

Kyle Smith**Saladin's Jihad in the 12th Century**

Majors: History and Religious Studies

Project Advisors: Stephen Lyons and Carl Olson

Molly Soffiatti**Bebop Jazz's Neo-Expressionist Impulse in the Work of Jean-Michel Basquiat**

Major: Art History / Minor: Black Studies

Project Advisor: Richard Schindler

Colin Soleim**Automated Theorem Proving**

Major: Mathematics / Minor: French

Project Advisor: Tamara Lakins

Ariel Statman**Anchoring Energy of Liquid Crystals Doped with Azo-Dyes**

Major: Physics / Minor: Philosophy

Project Advisors: Daniel Willey and David Statman

Josh Taylor**Isolation and Characterization of the Extracellular Polymeric Substances of Haemophilus ducreyi**

Major: Biochemistry / Minor: Economics

Project Advisor: Tricia Humphreys

Chad Ungarean**Total Synthesis of Anti-Fouling Sesquiterpene Furan Natural Products and Analogues**

Major: Biochemistry / Minor: History

Project Advisor: Shaun Murphree

Brigid Williams**Angiotensin I Converting Enzyme (ACE) and Equine (Equus ferus caballus) Athletic Performance in Three-Day Eventing**

Major: Biology / Minor: Psychology

Project Advisor: Ann Kleinschmidt

Kelly Williams**"Away with Waste": Using a Project-based Learning Module to Increase Environmental Literacy**

Major: Environmental Science / Minor: French

Project Advisor: Thomas Eatmon

Aaron Zimmerman**Photovoltaic Devices Using ABX3 Perovskites in an All-Solid State Sensitized Architecture**

Major: Physics / Minor: Economics

Project Advisor: David Statman

HISTORY

Since the College's first commencement in 1821, Allegheny students have showcased their exceptional academic achievements through a senior capstone experience of one kind or another. At times it involved an oral defense, at others a written thesis. The notion of a written Senior Project coupled with a comprehensive oral examination first appeared in the 1942 College Catalogue. In the 1970s, oral examinations shifted from a general defense of disciplinary expertise to a more focused verbal presentation of the Senior Project findings.

PREPARATION

The Senior Project provides students with an opportunity to integrate discipline-specific scholarship with the communication and research skills necessary for professionals in the 21st century. During their first year at Allegheny, students write, speak, and research frequently in their first-year seminars. By the sophomore year they are ready to undertake the complexities of writing and speaking in a specific discipline. They further hone these disciplinary communication skills in a junior seminar, the final preparatory phase for the Senior Project. By the senior year students are sufficiently prepared to undertake a scholarly endeavor approximating those experiences they will face as professionals in their field.

REALIZATION

The culminating experiences of the Senior Project are as varied as the disciplines that produce them, from recitals, performances, and exhibits to written and oral presentations on laboratory research. Many illustrate unusual combinations of disciplines, interests and skills. The Senior Project Celebration offers an open forum for students to present their projects, allowing seniors to refine their skills in presenting to a broad audience and share ideas with other students and the campus community.

ALLEGHENY COLLEGE

The national liberal arts college where 2,100 students with unusual combinations of interests, skills and talents excel.

SENIOR PROJECT CELEBRATION

In keeping with Allegheny's commitment to provide students with a liberal arts education of high standards, the Senior Project is not a mere report or semester paper, but a significant piece of independent study, research or creative work conducted under the supervision of one or more faculty members. **The outcome of a Senior Project is more than a grade or a written document;** for the student it often results in a new way of looking at complex problems and inspires an appreciation for the power of ideas that might previously have seemed like abstract concepts in a textbook. Often it can be a pivotal moment when a student realizes his or her own abilities and potential.



ALLEGHENY COLLEGE

April 25, 2014

Poster Presentations

ALL POSTER PRESENTATIONS WILL BE IN THE LOBBY OF THE HENDERSON CAMPUS CENTER.

10:00 AM - NOON

Ian Arturo

Metal Concentrations in Residential Burn Barrel Ash, Crawford County, Pennsylvania

Major: Environmental Studies / Minor: Values, Ethics & Social Action
Project Advisors: Rachel O'Brien and Caryl Waggett

Katie Beck

Oh Freedom! Our Own Sounds: A Community-Based Theatre Piece with Bethel African Methodist Episcopal Church

Major: Theatre / Minors: Values, Ethics & Social Action and Writing
Project Advisor: Beth Watkins

Stephanie Blystone

A Comparison of Class I, II, and Leg Ulcer Haemophilus ducreyi Phagocytic Resistant Genes

Major: Biology / Minor: Psychology
Project Advisor: Tricia Humphreys

Connor Bratten

Analyzing the Effectiveness of Helper Pads in 3D Printing

Major: Computer Science / Minor: Economics
Project Advisors: Robert Roos and Janyl Jumadinova

Ava Carvour

Escaping the Kennel and the Cage: The Female-Animal Comparison in Charlotte Bronte's *Jane Eyre* and Anne Bronte's *The Tenant of Wildfell Hall*

Majors: English and Women's Studies
Project Advisors: Barbara Shaw and Diane D'Amico

Alexandria Ceschini

Plutonic and Volcanic Relationships of the Clark Creek Igneous Field, Northern Talkeetna Mountains, Alaska-

Major: Geology / Minor: History
Project Advisor: Ron Cole

William de Montmollin

A comparison of drop-cast and spin-cast films of poly(ethylene oxide)-b-poly(ϵ -caprolactone) using Fourier Transform Infrared spectroscopy

Major: Chemistry / Minor: French
Project Advisor: Ryan Van Horn

Dakota Dehn

The Restorative Impacts of Nature on Distributed Attention and Working Memory: An Eye-Tracking Analysis

Major: Psychology / Minor: Communication Arts
Project Advisor: Aimee Knupsky

Diehl Edwards

Mother Mary and the White Man's Li(n)es

Major: English / Minor: Political Science
Project Advisor: Matthew Ference

Jacob Ford

An Investigation into the Josephus Problem

Major: Mathematics / Minors: Economics and History
Project Advisor: Anthony Lo Bello

Eugenia Frank

I Am Not an Island: How Mainstream Mental Health Care Fails Low Income Women

Majors: Psychology and Women's Studies
Project Advisors: Robert Hancock and Barbara Shaw

Blair Hartman

The Implications of Our Trousers: Goddess and the Exploration of Gender in Performance

Major: Theatre / Minor: Political Science
Project Advisor: Beth Watkins

Taylor Hinton

"Activism through Food": Creating a Housing and Dining Cooperative at Allegheny College

Major: Environmental Studies / Minor: English
Project Advisors: Mark Neff and Kazi Joshua

Nicole Hohman

La transformation de l'archétype du gamin de Paris via le personnage Gavroche dans *Les Misérables*

Major: French / Minor: Economics
Project Advisor: Briana Lewis

Ashley Hollenback

Domestic Violence Experience, Participant Sex, and the Acceptance of Domestic Violence Myths in College Students

Majors: Psychology and Women's Studies
Project Advisors: Juvia Heuchert and Barbara Shaw

Bridget Hubbard

Suffering and Self-Sacrifice in Ireland's Collective Memory: The Hunger Strikes of Terence MacSwiney and Bobby Sands

Major: History / Minors: Philosophy and Political Science
Project Advisor: Barry Shapiro

Rachael Jander

Impact of Amyloid Beta in Relation to Early Alzheimer's Pathology

Major: Neuroscience / Minor: Chinese
Project Advisor: Lauren French

Matt Kelley

Dangerous Characters: The (Bio)Politics of Modern Man

Majors: Philosophy and Political Science
Project Advisors: Eric Boynton and Zach Callen

Anna Koebley

Accuracy of Spatial Models of Contributing Factors to Low Birth Weight in Pennsylvania

Major: Environmental Science / Minors: Values, Ethics & Social Action and Global Health Studies
Project Advisors: Caryl Waggett and Chris Shaffer

Lauren Krowitz

Levels of Athletic Involvement and Well-Being

Major: Psychology / Minors: English and Communication Arts
Project Advisor: Juvia Heuchert

Sarah Labarre

The Contemporary Situation of Prayer and Religious Practice in Healthcare: Current Research, Ethical Concerns and Future Implementation

Major: Religious Studies / Minor: Biology
Project Advisor: Glenn Holland

Cliff Lee

Invisible Race

Major: Art in Technology / Minor: Psychology
Project Advisor: George Roland and Sue Buck

Sarah Lerch

Educating a Gentleman: The Evolution of the Classical Education of the Antebellum Southern Male Planter Elite at South Carolina College, 1800-1860

Majors: History and Classical Studies
Project Advisors: Ian Binnington and Judson Herrman

Braden Licastrò

Approximate Algorithmic Image Matching to Reduce Online Storage Overhead of User Submitted Images

Major: Computer Science / Minor: Economics
Project Advisors: Robert Roos and Gregory Kapfhammer

Stephanie Marchincin

Margaret Sanger: Birth Control Activist and Public Health Visionary

Major: History / Minor: Biology
Project Advisor: Paula Treckel

Caitlyn McNamee

Judicial Obedience to the Chevron Doctrine: A Strategic Analysis of Court Responses to EPA and SEC Decision-Making

Major: Political Science / Minors: Economics and Spanish
Project Advisor: Brian Harward

Paige Missel

Meadville Time Trade

Major: Values, Ethics & Social Action / Minor: Studio Art
Project Advisors: Zachary Callen and Don Goldstein

Rachel Moore

“A Grete and Strong Labourid Woman”: Margaret of Anjou, Guinevere, and the Fifteenth Century Virago

Majors: History and English
Project Advisors: Stephen Lyons and Jennifer Hellwarth

Heather Nelson

“Leading Ladies: An Examination of Gender Disparity in Hollywood” and “(her) story: a film”

Major: Communication Arts / Minors: Economics and English
Project Advisors: Michael Keeley, River Branch, and Joe Tompkins

Desiree Niccoli

Becoming the Bride of God: Conflicting Ideologies of Virginity and Motherhood During the Middle Ages

Major: English / Minor: History
Project Advisor: Jennifer Hellwarth

Rebecca Nowacki

Binding of Non-Sexually Transmitted Leg Ulcer Syndrome (LUS) *Haemophilus ducreyi* to Extracellular Matrix Protein Type I Collagen

Major: Biology / Minor: Psychology
Project Advisor: Tricia Humphreys

Vincent Palmer

Further Studies of Charge Transfer Induced Spin Transitions (CTIST) of [Fe(3,4,7,8-tetramethyl-1,10-phenanthroline)₂]₃[Ru(CN)₆]₂ through Electron Paramagnetic Resonance (EPR) Spectroscopy

Major: Physics / Minor: Environmental Writing
Project Advisor: Doros Petasis

Colleen Pegher

Truth and Lies in Nonfiction: An Analysis of Fabrications in Truman Capote's *In Cold Blood* and James Frey's *A Million Little Pieces*

Major: English / Minor: Political Science
Project Advisor: Ben Slote

Hannah Phillips

Choroid Plexus Target-Based Therapy in Rats with Chronic Hydrocephalus: Use of an Aquaporin-1 Antibody Treatment

Major: Neuroscience / Minor: Music Performance
Project Advisors: Jeffrey Cross and Jeffrey Hollerman

Holly Ramey

Crossfire of Narratives: Two Iraq War Novels and the Implications of War Literature

Major: English / Minor: Psychology
Project Advisors: Ben Slote and Alexis Hart

Lisa Roberson

The Emerging Threat of Terrorist Use of Small UAVs: A Threat Analysis

Major: Political Science / Minors: Spanish and Psychology
Project Advisors: Howard Tamashiro and Shanna Kirschner

Erin Roby

Behavioral Effects of Mefloquine, NMDA, and Dissociative Anesthetics on Schedule-Controlled Responding in the Rat

Major: Psychology / Minor: Spanish
Project Advisor: Rodney Clark

John Rooney

When and How to Strike: What Theory Can Learn from Action

Major: Political Science / Minor: Black Studies
Project Advisor: Andrew Bloeser

Kaitlyn Shanahan

Observing Exercise-Induced Variations in Vascular Endothelial Growth Factor (VEGF) in Adult Patients with Ventriculomegaly: A Pilot Study

Major: Neuroscience / Minor: Spanish
Project Advisors: Jeff Cross and Jeff Hollerman

Ion Simonides

Sandstone Petrography of Middle to Upper Devonian Foreland Basin Fill in the Catskill Front, Southeastern New York

Major: Geology / Minor: History
Project Advisor: Ron Cole

Paige Slaughter

Rebel and Cell: Spaces of Oppression and the Power of Testimony in Revolutionary Spain

Majors: Philosophy and Spanish / Minor: Values, Ethics & Social Action
Project Advisors: Eric Palmer and Teresa Herrera