PLEASE NOTE THE FOLLOWING UPDATES TO THE SSRD SCHEDULE

• The **first session** of the day will begin at **9:30**, not 9:45 as listed in the program. This session will run, as in previous years, in two halves. The first half will run 9:30-10:30 with a 15 minute break from 10:30-10:45. The second half will run from 10:45-11:45.

• **Session 1.4** has been moved to the **3:30-5pm** time slot and into **Ford 304** to accommodate a student presenter schedule conflict.

• The **Dance Recital Session** will take place in **Smith Auditorium** starting at **3:40**.

• The **Chrysalis Release** will take place in the **Hatfield Room** starting at **7:00**.

Thank you
Student Scholarship Recognition Day

The Twelfth Student Scholarship Recognition Day (SSRD) represents the variety of research conducted by students with over 200 presentations, and a special session that has attracted about 500 high school students from the Salem area. It is also enriched with an increasing number of poster sessions, participation of freshmen and sophomores, and diverse topics of cultural area studies and interdisciplinary research. The Special Science Session is in conjunction with the Salem-Keizer Science Expo Darwin Discovery Days (3D) Program which aims to celebrate science discoveries throughout our community.

SSRD is a day to celebrate the exemplary scholarship and creativity of Willamette University students. It is held annually in the spring for students to share the fruits of their research, present musical, theatrical, and dance performances, and display works of art to members of the faculty, family, friends, and fellow students. Regular classes are not held on SSRD as a way of honoring the extraordinary accomplishments of our students and demonstrating Willamette University’s institutional commitment to student scholarship.

The students whose work is presented at SSRD have been supported in various ways. Some have worked directly with members of the faculty as research assistants or on student-faculty collaborative projects as part of the Science Collaborative Research Program (SCRP) and Liberal Arts Research Collaborative (LARC). Others have designed and conducted their own research as course projects, summer projects, or senior capstone research projects. Still others have created original works in fine and performing arts.

SSRD represents a rich array of thoughtful scholarship addressing longstanding philosophical debates, current social problems, environmental challenges, and scientific quandaries. It also offers an exciting spectrum of creative works. It is not only a time to demonstrate academic achievements, but also various performing arts and community service learning projects. The Presidential Scholar Session, the Lilly Project Summer Research Grants Session, and the performances in Rogers Hall and Goudy Commons are just a few examples that illustrate our students’ incredible scholarship.

This day is also enriched by the SSRN (Student Scholarship Recognition Night) which consists of a series of events organized by the student organizations and clubs. Indeed, SSRD has become a valued part of Willamette University’s culture and history.

Let us celebrate the intellectual achievements, curiosity, leadership, and creative spirit of our extraordinary students!
All Day Activities .............................................................. 4

Junior Art Major’s Spring Review Exhibition
8:00 am - 4:00 pm // Student Art Gallery, Art Building

Senior Art Major’s Exhibition
10:00 am - 5:00 pm // Hallie Ford Museum of Art

Session 1: 9:45 - 11:45 am ..................................................... 4
Session 2: Noon to 1:50 pm .................................................. 6
Session 3: 1:00 - 2:00 pm ..................................................... 6

Music and Dance Session: 2:00 - 5:00 pm. .......................... 8

Film Session: 2:00 - 5:30 pm ............................................. 9

Session 4: 2:15 - 3:15 pm. ................................................. 9
Session 5: 3:30 – 4:30 pm ............................................... 10
Session 6: 3:30 – 5:00 pm ............................................... 10

Student Academic Honors Ceremony 5:00-7:00pm
Cat Cavern, University Center

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All Day Activities

**Junior Art Major Spring Review Exhibition**
*Student Art Gallery, Art Building*
8:00 am – 4:00 pm
Graham Bachelder, Eloise Bacher, Eileen Chavez, Lauren Cooney, Ivan Ferguson, Meara Gordanier, Elizabeth Harney, Moriah Hernandez, Ellen Kaline, Freddy Leon, Andrew Long, Michael Lukas, Linnea Oddie, Erynn Rebol, Alexander Smith, Georgia Stanley, Elizabeth Stegner, Samantha Sumpter, Cara Thompson, Ariel Wilson, and Jenna Wu

**Senior Art Major Exhibition**
*Hallie Ford Museum of Art*
10:00 am – 5:00 pm
Amanda Applebaum, Bonnie Balogh, Stephanie Crook, Emily Doughten, Janelle Higashida, Sam Kuniholm, Nick Lawson, Sarah McCarthy, Maya McFaddin, Matthew Parker, Laurel Priest, Katherine Preucil, and Matthew Soma

**Session 1.1: Readings from Engl498 Creative Writing**
*Moderator: Scott Nadelson // Eaton 211*

- Donovan, Joe
  DNA, Jay-Z, and Seat 9-A: Exploring Lyrical Formalism
- Bray, Emily
  Non-Fiction Thoughts on Growing Up
- Jones, Collin
  Readings from a Thriller Novel in Progress
- Frenzel, Rachel
  The Creation of a Contemporary Gothic Novel
- Church, Noah
  Untitled: A Work of Biblical Fanfiction
- Niermeyer, Madison
  Woman ≠ Garlic Clove: A Poetry Reading

**Session 1.2: Eisenhower's Cold War Rhetoric**
*Moderator: Amber Davission // Ford 102*

- Greenblatt, Nichola
  Eisenhower's Farewell
- Hernandez, Jake
  Rhetoric of President Eisenhower
- Abrahams, Miranda
  Chance for Peace: Metaphorical Persuasion
- Danielson, Acacia
  Eisenhower and the Rhetoric Compact
- Stahl, Megan
  Eisenhower: The Common Hero
- Lantz, Alexandra
  Eisenhower’s “Atoms for Peace”

**Session 1.3: Something About Literature (and Zombies)**
*Moderator: Mary Bachvarova // Ford 302*

- Furlow, Alexander
  Franz Kafka: Brief an den Vater (Letter to his Father)
- Cushman, Colin
  Louis Armstrong, Race, and Ralph Ellison’s Invisible Man
- Williams, Bethany
  Nature as Subject: Fiction and Empowerment
- Wright, D’Arcy
  Tintin and World War II: Hergé’s Political Critiques and Messages of Solidarity
- Deal, Carrie
  Machetes, Mahyem, and the Zombie

**Session 1.4: “LOLCATS: A Study of the Interwebs”**
*Moderator: Benjamin Peterson // Eaton 209*

- Scruton, Brett
  Afghanistan’s Internet Dilemma
- Updegraff, Alicia
  Like This be to Politically Involved
- Hamburg, Katie
  SOPA—The Right Balance to Combat Piracy?
- Briggs, Samantha
  All’s Fair in Love and (Cyber)war

**Session 1.5: Take-a-Break: Journey in Service, Justice, and Education**
*Moderator: Kim Sogge // Ford 301*

- Gutierrez, Margarita; Glade, Rosie
  TaB Chicago: Transborder Lives
- Buoncore, Katie; Hollowed, Thomas
  TaB Immigration Northwest
- White, Ray; Leveridge, Danielle
  TaB New Orleans: (Un)natural Disasters
- Buckley, Rachel; Paige Mullins
  TaB Portland: Youth Experiencing Homelessness
- Zavala, Natividad; Foster, Mack
  TaB San Francisco
Session 1.6: Beloved Humanities Seminar  
Moderator: Lynn Makau // Eaton 307

Miller, Kathryn  
“I want to join”—Toni Morrison’s ‘Beloved’ as Gothic literature through supernatural agency

Jolliff, Rebecca  
“Love songs to Mr. Death”: Exploring Gendered Resistance in Toni Morrison’s ‘Beloved’

Thomas Justman  
Domestic Space and Work in “Beloved”

Avery, Faith  
Sound and Utterance: Breaking Barriers of Race and Gender in Toni Morrison’s “Beloved”

Session 1.7: Food and Agriculture in the 21st Century  
Moderator: Kimberlee Chambers, Wendy Peterson

Borning // Collins 201

Anderson, Emily  
Environmental Implications of Food Waste: An Analysis of Waste Associated with Snack Served during an After-School Program at Bush Elementary School

Mayer, Rachael  
The Fast Life: Food at a Local Middle School

McClelland, Amanda  
Zena Farm

 Osborne, Ariel  
Having a Plot of One’s Own: Perspectives on the Community Gardening Experience in Salem, OR

Griggs, Marilea  
Farm to School in Salem-Keizer: the intersection of the local food movement and school lunch reform

Draguer, Ellen  
Gender and Sustainable Agriculture

Dougan, Emily  
Food Deserts: Purely a Western Problem?

Trant, Lindsay  
Local Food in the Willamette Valley

Session 1.8: Rhetoric: Story and Song  
Moderator: Cindy Koenig Richards // Ford 204

Pitchford, Matt  
Capes, Costumes, and Real Life Heroes

Leone, Angela  
From Bloomers to the Ballot Box: The Rhetorical Significance of Sheet Music in the Women’s Rights Movement in the Early United States

Rice, Kaitlyn  
Mitt Romney’s Mormon Narrative

Williams, Austin  
The Wire: The Risk of Unusual Television

Session 1.9: International Conflict and Cooperation  
Moderator: Michael Marks // Ford 201

Stevens, Kristen  
The Caspian Sea Dispute

Hall, Heidi  
The Scales of Good and Evil: Individual Responsibility for Mass Violence in International Criminal Courts

Reddy, Tejeswara  
Biodiversity: A Study of Patent Law

Gan, Livu  
Transatlantic Identities in U.S.-Europe Security Relations

Session 1.10: History Senior Thesis Presentations  
Moderator: Ellen Eisenberg // Eaton 106

Greenberg, Chelsea  
Teaching Americanism in Oregon

Sjulin, Jenna  
The Evolution of AIDS Service Organizations in the United States

Schnoor, Harrison  
The Knights of the Ivory Tower

Williamson, Haley  
Marguerite, Mysticism and Heresy

Session 1.11: Biology Research Presentations  
Moderator: David Craig // Collins 205

Venable, Sally  
Benefits of Holistic Veterinary Medicine

Sonnenfeld, Sarah  
Corticosterone regulation of vasotocin signaling: An imaging study

Gadek, Kate  
Ethylene’s Regulation of the Floral Transition in Pharbitis nil ‘violet’

Grabman, Bartholomew  
Response Time in Collegiate EMS

Parkinson, Erin  
Parasite Resistance to Anthelmintics

Ezray, Briana  
Native Bees Within the Willamette Valley
Session 2.1 (noon-12:30): Salem-Keizer to Scientists
Moderator: David Craig // Smith Auditorium

President Stephen Thorsett
Chuck Williamson
Alfredo Zuniga
Shealyn Friendrich
Erik Reinhart

Session 2.2 (12:35-1:50): Special Science Presentations
Moderator: David Craig // Smith Auditorium

Zuniga, Alfredo
Behavioral Analysis of Loss of single-minded Function in Drosophila

Neal, James
Preventing Blindness: The Design and Synthesis of Ion Channel Blockers

Williams, Hallie
Differences in morphology affect agonistic signalling of the domestic dog

Friedrich, Shealyn
Individual Lateralization and the Development of Prey Handling Skills Among Caspian Terns

Session 2.3 (12:35-1:50): Development of Teenagers/Emerging Adults
Moderator: Melissa Witkow, Erik Noftle // Ford 102

Prados, Hannah
Achievement: Liked vs. Popular students

Menghini, Kellie
Personal and Character Strivings

Session 2.4 (12:35-1:50): Psychology Poster Session
Moderator: Melissa Witkow, Erik Noftle // Ford Hall 102

Rauch, Erika
Pursuing a Functionalist Account of Behavioral Differences between Emotions by Integrating the Study of Actions, Inhibited Actions, and Big-Five States

Rickert, Nicolette; Apple, Amanda; Prados, Hannah; Meras, Inez; Cullen, Laura
Adolescent Autonomy and Driving

Session 2.5 (12:35-1:50): Sex, Drugs, and Rock and Roll: Sociological Studies of Subcultures and Countercultures
Moderator: Stanislav Vysotsky // Ford 122

Fleming, Kristian
The Boys’ Club: Punk in Salem

Tanner, Kelly
Becoming a Contemporary Marijuana User

Waligore, Erica
A Space of Their Own

Session 3.1: Chemistry Poster Session
Moderator: Sarah Kirk/Drew Duncan // Montag Den

Agnew-Svoboda, William; Davis, Erica; Fujimoto, Rachel; Reinhart, Erik;
Serotonin

Archibald, Alycia; Broadstone, Lisa; Rodgers, Nicole; Take a trip with LSD

Balderston, Marshall; Egelhofer, Kira; Glantz, Hayley; Moritz, Elisabeth;
Acid Rain and Human Activities

Bartlett, Elliot; Henry, Alex; Shiluk, Brandon;
The Greenhouse Effect: A chemical description of how the atmosphere is affected by greenhouse gases.

Barton, James; Gadson, Kaliko; Giramma, Oliver;
The Chemistry of Film

Blake, Ahlers; Jon Amos;
Nanotube Application in Solar Panels

Bond, Molly; Samiee, Hope; Hoffman, Peter; Kennedy, Carson;
History of Niobium and Tantalum

Brown, Justin; Im, Austin; Ingram, Kieran; McMillan, Josie;
Excimer Laser Surgery

Burkey, Kaile; Crosby, Dana; Oswill, Andres; Wong, Matthew;
TNT: An Explosive Lesson in Chemistry

Burton, Sarah; Duell, Anna; Nelson, Hope; Schwebke, Kristina;
Breaking Down Death

Carragee, Catherine; Josephson, Rebecca; Aubol, Kevin;
Chemistry of Albuterol

Cherry, James; Newcomb, Megan; Sharma, Chandni;
Howard, Jay;
Nitroglycerin

Cobbett, Katherine; Hermann, Jenna; Lindgren, Ian;
Wiggins, Eve;
The Chemistry of ATP Hydrolysis

Correa, Miguel; Davis, Garrett; Schrimp, Alexandra;
Whitehead, Chris;
Addicted to Morphine

Dwyer, Brendan; Cohen, Megan; Waidley, Kaitlyn;
New Infrared LASER Radiation Therapies
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<td>The Chemistry of Chocolate</td>
<td>Gross, Megan; Travis, Lauren; Lacy, Katherine; Lawson, Elizabeth; Berger, Nina</td>
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<td>Vasotocin Structure and Function</td>
<td>Jasmund, Robert; Richards, Michael; Grauberger, Jenny; Conklin, Carolyn; Star Light, Star Bright</td>
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<td>The Chemistry of Baking</td>
<td>Loos, Jordan; Guzman, Valeska; Nuñez, Andrea; Hernandez, Michael; Feeling Sarin for yourself?</td>
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<td>The Chemistry of Quasicrystals</td>
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<td>The Danger of Caffeinated Alcoholic Beverages</td>
<td>Ostrowski, Wesley; Semlacher, Berlin; Robbins, Brent; Waldner, Jake; The Danger of Caffeinated Alcoholic Beverages</td>
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<td>History of Uranium Enrichment</td>
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<td>Understanding Ozone Depletion</td>
<td>Sobocinski, Jeremy; Reed, Kaitlin; Outhet, Jessica; Environmental Clean-up via Photocatalyst</td>
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<td>Film Development</td>
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<td>AZT and the Fight Against HIV</td>
<td>Van Hook, Kelley; Pyl, Karlie; Paul, Alessandra; Jones, Colin; AZT and the Fight Against HIV</td>
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<td>The Chemistry of Fireworks</td>
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<td>Womb for Rent: Commercial Surrogacy and Reproductive Tourism Challenge</td>
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<td>Understanding “Homininity”</td>
<td>Alexander, Tyler; Balderston, Marshall; Berg-Rosenblatt, Jake; O’Leary, Hadley; Condiotti, Caroline; Dougan, Emily; Grey, Marin; Guyton, Brandon; Harper, Rebecca; Heitzman, Peyton; Leenstra, Madisyn; Lumish, Jennifer; Moreno, Joyce; Mow, Benjamin; Quintana, Miguel; Ramos, Juan; Rattner, Evin; Rehm, Daniel; Rhime, Lucy; Robie, Ryan; Schleman, Emily; Smith, Nicole; Smyth, Colleen; Wade, Kurt; Watanabe, Tana; Winslow, Heather; Xiang, Shen; Yoshizawa, Torri</td>
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**Session 3.2: Environmental Science Poster Session**  
**Moderator: Karen Arabas**  
// Ford Lobby

**Session 3.3: Experiencing the Human Body**  
**Moderator: Anna Cox**  
// Eaton 106

Olsen, Sabrina  
Agriculture and Obesity in the US  
Toninato, Blythe  
Understanding “Homininity”  
White, Kelsey  
Womb for Rent: Commercial Surrogacy and Reproductive Tourism Challenge and Redefine “Motherhood”
Session 3.4: Art and Community in Japan  
**Moderator: Miho Fujiwara // Eaton 209**

Hendricks, Kenneth  
After the Quake, Redux
Hurlburt, Heather  
Collaboration by Three Ukiyo-e Artists
Higashida, Janelle  
Social Interaction in Art

Session 3.5: Exercise Physiology  
**Moderator: Mike Lockard // Collins 201**

Clark, Lyndsy; Kim, Sylvia; Whitcomb, Tyler  
The Effects of Dynamic Stretching on Motor Neuron Excitability and Muscular Power
Palmer, Shannon; Siebuhr, Rachel; McGeehan, Michael; Briggs, Wyatt  
Physiological Correlates of Talk Test
O'Leary, Colin; Burke, Laurel; McSweeney, Sarah; Rowan, Andrea  
The Acute Effects of Static Stretching

Session 3.6: The Economics of Environmental Action  
**Moderator: Raechelle Mascarenhas // Ford 304**

Chavarin, Octaviano  
Nature as a Commodity: Implications of Voluntary Carbon Offsets in the Developing World
Nakayama, Yoshio  
The Rise of 1 Million Electric Vehicles

Session 3.7: Welfare Women, Criminal Women, and the Sadomasochism in Love: A Polemic Discussion on Gender  
**Moderator: Allison Hobgood // Ford 201**

O’Brien, Rory  
In the Bedrooms of Another Country
Uebelacker, Sydney  
Metaphors for Criminality and the Construction of the Female Offender in 19th-Century America
Streeter, Jennifer  
Women, Empowerment and The Welfare State

Session 3.8: Components of Change: Rehabilitative Justice on the West Coast  
**Moderator: Richard Ellis // Ford 301**

Worthing, Sarah  
“Deserving” rather than “Deviant”: California’s Victim-Centered Anti-Trafficking Legislation within the Securitization of Human Trafficking
Gala, Jack  
Trigger Happy, Gun Shy: Why States Like Oregon Still Have the Death Penalty

Session 3.9: Applied Sociology: What's Culture and Community Got to Do with It?  
**Moderator: Linda Heuser // Eaton 307**

Greene, Kaitlin  
Collective Culture, Expanded Community
Yamashita, Koki  
Beyond Soy Sauce: Office Space of Yamasa Corporation USA

Session 3.10: Crossing the Line: President Eisenhower's Rhetorical Crisis in Little Rock  
**Moderator: Amber Davisson // Ford 302**

Cothrun, Kayla  
Eisenhower at Little Rock
Gehm, Danielle  
Eisenhower’s Little Rock Speech: an Argument of Lawfulness and Patriotism
Sweeney, Joellen  
The Home Front Rescue Mission

Session 3.11: Lilly Project Summer Research Grants  
**Moderator: Karen Wood // Collins 205**

Stockdale, Catherine Minn  
Answering the Call: An Exploration into the Vocation of 21st Century Global Health Workers
Schiff, Hannah Elise  
Antony Zito: The Portrait Maker's Face
Li, Anna  
Taishanese in Portland, Oregon

Session 3.12: Theater Presentations  
**Moderator: Bobby Brewer-Wallin/Jon Cole**
Pelton Theatre, Putnam Studio 217

Quigley, Sarah; Striepe, Bryn; Rice, Josh  
Anyone Could See

Music Department Recitals: Art Alive!  
Rogers Music Center, Hudson Hall
Film Session: The View from Behind the Camera - Willamette Student Films
Moderator: Ken Nolley // Ford 122

Kyllingmark, Heather
The Oxcart: Synergy in Practice and Metaphor

Hill, Cameron
Dreamscapes

Leiser, Todd
A Morning After

Shults, Brad
Brad Shults Senior Thesis

Kuhn, Sam
Finding Truelove

Session : Dance Performances
Moderator: Matthew Nelson // Rogers

Larsen, Sarah
Performance of “Notice”

Yoste, Madeline
Tungsten Fury: Ballet

Session 4.1: Learning Senior Living: Life After 65
Moderator: Sarah Bishop // Eaton 211

Roberts, Caitlin
“Computing for Grownups:” Power and Resistance among Seniors Engaging with Computer and Internet Technologies

Fallat, Claire
Live Bones: Ageism and Senior Citizens

Hall, Rebecca
The Journey “Home”: An Anthropological Perspective on the “Homecoming” Experiences of Vietnam War Veterans

Session 4.2: Politics and Law in the U.S.
Moderator: Richard Ellis // Ford 301

Baptista, Rafael
Homeless Voting Rights in Oregon and New York

Hursh, Kimberly
A strange proximity: Chicano Activism in Mt. Angel, Oregon

Hanslovan, Andrea
My Hazard Should Be Our Hazard

Session 4.3: Psychology Thesis Presentations
Moderator: Courtney Stevens // Eaton 307

Niermeyer, Madison
An ERP Study of Reading Japanese Kanji

Rusk, Neal; Niermeyer, Madison; Waller, Hannah
Neural Responses to Letter Processing

Session 4.4: African History Goes to Hollywood
Moderator: Bianca Murillo // Ford 204

Eckerson, Bradley; Yoshida, Atsushi; Plourde, Catie
How “Hotel Rwanda” Deceived the U.S.

Briggs, Samantha; Zars, Frances
The Over Cultivated Garden

Session 4.5: Education Policy Analysis and Evaluation
Moderator: Don Negri // Collins 201

Bell, Kevin
A New e-Ducation for a New e-Conomy

Holdreith, Grace
The High Stakes of Standardized Testing; How Policy Feedback Mechanisms Fail To Improve Educational Outcomes

Session 4.6: Chemistry Research Presentations
Moderator: David Goodney // Collins 205

Yee, Estella
Nuclear Magnetic Resonance Spectroscopy Investigation of a Phase Diagram Anomaly in the o-Toluidine + n-Hexane Binary Liquid-liquid System

Johnson, Emily
The Investigation of the Binding Interactions between the Anticancer Agent NAMI-A and tRNAPhe

Cardiello, Joseph
Why do plants make isoprene? Using moss to solve a long-standing phytochemical mystery.

Session 4.7: Human Interfaces: Designing for the User
Moderator: Fritz Ruehr // Ford 204

Mock, Brian
Creating a Programming Language

Fisher, Ashley
Game Interface & Artificial Intelligence

Jones, Stephanie
Giving Logic a Graphical User Interface

Session 4.8: Understanding Social Institutions
Moderator: Brianne Davila // Eaton 209

Thomas, Nilo; Rivas, Dina Sarai
Willamette Academy: A Constructive Critique

Bateman, Matthew
Modeling Youth Homelessness
S E S S I O N 4.9: Religion, Politics, and States  
Moderator: Robert Trapp  // Ford 304

Bloom, Erin  
Land and Promises  
Chatterjee, Alyssa  
Presidential Nominees & Religiosity

Session 4.10: Looking Locally: Gendered Communities in Oregon  
Moderator: Jade Aguilar  // Ford 201

Scheffer, Ellen  
Farming For Femininity  
Quinn, Sara  
Gender Variance in Willamette Classrooms  
Larmer, Zoe  
Identity on Oregon Women’s Lands

Session 5.1: Presidential Scholarship Research  
Moderator: Monique Borque  // Hatfield Room

Brody, Ian  
Imagined Musical Communities: Making Meaning in Western Classical Art Music

Session 5.2: Lasers, Numbers, and Complex Systems  
Moderator: Josh Laison  // Ford 301

Whitson, Hayley; Parsagian, Lexi; Betton, Forrest; Miller, Brigit  
Construction of a Dye Laser  
Bateman, Matthew  
In Defense of Perspective  
Onstad, Malika  
The ABC Conjecture

Session 5.3: Retelling Cinderella  
Moderator: Jeanne Clark  // Eaton 209

Britton, Spenser; Cushman, Colin; de Man, Jordan; Harvey, Mary; Harwell, Jonathan; Mittendorf, Andrew; Paisley, Blake; Piluso, Kathleen; Reid, Adam; Richards, Michaelin; Simonson, Jacob; Smith, Elizabeth; Waligore, Erica; Zars, Frances

Session 5.4: Health and Healthcare  
Moderator: Stas Stavrianeas  // Collins 210

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Motor Deficits in Alzheimer’s Population  
Siebuhr, Rachel  
von Willebrand Factor and Blood Flow Response to Whole Body Vibration in Diabetic Peripheral Neuropathy  
Johnson, Emily  
The Pulmonary Microbiome and Cystic Fibrosis: Real Time PCR for the Identification of Bacteria in the Airways of Patients with Cystic Fibrosis

Session 5.5: Latin America: Past, Present, and Future  
Moderator: Kimberlee Chambers  // Eaton 311

Jennings, Jillie  
Language and Silence in the Dirty War  
Green, Teresa  
Puerto Rican National Identity Formation  
Kipling, Alex  
Rio’s Favelas/Morros and the Formal City

Session 6.1: A Mao for All Seasons: An Introduction to Different Historical Strategies  
Moderator: Cecily McCaffrey  // Eaton 105

Ezard, Alison  
Russell, Lindsy  
Newell, Bill  
Wu, Patrick

Moderator: Emily Drew  // Ford 204

Hoskins, Kelsey  
Bridge Between Homelands: Korean Adoptees’ Reclamation of Voice & Space  
Odell, Kelly; Mayer, Rachael  
“Chemawa Indian School Recording Session: Expressions of Knowledge”  
Sogge, Kim  
What are you?: Creative processes for reclaiming space and dialogue around the Multi-Racial identity  
Stockdale, Catherine Minn; Ryan, Brady  
Calibrations and Collaboration: Strengthening relationships between Willamette University and Chemawa Indian School through Chemawa AVID Day
Session 6.3: Womanhood and the Politics of Identity
Moderator: Jonneke Koomen // Ford 201

Wurster, Jessica
Hijab in the Media: A Difference in Perceptions

Hill, Mara
Marriage Legislation in Ethiopia

Hoogstede, Karina
The Female Protester in Egypt

Buckley, Rachel
Women Donors’ Imaginaries in the U.S.

Session 6.4: Resistance, Identity, and Social Change
Moderator: Megan Ybarra // Ford 302

Paulsen, Gunnar

Hunt, Heidi
Anarchy By Any Other Name: Occupy Wall Street’s Use of Anarchist Tactics

Coddington, Laura
Jordan, the Arab Spring that Wasn’t

Fidler, Annie
The Politics of Power and Indigeneity, and the Persistence of Rwanda’s Invisible Twa

Student Scholarship Recognition Night (SSRN) Activities

Class Council Social Events

Freshmen and Sophomores

POETRY EXTRAVAGANZA

Literary Readings, The Chrysalis
Readings by students, free magazines and live music
7:30-8:30pm//Hudson Hall-Rogers Music Center

Salem-Keizer Science Expo Darwin
Discovery Days (3D) Program
Sparks Gym
Eisenhower's Cold War Rhetoric
Chance for Peace: Metaphorical Persuasion

On April 16, 1953, Dwight D Eisenhower gave the “Chance for Peace” in response to the nation's hesitancy to the Cold War. This paper explores the metaphorical progression of the speech, given the U.S. fears of the Soviet Union and the recent death of Joseph Stalin. Eisenhower's kairos and metaphorical language create a visually pleasing end to a rather scary situation. This paper examines the use of the binary situation he creates with the two roads and how he furthers this binary situation with language of life and death, peace and war, leaving no possibility of overlap of the two.

Agnew-Svoboda, William  Sophomore
Biology

Davies, Eric  Sophomore
Chemistry

Fujimoto, Rachel  Sophomore
Biology

Turnidge, Ashley  Sophomore
Biology

Chemistry Poster Session
Serotonin

Discovered by Maurice Rapport and colleagues in 1948, Serotonin is a neurotransmitter that acts in the nervous systems of complex animals in response to stimuli. It is characterized by its involvement in the regulation of sleep and wakefulness, eating and body temperature. Serotonin is unable to cross the blood brain barrier, and therefore, must be synthesized in the brain from the amino acid L-Tryptophan. Structurally similar inhibiting or inducing drugs can be synthesized by evaluating the active sites on Serotonin and its specific receptors. These Serotonin Specific Reuptake Inhibitors (SSRI) are used to treat eating disorders, depression, migraines and anxiety.

Anderson, Emily  Senior
Environmental Science Spanish

Food and Agriculture in the 21st Century
Environmental Implications of Food Waste: An Analysis of Waste Associated with Snack Served During an After-School Program at Bush Elementary School

When food is wasted, the resources and energy that went into its production were used or expended in vain. A vast amount of food waste is specifically associated with schools. This study investigates the waste generated from a mandatory snack served during an after-school program at Bush Elementary School. The results indicate that the amount of waste is significant and the methods for disposing of the waste are not ideal. Mandating that students take a snack instills the idea that wasting food is acceptable, a prominent belief within the United States that leads to a multitude of environmental concerns.

Archibald, Alycia  Junior
Biology

Broadstone, Lisa  Sophomore
Chemistry

Rodgers, Nicole  Junior
Biology

Reinhart, Erik  Sophomore
Chemistry

Chemistry Poster Session
Take a trip with LSD

Lysergic Acid Detyethylamide (LSD or “Acid”) was synthesized in 1938 by Swiss chemist Albert Hofmann. It was first used as a treatment for depression before gaining a following as a recreational drug. Its hallucinogenic effects drew the interests of young people and musicians and so it quickly became abused for nonmedical purposes during the 1960's. Due to the adverse side effects, it was banned in 1966 and labeled a Schedule I Controlled Substance. This poster discusses the history, use, abuse, and synthesis of LSD, as well as the structures and physiological pathways of similar hallucinogens such as Psilocybin and Methysergide.

Avery, Faith  Junior
English Music

Beloved Humanities Seminar
Sound and Utterance: Breaking Barriers of Race and Gender in Toni Morrison’s “Beloved”

Critics have argued that sound and utterance play an integral role throughout Toni Morrison's Beloved. Often, they exclusively connect the concept of sound to the feminine and the healing which the character of Sethe experiences. I posit that, while sound and utterance are central to the novel, they cannot be solely connected with female characters. Rather, men and women, as well as African American and white characters, experience the power of sound differently. Consequently, sound and utterance serve as a bridge between characters and within communities as a means of healing and of communal understanding.

Balderston, Marshall  Freshman
Undecided

Egelhofer, Kira  Freshman
Undecided

Glantz, Hayley  Freshman
Undecided

Moritz, Elisabeth  Freshman
Undecided

Chemistry Poster Session
Acid Rain and Human Activities

Acid rain is no longer the hot-button issue as it was in the eighties, but it is still a significant environmental problem, particularly in the eastern United States. In this research project, we studied the chemical reactions in the atmosphere between water and nonmetal oxides, which produce acids. When this acid precipitation falls back to earth, it reacts with substances like limestone (calcium carbonate) to decompose it. It also affects ecosystems and crops by altering the pH of the soil and inhibiting plant growth. Limiting these effects by examining harmful fossil fuel usage is an important objective for modern environmental chemists.

Baptista, Rafael  Senior
Politics Spanish

Politics & Law in the US
Homeless Voting Rights in Oregon and New York

Beginning in the 1980s, legislation and court cases have made it possible for homeless citizens to exercise their right to vote. Both Oregon and New York are politically progressive, but they approach the question of homeless citizens' voting rights differently. Through a comparative analysis of social and political factors, this thesis seeks to explain why Oregon is a national leader in the practical right to vote for homeless citizens.

Bartlett, Elliot  Sophomore
Undecided

Henry, Alex  Junior
Exercise Science

Shiluk, Brandon  Sophomore
Undecided

Chemistry Poster Session
The Greenhouse Effect: A chemical description of how the atmosphere is affected by greenhouse gases.

Recently observed climate change can be attributed to the drastic increases in the output of greenhouse gases. Human activities including the burning of fossil fuels, as well as livestock enteric fermentation, are the main culprits behind the increases in output. Our atmosphere is surprisingly delicate and the consequential increases in CO2 produced from these sources are threatening the stability of our atmosphere and the benefits in temperance that it provides.
ABSTRACTS

Barton, James  Sophomore  Biology
Gadson, Kaliko  Sophomore  Biology
Giramma, Oliver  Sophomore  Biology Biology

Chemistry Poster Session
The Chemistry of Film

Our poster centers around the use of silver bromide in film development, specifically in black and white film. The invention of film modernized the way humans understood art, giving us a new way to preserve our memories. Traditionally, the creation of a photograph occurs when a silver halide compound reacts with light. For this poster, we explored the reaction that occurs when silver bromide absorbs a photon. The reaction triggers the silver bromide to split apart into its individual components. The silver atoms then form small clusters on the photo paper, that can later be developed into a visible image.

Bateman, Matthew  Sophomore  OTHER

Lasers, Numbers, and Complex Systems
In Defense of Perspective

As the world becomes increasingly interdisciplinary, the field of Complex Systems is beginning to take a greater hold on both the academic and non-academic populus. Both the field as well as the concept of a topical undergraduate student-designed major will be explained.

Bateman, Matthew  Sophomore  OTHER

Understanding Social Institutions
Modeling Youth Homelessness

Youth homelessness is a critically under-supported issue that is prevalent nationally. The research looks at how the various systems and organization work and fail, and how we can effectively move forward to solve the problem. The presentation is an explanation of what these youth go through on a regular basis.

Bell, Kevin  Senior  Politics Economics

Education Policy Analysis and Evaluation
A New e-Ducation for a New e-Conomy

The costs of higher education have risen 900% since 1978, 650 points above the rate of inflation. High costs and shrinking support for public and private non-profit schools have driven students into the eager arms of for-profit institutions, who have been accused of numerous questionably fraudulent and unethical practices, but represent the only choice for many and primary driver of innovation in higher education today, making its existence a necessity for millions. We will examine the government regulation, practices, and quality of publicly traded for-profit colleges and compare policies for effective regulation to determine appropriate responses to this new sector.

Blake, Ahlers  Sophomore  Exercise Science
Jon Amos  Junior  Biology

Chemistry Poster Session
Nanotube Application in Solar Panels

Nanotubes have the potential to be useful in revolutionizing medical, biotechnology, and energy fields so that they are cheaper and easier to administer. For example, nanotubes can be used in solar panels, fuel production, batteries, and much more. Solar cells are composed of several layers, including a transparent conductor layer that allows light to pass into the cell and electricity to pass out. Researchers have found that metallic nanotubes are fifty-times more efficient at conducting electricity than current solar cells. Solar panels incorporating nanotechnology have the capability to convert sunlight to electricity, leading to inexpensive solar power in the future.

Bloom, Erin  Senior  Politics

Religion, Politics, and States
Land and Promises

When Israel returned the Sinai Peninsula to Egypt as part of the Camp David peace accords, it was the first time in history that a country had voluntarily returned land won in conflict without having first been defeated in war. This paper examines the reasoning behind a seemingly unprecedented sacrifice of land through the lens of realism, liberal institutionalism and constructivism, and concludes that the decision to return the Sinai was motivated by the Zionist ideology. Since the Sinai had never been considered part of the historical Jewish state in any form, the Israeli government was unable to justify keeping the land.

Bond, Molly  Freshman  Undecided
Samiee, Hope  Freshman  Undecided
Hoffman, Peter  Freshman  Undecided
Kennedy, Carson  Freshman  Undecided

Chemistry Poster Session
History of Niobium and Tantalum

The recent participation of Tantalum and Niobium in the brutal guerilla warfare in Congo has certainly revealed how treacherous elements can be. However, despite their gruesome history, that both elements have many useful applications in the modern world, especially in the field of electronics, where they are used mainly in the production of capacitors. These elements are high-density, heat-resistant, noncorrosive and have the capability to hold a charge, which renders them highly useful in this field. In our presentation, we will go into depth on the chemistry behind these properties, which allow Tantalum and Niobium to impact our lives.

Bray, Emily  Senior  English

Readings from Engl498 Creative Writing
Non-Fiction Thoughts on Growing Up

As part of the first creative writing seminar, my senior thesis consists of several short non-fiction essays contemplating and exploring coming of age through personal accounts. These essays weave personal narrative and memory within the larger frame of understanding and unifying the multitude of emotions felt through leaving home, growing apart, and finding one’s identity. By tracing aspects of form, emotion, and diction through authors such as Joan Didion, Meghan Dahm, I am delving into the world of short creative non-fiction in order to put words and order to a highly frustrating but universal time of life.
ABSTRACTS

Briggs, Samantha  Junior
Politics

"LOLCATS": A Study of the Interwebs.
All's Fair in Love and (Cyber)war

This paper studies the importance of cyberwar in contemporary military operations. It analyzes the history of cyber warfare and the moral implications of the new weapon. The paper further argues that cyberwar is comparable to the nuclear bomb in the implications it had on military and public policy.

Briggs, Samantha  Junior
Politics
Zars, Frances  Junior
Politics

African History Goes to Hollywood
The Over Cultivated Garden

Analyzing the film, The Constant Gardener (2005), this project examines the submerged immoral issues in Western cinema depicting Africa. Through analyzing character relationships, we discuss how Britain's pharmaceutical companies directly affected Kenya. Our analysis of friendships, marriages, and "corrupt" political alliances reveals multiple themes in African history and complicates debates about Western presence in Kenya and Africa as a whole.

Britton, Spenser; Cushman, Colin; de Man, Jordan; Harvey, Mary; Harwell, Jonathan; Mittendorf, Andrew; Paisley, Blake; Piluso, Kathleen; Reid, Adam; Richards, Michaelin; Simonson, Jacob; Smith, Elizabeth; Waligore, Erica; Zars, Frances

Retelling Cinderella

The story of Cinderella has been told and retold from ancient Egypt to the Grimm brothers, from China to the Ojibwe, Charles Perrault to Disney. The original retelling presented here is built on the diverse perspectives of characters in the Western version of the tale ranging from the ashes and the dress. Character speeches and the unifying narration were written and are here read by members of Rhetoric 123: Performance of Literature.

Brody, Ian  Senior
Music

Imagined Musical Communities: Making Meaning in Western Classical Art Music

This project seeks to analyze how composers of western classical music construct identities, such as ethnicity and nationalism, in their compositions. This project also explores how these compositions are reinterpreted by listeners and performers in the western music tradition to create new, often radically different, identities and meanings. Ultimately, by examining and analyzing this process, this project demonstrates how meaning and identity in the western music tradition are constructed, maintained, and imagined. This project is part of the 2011-2012 Presidential Scholarship awarded for my proposal entitled "The Informed Artist: Enriching a Musical Performance with an Anthropological Study of Nationalism."

Brown, Justin  Freshman
Chemistry
Im, Austin  Freshman
Biology
Ingram, Kieran  Freshman
Undecided
McMillan, Josie  Freshman
Undecided

Chemistry Poster Session
Excimer Laser Surgery

Laser in situ keratomileusis (LASIK) is becoming a popular option for a great number seeking corrective eye surgery. When making a decision to undergo LASIK surgery, it is necessary to understand the chemistry behind it. We will focus on the most commonly used laser in clinical practice, the argon-fluorine (ArF) excimer laser. We will discuss the energy expended by the laser (and photons) and how that energy is used to break molecular bonds in the cornea. Additionally, we will explore why the laser is effective in ablation without causing damage to the surrounding tissues, and chemical explanations for some complications.

Buckley, Rachel  Senior
Spanish Politics
Paige Mullins  Junior
Psychology

Take-a-Break: Journey in Service, Justice, and Education
TaB Portland: Youth Experiencing Homelessness

Participants committed to a week of service and learning and volunteered with various organizations and programs that provide resources and services to those experiencing homelessness. During the week, participants also explored systemic issues of racism, classism, and sexism as well as how these constructs intersect and contribute to homelessness. TaB Portland aimed to enable participants to analyze various social justice issues through a critical lens and apply these experiences to the Salem community and the Pacific Northwest at large.

Buckley, Rachel  Senior
Politics Spanish

Womanhood and the Politics of Identity
Women Donors' Imaginaries in the U.S.

International development organization Oxfam’s Sisters on the Planet campaign offers a global sisterhood for donors located in the U.S. with women across the globe through donations which "invest in women.” How does Sisters on the Planet appeal to women donors’ imaginaries in the U.S.? Is this conceptualization of a global sisterhood plausible in a capitalist economy? Whose voices are being heard? I argue that Sisters on the Planet espouses seemingly contradictory revisionist neoliberal ideals of meritocracy and more radical transnational feminist theory, creating a complicated, problematic and appealing development project which has been successful in attracting celebrity, political and professional endorsements.

Buonocore, Katie  Sophomore
American Ethnic Studies
Hollowed, Thomas  Senior
Biology

Take-a-Break: Journey in Service, Justice, and Education
TaB Immigration Northwest

TaB Immigration NW will focus not only on the contentious issue of Latino immigration to the US, but the issues faced by other immigrant communities; their struggles to gain citizenship; and the work we can do together to achieve understanding. We will visit locations in the Willamette Valley, engaging in service learning around the topics of racism, nativism, and the social and political forces shaping these issues.
Burkey, Kaile Freshman
Psychology French

Crosby, Dana Freshman
Art History

Oswill, Andres Freshman
Biology Biology

Wong, Matthew Freshman
Chemistry

Chemistry Poster Session

TNT: An Explosive Lesson in Chemistry

Invented in 1863 by German chemist Joseph Wilbrand, TNT is considered to be a high explosive, meaning its detonation mechanism is based off of compression, and is the most commonly used explosive. It’s resistance to friction and heat induced detonation coupled with its hydrophobic properties make it an appealing, popular explosive. Trinitrotoluene, C6H2(NO2)3CH3, or TNT as it is most commonly referred to is given its explosive quality by the bonds forming the three nitric groups breaking. Relevancy is found in its practical uses, including pigmentation, medicinal applications, mining, and demolition juxtaposed with the enigmatic nature surrounding the way it works.

Burton, Sarah Sophomore
Biology

Duell, Anna Sophomore
Chemistry

Nelson, Hope Sophomore
Undecided Undecided

Schwebke, Kristina Sophomore
Chemistry

Chemistry Poster Session

Breaking Down Death

The chemical weapon O-ethyl S-[2-(diisopropylamino)ethyl] methylphosphonothioate, commonly known as VX nerve agent, is one of the most dangerous chemicals made by man. The poison works by attacking neurotransmitters, which causes the body to lose muscular control, ultimately ending in death. VX is so potent that one liter of this oily fluid is enough to annihilate one million people. Because this neurotoxin is so lethal, there are strict international laws prohibiting the synthesis and distribution of VX. The problem we are now faced with is safely eliminating the remaining stockpiles.

Carragee, Catherine Sophomore
Chemistry

Josephson, Rebecca Sophomore
Chemistry

Aubol, Kevin Junior
Exercise Science Exercise Science

Chemistry Poster Session

Chemistry of Albuterol

Having trouble breathing? Bronchospasms ruining your day? Albuterol, also known as salbutamol, is a drug that was rationally synthesized in the late 1960s to treat asthma and other conditions related to bronchospasms. Bronchospasms are sudden constrictions of the muscles in the walls of the lungs, making breathing difficult. Albuterol works by stimulating the production of cyclic adenosine-3',5'-monophosphate (cAMP), relaxing smooth muscles in the respiratory airway. Its synthesis yields an (R) and (S) racemic mixture of the enantiomers, however studies have found that the (R)-albuterol enantiomer is more effective in treating bronchospasms than the (S)-enantiomer.

Chatterjee, Alyssa Senior
Politics

Religion, Politics, and States

More Like Santorum? An Analysis of Presidential Candidates and Religious Rhetoric

With constant media attention, there has been a perceived increase in religious rhetoric amongst presidential candidates during the last few elections. This analysis shows that this increase is more than just perceived, but has been steadily growing since 1980 and the election of President Reagan. Looking at the acceptance speeches of presidential nominees, party platforms, and prominent candidate speeches, this research will show the many ways in which religious rhetoric has increased and what it may mean for future presidential candidates. Lastly, this research will discuss the possible reasons for this increase and why it has never occurred with such magnitude before.

Chavarin, Octaviano Junior
Politics

The Economics of Environmental Action

Nature as a Commodity: Implications of Voluntary Carbon Offsets in the Developing World

While scholars have focused on climate change mitigation through Kyoto CDM and the REDD+ mechanisms, these have yet to produce projected global markets. Currently, unregulated Voluntary Carbon Offsets (VCOs) comprise a greater share of the climate change mitigation market. First, our paper places debt-for-carbon in historical context, focusing on the rise of debt-for-nature swaps and structural adjustment policies in response to the 1980s debt crisis. This paper will analyze one VCO project from public utilities payers in Oregon, USA, to a private park in the Ecuadorian rainforest and the importance of accountability and transparency. Second, the paper argues that the rise of climate change mitigation commodifies nature as carbon. One important effect of carbon as a fictitious commodity is that international conservation organizations displace states and local users in accessing resources. In this paper we argue that VCOs exacerbate unequal relationships, particularly through reproducing neoliberal agendas.
Nitroglycerin

Nitroglycerin, a highly combustible molecule composed of a nitrated glycerin backbone, has played an important role in history. It is a very unstable compound, yet it can be stabilized by being combined with inert clay to make dynamite, a quality first discovered by Alfred Nobel in the mid 1800s. As dynamite, it has been combusted to level buildings and build railroads. Reduced by metabolic pathways in the body, nitroglycerin functions as a nitric oxide donor, causing it to act as a vasodilator and relieve chest pain, a common symptom of coronary artery disease.
ABSTRACTS

Cushman, Colin  Senior  Religious Studies Music

Something About Literature (and Zombies)

Louis Armstrong, Race, and Ralph Ellison’s Invisible Man

In Ralph Ellison’s novel Invisible Man, Louis Armstrong appears prominently in both the prologue and epilogue. This project examines the significance of jazz—and especially Armstrong—for the African American community and for Ellison, a prominent jazz critic. Then, from a discussion of how Armstrong was unique within the jazz scene and within pop culture, this project will demonstrate how Ellison integrated Armstrong into the novel as a frame for the narrative showing how a racial Other can transcend the limitations imposed on them by a racialized society through the use of the entertainer's mask.

Daly, Daniel  Senior  Music

Williams, Bethany  Senior  English

Brody, Ian  Music Music

Madeline Yoste  Junior  English

Matt Sazima  Music

Elizabeth Drake  Religious Studies

Make it Up; Make it Beautiful: a Performance of Improvised Music and Dance

The Willamette University Music and Dance Improvisation Ensemble is exploring new artistic territory by interacting across media, on the spot. Rather than memorize a song or step, the performers rehearse the art of communication—how to listen and watch to such a degree that every coordinated gesture is organic, seemingly predestined. What does a motion sound like? What does a sound look like? The Ensemble will answer these questions in a 30 minute performance unique to the day, the audience, the moment.

Danielsen, Acacia  Junior  Rhetoric/Media Studies

Eisenhower’s Cold War Rhetoric

Eisenhower and the Rhetoric Compact

In his “Doctrine” address, President Eisenhower responded to the international pressures of the Cold War by creating a series of rhetorical compacts. Eisenhower was reluctant to use his presidential power domestically and his administration focused mainly on foreign affairs. The Suez crisis provided an opportunity for him to rhetorically construct the identity of America’s foreign policy: friend of the oppressed, parent of the oppressor, and guardian of justice. The rhetorical compact allowed him to respect the interests of the Middle East, the Soviet Union, and the United States, while still working towards international peace and unity.

Deal, Carrie  Senior  Rhetoric/Media Studies

Something About Literature (and Zombies)

Machetes, Mahyem, and the Zombie

Using Seymour Chatman’s structuralist theories to codify the generic traits of the zombie apocalypse genre allows for the creation of a formula that both defines the genre as a whole and illuminates the genre’s core messages. The generic narrative puts its heroes in apocalyptic situations and describes their willingness to work together, realism about their situation, and survival instincts. The genre’s villains are combative, dangerous people with selfish motivations. Despite its many low-quality films, the genre champions a black-and-white morality system where ordinary people can act morally and correctly in a crisis.

Dinsmore, Jaela  Senior  Latin American Studies Spanish

Latin America: Past, Present, and Future

African Mexicans and National Identity

This study explores how African Mexicans challenge the Mexican national identity by defying cultural dualisms produced in racial ideologies prevalent in post-revolutionary Mexico. By analyzing the three films Angelitos negros, Negro es mi color, and El derecho de nacer, this study examines how society was expected to respond to the social anxiety caused by having African heritage. The films intersect race ideology with gender ideology, and though they attempt to give value to African Mexicans, they also manipulate Africaness to fit within ideals of Mexican dualisms. The implications of the analysis focus on the importance of a pluralistic national identity.

Donovan, Joe  Senior  English

Readings from Engl498 Creative Writing

DNA, Jay-Z, and Seat 9-A: Exploring Lyrical Formalism

This creative project employs a formalist approach to autobiographical writing. It weaves together fragmented meditations on genetics, Jay-Z, airplanes, white identity, haircuts, Ben Donovan, sex, loneliness, and tree sap. The arrangement of his fragments investigates his motivations for writing about himself and exposes the fictional underpinnings of any nonfictional work. In doing so, this project questions the authenticity of any “true story.”

Dougan, Emily  Sophomore  Environmental Science Chinese Studies

Sustainable Agriculture in the 21st Century

Food Deserts: Purely a Western Problem?

This study was conducted in Shanghai, China to determine if a food desert problem, like those in Western society, exists. Quantitative and qualitative analysis was used, and it was found that four out of the six districts surveyed are food deserts. Possible reasons why these areas exist and the potential problems they could create are discussed.

Dwyer, Brendan  Sophomore  Undecided

Cohen, Megan  Freshman  Undecided

Waidley, Kaitlyn  Freshman  Undecided

Chemistry Poster Session

New Infrared LASER Radiation Therapies

Researchers at The Methodist Hospital hope to improve current radiation therapy techniques by using specially made gold-filled silicon wafers to bond to and destroy cancerous cells with an infrared laser. The technique uses infrared lasers to heat wafers that only bond to the targeted cancer cells through their unique shape to kill the cancerous cells leaving the healthy cells alone. Our presentation will explore the chemistry of lasers -- how infrared lasers work and their advantages for radiation treatment -- and the chemistry of the wafers -- the biochemistry behind their interactions with the targeted cells and their gold and silicon composition.
A Mao for All Seasons: An Introduction to Different Historical Strategies

This project examines the question of how we are to historically assess Mao Zedong, Chairman of the Chinese Communist Party from 1943 to 1976 and founding member of the People’s Republic of China in 1949. Mao’s decades as chairman, marked both by successes in modernizing China and the disturbingly high human toll from events such as the Great Leap Forward and the Cultural Revolution, were anything but simple: frequent power struggles, puzzling statements, and contradictory decisions from the “Grand Helmsman” make historical inquiry an exceedingly complex challenge. This panel will present and examine four different historical perspectives of the Chairman in our attempt to illuminate what we find the most significant facets of his life as China’s most significant figure of the last hundred years.

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Ezray, Brian  Sophomore
Biology

Biology Research Presentations
Native Bees Within the Willamette Valley

It is necessary to conserve native bee populations in order to have continuous pollination of crops and to keep the biodiversity of ecosystems, because for some crops and plants, native bees are more effective pollinators than honey bees (Kremen et al. 2002). Currently, there are threats to native bumblebee and solitary bee populations due to habitat destruction and fragmentation. In Oregon, little is known about native bees and their impact on specialty crops. The objectives of this study, for this college colloquium grant and for the Oregon Department of Agriculture, were to find potential survey sites, research and put into practice native bee survey techniques, and analyze the diversity of native bee populations in specialty crop and diverse plant settings.

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Ezray, Briana  Sophomore
Biology

Biology Research Presentations
Native Bees Within the Willamette Valley

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**ABSTRACTS**

**Fleming, Kristian**  
**Sociology**  
**Sex, Drugs, and Rock and Roll: Sociological Studies of Subcultures and Countercultures**  
**The Boys’ Club: Punk in Salem**  
This project chronicles the gendered history of punk in Salem, OR through a sociological lens. Data obtained through in-depth interviewing of participants and producers of punk music in Salem, along with a content analysis of lyrics written by punk bands influential to the local scene, illuminates how gender roles are constructed within this particular music subculture. By examining how existing societal gender roles influenced the construction of the local punk scene, we are better equipped to understand how and why gender roles are manifested in punk subculture. These complex manifestations will be revealed and discussed.

**Freeby, Michaela**  
**Freshman**  
**Undecided**  
**McSweeney, Sarah**  
**Senior**  
**Exercise Science**  
**Hodges, Virginia**  
**Junior**  
**Classical Studies Classical Studies**  
**Chemistry Poster Session**  
**Lactic Acid and Blood Buffering**  
Lactic acid is a chemical compound that plays a vital role in biochemical processes. It is part of the carboxyl group and its chemical formula is C3H6O3. During exercise, the body’s metabolism produces CO2 and H+ in the muscles. Strainous exercise causes increased metabolism and results in the oxygen supply in the bloodstream running out, this leads to the body not having enough fuel. This is where lactate production proves to be beneficial. It provides fuel for muscles and maintains the pH balance in the bloodstream.

**Frenzel, Rachel**  
**Senior**  
**Psychology English**  
**Readings from Engl498 Creative Writing**  
**The Creation of a Contemporary Gothic Novel**  
This project consists of dramatic readings from students enrolled in WU’s premier creative writing thesis seminar class. My particular presentation will include reading an excerpt from a larger body of work that is the result of extensive research within the realm of gothic literature. My goal was to put a twist on the classic gothic novel by setting it in the 21st century as a failed coming of age novel, tracing the downfall and descent into madness of a character newly arriving on a college campus. The project focuses primarily on psychological terror rather than physical terror, with an emphasis on blurring the line between reality and the imaginary.

**Friedrich, Shealyn**  
**Senior**  
**Biology**  
**Special Science Session**  
**Individual Lateralization and the Development of Prey Handling Skills Among Caspian Terns**  
Lateralization is the preferential use of one side of the body over the other and is often reflective of higher brain function. This pattern has been documented in several avian species. It has been found that Caspian Terns demonstrate lateralized feeding behavior at the population level. In this study, we documented the orientation and success rate of feeds among individual Caspian tern chicks. We are working towards determining whether lateralization is individualized in this species.

**Furlow, Alexander**  
**Senior**  
**German**  
**Something About Literature (and Zombies)**  
**Franz Kafka: Brief an den Vater (Letter to his Father)**  
This project explores the extensive self analysis of the 20th century German language writer Franz Kafka in relation to his father that is present in Brief an den Vater (Letter to his Father). In this letter, Kafka discusses the quintessential conflict between father and son, which played a major role in his literary career. Kafka attempts to reconcile his relationship with his father through this letter; however, in doing so he discovers what he truly desires from their relationship: to escape it entirely.

**Gadek, Kate**  
**Senior**  
**Biology**  
**Biology Research Presentations**  
**Ethylene’s Regulation of the Floral Transition in Pharbitis nil ‘violet’**  
Ethylene a common plant hormone is involved in many different plant processes from seed germination to fruit ripening, however it’s role in plant flowering is not well understood. Previous data has shown that ethylene regulates the expression of the floral stimulator gene homologs, PnFT1 and PnFT2 in Pharbitis nil ‘violet’ (Japanese morning glory). I investigated expression of two key genes in the flowering pathway GIGAGTEA (PnGi), a gene upstream of PnFT1/2, and APETALA-like2 (PnAP2-like) a gene downstream of PnFT1/2. Our results indicate that ethylene does not regulate PnGi and suggest that PnAP2-like may act as a repressor of flowering.

**Gala, Jack**  
**Senior**  
**Politics**  
**Components of Change: Rehabilitative Justice on the West Coast**  
**Trigger Happy, Gun Shy: Why States Like Oregon Still Have the Death Penalty**  
What compels states to hand down the death sentence, but not execute? Using Oregon as a case study, I will conduct an historical comparative study to explain why states that do not regularly execute still have capital punishment. This presentation examines the role of states in support or opposition of institutional killing and explains these differences. Institutional differences, political culture and colonial influence factor in to how a state kills, but how might we account for the various reasons for retention? Through comparative case studies and historic cultural analysis the reasons for retention may become apparent.

**Gan, Liwu**  
**Senior**  
**Politics**  
**International Conflict and Cooperation**  
**Transatlantic Identities in U.S.-Europe Security Relations**  
In the last two decades, the European Union (EU) has developed a security policy capable of conducting military operations outside of NATO. Despite this, the U.S. dominated NATO continues to be the security regime of choice for most of Europe. Why has European security remained dependent on NATO despite calls for an independent EU security policy? I argue that NATO remains the dominant European security actor because the sense of a transatlantic identity is stronger than a European identity for many European states. In particular, I examine France’s evolving constructions of identity as they relate to the U.S. and NATO.
There is tension within Puerto Rican society about what the role of Spanish should be. This conflict manifests itself in the different identities Puerto Ricans form, those who believe Spanish makes you Puerto Rican and those who do not. This study examines Puerto Rican identity formations through the language of instruction in the public school system, taught in Spanish, and private school, taught in English. There are two national identities that arise from these different institutions: 1) being Puerto Rican and North American are mutually exclusive and 2) being Puerto Rican and North American coexist within Puerto Rican national identity.

There is tension within Puerto Rican society about what the role of English should be. This conflict manifests itself in the different identities Puerto Ricans form, those who believe Spanish makes you Puerto Rican and those who do not. This study examines Puerto Rican identity formations through the language of instruction in the public school system, taught in Spanish, and private school, taught in English. There are two national identities that arise from these different institutions: 1) being Puerto Rican and North American are mutually exclusive and 2) being Puerto Rican and North American coexist within Puerto Rican national identity.
Gross, Megan  Sophomore
Biology

Travis, Lauren  Freshman
Undecided

Lacy, Katherine  Freshman
Undecided Undecided

Lawson, Elizabeth  Freshman
Undecided

Berger, Nina  Freshman
Undecided

Chemistry Poster Session
The Chemistry of Chocolate
Chocolate is a complex substance that has existed for over three-thousand years and contains over five-hundred natural chemical compounds; a few compounds in chocolate, which include theobromine, caffeine, and tryptophan, affect the body by inducing pleasure sensors in the brain. The manufacturing process of cocoa beans plays a crucial role in the structural composition, physical properties, and quality of chocolate. The chemistry of chocolate is valuable to society due to the potential physical and mental health benefits; it gives insight into why people crave chocolate, why it tastes so good, and why chocolate is in high demand around the world.

Gutierrez, Margarita  Senior
American Ethnic Studies

Glade, Rosie  Senior
American Ethnic Studies
Take-a-Break: Journey in Service, Justice, and Education
TaB Chicago: Transborder Lives
TaB Chicago is a service trip structured in a way that allowed students to explore and better understand the complexity and intersectionality within immigration. One of the primary goals for TaB Chicago is for participants to grasp an understanding of the systemic forces, such as racism and nativism that have historically marginalized immigrant communities, and continue to do so today. Our presentation will discuss how participants engaged in service and reflection to develop a critical lens of immigration issues, awareness of their own privileges and positionality, and where they can plug into immigration issues when they return to the Northwest.

Hall, Heidi  Senior
Politics

International Conflict and Cooperation
The Scales of Good and Evil: Individual Responsibility for Mass Violence in International Criminal Courts
Genocide. Holocaust. Mass violence. These words evoke images of widespread violence that encompasses an entire society. International law and the international community agree that violence of this magnitude requires a judicial response. However, courts are designed to try individuals, not communities. Acknowledging this disconnect, how can the individual's relationship to mass violence be understood? Using case studies from the Nuremberg Trials and from the International Criminal Tribunal for Rwanda, this paper explores the source of Japanese people's quick adaptation to the aftermath of the Great Hanshin (Kobe) Earthquake of 1995. Presentation of senior thesis in the Japanese Studies department.

Hall, Rebecca  Senior
Anthropology

Learning Senior Living: Life after 65
The Journey “Home”: An Anthropological Perspective on the “Homecoming” Experiences of Vietnam War Veterans
This project explores the process of “coming home” among Vietnam War veterans. It discusses the complexity and variability of this experience by examining the construction of memory, community, and social networks. The primary data for this research were collected through participant-observation and interviews with members of the Mid-Valley chapter of Vietnam Veterans of America. The results are examined in comparison with other research, and veterans’ conceptions of self and social identity are contextualized within debates about American culture and politics. It is important to understand the ambiguous history of the period and to recognize those who served their country.

Hamburg, Katie  Sophomore
Politics

“LOLCATS”: A Study of the Interwebs
SOPA-The Right Balance to Combat Piracy?
This research project examines the Stop Online Piracy Act (SOPA) that is currently under review in the House of Representatives by studying it’s historical context within copyright law and the interests of old vs. new technology industries. This current topic has the potential to impact the everyday functionality of the internet. Despite the good intentions of the legislation’s authors, the research failed to find a healthy balance between the interests of groups who seek to staunchly protect intellectual property rights and those who seek to protect innovation and creativity from excessive or harmful regulation. Ultimately, SOPA has the potential to do more harm to the Internet infrastructure and community than help.

Hanslovan, Andrea  Senior
Politics

My Hazard Should Be Our Hazard
Why are some communities more likely to host hazardous waste than others? This paper will explore compelling explanations for environmental inequality in the U.S., including: environmental racism, politics, classism, and institutions. The paper will review the influence of the environmental justice movement on new environmental protections, as well as reveal its limits. Finally, I will highlight the emerging importance of local environmental regulations and political cultures in shaping new environmental inequalities.

Harman, Joseph  Sophomore
Chemistry

Knopp, Sibyl  Sophomore
Chemistry

Tragesser, Hannah  Sophomore
Biology

Chemistry Poster Session
Vasotocin Structure and Function
Vasotocin, often referred to as the love hormone, naturally occurs in amphibians and modulates social and reproductive behaviors. Vasotocin's mammalian counterparts, Vasopressin and Oxytoxin, contribute to human functions such as childbirth and parental instincts. These counterparts are also thought to play a role in human mental disorders, including psychopathy and sociopathy. In the context of amphibians, Vasotocin is inhibited when the stress hormone Corticosterone is released. A study of Vasotocin inhibition in a chemically induced stress setting, such as the release of Corticosterone in newts, will help us better understand the chemistry behind disorders such as sociopathy and psychopathy.

Hendricks, Kenneth  Senior
Japanese Studies

Art and Community in Japan
After the Quake, Redux
March 11, 2011 shook Japan with a 9.0M earthquake, tsunami, and nuclear crisis. Within hours of 2:46PM JST, entire communities were washed away. Within days, new ones had formed and began responding to the crisis. This thesis explores the source of Japanese people's quick adaptation to the events of March 11, seeking to ground much of how communities formed and functioned following the tragedies within the living memory of the Great Hanshin (Kobe) Earthquake of 1995. Presentation of senior thesis in the Japanese Studies department.
Eisenhower Cold War Rhetoric
Rhetoric of President Eisenhower

In this paper I have examined the correlation between President Eisenhower’s political views, pertaining to balance among the separate sectors of American institutions, and the rhetorical approach used in his farewell address. First, I will illustrate Eisenhower’s political views as well as look at the military-industrial complex. After this is established, I will endeavor into exploring the outline and structure to Eisenhower’s speech. This will be done in two ways. I will look at Eisenhower association as a common citizen and then as the general and politician. By inspecting the balance between Eisenhower’s perfection of himself, I will further examine the association between both his political views and his rhetorical strategy in delivering his farewell address. Untimely, this will display Eisenhower’s unique approach in addressing the American people; preferring to use a simple straightforward rhetorical tactic to clearly illustrate a sense of urgency.

Hagashida, Janelle  Senior
Japanese Studies Art Studio
Art and Community in Japan
Social Interaction in Art

After the atomic bomb was dropped, two terms for social interaction became widely used: Tatemae and Honne. In the early years of the twenty-first century, media enthusiastically promoted artists Takashi Murakami and Yoshitomo Nara as: Nara-kami. Murakami’s aesthetically polished Superflat art movement centers around his post World War II view of Japan losing identity. Art critic Midori Matsui coined the term Micropop and credited Yoshitomo Nara for changing the art world into a venue where true emotions can be conveyed. Superflat utilizes social ethics of tatemae, while Micropop is designed to reach the inner most desires of people’s honne.

Hill, Cameron  Senior
English
The View from Behind the Camera: Willamette Student Films
Dreamscapes

This project is the third video in a series of videos which captures my artistic development at Willamette University through music and photography. This project continues work originally for a Carson Grant. The video is titled Dreamscapes and is divided into two sections. The thematic issues concern emptiness, nature, space, and people. The entire video is in monochrome with original music compositions designed to guide the viewer through the experience.

Hill, Mara  Senior
Politics Psychology
Womanhood and the Politics of Identity
Marriage Legislation in Ethiopia

This project examines legislation regarding marriage in Ethiopia. It researches how Ethiopia, a country with a history of early marriage, enacted a Revised Family Code in 2000 raising the minimum age of marriage from 15 to 18 despite a seeming lack of popular support. The project seeks to determine whether political institutions, domestic or international activism, or the discourse and framing of the issue played the most influential role in the government’s decision to enact the Revised Family Code, and what this suggests about how human rights change occurs on a broader scale.
**Huriburt, Heather**  
Senior  
Asian Studies  

**Art and Community in Japan**  
**Collaboration by Three Ukiyo-e Artists**  

This project focuses on the relationship of three famous ukiyo-e, Japanese woodblock print, artists in the Utagawa school and why they worked together to create a series about the Tokaido Road. Utagawa Hiroshige specialized in landscapes prints while his contemporaries, Utagawa Kuniisa and Utagawa Kuniyoshi, focused on actor portraits from the kabuki theatre and beautiful women. The analysis of biographies, other examples of collaborated works, and the relationship among these three artists will draw conclusions on why it was beneficial to work together. These conclusions will be revealed and discussed.

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**Hursh, Kimberly**  
Senior  
History Spanish  

**Politics and Law in the U.S.**  
**A strange proximity: Chicano Activism in Mt. Angel, Oregon**  

Until 1973, Mt. Angel, OR was home to a two-year college run by the Benedictine sisters which served the German Catholic population in Oregon. In 1973, the college went into debt, and Colegio César Chávez, a Chicano college took its place. Two immigrant populations living in such close proximity create an opportunity to analyze how immigrant populations identify and understand each other, their own citizenship and identity, and the process of assimilation. This presentation will show how each group understood and defined assimilation, and how this affected the ways in which they dealt with each other.

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**Jasmund, Robert**  
Freshman  
Undecided  

**Richardson, Michael**  
Freshman  
Undecided  

**Grauberger, Jenny**  
Freshman  
Undecided Undecided  

**Conklin, Carolyn**  
Undecided  

**Chemistry Poster Session**  
**Star Light, Star Bright**  

Stars play an important role in understanding our universe because they reflect its origin based on the Big Bang Theory. We are able to study stars through the light and radiation they emit. Stars are classified by their mass, age, and chemical composition. Furthermore, the temperature of a star can be determined by the color emitted. Stars have the ability to produce other elements through a process known as nuclear fusion. Nuclear fusion is an attractive fuel source on Earth because it creates no nuclear waste or pollution. However, practical nuclear reactors exist solely as prototypes.

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**Jennings, Jillie**  
Senior  
Chemistry  

**The Investigation of the Binding Interactions between the Anticancer Agent NAMI-A and tRNAPhe**  

NAMI-A is a ruthenium based anticancer agent that is currently in phase II clinical trials. However, its mechanism of action is still unknown. RNA is of interest as a possible target because damage to RNA can lead to a wide range of effects including programmed cell death and the ability to alter the course of regulatory cell pathways. This project uses phenylalanine specific tRNA (tRNAPhe) in order to better understand the interactions between NAMI-A and tRNA at both physiological and cancer cell conditions.

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**Johnson, Emily**  
Senior  
Chemistry  

**Chemistry Research Presentations**  
**The Pulmonary Microbiome and Cystic Fibrosis: Real Time PCR for the Identification of Bacteria in the Airways of Patients with Cystic Fibrosis**  

Airway infection is common in patients with cystic fibrosis (CF) and is one of the main causes of morbidity, mortality, and lung function decline. Therefore, quick and accurate identification of bacteria that cause airway infection is critical. This project assessed qPCR as an alternative to traditional culture to identify bacteria in patients with CF in attempts to increase the accuracy and decrease the time required for diagnosis. qPCR assays can be designed to target specific bacteria. This project focuses on developing an assay for the identification of Staphylococcus aureus, a bacteria commonly associated with pulmonary exacerbations in patients with CF.

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**Jolliff, Rebecca**  
Senior  
English Spanish  

Beloved Humanities Seminar  
**“Love songs to Mr. Death”: Exploring Gendered Resistance in Toni Morrison’s Beloved**  

Much attention has been devoted to examining the female communities in Toni Morrison’s novel Beloved, and a variety of critics have discussed women characters’ methods of resistance and healing. I will investigate the role of men in the novel, paying particular attention to the ways they resist white authority figures and combat the dehumanization of the “peculiar institution.” Through examining the differences between male and female forms of resistance and of coping with the trauma of slavery, I hope to illuminate how the novel challenges expectations for gendered behavior.

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**Jones, Collin**  
Senior  
English  

**Readings from Engl498 Creative Writing**  
**Readings from a Thriller Novel in Progress**  

The purpose of my senior thesis project is to write a thriller novel that focuses on strong character development and plot twists. I have been studying the craft of certain authors within this genre to better understand how to keep the tension high. Someone should be able to say after reading it, “Wow I never saw that coming... But I should have.” Certain sections demonstrating these twists in action, along with sections describing strong character development will be read.

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**Jones, Stephanie**  
Senior  
Computer Science Mathematics  

Human Interfaces: Designing for the User  
**Giving Logic a Graphical User Interface**  

Pull back the shiny backlit keyboard and sleek casing of your computer and you will find an intricate pattern of wires, switches, and other components, although these days you may need a microscope to see it. The logic of a computer is built into these circuits. Circuit simulators are used to learn how logic circuits work by allowing the user to build and test their own designs. In this talk we will explore an implementation of a logic circuit simulator for the iPad and the design choices that were made to make it user friendly.
Justman, Thomas  Senior  English

Beloved Humanities Seminar
Domestic Space and Work in “Beloved”

I will explore the ways in which work shapes domestic space in Toni Morrison’s “Beloved.” Through several spheres of domesticity, Morrison examines varying intimacies between African American slaves and masters—some horrifically tragic, others, to a degree, mutually supportive—and the master-granted “freedom” of slaves to create their own home spaces. Even when slaves are dehumanized by overseers to such an extend that the illusion of home is not attempted, they use work strategically to make life survivable. My analysis will show that these strategies extended beyond slave life to free life as African Americans grappled with traumatic memories.

Kipling, Alex  Senior  Latin American Studies

Latin America: Past, Present, and Future
Rio’s Favelas/Morros and the Formal City

In this research I use a sociogeographic analysis of favelas (or morros) in the city of Rio de Janeiro where geography influences social differences between residents of the favelas and those of the city’s neighborhoods. As informal communities sharing physical areas with the city’s neighborhoods, the favelas’ geographic relationships with the neighborhoods emphasize social separation rather than cohesion. With full legal access to the city’s urban resources, the neighborhoods of Rio illustrate the benefits to participating in the urban city and highlight the dividing line between the formal and informal cities. Using the neighborhood communities as models for favela development, government projects fall short in their attempts to incorporate these communities into the formal city. As Rio plans to host two of the most popular global events within the next four years, namely the 2014 Fifa World Cup and the 2016 Summer Olympics, the city finds itself desperately implementing favela upgrading programs that are short-term at best.

Klementiev, Alexander  Freshman  Mathematics
Cullen, Laura  Freshman  Psychology
Allison, Forrest  Freshman

Undecided  Undecided

Chemistry Poster Session
Hydrogen Fuel Cells

Fuel cells are being considered as a power source in mobile and compact applications. Informally classified as a “zero-emissions” power source, they operate silently, releasing only water into the environment. Though this is accomplished in many different ways, all fuel cells have commonalities. Electrons are separated from one reagent, used to generate a current and accomplish work, and recombined in the final reaction. If barriers such as the cost of manufacturing and availability of hydrogen sources are addressed, fuel cells could become the leading source of energy for vehicle propulsion.

Knopp, Rachel  Sophomore  Chemistry
Lloyd-Lever, Rae  Sophomore  Biology

Chemistry Poster Session
The Chemistry of Cocaine

Cocaine is an extremely addictive drug that is especially prevalent in America -- the number one user and importer. Historically, cocaine was believed to heal wounds and cure colds. No longer used for medicinal purposes, cocaine is used recreationally for its euphoric effects. Some of the side effects include heart attacks, high blood pressure and a decrease in sexual capability. Cocaine was an ingredient in several consumer beverages but due to the discovery of these dangerous consequences it was removed. Most users obtain this drug in its synthetic form, however it can also be extracted naturally from the coca plant.

Kragness, Sabrina  Freshman  Biology
Mau, Daena  Freshman  Biology Chemistry
Swift, Jasmine  Freshman  Biology Biology

Chemistry Poster Session
Vitamin D and Light Therapy

In this presentation we will be explaining vitamin D and its many applications, along with the problems that can occur in a person’s body if they do not intake a healthy amount. We will also be discussing light therapy as a way to help increase the volume of vitamin D in a person by way of being exposed to UV and visible light. This will include a look into how the cells convert these light rays into the vitamin that is necessary for a healthy body.

Kueffner, Tannin  Sophomore  Exercise Science
Komeiji, Keisha  Undecided  Art Studio
Foree, Leesa  Biology Biology

Chemistry Poster Session
The Chemistry of Sunscreen

Despite the large number of people who claim to use sunscreen, not many know the basics of how or why it works. Sunscreen contains organic molecules that decompose in absorbing various types of UV radiation from the sun. As these compounds break down the sunscreen becomes less effective, thus the need to re-apply. When not used properly, the user is at a higher risk of skin cancer and premature aging. In a day and age where tan is considered beautiful, people must be especially cautious about taking care of their skin.

Kuhn, Sam  Senior  Humanities

The View from Behind the Camera
Finding Truelove

Clay, Michael and Andrew are fascinated by a yearbook from Chico High’s class of 1990 that they discover at a Value Village. Intrigued by the cryptic word “Caduceus” emblazoned across the cover, and by the countless sweet mullets and dream girls inside, the three friends lock onto one particular student: feather-banged mystery man Timothy Truelove. When the guys discover tickets for the 20th reunion available online, they can’t resist the temptation to crash. This is hands down the most awesome road trip you’ll ever take from Portland to Chico, California! Will they get busted by the Reunion Committee? Will Truelove show? What the heck does “Caduceus” mean anyway? The documentary equivalent of a John Hughes movie, Finding Truelove is an exhilarating comedy that pays homage to all things ’80s—from Saved By the Bell to Howard Jones to Back to the Future—with pure energy and heart. - Angie Driscoll  // Hot Docs 2012

Kyllingmark, Heather  Sophomore  Rhetoric/Media Studies Film Studies

The View from Behind the Camera: Willamette Student Films
The Oxcart: Synergy in Practice and Metaphor

The Oxcart is a short silent film inspired by the concept of synergy. The film was sponsored by a locally based international non-profit organization, and directed and co-produced by Willamette Sophomore Heather Kyllingmark as part of her ongoing filmmaking research. The campus version of the film will be screened, accompanied by a presentation chronicling the benefits and challenges of the collaboration, as well as a discussion of her findings and subsequent research questions. The talk will include clips from her continuing research in scoring the film’s new soundtrack.
Eisenhower's “Atoms for Peace”

This project explores the contradiction between concrete and idealistic language as a successful rhetorical strategy. Eisenhower’s “Atoms for Peace” speech is an example of how a controversial foreign policy proposal is made successful. At the time of the speech, any peace attempts between the United States and Soviet Union had failed. Eisenhower’s proposal proved to be a major step forward in relations between the US and the USSR. Eisenhower approaches peace as an idealistic goal, but uses his ethos and the backing of the United States to turn his proposal into a concrete plan.

Larmer, Zoe  Senior
Women's Studies

Looking Locally: Gendered Communities in Oregon Identity on Oregon Women’s Lands

I am focusing my senior thesis on women's land in Southern Oregon and looking at the ways in which the resident's relationship to capitalism (or anti-capitalism) altered their sexual/political identities. This will involve an exploration of both communes and “dropping out” in general and a look at separatist feminism. I am using the theories of Adrienne Rich and John D’Emilio to illuminate these questions and provide a context for understanding capitalism and political/sexual lesbian identity. I have also had the opportunity to visit several women's lands and delve into the SOCLAP archives at the University of Oregon as a part of my research. I am also looking at the ways that communal living and political lesbianism allow for both liberation and oppression.

Larsen, Sarah  Junior
Economics

Performance of “Notice”

“Notice” is a solo dance performance initially choreographed by Matthew Nelson for the 2011 PeopleDance: Stadium production with the Willamette Theatre department. After being adjusted to fit the proscenium setting it was performed at the 2012 American College Dance Festival in Salt Lake City Utah.

Lazo, Emma  Freshman
Undecided

Chemistry in Cooking

“Cooking is Chemistry.” Some say that in order to understand the basic techniques of cooking, one must understand the way chemistry works and how it is incorporated. Chemistry can help understand how recipes work but also how recipes fail. Our topic is to discuss and show how chemistry is incorporated into cooking and why it’s necessary. Many people may be oblivious to the fact that while they cook, a chemical reaction is occurring right in front of their eyes. Cooking involves elements and even the different types of bonds that are created. Flavor is also created through a chemical reaction.

Li, Anna  Senior
Psychology Chinese Studies

Taishanese in Portland, Oregon

There is a large number of Chinese living in Portland, Oregon from Taishan, a southern region in the Guangdong province. This study examines Chinese from Taishan and how individuals integrate culture to their identities and perspectives of life.
Chemistry Poster Session
The Chemistry of Developing Film

Photography has ingrained itself in modern society so deeply that it is difficult to imagine a world without the ability to capture real images on film. This project takes a detailed look at the chemical reactions, specifically the reaction between silver bromide and photons, and chemical interactions that take place during the complicated process of emulation. Emulation captures real world images in black and white on film creating black and white photographs. Analyzing chemical aspects of the developmental process for black and white film will give us a foundation to better understand the complexity of more modern types of photography.

Marin, Jazmine  Freshman
Biology

Meng, Serena  Freshman
Biology

Silvestre, Isabella  Sophomore
Biology Biology

Chemistry Poster Session
Dangers of Bisphenol A (BPA) in plastics

Bisphenol A, or BPA, is an organic compound used in the production of polycarbonate plastics. It has been speculated to leech toxins into food and drinks, especially when food packaging is left at high temperatures. Research shows BPA to advance puberty in rodents and change their reproductive function. It also affects human’s puberty, increasing male genetic abnormalities and causing girls to sexually mature earlier. Some studies have also linked BPA consumption to different forms of reproductive dysfunctions and cancers. Despite the dangers of BPA, it is still commonly used in food packaging, although many countries have begun banning its use.

Mayer, Rachael  Senior
Anthropology

Food and Agriculture in the 21st Century
The Fast Life: Food at a Local Middle School

This project reflects the research I conducted last semester at a local middle school. I found this school to be a reflection of wider society when analyzed through themes such as fast food, “freedom from want,” marketing, and social and institutional inequalities that are present. In many ways, lunch time was no longer about food but was a means to an end. However, despite food not being a focus, it was still deeply thought about with regard to body image, status, and responsibility.

McClelland, Amanda  Sophomore
Environmental Science

Food and Agriculture in the 21st Century
Zena Farm

Zena Farm strives to promote an educational atmosphere on the farm in which students can discover the sustainability of producing their own food as well as learn how to farm through hands on experiences. The student-run farm is powered by the Alternative Agriculture Community as well as a few dedicated work study students. Our primary goals are to produce local, organically grown food for the dining service on campus as well as to provide food for students and staff through our on-campus farm stand.

March, Rob  Freshman
Chemistry

Wang, Lisa  Freshman
Undecided

Yan, Melissa  Freshman
Undecided Undecided

Riffenburg, Ravella  Freshman
Undecided

Chemistry Poster Session
Buckminsterfullerenes

Buckminsterfullerenes, an allotrope of carbon, can be widely utilized in medicine because of its hollow center and the various properties of its side chains. Fullerenes can be used as transporters for medication because of their hollow centers, but fullerenes themselves can be used as medication because of their structures and chemical properties. The various properties of fullerenes, such as their polarity, solubility, and structure, greatly affect their medicinal value, as they allow for the molecules to bind to other molecules. The use of fullerenes in medicinal treatment could be instrumental to curing cancer and HIV, which would greatly benefit society.

Loos, Jordan  Sophomore
Physics

Guzman, Valeska  Sophomore
Chemistry

Núñez, Andrea  Sophomore
Chemistry Chemistry

Hernandez, Michael  Biology

Chemistry Poster Session
Feeling Sarin for yourself?

Sarin is a nerve agent used in chemical warfare. The compound was commonly deployed as a binary missile, in which two reagents reacted in flight to create a deadly weapon. The gas was released and upon contact, sarin attacked the central nervous system causing an irreversible inhibition of cholinesterase. While sarin has been detrimental to society, the mechanism by which it affects acetylcholinesterase activity is beneficial in investigating other nerve agents that attack and behave in a similar manner.

Luetjen, Chris  Sophomore
Physics

Nelson, Hope  Sophomore
Chemistry

Johnson, Christina  Sophomore
Quintan, Miguel  Sophomore

Chemistry Poster Session
Carbon Based Membranes for Sustainability

Two new carbon based membranes have been created recently and may soon bring future environmental benefits. One membrane is composed of graphene oxide laminates, and they are impermeable to liquids, vapor and gases, but allows water through. They could be used to dehumidify industrial gases, or to filter contaminants from water. The second membrane allows organic solvents to pass through it at extremely fast rates. Possible applications for this are in chemical and biofuel production, food oil extraction, and environmental remediation. They have much to offer and will continue to be studied to find cheap, effective methods of synthesizing them.

Mandava, Neha  Undecided

Venegas, Jaime  Undecided

Na, Nicole  Biology Biology

Wong, Jaime  Undecided

Chemistry Poster Session

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Meng, Serena  Biology

Silvestre, Isabella  Sophomore

Biology Biology

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Mayer, Rachael  Senior
Anthropology

Food and Agriculture in the 21st Century
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McClelland, Amanda  Sophomore
Environmental Science

Food and Agriculture in the 21st Century
Zena Farm

Zena Farm strives to promote an educational atmosphere on the farm in which students can discover the sustainability of producing their own food as well as learn how to farm through hands on experiences. The student-run farm is powered by the Alternative Agriculture Community as well as a few dedicated work study students. Our primary goals are to produce local, organically grown food for the dining service on campus as well as to provide food for students and staff through our on-campus farm stand.
Menghini, Kellie  Senior Psychology Spanish

Development of Teenagers/Emerging Adults Personal and Character Strivings

Emerging adulthood, spanning the ages of 18-25, is a dynamic period for personality development. Much is known about personality traits during this period, but little about recurrent motivations, or strivings. The current study examines emerging adults’ personal and character strivings and how they predict an important life outcome, well-being. We also investigated whether it was effort devoted to or importance placed upon strivings that contributed most to well-being. Results showed that several strivings predicted well-being, and effort contributed most to well-being. The results provide rare data on why character might matter in the most malleable period of adult development.

Miller, Emily Freshman English

Creating a Programming Language

Human Interfaces: Designing for the User Creating a Programming Language

Learning to program can be difficult given with general-purpose verbose programming languages and large, overly complex development environments. This project seeks to simplify both of these aspects, making programming more accessible.

Morrison, Aidan Freshman International Studies

This Too

This Too is a composition by Willamette guitar professor Mike Nord. The piece is unique in that it features a section of free form group improvisation, requiring the performers listen to one another at an especially high level.

Mow, Ben Freshman Undecided

The Chemistry of Quasicrystals

Daniel Shechtman’s discovery of the quasicrystal has redefined the definition of a crystal. Crystals were previously thought to have structural units with 1, 2, 3, 4, or 6 sides, but the finding of the quasicrystal shows that these particles can have a five-fold rotational axis and not be periodic in their symmetry. Being very hard and having a low heat conductivity makes the quasicrystal ideal for use in cooking utensils to turbine engines.

Nakayama, Yoshio Senior Economics

The Economics of Environmental Action

The Rise of 1 Million Electric Vehicles

This project is designed to examine and analyze how economics of scale effectively functions for introductions of new technologies. In 2008, President Obama officially proposed putting 1 million electric vehicles on the road in the U.S. by 2015. In this project, it is explained how the production costs of lithium batteries for electric vehicles are likely to decrease over time and help to achieve that goal. Additionally, this project addresses how the change of battery costs will affect individual’s purchasing decision by applying an analysis of return to investment. All data and research methods are based on the presenter’s internship work at the Energy Department of Oregon and discipline in the economics senior thesis class.

Neal, James Senior Chemistry

Preventing Blindness: The Design and Synthesis of Ion Channel Blockers

Cyclic nucleotide-gated (CNG) ion channels play a major role in the complicated process of human eyesight. Retinitis pigmentosa is a disease that allows too many cations to pass through this channel, eventually killing rod cells and leading to blindness. Tetracaine is a known small molecule that blocks the open channel with moderate affinity and prevents the influx of cations. My research focuses on optimization of the tetracaine scaffold; resulting in the design and synthesis of eleven novel derivatives that prevent degradation in the body and improve the blocking of CNG channels.
Niermeyer, Madison  Senior
Psychology English

Psychology Thesis Presentations
An ERP Study of Reading Japanese Kanji

Event-related brain potentials (ERPs) provide a noninvasive means to investigate neural systems engaged during reading. While several ERP studies report a left-lateralized N170 in response to alphabetic scripts, much less is known about the nature of processing logographic scripts. This study examined the laterality of the N170 response elicited by Kanji characters in adult native Japanese speakers. Kanji characters elicited a clear N170, but this neural response was modulated depending upon whether the character was single versus compound. These results may help clarify the current conflicting evidence about the lateralization of early neural specialization for logographic scripts.

Niermeyer, Madison  Senior
English Psychology

Readings from Engl498 Creative Writing
Woman e Garlic Clove: A Poetry Reading

This project is a chapbook of poems that explores various relationships between women. The poems also investigate what it means write within a tradition of American feminist poets and how gender mediates women’s relationships to language and the natural world. The collection contains free verse as well as traditional verse forms written in both lyric and narrative voice. Selections from the chapbook will be read followed by a brief discussion of the writing process.

O’Brien, Rory  Senior
Women’s Studies

Welfare Women, Criminal Women, and the Sadomasochism in Love: A Polemic Discussion on Gender
In the Bedrooms of Another Country

Sex is bound to a social memory and history of trauma because it is in dialogue with social constructions of race, gender, and sexuality. The bedrooms depicted in James Baldwin’s Another Country are public arenas wherein sexual and racial difference is reiterated, normalized, and fetishized. The socio-historical processes establishing sexual and racial difference result in a shared history of trauma, a trauma which Baldwin’s characters attempt to cope with through consensually violent imitation. Sex, then, is an act of domination and submission — and this sadomasochistic quality should be reclaimed and valued where it is consensual.

Odell, Kelly  Senior
Anthropology American Ethnic Studies

Mayer, Rachael  Senior
Anthropology American Ethnic Studies

Calibrations and Collaborations: Strengthening Relationships Between Willamette University and Chemawa Indian School Through Chemawa AVID Day

Chemawa Indian School is one of the oldest operating boarding schools within the country, with a history that is deeply intertwined with that of Willamette University’s history. We will discuss the recording studio project, where the Chemawa students have the opportunity to come to Willamette and collaborate with Professor Nord to record traditional songs, poetry, contemporary music, or anything through which they would like to express themselves. This form of expression is not only an artistic one, but a medium through which they can also express knowledge, history and identities through which one is unable to do in school.

O’Leary, Colin  Senior
Exercise Science
Burke, Laurel  Senior
Exercise Science
McSweeney, Sarah  Senior
Exercise Science
Rowan, Andrea  Junior
Exercise Science

Exercise Physiology
The Acute Effects of Static Stretching

Static stretching has long been incorporated into exercise regimens; however, the acute effects of static stretching on neural mechanisms are still inconclusive. The purpose of this study was to determine the effect of static stretching on the presynaptic neural inhibition and functional power of the soleus muscle. Presynaptic inhibition, peak and mean power were measured before and after a static stretching protocol. No significant changes in presynaptic inhibition were seen after stretching (p=0.296). There was a significant increase in peak power (p=0.049); however, linear regression between change in peak power and change in inhibition was not significant (r=0.384, p=0.089). Static stretching does not affect presynaptic inhibition and while there was a change in peak power, there is a possibility this was not due to neurological changes.

Olsen, Sabrina  Senior
Anthropology
Senior
Anthropology

Experiencing the Human Body
Agriculture and Obesity in the US

This paper examines the relationship between agricultural production and obesity in the United States. While dispelling myth surrounding farming and eating, I argue changing control of agriculture towards big business has negative health outcomes for consumers.

Onstad, Malika  Junior
Mathematics American Studies

Lasers, Numbers, and Complex Systems
The ABC Conjecture

In this talk we will examine an open problem in mathematics known as the ABC Conjecture. First posed almost 30 years ago, the ABC conjecture is now being tackled with the help of distributed computing. The conjecture relates the factors and sums of natural number, and if proven, would have significant implications in the field of mathematics. We will discuss some of these implications and present the progress that has been made towards a general proof.

Osborne, Ariel  Senior
Environmental Science

Food and Agriculture in the 21st Century
Having a Plot of One’s Own: Perspectives on the Community Gardening Experience in Salem, OR

Where might you find people of Laos, Ukraine, Mexico, and Oregon working side by side in the last light of day? Center Street Community Garden is a testimony to the tenacity of gardeners to continue enjoying their pastime and continue providing fresh, healthy foods to their families. This project documents the coordination of this long-established community garden as well as the experiences from other gardeners and garden coordinators as they worked through the growing season of 2011. The stories of the gardeners at Center Street are highlighted as the true spirit of community gardening that should be encouraged further.
**Ostrowski, Wesley**  Freshman
Biology Chemistry

**Semlacher, Berlin**  Freshman
Undecided Undecided

**Robbins, Brent**  Freshman
Undecided Undecided

**Waldner, Jake**  Freshman
Undecided Undecided

Chemistry Poster Session
**The Danger of Caffeinated Alcoholic Beverages**

The dangers of caffeinated alcoholic beverages have received attention the past few years due to its growing popularity. There are many misconceptions about the affects when caffeine and alcohol are combined. Some believe that the caffeine lessens the affects alcohol has on the consumer, but in reality it does the opposite. When combined, the caffeine counteracts the parts of the brain that usually give off signals of severe intoxication, and also both of the drugs are very soluble meaning they enter the blood stream easily. We hope to open up the eyes of our peers to this serious epidemic.

**Palmer, Shannon**  Senior
Exercise Science

**Siebahr, Rachel**  Senior
Exercise Science

**McGeehan, Michael**  Senior
Exercise Science Exercise Science

**Briggs, Wyatt**  Junior
Exercise Science

Exercise Physiology
**Physiological Correlates of Talk Test**

Exercise prescription involves measurement of physiological markers including HR, LT, %VO2 max, and RPE, which may be inappropriate for untrained populations beginning training. The Talk Test (TT) is a surrogate, replacing these physiological markers. Purpose: Assess the relationship between ease of completion of the TT and physiological markers of exercise intensity. Methods: Nine participants completed graded exercise tests during which ease-of-completion of the Talk Test (TT RPE), rate of perceived exertion (RPE), blood lactate (BL), and heart rate (HR) were assessed. Results: Correlations were found between TT RPE and exercise RPE (r=0.992), BL concentration (r=0.967), and HR (r=0.976). Conclusion: The TT was found to be an effective indicator of exercise intensity, likely due to the relationship between ventilator threshold and exercise intensity.

**Parker, Hayden**  Freshman
Chemistry

**Sorun, Quinn**  Freshman

**Cressey, Emma**  Freshman

**Eames, Greyson**  Senior

Chemistry Poster Session
**History of Uranium Enrichment**

During the Manhattan Project, uranium was enriched in a variety of ways. Electromagnetic separation was done by a device called a “calutron”, which involved accelerating the uranium in a cyclotron then using mass spectroscopy to separate the atoms. Gas diffusion was also used, which relayed on Graham’s law to separate gaseous UF6 by diffusion rate. Lastly, thermal diffusion took advantage of the tendency of heavier gasses to collect at colder ends of a temperature gradient while lighter gasses collect at the warmer ends. In all cases the procedures took tremendous amounts of resources to obtain usable quantities of enriched uranium.

**Parkinson, Erin**  Sophomore
Biology

**Biology Research Presentations**

**Parasite Resistance to Anthelmintics**

De-worming medication is often administered to goats routinely causing internal parasites to rapidly become resistant. This College Colloquium Research Grant investigated the extent of goat parasite resistance to the anthelmintic drug, ivermectin, in Whatcom County, Washington. The study monitored twenty dairy goats total from four farms, over a three month period, testing for parasites using a variation of the Fecal Egg Count Reduction Test. In six of the twenty goats, parasitic egg reduction in response to treatment with ivermectin was below 90%. In this research 2 of the 4 (50%) of the farms showed resistance to ivermectin.

**Paulsen, Gunnar**  Senior
English Politics

Activism and Social Justice
**Echoes of Falling Water: Narratives of Indigeneity in Celilo Village and the Dalles Dam.**

On March 10, 1957 Celilo Falls, the most productive salmon fishery on the Columbia River, was flooded when the gates of the Dalles Dam closed. The falls were an important gathering place for Native Americans for over 10,000 years. This project explores popular narratives in regional newspapers, federal documents, and other public fora that justified the destruction of this magnificent cultural and natural resource. In doing so, I examine the challenge that Celilo Village – the American Indian community situated adjacent to the falls – pose to those narratives and explore the uncomfortable foundations of mid-twentieth century Oregon identity.

**Pearson, James**  Junior
Biology

**Chapple, Duncan**  Junior
Biology

**Sloan, Blythe**  Senior
Anthropology Anthropology

**Felicia Garcia**  Sophomore
Psychology

Chemistry Poster Session
**Embalming in Ancient Egypt**

This paper intends to examine the embalming ritual of Ancient Egyptians, and the chemical processes involved. A background will be provided on the three compounds that make up the embalming process: Natron, beeswax, and resin. Natron was used to absorb water from the body. During the process of dehydration, resin was placed on the skin to prevent microbial deterioration. Afterwards, a layer of beeswax was spread over the skin to provide a hydrophobic layer on the skin to repel moisture. This project will compare these methods with the natural mummification of bodies found in bogs and extremely arid conditions.

**Peterson, Savannah**  Freshman
Biology

**Swart, Matt**  Freshman
Biology

**Brooks, Nick**  Freshman
Biology Biology

Chemistry Poster Session
**A Study of Graphene**

Carbon has many allotropes including diamond, buckminsterfullerene, and graphite. Graphene is an allotrope of carbon discovered by Professor Andre Geim and Professor Konstantin Novoselov who were from the University of Manchester. Graphene is carbon flattened into a single atom thick layer and is still stable. The experiment was two pieces of tape stuck together with graphite in between them. When they pulled the pieces of tape apart, graphene had been pulled apart from the graphite and was stuck to the tape. Graphene has been found to be used for fuel, alcohol, killing bacteria, and also for the use in packaging.
**ABSTRACTS**

**Pitchford, Matt** Senior
Rhetoric/Media Studies

Rhetoric: Story and Song

**Prados, Hannah** Senior
Psychology

Development of Teenagers/Emerging Adults

Achievement: Liked vs. Popular students

Our study examines the differences between popular and well-liked students in terms of academic measures and feelings about school. The goal of the study was to examine whether daily school behaviors (average time spent studying and average effort spent on homework across a two-week period) mediate associations between being well liked and being popular and grades and feelings about school. Data was obtained from a group of high school students who filled out a questionnaire measuring daily behaviors and school outcomes. This project aims to add to the literature possible mechanisms for differences in school outcomes between the two groups.

**Quigley, Sarah** Senior
Theatre

**Striepe, Bryn** Senior
Theatre

**Rice, Josh** Senior
Theatre

Theatre Performance

Anyone Could See

A performative adaptation of words taken from an avant-garde short piece by Gertrude Stein entitled, “If You Had Three Husbands,” created during the most fertile and prolific years of her experimental work. The performance exposes the destructive nature of doubt within an intimate relationship, while also highlighting themes of complacency and deception. The piece was originally devised for the Feast on Coho! fundraising performance for Coho Productions Company in Portland. An intense, reckless, and violently charged performance that will have you at the edge of your seat: until it’s dead.

**Quinn, Sara** Senior
Women’s Studies

Looking Locally: Gendered Communities in Oregon

**Rahal, Erika** Senior
Biology

Psychology Poster Session

Pursuing a Functionalist Account of Behavioral Differences between Emotions by Integrating the Study of Actions, Inhibited Actions, and Big-Five States

Functionalist theories propose that different emotions elicit distinct action tendencies that address the threats, challenges, and opportunities afforded by situations. The current research integrates “molecular” and “molar” approaches in simultaneously assessing three divergent aspects of action tendencies: actions, inhibited actions, and Big-Five personality states. In two studies (N=187; 895), participants were asked to recall recent experiences of 15 different emotions, including their action tendencies. Results revealed emotions vary considerably in their patterns of action tendencies, supporting somewhat distinct behavioral functions of emotions. Results also demonstrated a meaningful correspondence across action tendencies, suggesting the usefulness of combining methods of assessing behavior.

**Reddy, Tejeswara** Senior
Politics Economics

International Conflict and Cooperation

Biodiversity: A Study of Patent Law

This thesis explores why the U.S. and Indian IPR systems developed evolved from similar notions of ownership post-industrialization however overtime adopt radically different philosophies regarding treatment of biological material. A history of environmental politics in both countries, the role of the civil service, and the increasing privatization of biotechnology are investigated as causes of this diverse legal philosophy. Given the complexity of environmental politics and the unstable micro-politics involved within the civil service, the globalization of biotechnology is perhaps the best-evidenced causality for legal protections in India and U.S. Results will be evaluated and discussed.

**Reinhart, Erik** Sophomore
Physics Chemistry

Darwin Day Science Presentation

We discovered and characterized a new ultra-rare Delta Scuti type triple mode pulsating variable star, TYC3144-595-1. Relatively high mass stars will begin pulsating as they age, as long as their interior temperature near a helium layer is the correct temperature for ionization. Using a telescope, a high resolution camera, and differential magnitude calculation software, the magnitude of the star can be determined. By using another program, the date and the magnitude data can be used to determine the radial pulsation frequencies. The pulsation mechanism and results will be discussed more in full as well as the significance of the data.

**Rice, Kaitlyn** Senior
Women’s Studies

**Rauch, Erika** Senior
Rhetoric/Media Studies

Rhetoric: Story and Song

Mitt Romney’s Mormon Narrative

Romney’s speech, “Faith in America” is a narrative he created in order to “normalize” his faith, which is a faith that has never been represented in the public sphere with such prominence. Romney addresses his Mormonism not by describing the values a Mormon holds, but by arguing that he should not have to defend his faith in a country that is founded on values that admit religious freedom. This speech is Romney’s attempt to embed his own Mormon narrative, which is incoherent for much of the voting public in America, into the coherent narrative of religious tolerance.

**Reddy, Tejeswara** Senior
Politics Economics
The present study used event-related brain potentials to investigate whether single letters would elicit a left-lateralized enhancement of the N170 neural response in adult fluent readers. Results indicated that single letters elicited a larger amplitude occipito-temporal N170 bilaterally relative to false-font stimuli. Additionally, participants with a larger N450 rhyme effect to single letters also showed relatively more left-lateralized N170 responses. Taken together, these data indicate that single letters are distinguished from low-level control stimuli within 200 msec of processing. These data also suggest phonological recoding might account for some portion of the left-lateralization of early neural responses to printed text.

Scheffer, Claire  Freshman
Undecided

Barbarick, Chelsea  Freshman
Undecided

Thorson, Robin  Freshman
Undecided Undecided

Vetter, Kyler  Freshman
Undecided

Chemistry Poster Session
The Chemistry of Photography

The purpose of this research is to study the chemistry behind photography. Photos are taken by photogenic paper containing silver halides in gel on the surface. Once the light rays strike the paper, the energy from the light reduces the Ag+ to Ag and turns black, called a latent image. This can be done with few household objects and will give students the knowledge to take photos without the need of expensive cameras. We will be researching silver halide photography by making a pinhole camera, as well as looking at how photography has changed over the past years.

Scheffer, Ellen  Senior
Women's Studies

Looking Locally: Gendered Communities in Oregon
Farming For Femininity

This presentation will look at the ways that elements of both masculinity and femininity are incorporated into the on-farm labor and gender presentation of women primary farm operators in the Willamette Valley. I will look at both traditional and nuanced conceptions of the gendered division of labor on small farms to determine the ways that women primary farm operators are both working within and stepping outside these roles, and what effect their performance has on the sustainable agriculture movement.

Scheffer, Ellen  Senior
Women's Studies

Sustainable Agriculture in the 21st Century
Gender and Sustainable Agriculture

This presentation will examine the ways that women primary farm operators in the Willamette Valley perform gender in their on-farm labor and outward appearances, and how this affects their role in the sustainable agriculture movement.
**Schiff, Hannah Elise** Senior  
Art History  

Lilly Project Summer Research Grants  

Antony Zito: The Portrait Maker's Face  

This project takes an in-depth look at the spirituality and ethics of contemporary portrait artist, Antony Zito. By looking through these lenses, and discerning what goes into his artistic process, Zito serves as a case study to provide a better understanding of how art and vocation can be one.  

**Schlueter, Heather** Junior  
Exercise Science  

O'Mahony, Erin Junior  
Exercise Science  

Health and Healthcare  

Motor Deficits in Alzheimer's Population  

This is a preliminary report on the effects of Alzheimer’s Disease (AD) on motor function. We analyzed gait characteristics, balance, reaction time, and grip strength. Our results reveal that men performed significantly better than women for reaction time. There were no gender differences in stride length and single leg support time. Further, there were no gender differences in medial/lateral or anterior/posterior balance. Results indicate that men and women exhibit similar declines in ambulatory performance with AD. We are investigating whether gender differences may be attributable to muscle mass, prior levels of activity, and progressive stage of the disease.  

**Schnoor, Harrison** Senior  
History  

History Senior Thesis Presentations  
The Knights of the Ivory Tower  

This presentation analyzes the ways in which Hitler subordinated the German Officer Corps to his will from 1933 to 1938. In particular, I focus on his undermining of their confidence and corporate power (such as through the 1938 Blomberg-Fritsch Crisis) as well as his pandering to their pro-Imperial Era sensibilities. The details of how and why the perhaps most conservative group in prewar Germany came to serve a radical fanatic will be revealed in my presentation.  

**Scruton, Brett** Junior  
Politics  

“LOLCATS”: A Study of the Interwebs  

Afghanistan’s Internet Dilemma  

The aim of this research investigation is to examine the reluctant use of the Internet in the war-torn nation of Afghanistan. Despite many externally based development projects in the region, the modern commodity of the Internet has yet to be steadily used, even with physically implemented resources to do so. Why is the Internet simply underutilized in Afghanistan? This segment of the panel aims to answer this question by putting forth research on both physical accessibility and cultural norms. The most prominent theory will be presented and will hopefully inspire discussion and audience debate.  

**Siebuhr, Rachel** Senior  
Exercise Science  

Health and Healthcare  

von Willebrand Factor and Blood Flow Response to Whole Body Vibration in Diabetic Peripheral Neuropathy  

Whole body vibration (WBV) is an emerging treatment possibility for diabetes-related impaired vascular health, possibly enhancing endothelial maintenance and peripheral blood flow. Purpose: Identify effect of four weeks WBV on peripheral blood flow and endothelium of diabetics suffering peripheral neuropathy. Methods: Diagnosed diabetics with peripheral neuropathy (6 male, 5 female) underwent three WBV sessions/week for four weeks. Toe-brachial indexes (TBI) and blood samples analyzing von Willebrand Factor (vWF) were used to assess effects. Results: Plasma vWF levels decreased significantly, and significantly correlated with changes in TBI. Conclusions: Data suggests that regular WBV decreases endothelial damage by improving peripheral blood flow.  

**Sjulin, Jenna** Senior  
History  

History Senior Thesis Presentations  
The Evolution of AIDS Service Organizations in the United States  

Following the discovery of the Acquired Immune Deficiency Syndrome (AIDS) in 1981, AIDS Service Organizations emerged in the United States in response to the lack of governmental attention paid to the epidemic. These organizations centered on the needs of the gay community, the group initially most affected, in order to offer relevant services and give agency to a stigmatized group. This project uses a case study of the Cascade AIDS Project, an organization based in Portland, Oregon, to demonstrate the internalized struggle of this and other similar organizations to support and empower gay men with HIV/AIDS while simultaneously recognizing the need to engage the heterosexual community in order to ensure political action.  

**Sobocinski, Jeremy** Freshman  
Undecided  

Reed, Kaitlin Freshman  
Undecided  

Outhet, Jessica Freshman  
Undecided Undecided  

Chemistry Poster Session  

Understanding Ozone Depletion  

Chlorofluorocarbons (CFCs) were commonly used from the 1960s to the 1980s. They have been linked to the depletion of ozone, O₃, from the stratosphere over Antarctica. This depletion has come to be known as the ozone hole, and is nearly the size of the continental United States. The ozone hole has multifaceted implications, including: equilibrium of the eastern Antarctic ice sheet (despite global warming’s effects), detriments to human health, and a reduction in plant growth. In 1978, the United States government recognized this, and regulated chlorofluorocarbon production. These changes have profoundly affected the environment; Ozone growth is predicted by 2023.
Sogge, Kim  
Senior  
Rhetoric/Media Studies  
American Ethnic Studies


What Are You?: Creative Processes for Reclaiming Space and Dialogue Around The Multi-Racial Identity

The Multi-Racial identity is often an unexplored facet of the racialized identity. Until recently, little to no research in Ethnic Studies was centered around the multi-racial lived experience. Drawing on previous projects, artwork, and research which reclaim the Multi-Racial identity, this project aims to explore, expand, and give voice to the Multi-Racial people on Willamette’s campus through various forms of creative processes. By fostering community and creating dialogue I hope to create voice and visibility of the lived experiences of Multi-Racial people. I hope to shed light on the need for Multi-Racial space and dialogue in order to build community and move in the direction of social change and resistance.

Sonnenfeld, Sarah  
Senior  
Biology

Biology Research Presentations

Corticosterone regulation of vasotonin signaling: An imaging study

Acute stress has many effects on animal behavior and physiology, including behavioral changes due to hormonal fluctuations. These rapid changes are critical to survival and reproduction, yet their mechanisms are relatively unknown. The roughskin newt was used to investigate the relationship between CORT (stress hormone) and VT (peptide hormone). We conducted a confocal imaging study using VT tagged to a fluorescent probe. Newts received an injection of CORT, followed by administration of VT-OG directly to the hindbrain. Results showed CORT had no effect on VT-OG internalization, suggesting either another possible mechanism, or a limitation in experimental set-up.

Stahl, Megan  
Junior  
Rhetoric/Media Studies

Eisenhower’s Cold War Rhetoric

Eisenhower: The Common Hero

This paper focuses on the morals Dwight D. Eisenhower asks the American people to uphold in his Eisenhower Doctrine speech, given on January 5th, 1957. Eisenhower uses the moral of peace to garner support for his doctrine, the value of freedom to conceal his real interests in the Middle East, and the value of self-sacrifice as a way to ensure lasting support in the nation’s military actions. Both textual examples and outside evidence will be discussed, as well as the rhetorical significance of Eisenhower’s speech.

Stevens, Kristen  
Senior  
Politics

International Conflict & Cooperation

Caspian Sea Dispute

For decades, the Caspian Sea has been considered a flashpoint, a region poised for conflict. The five bordering nations have all made territorial claims to its waters, but have failed to agree on how to settle competing claims. Tensions between states have been exacerbated by the discovery of massive oil fields within the seabed. Despite these conditions, there has not been a major conflict over this issue, and have even been instances of cooperation between states. My project uses explanations of state interests, ideals, and international norms to explain this phenomenal geopolitical behavior over the coveted Caspian.

Stockdale, Catherine Minn  
Senior  
Anthropology

Lilly Project Summer Research Grants

Answering the Call: An Exploration into the Vocation of 21st Century Global Health Workers

What awakens compassion in human beings? This project explores the formative life influences and experiences that bring workers into the challenging field of global health today. Through conversations with a variety of individuals working in the field, we are given a snapshot of the challenges that call them to this work and the inspirations that sustain them.

Stockdale, Catherine Minn  
Senior  
Anthropology  
American Ethnic Studies

Ryan, Brady


Calibrations and Collaboration: Strengthening relationships between Willamette University and Chemawa Indian School through Chemawa AVID Day

Through the Chemawa Indian School Partnership Program (CISPP) and the Chemawa AVID Internship Program, new opportunities have arisen to rebuild and strengthen the relationship between Willamette University and Chemawa Indian School. This project recognizes and honors Willamette University’s absolutely intertwined history with Chemawa Indian School and seeks to strengthen our relationship through collaboration with AVID students and teachers in planning a meaningful and fun day for Chemawa AVID students to visit and participate in classes, learn more about the college experience from CISPP tutors, build friendships with staff and students, and learn more about the many exciting possibilities of college. AVID is a nationwide program and stands for Advancement via Independent Determination. Members of the Chemawa AVID program like to joke with the students that it should be advancement via self-determination. The AVID program nationwide emphasizes college readiness and professional development and is designed to increase school wide learning and performance.

Streeter, Jennifer  
Senior  
Women’s Studies  
Politics

Welfare Women, Criminal Women, and the Sadomasochism in Love: A Polemic Discussion on Gender

Women, Empowerment, and The Welfare State

I will be offering a comparative analysis of the U.S. welfare system with the current welfare state in the barrios or slums of Venezuela. Venezuela has developed a revolutionary constitution that incorporates gender-neutral language and offers state provided wages for women who stay in the home. This is fundamentally different than the self-sufficiency-focused welfare state in the U.S. Juxtaposing these two welfare states provides a contemporary lens in which to analyze welfare in an effort to answer the question: Can the welfare state play an empowering role in the lives of women and single mothers?

Sweeney, Joellen  
Sophomore  
Theatre

Crossing the Line: President Eisenhower’s Rhetorical Crisis in Little Rock

The Home Front Rescue Mission

In his Address On Little Rock, Arkansas, Eisenhower justifies his use of military intervention by casting it as a home front rescue mission. His speech utilizes the tropes of rescue mission rhetoric as defined by Proctor (1987)—created chaos, indirect aggression, coerced choice—but reinterprets them through the role of president as surrogate parent. My presentation will identify the ways in which Eisenhower establishes his role as surrogate, and then examine the way that role interacts with the tropes of rescue mission rhetoric to create a discourse that is closer to parental discipline than military intervention.
ABSTRACTS

Tablas, Cybelle  Freshman Undecided
Poltavski, Denise  Freshman Undecided
Needham, Taylor  Freshman Undecided Undecided
Parkinson, Erin  Sophomore Biology

Chemistry Poster Session

Film Development

In the antiquated technique of film development chemicals such as silver halide grains and silver must be added to water. An oxidizing agent is produced in an oxidation-reduction reaction and couplers are formed in the layer by layer imaging process. For every color in the photo, the paper must be transferred from one set of chemicals, which is formulated to create one of the primary colors, to another. Due to the sensitive nature of this process, chemical accuracy is crucial for the developing film. Without the knowledge of the complexities behind film development, successful recovery of images would be near impossible.

Tanner, Kelly  Senior Sociology

Sex, Drugs, and Rock and Roll: Sociological Studies of Subcultures and Countercultures

Becoming a Contemporary Marijuana User

Many aspects of our society have changed since 1953. Nearly 60 years after Howard S. Becker’s original study of how people become marijuana users the process was reexamined in a modern setting. Interviews were conducted with 9 participants to critically analyze the 3 steps outlined by Becker’s original research: (1) Learning to use marijuana (2) Recognizing the effects and (3) Identifying the effects as pleasurable. It was found that modern users must go through two additional steps before they identify as marijuana users. In addition to these steps one must firstly overcome the social stigma surrounding marijuana use and lastly they must accept the label of “marijuana user.”

Taylor Mutch  Freshman Undecided
Michael Koenig  Freshman Undecided
Tuolai Yang  Sophomore Physics Physics
William Hendricks  Freshman Undecided

Chemistry Poster Session

Environmental Clean-up via Photocatalyst

Photocatalysts offer new and efficient methods for breaking down polluted sources into desired materials at a low energy cost and with low risk to the environment. By using light as the only energy source for the catalyst, photocatalysts can be applied to environmental disasters such as oil spills as well as commercially as a fog remover. Their semiconductor nature lends itself towards a redox reaction, attracting negatively charged molecules to the oxidation of the conduction band and positively charged molecules to the reduced valence band. By this method, photocatalysts are capable of decomposing selected organic and inorganic molecules with efficiency.

Thomas, Nilo  Junior Sociology Economics
Rivas, Dina Sarai  Sophomore Sociology Spanish

Understanding Social Institutions

Willamette Academy: A Constructive Critique

Our goal is to embark on a project that would examine the effects of Willamette Academy on its alumni. The purpose of this project is to discover all of the effects WA has had on their students. We also plan to explore the struggles and experiences that underrepresented students here at Willamette University go through as well as suggest to WU other forms of support they can offer students. The results of our findings will serve to provide suggestions of improvement for WA as they continue to support their students.

Toninato, Blythe  Senior Anthropology

Understanding “Homininity”

This paper examines the extent that teleological and hierarchical thinking of human evolution confute the understanding of humanity, or “homininity,” in Neanderthals. Evidence from the paleontological record, population genetics, and molecular evolution support an evolutionary story that Neanderthals were more “human-like” than previously thought.

Townsend, Jameka  Freshman Undecided Undecided
Redick, Mali  Freshman Biology Undecided
Townesley, Jasmine  Freshman Undecided Undecided
Lemmons, Frankie  Freshman Undecided Undecided

Chemistry Poster Session

Vitamin C Synthesis in Goats

First we will explore the synthesis of Vitamin C in goats. Vitamin C is a reducing agent, and its fully oxidized form is called dehydroascorbate. We will discuss the importance of Vitamin C and how it is formed. We will analyze the redox reaction that occurs to form dehydroascorbate. This chemical process is of vital importance to many species. We will explore what is actually happening at the atomic and molecular level within Vitamin C during the reaction. We will also show the molecular make-up of d-glucuronate, which is required by vertebrates to synthesize vitamin C.

Trant, Lindsay  Senior Sociology

Sustainable Agriculture in the 21st Century

Local Food in the Willamette Valley

This paper explores the question: what is it like to be a local farmer in the Willamette Valley? This question is addressed through a quantitative analysis of data collected on a local farm and a qualitative case study conducted on a local farmer. This question includes both the economic challenges facing local farmers and the problem of economic inequity that inhibits participation in the local food movement. Additionally, the relationship provided through local food facilitates an awareness of food and the process that produced it. Further, this relationship produces a sense of community that is grounded in a specific place.

Uebelacker, Sydney  Senior Women’s Studies

Welfare Women, Criminal Women, and the Sadomasochism in Love: A Polemic Discussion on Gender

Metaphors for Criminality and the Construction of the Female Offender in 19th-Century America

This thesis will explore the use of spiritual sickness or religious impurity as metaphor for criminality in 1860s New York. It will examine conceptualizations of criminality as informed by preferred or less desired features of stratification, and the construction of the female offender as machine.

Updegraff, Alicia  Senior Politics

“LOLCATS”: A Study of the Interwebs
Like This be to Politically Involved

This project is all about researching how social networking has impacted our political processes. This includes evaluating the different forms of media that are available for politicians to use, like YouTube, Facebook, and even Twitter and the ways in which they are used to promote political participation. Also, there is a lot of focus on the 2008 election because scholars have pointed out how prevalent and expanded the use of the Internet became in the campaign process during this election. Lastly there is an analysis of the use of social networking in recent political movements like the Occupy Movement.
Vanillin is the molecule responsible for the scent and flavor of the pod of the vanilla orchid (Vanilla planifolia). Its structure was first determined in 1874 by Ferdinand Tiemann and Wilhelm Haarmann. Bio-synthesis involves the conversion of valerianic acid into vanillin; this conversion can also be enzymatically catalyzed. Bench-top synthesis of vanillin makes it useful in industrial applications, as a precursor to a wide range of pharmaceuticals including l-dopa and papaverine, in herbicides and anti-foaming agents.

**Chemistry Poster Session**

**Vanillin**

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ABSTRACTS

Williams, Hayley  Senior
Physics

Williams, Hallie  Senior
Biology Spanish

Special Science Session

Differences in morphology affect agonistic signalling of the domestic dog
Paedomorphosis, the retention of juvenile morphology at maturity, is believed to be an important process in generating evolutionary change. The domestic dog, Canis familiaris, was domesticated from the wolf, Canis Lupus, and is a distinct species. The domestic dog displays great morphological diversity that is believed to be derived from both global and local paedomorphosis. This study investigates how differing morphologies and levels of paedomorphosis affect the exchange of agonistic visual signals in the domestic dog. Data gathered through observation of dogs at play, assigning morphology scores and observing the agonistic signals displayed. Methods and results will be discussed.

Williamson, Haley  Senior
History

History Senior Thesis Presentations

Marguerite, Mysticism and Heresy
This project looks at Marguerite Porete’s fascinating early-14th century book, The Mirror of Simple Souls, to look at power structures in the extra-textual world. Marguerite was burned at the stake in 1310 for heresy; her text offers us an entrance into early 14th century France with buried references to power, gender, political, social, and economic structures in the outer world. This presentation will focus on Marguerite's allegorical figures Reason and Holy Church the Little to analyze Marguerite’s relationship to the external ecclesiastical hierarchy and “real world” power structures.

Worthing, Sarah  Senior
Politics

Components of Change: Rehabilitative Justice on the West Coast “Deserving” rather than “Deviant”: California’s Victim-Centered Anti-Trafficking Legislation within the Securitization of Human Trafficking
This study will investigate California’s human-rights approach to protecting victims of human trafficking, despite widespread international and federal discourse on human trafficking as a national security threat. While federal policies on protecting and supporting trafficking survivors are stringent and inadequate, California adopted legislation in 2006 that liberally extended benefits to noncitizen victims as well as providing all trafficking victims with access to civil damages. Through examining political institutions, the use of discourse, and social movements, this study will illuminate how California enacted human-rights centered change through victim-centered anti-trafficking legislation. Juxtaposing Oregon to California, this study will also examine how Oregon can enact similar policies.

Whitson, Hayley  Senior
Physics

Lasers, Numbers, and Complex Systems
Construction of a Dye Laser
Ultracold heteronuclear molecules have seen increasing interest in the scientific community over the last few years. By controlling their ro-vibrational energy levels, ultracold molecules can be used for high precision spectroscopy, to study cold collisions with rich internal dynamics, as model systems for condensed matter physics, and as qubits in quantum information processing. In this laboratory, we study the novel combination RbCa. In addition to a permanent electric dipole moment, it also possesses a permanent magnetic dipole moment. This makes it an ideal candidate to study strong long-range dipole-dipole interactions. A dye laser system will be used to ionize RbCa through resonantly enhanced multi-photon ionization (REMPI). We use a Nd:YAG pulsed laser to pump a dye solution in a quartz glass cell. The linewidth of the dye laser is narrowed through use of a diffraction grating in Litman-Metcalf configuration. We have performed ab initio calculations to determine the best wavelength for REMPI. The data collected will be used to optimize further calculations of molecular energy levels of ultracold RbCa.

Williams, Austin  Junior
Rhetoric/Media Studies

Rhetoric: Story and Song

The Wire: The Risk of Unusual Television
The HBO television program, The Wire, takes a deeply cynical look at the institutions of the modern American city through its fictional account of a West Baltimore drug investigation, which garnered high levels of critical acclaim but relatively few viewers. Through its devotion to realism, avoidance or subversion of traditional character roles, and use of a single, cohesive narrative the show builds identity on multiple levels simultaneously. While these elements are essential to the program’s ability to construct identity, they run counter to conventions of the television crime drama and likely led to the program’s low viewership.

Williams, Bethany  Senior
English

Something About Literature (and Zombies)

Nature as Subject: Fiction and Empowerment
An exploration of how contemporary Pacific Northwestern fiction may rewrite nature as an empowered subject. Brian Doyle’s novel Mink River works against a literary tradition that perpetuates environmental degradation and the social disempowerment of marginalized groups due to its feminine gendering of nature. An analysis of Mink River’s redefinition of nature and reconceptualization of humans’ relationship with it—through lenses of Bakhtinian dialogue and ecofeminist, materialist, and literary theories—will yield an enriched understanding of how Doyle’s gripping narrative and beautiful lyricism deftly engages in current critical discourse.

Wright, D’Arcy  Senior
French Anthropology

Something About Literature (and Zombies)

Tintin and World War II: Hergé’s Political Critiques and Messages of Solidarity
Hergé’s Tintin comics are not simply an imaginary world of adventure. In my analysis of the comics Hergé wrote during WWII, I demonstrate that these comics evolved in tandem with Belgium’s tumultuous socio-political scene. Hergé began this period with overt critiques of global and local politics, criticizing Hitler and Flemish marginalization. Yet, as war progressed, his message shifted to convey Franco-Belgian identity and unity. With these conclusions, my study offers a new perspective on the social climate during, on Hergé’s comics, and on the ability for comics to represent and critique their social milieu.
Womanhood and the Politics of Identity

**Hijab in the Media: A Difference in Perceptions**

Historically, a tension has existed between western nations and Middle Eastern Islamic nations. Western feminists have commonly interpreted the hijab as a sign of Muslim women's oppression, since Islam differentiates the roles of men and women followers. However, Muslim scholars and citizens defend the hijab as liberating for women, because it allows for Muslim women to be mobile within the community. This study will investigate how Muslim American's portray Muslim women in hijab within magazines, as an attempt to bridge the seemingly dichotomous relationship between “the West” and “the Middle East.” Results and interpretations will be discussed.

**Yamashita, Koki**  Senior
Sociology

**Applied Sociology: What’s Culture and Community Got to Do with It? Beyond Soy Sauce: Office Space of Yamasa Corporation USA**

This presentation investigates what is happening in the international business world from sociological perspectives by looking at how bureaucratic position and multicultural background may affect employees’ personal and professional goals and other various aspects at Yamasa Corporation U.S.A, Japanese Soy Sauce Production Company in Salem. It will examine how people are motivated or demotivated to work within a corporation system or how workers from different cultural backgrounds communicate within this bureaucratic setting.

**Yee, Estella**  Senior
Chemistry

**Chemistry Research Presentations**

**Nuclear Magnetic Resonance Spectroscopy Investigation of a Phase Diagram Anomaly in the o-Toluidine + n-Hexane Binary Liquid-liquid System**

Phase transition temperatures of liquid-liquid systems have been precisely measured using data collected by a light scattering instrument, thus allowing for a more accurate mapping of the phase diagrams. However, in several liquid-liquid systems, an anomaly has been observed on one side of the phase diagram, where light scattering data suggest two different transition temperatures. In this current project, the o-toluidine + n-hexane system was investigated through the use of light scattering and NMR techniques. NMR experiments were used to study the compositions of the phases as a function of temperature in order to discover the source of the anomaly.

**Zuniga, Alfredo**  Senior
Biology

**Behavioral Analysis of Loss of single-minded Function in Drosophila**

I have identified a mutant allele of the single-minded (sim) gene in Drosophila melanogaster. The sim gene encodes a transcription factor that acts as a master regulatory protein responsible for regulating the development of the central nervous system in early embryos. It has been shown that the loss of sim function results in the loss of all central nervous system midline cells. In order to quantify the effect that loss of sim function has on Drosophila behavior, a quantitative analysis of the walking behavior of sim^WU4 mutants was conducted using Buridan's Paradigm and a video-based computerized tracking system.
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The Committee thanks all students who participated in SSRD, especially those students who present their work, and make this event a great success.

2011-2012 SSRD Committee
Stas Vysotsky, Assistant Professor of Sociology, SSRD Chair
Bianca Murillo, Assistant Professor of History
Eric Noftle, Assistant Professor of Psychology
Aili Zheng, Assistant Professor of German
Leslie Whitaker, Administrative Assistant

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