miller, Erin Tyrer	Kathy Berenson	10:00am - 11:30am Science Center 2 Lobby

In this study we tested the effect of isolation on levels of aggression as a function of individuals levels empathy and agreeableness. Participant's agreeableness and empathy levels were measured. Each participant viewed a series of pictures that were either neutral or intended to invoke feelings of isolation and then read a standard Donald paragraph. We hypothesized an interaction between the prime of isolation and the traits of agreeableness and empathy. We predicted that individuals high in agreeableness and empathy, regardless of whether they were primed with feelings of isolation, would be less aggressive while individuals low in agreeableness and empathy will exhibit greater aggression when primed with feelings of isolation. This experiment is still on going at this time and therefore we are unable to report our results.

Modulation of the Aesthetic Experience (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Abigail Ziegler, Alyson Buck	Kevin Wilson	10:00am - 11:30am Science Center 2 Lobby

Using transcranial direct current stimulation, we modulated excitability in the left dorsolateral prefrontal cortex (DLPFC) of 16 undergraduate participants. Past research suggests that this area of the brain may play a key role in aesthetic judgements. We hypothesized that stimulation of the left DLPFC will modulate aesthetic experience. Specifically, we predicted that by increasing excitability in the left DLPFC we could increase participants' aesthetic judgments. If the left DLPFC is in fact involved specifically with the aesthetic experience of art rather than simply judgments of pleasantness, then increasing excitability in this area of the brain should cause participants to give more positive aesthetic ratings of pictures (i.e. for both beautiful and not beautiful stimuli). However, if the left DLPFC is involved in the general experience of pleasantness (not specifically in aesthetics), then increasing excitability in this area will increase participant ratings only for pictures which are already considered to be more pleasant (i.e. beautiful stimuli). We compared judgments made by participants after receiving anodal stimulation to judgments made after both cathodal and sham stimulation.

Order Effects on Preference Judgments for Visual Stimuli (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Stephanie Tait	Richard Russell	12:00pm - 1:30pm Science Center 2 Lobby

Many studies have found that order often plays a role in shaping preferences for items in a sequence. Such studies have been conducted to test order effects on preference in many different modalities, such as taste. However, little research has been done to look for these effects in visual stimuli. As an extension of a previous project, I was interested in determining if order effects exist specifically for visual stimuli. I examined participants' preferences for various types of images, including faces, scenes, clouds, inanimate objects, and abstract art images. I hypothesized that longer sequences would display a recency effect, in which participants prefer later images in a sequence. I also hypothesized that the opposite would be true for shorter sequences, resulting in a primacy effect, indicating a preference for earlier images in a sequence. Following the methods used by Mantonakis et al. (2009) participants viewed a sequence and afterwards chose which image they found most attractive. All participants saw the same images but different subject groups saw different orders within the sequences. Mean probability of choice and Chi-square analyses will be conducted to see if any order effects were present.

Power and Superstition's Effect on Self-Efficacy (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Caldwell Rohrbach, Stephen Gern	Rebecca Fincher-Kiefer	10:00am - 11:30am Science Center 2 Lobby

Previous research has shown that superstition increases performance because it raises self-efficacy, which leads participants to expect greater results and therefore work harder and longer to fulfill their expectations (Bandura, 1997). Feeling powerful also affects feelings of self-efficacy which then can be observed in judgments of one's own height (Duguid & Goncalo, 2011). In Experiment 1, we examined the interaction of the variables of power and superstition. Participants were asked to either recall a memory when an individual had power over them or when they had power over another and were then given a lucky or regular pen to solve anagrams. Results tentatively suggested that participants with high power were more affected by superstition than those with low power. In Experiment 2, we changed the manipulation of power to one in which participants adopted a powerful or submissive body posture, and the anagram task was switched to a word completion task.

Priming and the Inverse Halo Effect (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Michael Behling, Sara Purifoy	Kathy Berenson	10:00am - 11:30am Science Center 2 Lobby

The Halo Effect is well documented, in that people believe the more attractive someone is, the more likely they are to have prosocial traits. We tested whether or not this could work in reverse, priming people to feel they are more attractive and measuring whether the level of self-reported prosocial traits increased.

Quantifying and Comparing Oxytocin Neurons Between Two Rat Strains: Fischer 344 and Sprague-Dawley Rats (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alayne Holland	Stephen Siviyy	12:00pm - 1:30pm Science Center 2 Lobby

The purpose of the present study is to quantify the number of oxytocin neurons in two different strains of rats: Fischer-344 & Sprague-Dawley rats. Oxytocin is a neurotransmitter that has multiple functions in social behavior, such as pair bonding and social recognition. Fischer 344 rats have been shown to play significantly less than other strains of rats. Data obtained by quantifying and comparing the number of oxytocin neurons in the hypothalamus of Fischer 344 and Sprague-Dawley rats (control inbred strain) could be used to better understand various human social deficits, such as autism. The present study hypothesizes that Fischer 344 rats will have significantly less expression of oxytocin neurons in the hypothalamus, the area of concentration for this study.

Self-Regulation: An Illusion of Perception? (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Anna de la Motte	Paul D'Agostino	10:00am - 11:30am Science Center 2 Lobby

This study examined how the perception of one's mental resources would affect that individual's performance on subsequent tasks. In particular we were interested in any differences in performance that might occur if the individual was provided with a situational versus a personal attribution for their mental state. Past research has demonstrated that when an individual is given feedback containing a situational explanation they do not necessarily perform in a way that is consistent with that feedback. We predict, however, that individuals given personal feedback will perform in a way that matches that feedback.

The Effect of Social Play and Amphetamine on Prepulse Inhibition (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Cody Pollack, Derik Yager-Elorriaga	Stephen Siviyy	12:00pm - 1:30pm Science Center 2 Lobby

Previous studies have shown that social play increases dopamine release and that increased dopamine leads to decreased prepulse inhibition of the acoustic startle response in the rat. However, research is lacking on a direct effect of play on prepulse inhibition. The current study sought to examine whether play and subeffective doses of the dopamine agonist amphetamine synergistically attenuate prepulse inhibition. Thirty-two Sprague-Dawley rats were randomly assigned to one of four conditions: play-saline, play-amphetamine, no play-saline, and no play-amphetamine. Results showed only a significant main effect of prepulse intensity, indicating that the dopamine released during social play is a part of a different mechanism than the dopamine involved in the pre-pulse inhibition of the startle response.

The effect of spatial limits on embodied perceptions (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
James Kane, John Servinskis	Rebecca Fincher-Kiefer	10:00am - 11:30am Science Center 2 Lobby

Prior research has demonstrated that physical restraints can increase distance perception and alter thought speed, which is the speed with which decisions are made (Proffitt, 2006). Experiment 1 examined the effects of physical confinement and thought speed by manipulating two variables: text type, one text described fast paced actions and one described slow actions; and spatial conditions, one condition was a spatially open room and the other was a spatially confined room. We predicted that individuals in the open room with the fast paced reading would find a higher number of fast words within a word search than slow words, and the opposite would be true with the slow action text in the spatially confined room. Results supported the predicted pattern. Experiment 2 used the same spatial conditions, but had participants read a text at either a fast or slow pace before being given a word completion task. Results did not support the predicted interaction, but surprisingly showed that when reading at a fast pace, slow words were more accessible, but when reading at a slow pace, fast words were more accessible.

The Effect of Temperature on Own-Race Bias in Facial Recognition (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Ayana Spell, Francesco Siciliano	Rebecca Fincher-Kiefer	10:00am - 11:30am Science Center 2 Lobby

Own- race bias for facial recognition is a psychological phenomenon in which individuals are more accurate at recognizing previously viewed faces if they are of their own race compared to another race (Malpass & Kravitz 1969). Another social phenomenon within the theory of embodied cognition is that people who experience warm temperatures are more likely to be socially open to other people than those who experience cold temperatures (Williams & Bargh 2008). The current study examined whether bodily states, as a function of temperature, influence our social perceptions in face recognition. Experiment 1 predicted that participants exposed to warmth would show less of an own-race bias in facial recognition than participants exposed to cold. Results did not support this interaction; instead participants in the cold condition were more likely to recognize faces of the opposite race than own race, whereas participants in the warm condition showed no difference between races. Experiment 2 tested the hypothesis that this interaction may be the effect of divergent facial processing mechanisms in the temperature condition, with participants in the cold condition more likely to use featural processing when recalling faces.

The Effects of Cat Odor and Tickling on Anxiety in the Juvenile Rat (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Elizabeth Royer, Elizabeth Stevenson	Stephen Sivi	12:00pm - 1:30pm Science Center 2 Lobby

Predator odor is known to induce anxiety in rats. Tickling rats has a pleasurable effect on them, as observed by 50 kHz vocalizations emitted during tickling sessions. These high-frequency vocalizations are present in anticipation of or during other pleasurable behaviors such as playing and mating. The current study aimed to assess whether tickling a rat before exposure to cat odor could reduce the rat's anxiety. It was predicted that the rats that received tickling prior to smelling cat odor would show less anxiety than those that received no tickling prior to cat odor exposure.

The Effects of Familiarity on Preschoolers' Perceptions of Life in Various Types of Media (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Andrew Hoch, Maggie Tosten	Kathleen Cain	10:00am - 11:30am Science Center 2 Lobby

This study investigated preschoolers' perceptions of living and nonliving objects. Twenty-seven 3- to 5-year-olds were asked to identify twelve objects as living or nonliving. Half of the children were shown videos of the objects, while the other half were just shown pictures. Analyses test the hypotheses that the children would more likely identify any moving object as living. Also, if an object was more familiar to a child or they have had an experience with it, they would more likely correctly identify it as living or nonliving.

The Effects of Gender Priming on Preschoolers' Responses to Aggression (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Anna Myavec, Emily Miano	Kathleen Cain	10:00am - 11:30am Science Center 2 Lobby

Previous research has stated that gender cues affect performance ability and social interactions. The present study aims to examine the effects of gender on preschooler's responses to aggression through gender-priming tasks. The study hypothesizes that, following a gender-priming task, girls will respond in an appealing manner when faced with conflict while boys will respond in a more forceful approach. This would suggest that even subtle gender cues will cause the children to conform to gender stereotypes.

The Medial Prefrontal Cortex and Its Effects on Prosocial Behavior (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alexandra Papada, Erica Forzley	Kevin Wilson	10:00am - 11:30am Science Center 2 Lobby

The Role of Behavioral Inhibition and Activation Systems in Olfactory and Taste Perception (Poster)

Student(s):**Carolyn Murphy****Mentor(s):****Daniel McCall****Time/Location:****12:00pm - 1:30pm****Science Center 2 Lobby**

The behavioral inhibition system (BIS) and behavioral activation system (BAS) offer an expansive and modern approach to explore how personality correlates with sensory perception. The underlying concept of BIS/BAS consolidates multiple personality dimensions and has a distinct link to brain asymmetry. The current study uses the BIS/BAS Scale and appropriate negative and positive olfactory and taste experiences to shed light on previously found personality links to olfactory and taste perception. Because BIS correlates to an aversive system, participants high on BIS were thought to have higher sensitivity and increased attention to negative stimuli while participants high on BAS were thought to show a similar trend for positive stimuli. While the first experiment found that participant ratings did not differ significantly between supposedly negative and positive stimuli, the ratings of the stimuli overall demonstrated the expected trend. Individuals high on BIS found test stimuli generally less pleasant while the opposite was true for individuals high on BAS. Because subjective ratings were used in the first experiment, the second experiment relied on more objective ratings to differentiate whether participants had different preferences or if their sensory experience was actually different due to contrasting attention allocation. The second experiment yielded unexpected results that seemingly contradict the findings of the first experiment until the experiments are explained through the lens of emotional eating.

The Role of Social Exposure on Attenuating the Fear Response (Poster)

Student(s):**Anna de la Motte, Paula Eichner****Mentor(s):****Stephen Siviyy****Time/Location:****12:00pm - 1:30pm****Science Center 2 Lobby**

The current study examines the impact of social exposure on the rat's response to an environment where they were previously exposed to a fearful stimulus. Previous research conducted in the area of social buffering suggests that rats who are able to engage socially will display less fearful behavior when re-introduced to the environment where the fearful stimulus was presented. We predict that rats in the exposed condition will display more hiding than those in the non-exposed condition. Further, we predict that rats in the exposed condition who are socially housed will display less hiding than their isolated counterparts.

The Role of the Medial Prefrontal Cortex In Romantic Relationships (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Corrina DaSilva, Daniel Weitzer	Kevin Wilson	10:00am - 11:30am Science Center 2 Lobby

Various studies have described romantic love in terms of rejection and the reward and motivational systems by which it acts. However, few studies have investigated whether the thought brain regions involved in romantic love have a preference for romantic love or contribute to the overall “state” of the individual. In the current study, this was investigated by examining whether or not the medial prefrontal cortex functioned in overall happiness or in happiness specifically related to the romantic relationship. In this study, the prefrontal medial cortex was activated, inhibited or “shamed” via tDCS stimulation. In order to determine how the prefrontal medial cortex operates, scores from the passionate love scale and subjective happiness scale were compared and analyzed.

The Smell of Music: Pitch and Consonance Influences on Olfactory Perception (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Carolyn Murphy, Lucien Ryan	Daniel McCall	10:00am - 11:30am Science Center 2 Lobby

In addition to research surrounding implicit facilitation of auditory and gustatory perception, increasing evidence supports a auditory-olfactory cross-modal link. Olfactory perception involves integration from multiple senses such as vision, especially for colors. Congruent sounds have been found to affect olfactory pleasantness ratings. However, the question remains whether there is an implicit association between audition and olfaction, rather than simply integration. The present study examines the effects of varying levels of pitch and consonance on olfactory perception. Analysis of participants’ pairing of trigeminal and olfactory odors with either low or high pitch and either dissonance or consonance highlights the existence of a crossmodal association between these different attributes. Although participants did not choose pitch or consonance options significantly for trigeminal odors, olfactory odors were significantly associated with consonant sounds and high-pitch sounds. An evolutionary advantage to an olfactory and an auditory association may explain these results.

Understanding the Role of Specific Personality Traits In Assessing Death Qualification (Poster)

Student(s):**John Servinskis, Riccardo Purita****Mentor(s):****Nina Turner****Time/Location:****10:00am - 11:30am
Science Center 2 Lobby**

The current study examines the relation between death penalty attitudes and specific personality traits as measured by the 60-item Narcissism, Extroversion, and Openness Five Factor Inventory-3 Scale (NEO-FFI-3), as well as positive and negative affect (PANAS-X). Results indicate the existence of select traits present in individuals who meet death-qualification standards.

Supporting Summary:

Research has demonstrated that death-qualification status and death penalty attitudes are related to various individual difference characteristics, such as authoritarianism (Stack, 2003) and belief in a just world (Butler & Moran, 2007). In addition, affective states such as mood have been shown to mediate the relation between death penalty attitudes and specific individual difference characteristics (Rowback, 2009). Research however, has yet to examine whether death penalty attitudes can be conceptualized as a personality trait. In the current study, we examined the predictive ability of specific personality traits as measured by the NEO-FFI-3 (Costa and McCrae, 1992) on death penalty attitudes. In addition, we were interested in observing the mediating effects if any, of affective states in the relation between personality and death penalty attitudes.

Religious Studies

Dimensions of Identity: Exploring Religious Intolerance in Pakistan (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Ann-Marie Valentine	Charles Myers	1:00pm - 2:00pm Glatfelter Hall 105

This research explores the relationship between religion and nationhood in Pakistan and how this affects religious minorities. Using an identity constructionist lens, the ways in which the education system and the constitution have applied a Muslim identity to Pakistani citizenry through processes of 'Islamization' is explored. Drawing upon contemporary scholarly articles and books, data detailing Pakistan's education system, and an analysis of the controversial "blasphemy laws" in Pakistan's constitution the discrimination of religious minorities on a case study basis is detailed. Although there are many religious minorities that face discrimination of different kinds in Pakistani society, the research is focused specifically on the Ahmadi and Hindu communities. The intolerance of religious minorities that occurs within a social and governmental context is perpetuated by the associations of a singular Muslim identity with a larger Pakistani national identity. What is problematic about these associations is that they are fostered and encouraged by a variety of social actors which subsequently supports discrimination of religious minorities. Social and government structures in Pakistan reinforce the link between Muslim identity and national identity effectively leaving no space for religious minorities to exist free from discrimination and intolerance.

The Jewish Sabbath: The Eternal Unity of God and Socio-Spiritual Ethics (Poster)**Student(s):****Kyra Jenney****Mentor(s):****Charles Myers****Time/Location:****2:00pm - 3:30pm****Science Center 2 Lobby**

The Jewish Sabbath, beginning at sundown on Friday and ending at sundown on Saturday, marks a very important religious practice in Judaism. The Sabbath is not only one of God's most important creations, but also it can be seen as the pinnacle of creation, where God ceases from all of the work that He has done and takes pleasure in that work. Just as God rested, so too can man; and in doing so man also takes part in creation. Thus, the Sabbath exists as the eternal marker of man's relationship with God and with the world. Those who follow Judaism take part in a spiritual community that is one under God and that values the relationship of God to creation as the uniting bond that maintains this community. The Sabbath and these relationships form the social ethics of Judaism. These ethics are grounded in creation and centered upon the eternal covenant between God and His people. The Sabbath is not merely to be taken as a day of rest, but rather its observance is a crucial ethical act that focuses one within the framework of God's holiness and morality. The Sabbath, therefore, is arguably the most important spiritual and social aspect of Judaism, as it reinforces the unity of God through an eternal and dualistic alignment of the Jewish community with the ethics of creation.

Sociology

"You Are What You Eat" - Food and Identity: Authenticity, Modernity, and Ethnic Symbolism in Singaporean Cuisine (Poster)

Student(s):**Falon Deimler****Mentor(s):****VoonChin Phua****Time/Location:****2:00pm - 3:30pm****Science Center 2 Lobby**

This research aims to reveal the ways in which Singaporean "Hawker Centers" (food centers), perhaps the only portions of Singapore which have not been fully modernized, provide a space for the preservation, development and adaptation of distinct ethnic symbols and identities, as well as that of a larger Singaporean identity, through the use of food as a symbol of heritage, of difference as well as unity within a concentrated and highly modern society. The hawker centers of Singapore provide younger and older generations with an outlet through which they control the production of identity symbols through demands as a consumer population, consuming not only food but also the ethnic identities attached to the variations of Indian, Malay, Chinese, and Western cuisine that most hawker centers provide. The cuisine acts as an insightful reflection of Singaporean society, where an analysis of observations made in Singaporean hawker centers and food courts, interviews with Singaporean nationals, and media representations of hawker centers and their goods shed light on issues of modernity and change and the influence of majority and minority population issues on identity formation in the economically and technologically advanced society of Singapore. I present the experience of Singaporean ethnic identity production in contrast to identity production as it occurs for immigrant populations in other parts of the world, specifically America, to reveal the unique nature of Singaporean identity and identity issues.

Eating Habits and Attitudes Toward Body Image (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Lauren Niess	Cassie Hays	12:00pm - 1:00pm Glatfelter Hall 212

The role of food in today's Western culture is seemingly becoming more and more controversial due to the unrealistic standards that define femininity. Because food has an unusually rich symbolic malleability (Barthes 1975:57), it is a particularly apt medium for displaying widely varying cultural ideologies. In America's weight-obsessed society where the pressures to be thin and the fears of being fat amongst women are merely getting worse, the significance of this social fixation deserves attention. This article uses observations of female college students to argue the ways in which their behaviors and attitudes toward food and body image are affected by the larger society's valuing of thinness.

Feeling at Home Away from Home: Gay Tourism and the Creation of the "Safe" Vacation (Poster)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Chandra Kirkland	VoonChin Phua	2:00pm - 3:30pm Science Center 2 Lobby

Marketing for gay tourism has recently grown as the desire to make "pink dollars" has increased. A specific marketing strategy meant to attract gay tourists involves the creation of "safe" travel locations. This paper will discuss the marketing of "gay friendly" travel spots for gay tourists, with a focus on tourism in Singapore and China among gay men. It will also seek to answer the question of whether or not the special accommodations that arise through gay-targeted strategies successfully create this safe environment. The idea that these "gay friendly" vacation accommodations may create a sense of "home away from home" will also be explored. The data sample used to examine our conclusions is drawn from a variety of tourism websites and blogs. The goals and prominent marketing strategies for gay tourists have been evaluated through statements made on websites advertising tourism, as well as by locating key terminology and phrases that seem to aim towards attracting the attention of that audience and imply a certain level of quality or special accommodation. This paper will focus on gay tourism in Singapore and China. Singapore has taken recent steps towards a higher level of official (policy-wise) tolerance of the gay community; they have recognized the need to compete in the global market in order to bring in the "pink dollars". China, and in particular Hong Kong, has taken similar steps. But their attempts to market to gay tourists through the creation of "gay friendly" space may be hindered by a residual reputation for homophobia. The preliminary results reveal a trend towards marketing a safe and "gay friendly" vacationing environment, which includes a focus on gay-owned and operated businesses, as well as tolerant or friendly behavior in locals.

Perceptions of Masculinity in Singaporean Heterosexual Mate Selection (Poster)**Student(s):****Alice Wolfkill****Mentor(s):****VoonChin Phua****Time/Location:****2:00pm - 3:30pm****Science Center 2 Lobby**

The present study investigated Singaporean's perspectives of heterosexual mate selection. Specifically, the project examined how Singaporeans perceive and define masculine traits and how Singaporean culture may affect these definitions. I sought to examine the construction of masculinity in Singapore through a series of semi-structured in-depth interviews with Singaporean men and women as well as a content analysis of 223 Singaporean personal advertisements. Previous ethnographic studies have focused on identifying specific characteristics of masculinity in Western culture. These findings in addition to studies of Asian masculinities are used as a foundation for determining possible Singaporean characteristics of masculinity in the personal ads and interviews. This paper discusses if there is a preferred set of characteristics that embodies the idea of masculinity in Singaporean mate selection. The roles of gender and the materialistic culture of Singapore are two components that surface throughout the study.

Social Methods Research at Gettysburg (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Alexis Bralow, Allison Serina, Anna Baldasarre, Chandra Kirkland, David Harty, Elizabeth Mueller, Hannah Church, Jacey Dold, James Patton, Josiah Adlon, Karla Cobos, Lindsay Menton, Madison Hughan, Mary Bridget Shouvin, Matthew Moyer, Mia Rawleigh, William Worthy	Cassie Hays	10:00am - 1:00pm Glatfelter Hall 212

How do sociologists examine the world and come to grasp its intricacies scientifically? What makes for ethical research in the 21st century? What role does theory take in developing and producing sociological research? In what ways do certain research questions lend themselves to specific methodologies? What are the positives and negatives of the various quantitative and qualitative methods? In this course, students have had the opportunity to hone their skills as sociologists as they worked through the process of conducting social research. They completed preliminary secondary research, developed a set of research questions, and conducted surveys and interviews designed to help them answer those questions. Those data were analyzed, either quantitatively or qualitatively, and included as results in a final research paper, to be presented on this panel.

Alexis Bralow**Individual Abstract**

Searching for the affects of Hometown diversity on a person's levels of ethnic/racial tolerance.

This project aims to ask if a person's hometown diversity affects their own levels of racial and ethnic tolerance. Researchers predict that when a person's hometown is less diverse, they will have a lower level of racial and ethnic tolerance.

Anna Baldasarre**Individual Abstract****Reactions to Romantic Relationship Breakups**

Romantic relationships are a large part of the social life of all adults, and Gettysburg College students are no exception. But what happens when the relationship ends? How do people react to relationship breakups, and is there a difference between the reactions of men and women? A literature review of related studies suggested that the gender differences sometimes observed in emotional reactions usually came from sources not related to the breakup such as outside influences or personality. A survey of Gettysburg students showed that there are slight differences in the ways men and women react to breakups. Qualitative analysis appeared to support the quantitative data and highlighted the importance of society on the way people react. Much of the differences perceived in the ways men and women react to relationship breakups seem to be linked to social influences more than to inherent characteristics of males and females.

Chandra Kirkland

Individual Abstract

Relationship Norms at Gettysburg College

This paper will explore relationship norms on the Gettysburg College campus, and seek to explain the variables that account for differences in normative alignment. Quantitative data was obtained through a survey conducted online - a simple random sample of students was taken, and invitations were sent via email. The qualitative data for this study was acquired through one-on-one interviews with student respondents. The hypothesis directing this work is that the dependent variable "pre-college norms" – which are assumed to differ according to whether or not the hometown/city is rural, suburban, or urban – will influence current romantic/sexual habits (the independent variable). The influence of these norms is hypothesized to decrease as class year increases. This paper aims to answer the question: What are the effects of home normative environment, class year and hometown/city type on relationship norms?

Elizabeth Mueller

Individual Abstract

Magazines and Female Body Image

This research attempts to discover a possible connection between media, specifically magazines, and negative body image among first-year and senior females at Gettysburg College. Body image is being studied through analysis of and individual's behavior as well as attitudes and feelings. The quantitative data analysis has shown that exposure to magazines does not correlate to either positive or negative body image, however Cosmopolitan magazine specifically had a strong correlation with an individual's healthy eating habits. There does not seem to be much difference between the two age groups. After conducting several interviews and analyzing prevalent themes, there seems to be an equal split between positive and negative body images. Themes that emerged from this included the idea of society as media and that the messages media send become strict rules society follows. Also, many described the importance of peer influence on both positive and negative body images. All interviewees said that they felt negative body image was at least partially linked to the thin ideal portrayed in the media in regards to women, but some said media was more or less a factor for them personally. Age also did not seem to be a factor.

Karla Cobos

Individual Abstract

Gender and Diversity on the campus of Gettysburg College

Between March and May, 2012, a study involving full-time students at Gettysburg College was conducted in Gettysburg, Pennsylvania. Racial dynamics on campus were studied in order to answer the question: "What is the effect of Gettysburg College students' gender on their racial prejudice?" The study measured both subtle and blatant racial prejudice of participants through an online survey titled: "Gender and Diversity on the campus of Gettysburg College". Hour-long interviews were also conducted with 3 Gettysburg College students of different genders and races; this has provided more qualitative, individual detail that gives depth to the quantitative findings. Bivariate analyses of the survey data found that there was a slight difference between genders and their levels of racial prejudice. According to this quantitative analysis, males had slightly higher levels of both blatant and subtle prejudice than females.

Lindsay Menton**Individual Abstract****Facebook Use at Gettysburg College**

Over the past decade, the use of social media sites has increased drastically. Perhaps one of the most well known such sites is Facebook. As Facebook originally was created to serve college students, it comes as no surprise that they are one of the major subgroups of users of the social media site. Facebook plays a major role in identity development on college campuses today; some may even argue that the site and the networking it produces serves as a sort of virtual campus. This brings one to question how Facebook is used at Gettysburg College and, more importantly, what impact gender has on students' Facebook use and how they portray themselves on the social media site. Anonymous campus surveys suggest that female students are generally more active users of Facebook and supply material to enable voyeurism by their peers, including less active male student users. Meanwhile, male students are generally more open and honest about their Facebook use and activity. More extensive qualitative interviews demonstrated that students tend to perceive female students are more active and frequent Facebook users. Additionally, all participants acknowledged the frequent "stalking" that takes place and the conscious decisions one makes regarding individual Facebook content and how it contributes to one's identity. This research shows that Facebook is a popular social media site at Gettysburg that not only provides students a means of communication with one another, but produces material that engenders others' voyeurism; cumulatively, these activities create a sort of virtual campus.

Mary Bridget Shouvlin**Individual Abstract****Impact of exposure to popular media on college females' bodies and self-image.**

In today's popular media there is much emphasis on the female body, as extremely thin celebrities are heavily featured in magazines and on television. These media sources send the message that to be thin is to be attractive, creating cultural norms of thinness, also known as the thin ideal, in today's society. This study focuses on how exposure to this popular media influences the body and self-image of female students at Gettysburg College. Defining popular media as magazine and popular television, body and self-image were measured through questions regarding eating habits and body-related perceptions. Data was gathered through surveys and interviews, and analyzed through both quantitative and qualitative methods. Analysis thus far, confirms that student's who have the most exposure to popular media, tend to engage in more dieting behaviors as well as place more emphasis on being thin. Though, a final conclusion has not yet been reached, research is so far confirming that female student's at Gettysburg College who are heavily exposed to popular media ultimately feel more pressure to conform to cultural norms of thinness as well.

Mia Rawleigh**Individual Abstract****Body consciousness among females at Gettysburg College.**

This research examined body consciousness among females at Gettysburg College. Body consciousness involves two attributes: attitude and behavior. Attitude examines how a female feels about her body and her perceptions of other females' bodies. Behavior includes a female's eating and exercise habits. The research question asked, do sorority members have a higher body consciousness vs. non-sorority members? Using quantitative and qualitative methods, this research found that sorority membership has little effect on body consciousness among females on Gettysburg College's campus, however there appears to be a high level of body consciousness among females at Gettysburg College as a whole.

The Marketing of Authenticity by Chinatown (Poster)**Student(s):****Elizabeth Jones****Mentor(s):****VoonChin Phua****Time/Location:****2:00pm - 3:30pm****Science Center 2 Lobby**

There are many Chinatown locations across the world but one exceptionally popular Chinatown, on which my research will focus, is located in London. Chinatown provides an opportunity for tourists to be immersed in another culture. Tourists have started to play a more active role in their experiences. Chinatown provides the perfect opportunity for tourists to interact with their environment with its excess of shops, restaurants, and entertainment opportunities. People of Asian decent in that area can also benefit from Chinatown because they see it as a place of familiarity. Another benefit for non-tourists is that marketing Chinatown can cause a cultural revival. In order to share their culture with visitors, they must first learn about it themselves. Many tourists leave Chinatown without feeling that they have experienced the authentic culture that has been marketed to them on the Internet.

Although there has been research conducted on Chinatowns, it has not focused on the marketing strategies employed to draw in tourists. My paper will discuss both the marketing techniques used and if these strategies are successful in attracting tourists. I used the snowball sampling technique to gather my data in 2011. I gathered the data from websites, including official tourism sites and blogs. I am using this data to first research how Chinatown is marketed to tourists, then to gauge how tourists respond to the marketing and how they experienced Chinatown. Preliminary results show that Chinatown websites tend to market the authentic cultural experience that includes food, music, and festivals/ceremonies.

Spanish

Brothels in Puerto Rico: A look at its space and how it's being used (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Daniela Yager-Elorriaga	Radost Rangelova	2:00pm - 3:00pm Breidenbaugh Hall 311

El Espacio de texto en The House on the Lagoon y el Manuscrito de Miramar (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Erin McCarthy	Radost Rangelova	1:00pm - 2:00pm Breidenbaugh Hall 311

The purpose of this research is primarily to examine the spatial use of text in two novels written by two Puerto Rican authors. The authors, Rosario Ferre and Olga Nolla, who are cousins as well as writers, both use text in an interesting manner in their works. Each novel also focuses on a number of other diverse spaces, such as that between genders, social class, present and past, and geographical space as well. As a result, the mechanisms, purposes and different uses of text will be discussed in great detail to determine the overall significance of text as a space in both The House on the Lagoon and El Manuscrito de Miramar.

El espacio del ferrocarril en la literatura (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Mary Cathey	Radost Rangelova	3:00pm - 4:00pm Breidenbaugh Hall 311

El espacio del ferrocarril esta representado en la literatura en las obras "La Aldea Perdida" por Armando Palacio Valdes, "Adios, Cordera" por Leopoldo Clarin, y "Dona Perfecta" por Benito Perez Galdos como un símbolo del progreso, pero a la misma vez, resulta en consecuencias negativas para los campesinos.

Importance of "The Train" in Spanish Literature and Film (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Amanda Reynolds	Radost Rangelova	3:00pm - 4:00pm Breidenbaugh Hall 311

The train in Spanish literature and film represents an agent of change for a better life and it is associated with social and gender changes. Since the 1950's until today, there has existed a romanticization of railroads, but this idealization and hope has changed throughout the years. In the 1950's, trains represented the possibility for a better job or a chance to rise in social class but today trains represent immigration and the search for a better life in another country. This change is apparent in the book "El Tren Pasa Primero" by Elena Poniatowska and the movie "Sin Nombre".

La adquisicion de la concordancia en la escritura de una segunda lengua (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Taylor Plank	Rebeca Bataller	10:00am - 11:00am Breidenbaugh Hall 311

El presente estudio trata del tema de la adquisición de la concordancia sujeto verbal y la concordancia entre artículo, sustantivo y adjetivo en la escritura de una segunda lengua, específicamente hablantes nativos de inglés en clases de español universitarias. Aunque hay muchos estudios sobre la adquisición de una segunda lengua, no hay casi ningún estudio sobre la adquisición de la escritura de una segunda lengua. Aproximadamente veinte estudiantes de tres niveles diferentes (más o menos principiante, intermedia y avanzada) de español en Gettysburg College escribieron ensayos cortos respondiendo a cuatro preguntas en clase.

Las tareas fueron analizadas para ver el número y porcentaje de errores en cada nivel. Los errores en concordancia sujeto verbal fueron agrupados en diferentes categorías: 1. Verbos que deben ser en pretérito, 2. Verbos que deben ser en imperfecto, 3. Verbos que deben ser en presente indicativo y subcategorías dentro de cada categoría: a. conjugación en tiempo verbal correcta pero de persona incorrecta, b. conjugación en tiempo verbal incorrecta pero correcta para la persona, c. conjugación en tiempo verbal y persona incorrectas. Los errores entre artículo, sustantivo y adjetivo también fueron agrupados en diferentes categorías: 1. Uso del artículo incorrecto para el sustantivo cuando no hay un adjetivo, 2. Adjetivo que no concorda con el sustantivo ni el artículo, 3. Adjetivo que concorda con el artículo pero no el sustantivo, 4. Adjetivo que concorda con el sustantivo pero no el artículo. Después de la clasificación los errores fueron analizados para ver como los porcentajes y distribuciones en categorías cambian a través de los niveles diferentes.

La iglesia española a través de los años (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Kailey Smaczniak	Radost Rangelova	2:00pm - 3:00pm Breidenbaugh Hall 311

Esa presentación va a enfocar en el papel de la iglesia española durante dos épocas distintas: la dictadura de Franco, y hoy en día. También, envolverá la relación constante entre la iglesia y las clases sociales. Para hacer esto, voy a examinar un texto principal de cada época – Réquiem por un Campesino Español por Ramón J. Sender, que representará la vida bajo la dictadura, y La Piel del Tambor de Arturo Pérez-Reverte, que representará la actualidad.

La influencia del género del hablante en el uso de tú y usted entre la gente de España (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Andrew Peiffer	Rebeca Bataller	10:00am - 11:00am Breidenbaugh Hall 311

El propósito de este estudio es investigar el uso de los pronombres de la segunda persona singular entre gente de España. El foco específico es la influencia del género del hablante en la frecuencia de su uso de tú y usted. Los datos fueron cogidos por un cuestionario escrito que consistía en ocho situaciones comunicativas en que el participante tuvo que imaginar que la situación ocurre en su vida real y responder con lo que diría en cada situación. Las situaciones requirieron que cada respuesta incluya un pronombre singular de segunda persona.

La pregunta de investigación de este estudio es:

Entre gente de España, ¿qué influencia tiene el género del hablante en la frecuencia de su uso de tú y usted en una situación de role-play escrito?

**Learning how to speak dos lenguas a la misma vez:
El reconocimiento de las estructuras típicas de cambios de código en estudiantes de español
(Panel)**

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Katelyn Bigelow	Rebeca Bataller	10:00am - 11:00am Breidenbaugh Hall 311

Previous studies have shown that many bilingual speakers use intra-sentential code-switches, or change language in the middle of a sentence, under set grammatical conditions, and only during situations in which the grammars of the two languages are identical. This study investigates the recognition of typical and atypical code-switches between Spanish and English by beginner and advanced students of Spanish at Gettysburg College. The questions of investigation are whether participants in the same level of Spanish have differing opinions of the acceptability of sentences with different parts of speech or that comply with one or both grammars, as well as whether there is a difference in the acceptability of these types of sentences between the two groups. The study consists of recordings of sentences containing both Spanish and English, some of which follow the previously stated code-switching guidelines and some of which do not. Subjects were asked to report the acceptability of the sentence in a conversation between bilinguals. Following these recordings, a questionnaire regarding attitudes towards Spanglish and code-switching was filled out. The results of the experiment show that within both of the groups the opinions of acceptability of code-switches vary between different parts of speech and different grammars. However, there were very few differences between the two groups. This suggests that students are able to recognize when Spanish and English grammars differ from an early stage, but their understanding of code-switching does not change as they advance in the language.

Spanish Panel: Sobre la asimilación de /s/ ante /r/ en la norma radiofónica del español estándar europeo y mexicano (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Bryan Harris	Rebeca Bataller	11:00am - 12:00pm Breidenbaugh Hall 311

El presente estudio busca analizar la asimilación realizada como debilitamiento y/o elisión de /s/ ante /r/ en el español culto de España y México, así consiguiendo las tasas de asimilación en los dos dialectos. A través de la transcripción fonética del estándar radiofónico de dichos dialectos se desea indagar sobre dicha asimilación con atención breve prestada a sus implicaciones sociales. La hipótesis del presente estudio es que en el español estándar europeo, por utilizar el alófono /s/ áptico-alveolar, se encontrará más asimilación de /s/ ante /r/ por el punto de articulación apical compartida entre dicho /s/ áptico-alveolar y el /r/ vibrante múltiple áptico-alveolar, mientras que el español estándar mexicano, en el cual se emplea el alófono /s/ lamino-alveolar, habrá menos asimilación de /s/ ante /r/. Se desea agregar al conocimiento universal de la fonética articulatoria del español de España y México en cuanto a la asimilación de /s/ ante /r/, siendo un tema muy poco estudiado hasta ahora.

Subject Pronoun Expression and the Effect of Syntactic Priming in Advanced Students of Spanish (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Rachel Ciniewicz	Rebeca Bataller	11:00am - 12:00pm Breidenbaugh Hall 311

The present study investigates the use of syntactic priming in college students studying Spanish with a particular focus on the priming of the first person subject pronoun, yo. An auditory and oral test consisting of ten series of three images was used to observe syntactic priming. The participants listened to a recording of a native speaker describing the first image using the first person present form and then verbally described the two subsequent images. The model was repeated this model with each group of images, randomly alternating the presence or omission of the pronoun. It was found that priming was used in the majority of descriptions following the format of each recording. The results demonstrate that students of Spanish can become proficient enough in the language to use the psycholinguistic technique of syntactic priming in the use of the first person pronoun.

The Tavern: The Ubiquitous Space of The Early Modern World (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Adam Newhard	Radost Rangelova	2:00pm - 3:00pm Breidenbaugh Hall 311

This essay and presentation analyze the uses and experiences of early modern peoples in taverns. The essay focuses on three works of literature, "Lazarillo de Tormes," "Don Quijote de la Mancha," and "La Ilustra Fregona," and analyzes the characters' actions and behavior in taverns, and how this reflects upon the early modern world in which the authors lived.

Un espacio caótico: la Ciudad Juárez y la frontera (A Chaotic Space: Ciudad Juárez and the Border) (Panel)

<u>Student(s):</u>	<u>Mentor(s):</u>	<u>Time/Location:</u>
Katelyn McLimans	Radost Rangelova	1:00pm - 2:00pm Breidenbaugh Hall 311

My Project analyzes the influence of international corporations and border conflicts on Ciudad Juárez, a Mexican border town across from El Paso, Texas. I pay particular attention to the way in which the border, as a space of contact, conflict, and migration, influences women in this region. I use Carlos Fuentes's novel *La frontera de cristal* (The Crystal Frontier) to discuss the influence of the maquiladora industry, or foreign-based factories employing thousands of young females, on women's condition in Ciudad Juárez. I also discuss the way in which Sabina Berman's film *El traspatio* (Backyard) relates this industry to the overwhelming amount of femicide, or violence against women, that has been a notorious feature of the region since the early 1990's.

Theatre Arts

"Novacane" (Theater)

Student(s):

Isabelle Boguski, Ryan Bonner

Mentor(s):

Christopher Kauffman

Time/Location:

12:00pm - 1:00pm

Brua Hall 200 Kline Thea

With the ever-increasing presence of hip-hop dance in today's culture, popularized through commercialized programs such as America's Best Dance Crew, So You Think You Can Dance, and countless music videos, the common images portrayed in this artistic form have bred a confused and static idea of hip-hop dance in the general public, becoming a mere commodity rather than a serious outlet for artistic expression. Since 2004, The Hip-Hop Conservatory of New York has been surveying New Yorkers in an effort to understand this growing misconception about hip-hop dance culture, while simultaneously educating misinformed participants about the true history of the culture as an inner expression of art.

To follow in these footsteps and begin to plant the seed for a more comprehensive perception of hip-hop dance, I have choreographed "Novacane" to demonstrate the capabilities of this genre of dance beyond the limited purview of styles that commercialized mass media commonly displays. This piece specifically explores the inherent tension between the competing goals and personalities of two people in a relationship. How much success or failure can we blame on our partner, and how much on ourselves? The only portal to an authentic connection is through the mutual surrendering of our selves, the letting go of the barriers we erect to keep what is outside in and what is inside out.

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The Celebration '12 Planning Committee wishes to thank all the student presenters, their mentors, and their supporters for making today's event a cause for celebration!

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