13th Annual Graduate & Undergraduate
EWU | Student Research and Creative Works
SYMPOSIUM
MAY 18–19, 2010

The mission of the EWU Student Research and Creative Works Symposium is to promote student research, scholarship, and creative activity done in partnership with faculty as a vital component of higher education. Students, faculty, and administrators are invited to attend to hear and discuss undergraduate and graduate creative and scholarly work.

“It is better to have enough ideas for some of them to be wrong, than to be always right by having no ideas at all.”

Edward de Bono
Leading Authority in the Field of Creative and Conceptual Thinking
Eastern Washington University
13th Annual Student Research & Creative Works Symposium

Day One
Tuesday, May 18, 2010
4:30 p.m. – 9:10 p.m.
Presentations, Fine Arts Complex

4:30 p.m. Welcome Speech from College of Arts and Letters Associate Dean Gina Petrie, Presenter Check-In Begins
Art Building, Entrance

4:30 - 8:00 p.m. Appetizers and Refreshments
Art Building, Lobby*

5:00 - 9:00 p.m. Art & Visual Communication Design Displays
Art Building, Lobby, Gallery, Installation Room

5:00 - 6:20 p.m. Music Composition Presentations
Art Building, Gallery

6:20 - 9:10 p.m. Film with Music Presentations
Radio-Television (RTV) Building, Room 221

5:00 - 6:00 p.m. Theatre Presentations
University Theatre, Room 207 and 2nd Floor Studio

5:30 - 8:30 p.m. Film Presentations
Radio-Television (RTV) Building, Room 101

5:00 - 8:40 p.m. Creative Writing
Communications Building, Room 225

* Appetizer and refreshment tables will be located outside in the courtyard if the weather permits
Eastern Washington University
13th Annual Student Research & Creative Works Symposium

Day Two
Wednesday, May 19, 2010
7:30 a.m. – 6:00 p.m.
Presentations, Senior Hall

7:30 a.m. Presenter Check-In Begins
Senior Hall, Entrance

8:00 - 11:00 a.m. Coffee and Pastries
Senior Hall, Lobby

8:00 a.m. - 3:00 p.m. Information Tables: Service Learning, NCUR, HPPV Competition, Graduate Studies, EWU Library
Senior Hall, Lobby

8:00 a.m. - 12:40 p.m. Morning Oral Presentations
Rooms 101, 124, 201, 203, 204, 221, 243

10:00 a.m. - 12:00 p.m. Morning Poster Presentations
2nd Floor Lounge, Rooms 302/304 and 306. All posters may be viewed throughout the day.

12:40 - 3:30 p.m. Afternoon Oral Presentations
Rooms 101, 124, 201, 203, 204, 221, 243

1:00 - 3:00 p.m. Afternoon Poster Presentations
2nd Floor Lounge, Rooms 302/304 and 306. All posters may be viewed throughout the day.

★★★★

Banquet, Hargreaves Hall Reading Room, 201

4:00 - 6:00 p.m. Dinner and Keynote Address*

* Keynote Address by Terrance MacMullan, PhD, EWU Department of Philosophy, “Connecting the Circuit: Community as the Source and End of Research”. Please join us in celebrating presenters and their faculty mentors as we recognize participants for their outstanding presentations.
2010 Inspirational Quote

Edward de Bono

“It is better to have enough ideas for some of them to be wrong, than to be always right by having no ideas at all”

The mission of the EWU Student Research and Creative Works Symposium is to promote student research, scholarship, and creative activity done in partnership with faculty as a vital component of higher education. This year the symposium committee chose this quote by Edward de Bono, leading authority in the fields of creative and conceptual thinking, to exemplify this mission.

Edward de Bono, born in the Republic of Malta, is a physician, author and inventor who is best known as the originator of the term “lateral thinking,” which refers to solving problems through indirect and creative approaches. He is regarded by many as the leading authority in the field of creative thinking and the direct teaching of thinking as a skill.

Whereas Rene Descartes propounded *cogito ergo sum* (I think therefore I am), Edward de Bono proposes *ago ergo erigo* (I act therefore I construct/act). de Bono contends that action, together with an intentional design of the thought process, is required to constructively advance toward results and change.
Symposium Sponsors

EWU Office of the Provost  Graduate Studies
Grants & Research Development
McNair Scholars Program  Spokane Teachers Credit Union

Special thanks to

President Rodolfo Arévalo  Provost John Mason
Terrance MacMullan  Dean Lynn Briggs  Leslie Swannack

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Event Planning & Dining Services: Tom Shaffer, Albert Pjosek & Staff
Printing Services & Paint Shop

Spokane Teachers Credit Union
for their generous donation toward the honorarium, t-shirts, and recognition flash drives

And to all students, mentors, faculty and volunteers
who have continually worked to make the symposium a success

If you would like to contribute to the Symposium Foundation, envelopes are available in the Symposium office, Showalter 217B.

Please make checks payable to: EWU Foundation for Student Research & Creative Works Symposium
Symposium Committee Members

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Devon Tinker, Assistant Director, Bookstore & PUB Operations
Rachel Toor, Assistant Professor, Creative Writing, Inland Northwest Center for Writers

McNair Scholar Participants and Faculty Mentors

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Jessica Bryant, Rebecca Brown, Biology
Gabriel Chavez, Todd Hechtman, Sociology & Justice Studies
Desuree DeBerry, Pui-Yan Lam, Sociology & Justice Studies
Nicole Dewitt, Susan Ruby, Psychology
Enver Guseynov, Jerry Galm, Anthropology
Chris Miclat, Terrance MacMullan, Philosophy
Maria Morales, Sean Chabot, Sociology & Justice Studies
Carlos Munoz, Molly Johnson, English
LaMeshia Reese-Taylor, Dorothy Munson, CED Psychology
Amara Rieken, Julia Smith, Anthropology
Yvonne Sherwood, Todd Hechtman, Sociology & Justice Studies
Olga Shiva, Andrea Castillo, Biology
Elizabeth Welch, Dennis Anderson, Psychology
Information Tables

Academic Service Learning

Faculty, students and staff will be on hand to talk about their service-learning experiences and to offer information, resources and handouts. There will also be student artifacts, posters, books and journals at the booth for visitors to browse through.

National Conference on Undergraduate Research (NCUR)

NCUR, established in 1987, is the nation’s largest conference dedicated to undergraduate research and creative activity. This year, 30 EWU students representing various disciplines participated in the 24th annual conference at the University of Montana in Missoula. An NCUR volunteer will be available to discuss this year’s conference and provide information about the 2011 NCUR, to be held at Ithaca College in NY.

Human Powered Paper Vehicle (HPPV) Competition

Each year, EWU hosts the annual Intercollegiate Human Powered Paper Vehicle (HPPV) Engineering Competition. The basic concept is to construct a human powered vehicle out of 90% paper products (by weight). The remaining 10% can be any type of material and is limited only by the imagination of the designers. On display will be vehicles from this year’s competition along with a video presentation capturing the performance trials and tribulations.

Graduate Studies

Students considering advanced study beyond the bachelor’s degree will find information about more than 50 graduate programs offered at EWU, the application process, tuition and financial aid, contacts and deadlines, along with applications for admission. The friendly, professional staff members in the Graduate Studies Office are available to answer questions on the day of the Symposium and every weekday from 8 a.m. to 5 p.m. in 206 Showalter Hall, or by phone at 359-6297.

EWU Library

Library employees will be available to discuss what types of services and resources the library has to offer students. Come and learn how you can get research assistance from a librarian (in-person or via chat) who can show you how to find articles using the library databases, or how you can use the RefWorks database to help you with managing your citations when writing a paper. There will also be information on upcoming library events such as Books2Eat, future speakers, etc.
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Keynote Speaker

Hargreaves Hall Reading Room, 201 ◆ 4:30 – 5:00 p.m.

Terrance MacMullan, PhD
Department of Philosophy

“Connecting the Circuit: Community as the Source and End of Research”

This presentation calls on each of you to connect the circuit between your creative, scientific or scholarly works on the one hand and the needs and understanding of your community on the other. Relying on public intellectuals like John Dewey and C.S. Lewis as guides, I argue that the best research extends beyond the confines of its discipline by emerging from the lived problems of the greater public and returning to this community in ways that enhance its discussions and understanding. Human flourishing requires that you researchers and artists serve as living links between your works and your community.

Biography

Terrance MacMullan was born in Edison, NJ and was raised by his parents Ed and Joan in Miramar, Puerto Rico. He received his BA in Philosophy from Hamilton College in Clinton, NY and his Doctorate in Philosophy from the University of Oregon in Eugene in 2002. He has traveled widely and has worked as a bartender, a janitor, and as an assistant to the Homicide Unit in Elizabeth, NJ. He is currently an Associate Professor of Philosophy and Honors at Eastern Washington University, where he was named the ASEWU Undergraduate Teacher of the Year in 2008 and won the President's Merit Award in 2009. He was also elected by the faculty to serve as the President of the Faculty Organization for the 2007-2008 academic year. His essays on American philosophy, the philosophy of race and the relationship between public intellectuals and democracy have been published in The Journal of Speculative Philosophy, Philosophy and Social Criticism, and The Daily Show and Philosophy. His book The Habits of Whiteness: A Pragmatist Reconstruction was published by Indiana University Press in May 2009. He is currently researching a book-length project on post-positivist philosophies of Latin America. He lives in Spokane, Washington with his wife Rebecca, their two children, Sylvia and Liam, and their border collie Caleb.
Creative Works Presentation Schedule

Tuesday, May 18, 2010
Time: 5:00 – 9:10 p.m.

5:00 – 9:00 p.m.  Session 1: Art and Visual Communication Design Exhibits*
  Art Building: Lobby, Gallery and Installation Room

5:00 – 6:20 p.m.  Session 2: Music Composition
  Art Building: Gallery

6:20 – 9:10 p.m.  Session 3: Film with Music
  Radio-Television (RTV) Building: Room 221

5:00 – 6:00 p.m.  Session 4: Theatre
  University Theatre: Room 207 and 2nd Floor Lounge

5:30 – 8:30 p.m.  Session 5: Film
  Radio-Television (RTV) Building: Room 101

5:00 – 8:40 p.m.  Session 6: Creative Writing
  Communications Building: Room 225

* The B.F.A. Visual Communication Design (VCD) and Symposium Art/VCD exhibits will remain on display in the Art Building Gallery, Lobby, and Installation Room throughout the day on Wednesday, May 19, 2010.
# Creative Works Session 1: Art Exhibit

Art Building: Lobby, Gallery and Installation Room, 5:00-9:00 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Artist</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00 to 9:00</td>
<td>Kate Bohnet</td>
<td><em>Beauty is Power</em></td>
<td>Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>Juventino Aranda</td>
<td><em>The Middle Passage</em></td>
<td>Greg DuMonthier, Jenny Hyde</td>
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<tr>
<td></td>
<td>Jessica Garcia</td>
<td><em>Untitled</em></td>
<td>Tom Askman</td>
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<tr>
<td></td>
<td>laura rafford</td>
<td><em>Untitled</em></td>
<td>Tom Askman</td>
</tr>
<tr>
<td></td>
<td>Ashley Vaughn</td>
<td>Did yOU Know&quot;,tHat:,'(DanDElionS)) ArE* ((BeautIFul))<em>:?:</em>?</td>
<td>Tom Askman</td>
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<tr>
<td></td>
<td>Kelsey Vance</td>
<td><em>Untitled</em></td>
<td>Tom Askman</td>
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<tr>
<td></td>
<td>Joseph Loring</td>
<td><em>Thought Bubble</em></td>
<td>Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>Bridget Freeman Wamsley</td>
<td><em>Lighter Than Air: Wire, Graduating Plastic Sheets, White Duct Tape</em></td>
<td>Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>John Faulks</td>
<td><em>Thwap!</em></td>
<td>Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>Violet Tchalakov</td>
<td><em>Loma Chocolate</em></td>
<td>Mindy Breen, Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>D.Lynnette Tate</td>
<td><em>Found and Given</em></td>
<td>Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>Matthew Preston</td>
<td><em>Haiti, January 2010</em></td>
<td>Elisa Nappa</td>
</tr>
<tr>
<td></td>
<td>Michael Kenney</td>
<td><em>Marietta</em></td>
<td>Mindy Breen, Greg DuMonthier</td>
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<tr>
<td></td>
<td>Inga Ilich</td>
<td><em>Euboxus</em></td>
<td>Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>Oscar Nelson</td>
<td><em>Busted Knuckle Brewing Co.</em></td>
<td>Mindy Breen, Greg DuMonthier</td>
</tr>
<tr>
<td></td>
<td>Heather Kerns</td>
<td><em>Bike to Work Week Poster Series</em></td>
<td>Mindy Breen</td>
</tr>
<tr>
<td></td>
<td>Care Pantojan</td>
<td><em>Riding Into the Wind: “Innovate or Die”</em></td>
<td>Mindy Breen</td>
</tr>
<tr>
<td></td>
<td>Care Pantojan</td>
<td><em>Continuous Connections</em></td>
<td>Mindy Breen</td>
</tr>
<tr>
<td></td>
<td>Brian Kendall</td>
<td><em>Illustrations in Design</em></td>
<td>Mindy Breen</td>
</tr>
<tr>
<td></td>
<td>Katie Irvin</td>
<td><em>Doublethink</em></td>
<td>Mindy Breen</td>
</tr>
</tbody>
</table>
# Creative Works Session 2: Music Composition
Art Building, Gallery, 5:00-6:20 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Composer</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00</td>
<td>David Kobaly</td>
<td><em>Duo for Cello and Bassoon</em></td>
<td>Jonathan Middleton</td>
</tr>
<tr>
<td>5:20</td>
<td>Ben Robertson</td>
<td><em>Lattice</em></td>
<td>Jonathan Middleton</td>
</tr>
<tr>
<td>5:40</td>
<td>Becca Castillo</td>
<td>“Dante's Inferno” for Strings and Percussion</td>
<td>Jonathan Middleton</td>
</tr>
<tr>
<td>6:00</td>
<td>Levi Mazurek</td>
<td><em>Original Compositions for Voice and Acoustic Guitar</em></td>
<td>Robert Tapper, Kristina Ploeger</td>
</tr>
</tbody>
</table>

# Creative Works Session 3: Film with Music
RTV Building, Room 221, 6:20-9:10 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Filmmaker/Composer</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:20</td>
<td>Rachel Crow/SpreadingWings, Writer/Director Nick Bailey, Film Score</td>
<td><em>The Lost</em></td>
<td>Sarah Lee Monroe, Don Goodwin</td>
</tr>
<tr>
<td>6:40</td>
<td>Hyun Woo, Writer/Director Davis Hill, Film Score</td>
<td><em>Broken Glass</em></td>
<td>Sarah Lee Monroe, Jonathan Middleton, Don Goodwin</td>
</tr>
<tr>
<td>7:00</td>
<td>Kate Knox, Writer/Director Alex Wolfe, Film Score</td>
<td><em>Unanswered Phones</em></td>
<td>Sarah Lee Monroe, Jonathan Middleton</td>
</tr>
<tr>
<td>7:20</td>
<td>Dexter Moetului, Writer/Director Jill Pendleton, Film Score</td>
<td><em>Cook It Over</em></td>
<td>Sarah Lee Monroe, Don Goodwin</td>
</tr>
<tr>
<td>7:40</td>
<td>Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7:50</td>
<td>Justin Sen-Crowe, Writer/Director Brian Burke, Film Score</td>
<td><em>siblings</em></td>
<td>Sarah Lee Monroe, Don Goodwin</td>
</tr>
<tr>
<td>8:10</td>
<td>Lewis Kendall, Writer/Director David Kobaly, Film Score</td>
<td><em>Short Film</em></td>
<td>Sarah Lee Monroe, Jonathan Middleton</td>
</tr>
<tr>
<td>8:30</td>
<td>Woo Kim, Writer/Director  Dexter Moetului, Film Score</td>
<td><em>My Lover's Back...It's Not What I Expected</em></td>
<td>Sarah Lee Monroe, Jonathan Middleton</td>
</tr>
<tr>
<td>8:50</td>
<td>Mike Malsam, Writer/Director Natalya Lainhart, Film Score</td>
<td><em>Wealth and Happiness</em></td>
<td>Sarah Lee Monroe, Jonathan Middleton</td>
</tr>
</tbody>
</table>
Creative Works Session 4: Theatre
University Theatre, Room 207 and 2nd Floor Studio, 5:00-6:00 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Designer/Performer</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>5:00-6:00</td>
<td>Rebecca Spining</td>
<td><em>Summertree</em> by Ron Cowen Designed by Rebecca Spining</td>
<td>Don McLaughlin</td>
</tr>
<tr>
<td>Rm. 207 and</td>
<td>Brandon Bogaert</td>
<td><em>Quasimodo</em> Set Design</td>
<td>Don McLaughlin</td>
</tr>
<tr>
<td>Studio</td>
<td>Christopher Clark, Chailee Friant</td>
<td>Scene from <em>This Is Our Youth</em> by Kenneth Lonergan</td>
<td>Sara Goff, Jeff Sanders</td>
</tr>
<tr>
<td></td>
<td>Alicia Uecker, Jessica Johnson</td>
<td><em>Othello:</em> Act 4, scene 3</td>
<td>Sara Goff</td>
</tr>
<tr>
<td></td>
<td>Lenea Tomson, Teko Dumoulin, Carolee MacDonald</td>
<td>A Scene from William Shakespeare’s <em>The Taming of the Shrew</em></td>
<td>Sara Goff</td>
</tr>
<tr>
<td></td>
<td>Curtis Chandler</td>
<td>Audition Monologues: <em>Fun &amp; Othello</em></td>
<td>Sara Goff</td>
</tr>
</tbody>
</table>

Creative Works Session 5: Film
RTV Building, Room 101, 5:30-8:30 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Filmmaker</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1</td>
<td>Adam Harum</td>
<td><em>Dog</em></td>
<td>Tom Mullin</td>
</tr>
<tr>
<td>5:30-6:15</td>
<td>Jon Barney</td>
<td><em>Battle’s End</em></td>
<td>Tom Mullin</td>
</tr>
<tr>
<td>6:15</td>
<td></td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>Section 2</td>
<td>Adam Harum</td>
<td><em>Fade</em></td>
<td>Tom Mullin</td>
</tr>
<tr>
<td>6:25-7:10</td>
<td>Clancy Bundy</td>
<td><em>Fade</em></td>
<td>Tom Mullin</td>
</tr>
<tr>
<td></td>
<td>Isaac Joslin</td>
<td><em>Violence, Fight!</em></td>
<td>Tom Mullin</td>
</tr>
<tr>
<td>7:10</td>
<td></td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>Section 3</td>
<td>Clancy Bundy</td>
<td><em>A Life of Service</em></td>
<td>Tom Mullin</td>
</tr>
<tr>
<td>7:20-8:05</td>
<td>Devin Greenman</td>
<td><em>The Delivery Man</em></td>
<td>Mindy Breen</td>
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<td></td>
<td>Sebastien Thibeau</td>
<td><em>Auittilo</em></td>
<td>Tom Mullin</td>
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</table>
## Creative Works Session 6: Creative Writing
### Communications Building, Room 225, 5:00-8:40 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1</td>
<td>Victoria Stedham</td>
<td>Character Poetry</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td>5:00-5:50</td>
<td>David Stewart</td>
<td>“Mechs of Valhalla”</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Garrett Rowe</td>
<td>Working Title</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Brent Schaeffer</td>
<td>“Birds, Flowers, the Moon”</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Dylan Medina</td>
<td>“Jacob”</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Dalton Paget</td>
<td>“An Introduction to Several Worlds”</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Terra Maus</td>
<td>“I Always Knew”</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Jennifer McIntyre</td>
<td>Surrealist Inspired Poetry</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Tanya DeBuff</td>
<td>“Shapeshifter”</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td>5:50</td>
<td><strong>Break</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 2</td>
<td>Jessica Lambert</td>
<td>Creative Prose</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td>5:55-6:45</td>
<td>Francis Devereaux</td>
<td>Creative Works by Lux Devereaux, A Short Story, “Loose Cannon”</td>
<td>Rachel Toor</td>
</tr>
<tr>
<td></td>
<td>Sabrina Mauritz</td>
<td>“Meditations in Poetry”</td>
<td>Christopher Howell</td>
</tr>
<tr>
<td></td>
<td>Dalton Paget</td>
<td>“An Introduction to Several Worlds”</td>
<td>Rachel Toor</td>
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<tr>
<td></td>
<td>Alicia Wyborney</td>
<td>Creative Nonfiction</td>
<td>Rachel Toor</td>
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<td></td>
<td>Bailey Wolff</td>
<td>Creative Writing</td>
<td>Rachel Toor</td>
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<td></td>
<td>Joe Tynan</td>
<td>“Chauncey’s Fire”</td>
<td>Rachel Toor</td>
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<td></td>
<td>Sam Edmonds</td>
<td>“Bags of Particles”</td>
<td>Rachel Toor</td>
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<td></td>
<td>Liz Rognes</td>
<td>Creative Writing and Contemporary Pop Song: A Pedagogical Folk-Rock Opera in One Song</td>
<td>Rachel Toor</td>
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<tr>
<td>6:45</td>
<td><strong>Break</strong></td>
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<tr>
<td>Section 3</td>
<td>Sarah Hauge</td>
<td>“Hung Up On My Land Line”</td>
<td>Rachel Toor</td>
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<tr>
<td>6:50-7:40</td>
<td>Ryan Flexer</td>
<td>Poetry Reading</td>
<td>Rachel Toor</td>
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<td></td>
<td>Hannah Dutt</td>
<td>“The Elusive Vindaloo”</td>
<td>Rachel Toor</td>
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<td>Olivia Croom</td>
<td>“Twelve Albino Camels”</td>
<td>Rachel Toor</td>
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<td>Megan Charles</td>
<td>“These Three Poems”</td>
<td>Rachel Toor</td>
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<td>Benjamin Burbank</td>
<td>“Crop Land”</td>
<td>Rachel Toor</td>
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<td>Asa Bradley</td>
<td>“Math as a Second Language”</td>
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<td>Dawn Bobby</td>
<td>“‘Nihon Quarter’: A Love Story in Four Poems”</td>
<td>Rachel Toor</td>
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<td>Jenna Ainslie</td>
<td>“School Isn’t Everything”</td>
<td>Rachel Toor</td>
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<tr>
<td>7:40</td>
<td><strong>Break</strong></td>
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<tr>
<td>Section 4</td>
<td>Britney Andrade</td>
<td>“The Struggle Kills Me”</td>
<td>Rachel Toor</td>
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<tr>
<td>7:45-8:40</td>
<td>Rikki Andrews</td>
<td>“Headline News”</td>
<td>Rachel Toor</td>
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<td>Karhonkwison Logan</td>
<td>“Encrypted Existence”: Studies in Confessional Poetry</td>
<td>Paul Lindholdt</td>
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<td>Jeffrey Gerhardstein</td>
<td>“Growing Up Nuclear”</td>
<td>Paul Lindholdt</td>
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<td>Mary Clark</td>
<td>“My Mother’s Garden”</td>
<td>Paul Lindholdt</td>
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<td>Paul Merchant</td>
<td>“Imbecile”</td>
<td>Rachel Toor</td>
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<td>Kennan Knudson</td>
<td>“Living”</td>
<td>Rachel Toor</td>
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<td>Erik Johnson</td>
<td>Creative Nonfiction</td>
<td>Rachel Toor</td>
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<tr>
<td></td>
<td>Lindsay Williams</td>
<td>“Kitsunetsuke” and “Sirena”</td>
<td>Christopher Howell, Rachel Toor</td>
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<tr>
<td></td>
<td>Kathryn McKenna</td>
<td>“Genre Bending”</td>
<td>Jonathan Johnson</td>
</tr>
<tr>
<td></td>
<td>Gabe Ehrnwald</td>
<td>WITC and Tincan Projects in the Spokane Community</td>
<td>Rachel Toor</td>
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</tbody>
</table>
Oral & Poster Presentation
Schedule

Wednesday, May 19, 2010
Time: 8:00 a.m. – 3:30 p.m.

Senior Hall

8:00 a.m. - 12:40 p.m.  Morning Oral Sessions: 1-9
(Rooms 101, 124, 201, 203, 204, 221, 243)

10:00 a.m. - 12:00 p.m. Morning Poster Session
(2nd Floor Lounge, Rooms 302/304, 306; Groups 1-4)
* All posters will be available to view throughout the day

12:40 - 3:30 p.m.  Afternoon Oral Sessions: 10-16
(Rooms 101, 124, 201, 203, 204, 221, 243)

1:00 - 3:00 p.m.  Afternoon Poster Session
(2nd Floor Lounge, Rooms 302/304, 306; Groups 5-8)
* All posters will be available to view throughout the day

Hargreaves Hall Reading Room, 201

4:00 - 6:00 p.m.  Banquet: Dinner and Keynote Address
<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Dustin Cousins</td>
<td>Underground Without a Headlight: Can the Northern Pocket Gopher Sense Magnetic Fields?</td>
<td>Margaret O’Connell</td>
</tr>
<tr>
<td>8:20</td>
<td>Candace Bennett</td>
<td>Coyotes, Wolves, and People: Coyote Abundance Across an Urban-Wildland Gradient in Northeastern Washington</td>
<td>Margaret O’Connell</td>
</tr>
<tr>
<td>8:40</td>
<td>Christopher Dwight</td>
<td>Elk Hunting on Turnbull National Wildlife Refuge: Impacts on Elk Movement and Aspen Regeneration</td>
<td>Margaret O’Connell</td>
</tr>
<tr>
<td>9:00</td>
<td>Jessica Bryant, Brandy Reynecke</td>
<td>Exotic and Native Plant Distribution on the Mima Mounds of Eastern Washington</td>
<td>Rebecca Brown</td>
</tr>
<tr>
<td>9:20</td>
<td>Meleah MeltingTallow</td>
<td>A Vegetation Survey of a Disturbed Riparian Zone in Deep Creek, Washington</td>
<td>Rebecca Brown</td>
</tr>
<tr>
<td>9:40</td>
<td>Danielle Klinzing</td>
<td>Assessment of Cow Creek Following Riparian Restoration</td>
<td>Camille McNeely</td>
</tr>
<tr>
<td>10:00</td>
<td>John Getz</td>
<td>Vegetation Analysis of a Riparian Zone After Livestock Exclusion, Cow Creek, WA</td>
<td>Suzanne Schwab, Rebecca Brown</td>
</tr>
<tr>
<td>10:20</td>
<td>Break</td>
<td>Break</td>
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<tr>
<td>10:40</td>
<td>Mark Paluch</td>
<td>Movements of Bull Trout Above and Below Albeni Falls Dam</td>
<td>Allan Scholz</td>
</tr>
<tr>
<td>11:00</td>
<td>Cassandra Pharr</td>
<td>Swim Training Effects on the Morphology of Juvenile Kokanee Salmon <em>Oncorhynchus nerka kennerlyi</em></td>
<td>Thomas Hancock</td>
</tr>
<tr>
<td>11:20</td>
<td>Heidi Richardson, Tammy Sammeli</td>
<td>Clams Have Higher Fitness When Living with Less O2</td>
<td>Joanna Joyner-Matos</td>
</tr>
<tr>
<td>11:40</td>
<td>Elliott Reams</td>
<td>Carbon Turnover Rate of Gammarus Tissue</td>
<td>Camille McNeely</td>
</tr>
<tr>
<td>12:00</td>
<td>Terence Stephens</td>
<td>Cloning of Ribulose-1,5-Biphosphate Gene from <em>Jatropha</em></td>
<td>Prakash Bhuta</td>
</tr>
<tr>
<td>12:20</td>
<td>Phillip Rabideau, Ben Kozubenko</td>
<td>Low Cost Remote Data Gathering Tools Using Off the Shelf Equipment</td>
<td>Douglas Bickerstaff</td>
</tr>
</tbody>
</table>
### Oral Session 2: Sociology, Justice and Related Studies
**Room 124, 8:40 a.m.-12:20 p.m.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
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</thead>
<tbody>
<tr>
<td>8:40</td>
<td>Yvonne Sherwood</td>
<td>Definition Begets Deficiency: A Critical Analysis of the Creation of a Contested Indigenous Identity</td>
<td>Todd Hechtman</td>
</tr>
<tr>
<td>9:00</td>
<td>Gabriel Chavez</td>
<td>The Chicano/a Struggle in the Classroom in Predominately White High Schools</td>
<td>Todd Hechtman</td>
</tr>
<tr>
<td>9:20</td>
<td>Maria Morales</td>
<td>Resisting to the Latino “Migrant Nightmare” in the United States</td>
<td>Sean Chabot</td>
</tr>
<tr>
<td>10:00</td>
<td>Helen Arega</td>
<td>Investigating African-Born Women and the Barriers That Stand in Their Way to Seeking Health Care After Arriving in the United States</td>
<td>Robin Pickering</td>
</tr>
<tr>
<td>10:20</td>
<td></td>
<td>Break</td>
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<tr>
<td>10:40</td>
<td>Alexandra Franks, Allison Jost</td>
<td>Nature-Deficit Disorder and Its Impact on Children’s Play</td>
<td>Sue Wright</td>
</tr>
<tr>
<td>11:00</td>
<td>Kurt Stranberg, Kelly Kinzebach, Brandee Stafford, Arman Mohsenian, Brett Hughes</td>
<td>Experiences of Parents Whose Children Participate in an Adapted Sports Program</td>
<td>Wendy Holmes, Gregory Wintz</td>
</tr>
<tr>
<td>11:20</td>
<td>Danielle Hansen, Lauren Thrasher, Christina Reed, Levi Estes, Alicia Ware</td>
<td>The Experience of Individuals with Parkinson’s Disease Participating in a Dance Class</td>
<td>Wendy Holmes, Gregory Wintz</td>
</tr>
<tr>
<td>11:40</td>
<td>Tracey Waring</td>
<td>The GOAL Project: A Helping Hand in Reentry</td>
<td>Robert Zinke</td>
</tr>
<tr>
<td>12:00</td>
<td>Sally Kakoti</td>
<td>Debt Literacy Among Social Work Students</td>
<td>Vernon Loke</td>
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</table>

### Oral Session 3: Chemistry and Biochemistry
**Room 201, 8:40-10:00 a.m.**

<table>
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<tr>
<th>Time</th>
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<tr>
<td>8:40</td>
<td>Whitney Pinches</td>
<td>Towards the Treatment of Cancer: Polyamides and Polyamines as Gene Delivery Agents</td>
<td>Travis Denton</td>
</tr>
<tr>
<td>9:00</td>
<td>Marcus Annable, Steven McDaniel, Todd Talley, Palmer Taylor</td>
<td>An Investigation Towards the Development of the Next Generation of Alzheimer’s Drugs</td>
<td>Travis Denton</td>
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<tr>
<td>9:20</td>
<td>Matthew Bos</td>
<td>Synthesis of 1-Benzylpiperazine (BZP) Using Laboratory Grade Reagents and in a Clandestine-Like Setting</td>
<td>Peter Bilous</td>
</tr>
<tr>
<td>9:40</td>
<td>Jennifer Bowman</td>
<td>A Comparison of Two Fluorescent Dyes for the Visualization of DNA Fragments Separated by Agarose Gel Electrophoresis</td>
<td>Peter Bilous</td>
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</tbody>
</table>
### Oral Session 4: Spanish, Room 201, 10:20 a.m.-12:00 p.m.

<table>
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<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
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<tbody>
<tr>
<td>10:20</td>
<td>Jeremy Rouse</td>
<td>Las Novelas Policiacas de Paco Igacio Taibo II como Critica Social</td>
<td>Natalia Ruiz-Rubio</td>
</tr>
<tr>
<td>10:40</td>
<td>Thomas Shalloe</td>
<td>Si No Sale en Television, No Existe</td>
<td>Natalia Ruiz-Rubio</td>
</tr>
<tr>
<td>11:00</td>
<td>Dori Simpson</td>
<td>Las Fuerzas del Bien y del Mal</td>
<td>Natalia Ruiz-Rubio</td>
</tr>
<tr>
<td>11:20</td>
<td>Nereyda Martinez</td>
<td>La Superficialidad de los Edios de Comunicación</td>
<td>Natalia Ruiz-Rubio</td>
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<tr>
<td>11:40</td>
<td>Crystal Chiemwichitra</td>
<td>El Tango: La Transgresion del Rol de la Mujer en “Boquitas Pintadas”</td>
<td>Natalia Ruiz-Rubio</td>
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### Oral Session 5: Engineering and Design, Room 203, 8:00 a.m.-12:40 p.m.

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<th>Author</th>
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<tr>
<td>8:00</td>
<td>Sandra Rich, Jason Krienke</td>
<td>Design and Production of an Advanced A-Frame Signboard for Sidewalk Advertisement</td>
<td>N.M. Awlad Hossain</td>
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<tr>
<td>8:20</td>
<td>Adam Huson, Nathan Cutler</td>
<td>Image Recognition of a 2D Marker to Control a Virtual Object in 3D</td>
<td>Min-Sung Koh</td>
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<tr>
<td>8:40</td>
<td>Justin Wagner, Adam Huson, Nathan Cutler, Dan Niehenke</td>
<td>Seeing and Interacting with Sound-Oscillo-Tube Science Exhibit</td>
<td>Claudio Talarico, Min-Sung Koh</td>
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<tr>
<td>9:00</td>
<td>Joseph Roberts, John Parra</td>
<td>Developing Nondestructive Testing Laboratory Experiments for Mechanical Engineering Technology Curriculum at EWU</td>
<td>N.M. Awlad Hossain</td>
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<tr>
<td>9:20</td>
<td>Daniel Degelman</td>
<td>Resin Cable Over Molding Project</td>
<td>Donald Richter</td>
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<td>9:40</td>
<td>Darrell Pope, Harley Dobson</td>
<td>Strengthening Concrete Structures by Chemical Admixtures and Fiber Materials</td>
<td>N.M. Awlad Hossain, Donald Richter</td>
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<tr>
<td>10:00</td>
<td>Michael Richter, Robert Speerstra</td>
<td>Diesel Fueled Turbine Engine Research</td>
<td>Jason Durfee</td>
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<td>10:20</td>
<td>Break</td>
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<td>10:40</td>
<td>Andrew Twitchell, Jesse Stevens</td>
<td>Cooling Towers</td>
<td>Hani Saad</td>
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<td>11:00</td>
<td>Eric Grant, Sandra Rich</td>
<td>Wind Tunnel Experiment to Show the Effects of Drag on Dimpled vs Smooth Golf Balls at Different Velocities</td>
<td>Jason Durfee, Donald Richter</td>
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<tr>
<td>11:20</td>
<td>Joseph Roberts, Jesse Newberry</td>
<td>Design and Production of Lightweight Noble Longboard Decks</td>
<td>N.M. Awlad Hossain</td>
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<td>11:40</td>
<td>Eric Grant, Steven Butterfield, Darrell Pope, John Parra</td>
<td>HPPV – Team EagleRiders</td>
<td>N.M. Awlad Hossain, Donald Richter</td>
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<tr>
<td>12:00</td>
<td>Joseph Roberts, Matt Smock, Michael Richter, Robert Speerstra</td>
<td>HPPV, Human Power Paper Vehicle Research</td>
<td>Donald Richter</td>
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### Oral Session 6: English I, Room 204, 8:00 a.m.-12:40 p.m.

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<tr>
<td>8:00</td>
<td>Aubra Godwin</td>
<td>And the Children May Know Their Names: How the Hidden Meaning of Names Informs Toni Morrison’s <em>Song of Solomon</em></td>
<td>Beth Torgerson</td>
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<tr>
<td>8:20</td>
<td>Sarah Murphy</td>
<td>Mary Had a Little Bat: The Modern Mother of Batman</td>
<td>Beth Torgerson</td>
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<tr>
<td>8:40</td>
<td>Krista Beattie</td>
<td>Charles Dickens <em>A Christmas Carol</em>: Connecting the Material to the Ideal</td>
<td>Beth Torgerson</td>
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<tr>
<td>9:00</td>
<td>Max Hohner</td>
<td>Warnings from Beyond the Grave: Agency for the Dead in Hardy’s Early Poetry</td>
<td>Beth Torgerson</td>
</tr>
<tr>
<td>9:20</td>
<td>Aubra Godwin</td>
<td>The Victorian Fallen Woman: Influences in Christina Rossetti’s “Goblin Market”</td>
<td>Beth Torgerson</td>
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<tr>
<td>9:40</td>
<td>Kristina Ries</td>
<td>From Apes to Eloi: The Impact of Darwin on the Novels of H.G. Wells</td>
<td>Beth Torgerson</td>
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<td>10:00</td>
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<td><strong>Break</strong></td>
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<td>10:20</td>
<td>Kayla McAllister</td>
<td>The Gaze for Art’s Sake: Female Power and the “Icarian Fall” in Levy and Tennyson</td>
<td>Beth Torgerson</td>
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<tr>
<td>10:40</td>
<td>Amy Dotson</td>
<td>Fact or Fiction: The Shakespeare Conundrum</td>
<td>Paul Lindholdt</td>
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<tr>
<td>11:00</td>
<td>Dylan Medina</td>
<td>On His Own Terms: Abbey’s Movement from Technophobia to Community</td>
<td>Paul Lindholdt</td>
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<tr>
<td>11:20</td>
<td>Cori Smith</td>
<td>Lilith in History and Literature</td>
<td>Paul Lindholdt</td>
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<tr>
<td>11:40</td>
<td>Peter Moe</td>
<td>Killer vs. Socialite: Metaphoric Constructions of the Orca Whale</td>
<td>Paul Lindholdt</td>
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<tr>
<td>12:00</td>
<td>Jessica Johnson</td>
<td>Rachel Carson and the Lorax: Partners in Advocacy</td>
<td>Paul Lindholdt</td>
</tr>
<tr>
<td>12:20</td>
<td>Vanessa Braudrick</td>
<td>Early Film Regulation and <em>A Streetcar Named Desire</em></td>
<td>Paul Lindholdt</td>
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### Oral Session 7: Physical Therapy, Room 221, 8:40-10:00 a.m.

<table>
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<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
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<tbody>
<tr>
<td>8:40</td>
<td>Samantha Modderman</td>
<td>Method for Implementing a Participatory Ergonomics Program to Reduce Risk of Musculoskeletal Disorders in the Grocery Industry</td>
<td>Daniel Anton</td>
</tr>
<tr>
<td>9:00</td>
<td>Michael Milanoski, Blake Novoa, Zack Sinner</td>
<td>Construction Solution Database</td>
<td>Daniel Anton</td>
</tr>
<tr>
<td>9:20</td>
<td>Stephen Goldrick, Ryan Mizner, Jennifer Hess, Laurel Kincl</td>
<td>Analysis of Two Ergonomic Interventions for Lifting Concrete Blocks Over Rebar Wall Supports in the Masonry Trade</td>
<td>Daniel Anton</td>
</tr>
<tr>
<td>9:40</td>
<td>Janna Ott, Jen Lamberry</td>
<td>Falls: Functional Status and Exercise Behaviors in Well Older Adults</td>
<td>Kimberly Cleary</td>
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</table>
### Oral Session 8: Philosophy, Room 221, 10:40 a.m.-12:40 p.m.

<table>
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<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
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<tbody>
<tr>
<td>10:40</td>
<td>R. Skyler Oberst</td>
<td>What Would a Compassionate University Look Like?</td>
<td>Robert Sauders, Kathryn Julyan</td>
</tr>
<tr>
<td>11:00</td>
<td>Chris Lorenz Miclat</td>
<td>Ladybug Under the Leaf: The African American Women in the Civil Rights Movement</td>
<td>Terrance MacMullan</td>
</tr>
<tr>
<td>11:20</td>
<td>Ryan Weldon</td>
<td>Integration and Process in Frondizi and Teilhard: A Speculative Axiology Out of Frondizi via Comparison</td>
<td>Terrance MacMullan</td>
</tr>
<tr>
<td>11:40</td>
<td>Madeline Mahugh</td>
<td>The Movement from Skepticism to Kant and the Philosophy Behind George A. Kelly’s Personal Construct Psychology</td>
<td>Kevin Decker</td>
</tr>
<tr>
<td>12:00</td>
<td>Andrew Webb</td>
<td>William James: A Norse Concept of the Afterlife</td>
<td>Kevin Decker</td>
</tr>
<tr>
<td>12:20</td>
<td>Maxine Holden</td>
<td>Homeric Values in <em>Lost;</em> Social Roles and Virtue</td>
<td>Christopher Kirby</td>
</tr>
</tbody>
</table>

### Oral Session 9: Psychology, Room 243, 8:40 a.m.-12:00 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:40</td>
<td>LaMeshia Reese-Taylor</td>
<td>My Body Is My Body: Preventative Measures of Child Sexual Abuse and Associated High Risk Behavior</td>
<td>Dorothy Munson</td>
</tr>
<tr>
<td>9:00</td>
<td>Elizabeth Welch</td>
<td>First Victims: A Proactive Criminal Justice Program to Prevent Sex Offenses</td>
<td>Dennis Anderson</td>
</tr>
<tr>
<td>9:20</td>
<td>Andrea Griechen, Kayla Grubaugh, Cindi Harding, Nate Wareham, Tina Myers</td>
<td>Media and the Criminal Justice System</td>
<td>Kayleen Islam-Zwart</td>
</tr>
<tr>
<td>9:40</td>
<td>Tristan McKay</td>
<td>Personality Theory: A Self Discovery</td>
<td>Kayleen Islam-Zwart</td>
</tr>
<tr>
<td>10:00</td>
<td></td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:20</td>
<td>Mitchell Colver, Chelsey Bershaw</td>
<td>Stereotypical Perceptions of Personality Type and Circadian Preference</td>
<td>Amani El-Alayli</td>
</tr>
<tr>
<td>10:40</td>
<td>Claire Collins, Chris Santoyo</td>
<td>Owls and Larks: An Assessment of Perceived and Real Differences in Personality Traits and Behaviors Amongst Morning and Night People</td>
<td>Amani El-Alayli</td>
</tr>
<tr>
<td>11:00</td>
<td>Christine Belknap, Kayela Robertson, John Cash, Nasreen Shah, Tricia Wahler</td>
<td>Arousal and False Memory</td>
<td>Leonard Stern</td>
</tr>
<tr>
<td>11:20</td>
<td>Nicole Juliana Dewitt</td>
<td>The Full Half of the Glass: Stress and Resilience in Minority College Students from Disrupted Homes: Is Achievement Motivation a Mitigating Factor?</td>
<td>Susan Ruby</td>
</tr>
<tr>
<td>11:40</td>
<td>Casey Lytle, Mark Ward, Jill Mattson</td>
<td>Prime-Time Television as Indicator of Attitude Change: Measuring the Impact of the 2008 Presidential Campaign</td>
<td>Gail Hicks, Amani El-Alayli</td>
</tr>
</tbody>
</table>
### Oral Session 10: English (TESL), Room 101, 1:00-3:10 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00</td>
<td>Elena Pipenko</td>
<td>Comparison of EWU Students’ Attitudes Towards Non-Native English</td>
<td>Tracey McHenry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Speaking Teachers with the Perceptions of Non-Native English</td>
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<td></td>
<td></td>
<td>Speaking Teachers Experiences of Teaching English in the USA:</td>
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<tr>
<td></td>
<td></td>
<td>Controversy</td>
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<tr>
<td>1:20</td>
<td>Paula Márquez Lavine</td>
<td>The Immigrants’ Issue of Social Identity and Heritage Language</td>
<td>LaVona Reeves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transfer to Their Children</td>
<td>Tracey McHenry</td>
</tr>
<tr>
<td>1:40</td>
<td>David Herman</td>
<td>Reflections on a Year of Teaching in China</td>
<td>LaVona Reeves</td>
</tr>
<tr>
<td>2:00</td>
<td></td>
<td><strong>Break</strong></td>
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<tr>
<td>2:10</td>
<td>Dan Ubaldo</td>
<td>“Attributes of Resiliency”: How ESL College Writers Respond to</td>
<td>LaVona Reeves</td>
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<tr>
<td></td>
<td></td>
<td>Music and Demonstrate Future Orientation</td>
<td></td>
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<tr>
<td>2:30</td>
<td>Huei-Ting (Maggie) Lu</td>
<td>Multilingual Writers’ Representation of Sacrifice in Response to Miss</td>
<td>LaVona Reeves</td>
</tr>
<tr>
<td></td>
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<td>Saigon</td>
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</tr>
<tr>
<td>2:50</td>
<td>Jillian Andre</td>
<td>Written Teacher Response to Second Language Writing: An Exploration</td>
<td>LaVona Reeves,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>of Issues and Methods for Improving Feedback</td>
<td>Stephen Hoyt</td>
</tr>
</tbody>
</table>

### Oral Session 11: History, Room 124, 12:40-3:30 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>12:40</td>
<td>Adam Attwood</td>
<td>Facilitating Student Interest in Social Studies with Virtual Museums</td>
<td>Kevin Pyatt</td>
</tr>
<tr>
<td>1:00</td>
<td>Lucas LeCaire</td>
<td>The Mycenaean Warrior Aristocracy of the Late Bronze Age</td>
<td>Georgia Bazemore</td>
</tr>
<tr>
<td>1:20</td>
<td>Mitch Smithpeter</td>
<td>Lewis, Clark and the Fur Trade of the Far West</td>
<td>William Youngs</td>
</tr>
<tr>
<td>1:40</td>
<td>Hannah Teachman</td>
<td>Playing by the Rules: Victorian Society and Lady Gregory</td>
<td>Ann LeBar</td>
</tr>
<tr>
<td>2:00</td>
<td></td>
<td><strong>Break</strong></td>
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<tr>
<td>2:10</td>
<td>Sydney Stover</td>
<td>The Campbell House Food</td>
<td>Lawrence Cebula</td>
</tr>
<tr>
<td>2:30</td>
<td>Michelle Reid</td>
<td>Women Who Won Their Wings: WASP Pilots in the Northwest During WWII</td>
<td>William Youngs</td>
</tr>
<tr>
<td>2:50</td>
<td>Diana Johnson</td>
<td>The Early Beginnings of Black and Chicana Feminisms: Gender Relations</td>
<td>Ann LeBar</td>
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<tr>
<td></td>
<td></td>
<td>and Cultural Influence in the Civil Rights and Chicano Movements</td>
<td></td>
</tr>
<tr>
<td>3:10</td>
<td>Petro Tsyukalo</td>
<td>From the Iron City to a Human City: A Comparative History of Environmental Disasters in Mariupol, Ukraine and Pittsburgh, Pennsylvania</td>
<td>William Youngs</td>
</tr>
</tbody>
</table>
Oral Session 12: Communication Studies
Room 201, 1:00-3:10 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
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<tbody>
<tr>
<td>1:00</td>
<td>Daniel Brasher</td>
<td>The Historical Rhetoric in the Debate on Economic and Health Reform in the United States</td>
<td>Dana Elder</td>
</tr>
<tr>
<td>1:20</td>
<td>Alisha Burger</td>
<td>The Federal Communication Commission’s Newspaper-Broadcast Cross-Ownership Rule: Should It Be Retained, Relaxed or Abolished?</td>
<td>Peter Shields</td>
</tr>
<tr>
<td>1:40</td>
<td>Rebekah Largent</td>
<td>The Changing Faces of GLBT Commitment</td>
<td>Heather Robinson</td>
</tr>
<tr>
<td>2:00</td>
<td>Patricia Chambers</td>
<td>Break</td>
<td></td>
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<tr>
<td>2:10</td>
<td>Alisha Burger</td>
<td>WALL-E Re-Imagined Through the Eyes of Post-Colonial Theory</td>
<td>Heather Robinson</td>
</tr>
<tr>
<td>2:30</td>
<td>Jaime Hollis</td>
<td>WALL-E Re-Imagined Through the Eyes of Feminist Theory</td>
<td>Heather Robinson</td>
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</tbody>
</table>

Oral Session 13: Fine Arts
Room 203, 1:00-2:50 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
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</thead>
<tbody>
<tr>
<td>1:00</td>
<td>Davis Hill</td>
<td>Ancient Greek Music Theory: A Comparison of Aristoxenian and Pythagorean Thought</td>
<td>Jane Ellsworth</td>
</tr>
<tr>
<td>1:20</td>
<td>Maile Allen</td>
<td>Moral Ambiguity and Modern Television</td>
<td>Thomas Mullin</td>
</tr>
<tr>
<td>1:40</td>
<td>Jon Barney</td>
<td>Breaking Bad: An Interpretive View of the Introduction of Walter White</td>
<td>Thomas Mullin</td>
</tr>
<tr>
<td>2:00</td>
<td>Patricia Chambers</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>2:10</td>
<td>Laurel Newnham</td>
<td>Cinema as Truth: Philosophy in the Films of the Nouvelle Vague</td>
<td>Barbara Miller</td>
</tr>
<tr>
<td>2:30</td>
<td>Lindsey Vercruyssen</td>
<td>Hooked on Louis: A Comparison of King Louis XIV of France and J.M. Barrie’s Notorious Captain James Hook: Louis’ Image in Modern Society</td>
<td>Barbara Miller</td>
</tr>
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</table>
## Oral Session 14: Anthropology
### Room 204, 1:00-2:50 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
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</thead>
<tbody>
<tr>
<td>1:00</td>
<td>Eric Johnson</td>
<td>The Whitman Mission and Shamanism on the Columbia Plateau</td>
<td>John Dorwin</td>
</tr>
<tr>
<td>1:20</td>
<td>Cree Whelshula</td>
<td>First Foods of Salish People</td>
<td>Sarah Keller</td>
</tr>
<tr>
<td>1:40</td>
<td>Amara Rieken</td>
<td>Strategies of Single Motherhood</td>
<td>Julia Smith</td>
</tr>
<tr>
<td>2:00</td>
<td>Break</td>
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<tr>
<td>2:10</td>
<td>Enver Guseynov</td>
<td>Nagoro-Karabakh and Its Effects on the Formation of Azeri-Israeli and Armenian-Iranian Relations</td>
<td>Jerry Galm</td>
</tr>
<tr>
<td>2:30</td>
<td>Sarah Yount</td>
<td>Environmental Geology as a Factor in Middle Eastern Conflicts: Water Accessibility and Management in the Jordan Basin</td>
<td>Robert Sauders</td>
</tr>
</tbody>
</table>

## Oral Session 15: English II
### Room 221, 12:40-3:30 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
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</thead>
<tbody>
<tr>
<td>12:40</td>
<td>Miki Asai</td>
<td>Chiune Sagihara Saved 6,000 Jews: The Story of a Japanese Heritage Hero</td>
<td>LaVona Reeves</td>
</tr>
<tr>
<td>1:00</td>
<td>Patricia Rasmussen</td>
<td>The Many Red Devils of Stephen Crane</td>
<td>Judith Logan</td>
</tr>
<tr>
<td>1:20</td>
<td>Shannon Genzone</td>
<td>Transinterpretive Criticism and Beowulf</td>
<td>Logan Greene</td>
</tr>
<tr>
<td>1:40</td>
<td>Carlos Munoz</td>
<td>Breaching Gender Constraints: The Mestiza Heroina’s Search for a Mestiza Consciousness in Sandra Cisneros’s House on Mango Street</td>
<td>Winona Wynn (Heritage University)</td>
</tr>
<tr>
<td>2:00</td>
<td>Break</td>
<td></td>
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<tr>
<td>2:10</td>
<td>Summer Hess</td>
<td>A Nation Is Not Defeated: An Activist’s Response to a Cheyenne Tradition</td>
<td>Deirdre Almeida</td>
</tr>
<tr>
<td>2:30</td>
<td>Summer Hess</td>
<td>The Fulbright Application: Tips from 2010-2011 Scholar</td>
<td>Stephen Schwalbe</td>
</tr>
<tr>
<td>2:50</td>
<td>Kathryn McKenna, Anna Schmidt</td>
<td>The Significance of Surrealism as a Literary Movement</td>
<td>Christopher Howell</td>
</tr>
<tr>
<td>3:10</td>
<td>Jose Cortez</td>
<td>Semiotic Theory &amp; New Media: Pierce’s Speculative Rhetoric in Digital Space</td>
<td>Molly Johnson</td>
</tr>
</tbody>
</table>
## Oral Session 16: English (Service Learning) and Writers in the Community

**Room 243, 1:00-2:20 p.m.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Author</th>
<th>Title</th>
<th>Mentor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00</td>
<td>Gregory Halvorsen</td>
<td>Service-Learning: Professional Education</td>
<td>Molly Johnson</td>
</tr>
<tr>
<td>1:20</td>
<td>Heather DeCamp</td>
<td>The Challenge and Fulfillment of Service Learning: Creating a Community Newsletter</td>
<td>Molly Johnson</td>
</tr>
<tr>
<td>1:40</td>
<td>Jennifer Trumbull</td>
<td>Cheney Merchants Association Spring 2010 Newsletter Service Learning Project</td>
<td>Molly Johnson</td>
</tr>
<tr>
<td>2:00</td>
<td>Brandon Getz, Melina Rutter, Paul Merchant, Sam Edmonds, Gabe Ehrnwald</td>
<td>Writers in the Community: Learning Through Teaching</td>
<td>Rachel Toor</td>
</tr>
</tbody>
</table>
**Poster Session**

**Rooms 302/304, 306 2nd Floor Lounge, 9:30 a.m. to 3:30 p.m.**

Presenters for Groups 1-4 will be available to discuss their posters 10:00 a.m.-12:00 p.m.; Groups 5-8 from 1:00-3:00 p.m.

<table>
<thead>
<tr>
<th>POSTER #</th>
<th>PRESENTER/AUTHOR</th>
<th>TITLE</th>
<th>MENTOR</th>
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<tr>
<td><strong>Group 1</strong>&lt;br&gt;2nd Floor Lounge</td>
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</tr>
<tr>
<td>1. Service Learning</td>
<td>Sarah Schuster</td>
<td>The Wonders of a Service Learning Grant Project</td>
<td>Molly Johnson</td>
</tr>
<tr>
<td>2. Service Learning</td>
<td>Carlos Munoz</td>
<td>Service Learning Project: Understanding the Dynamics of Working in a Group</td>
<td>Molly Johnson</td>
</tr>
<tr>
<td>3. Service Learning</td>
<td>Matthew Foos</td>
<td>Friends of the Library Service Learning Project</td>
<td>Molly Johnson</td>
</tr>
<tr>
<td>5. Service Learning</td>
<td>Hannah Rile</td>
<td>Service Learning with the U.S. Navy in Technical Communication</td>
<td>Molly Johnson</td>
</tr>
<tr>
<td><strong>Group 2</strong>&lt;br&gt;2nd Floor Lounge</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6. Physical Education, Health and Recreation</td>
<td>Kailynn Dolph, Julie Wight, Heather Pence, Liz Reinstein</td>
<td>Collegiate Female Volleyball Athlete with a Type II SLAP Tear: A Case Report</td>
<td>Jeffrey Kawaguchi</td>
</tr>
<tr>
<td>7. Physical Education, Health and Recreation</td>
<td>Caitlin Kokot, Tara McLaughlin, Yoshi Tsumekawa</td>
<td>A Male Track and Field Athlete with a Sacroiliac Joint Dysfunction</td>
<td>Jeffrey Kawaguchi</td>
</tr>
<tr>
<td>8. Physical Education, Health and Recreation</td>
<td>Travis Laird, Brittney Doran, Syaka Yasui</td>
<td>ITB Syndrome Case Study</td>
<td>Garth Babcock, Jeffrey Kawaguchi</td>
</tr>
<tr>
<td>10. Physical Education, Health and Recreation</td>
<td>Carla Walter, Hirotomo Mikami, Jennifer Dawson</td>
<td>Case Study: A Female Basketball Player with Bilateral Achilles Tendon Ruptures</td>
<td>Jeffrey Kawaguchi</td>
</tr>
<tr>
<td>11. Physical Education, Health and Recreation</td>
<td>Irene Lowe, Chris Williams, Josh Arness, Tiffany Cummings</td>
<td>An 18 year-Old Female Collegiate Soccer Athlete with Coalition of the Subtalar Joint</td>
<td>Garth Babcock</td>
</tr>
<tr>
<td>13. Physical Education, Health and Recreation</td>
<td>Hilary Ishii, Melissa Spacek, Taylor Ferguson, Katelyn Hill</td>
<td>A Collegiate Football Athlete with DVT</td>
<td>Garth Babcock</td>
</tr>
</tbody>
</table>
| Group 3  
| 2nd Floor Lounge |
|------------------|---------------------------------|-----------------|
| 15. Geology      | Nerissa Pettett                 | The Spatial and Temporal Distribution of Metals in the Spokane River | Carmen Nezat |
| 16. Geology      | Klarissa Davis                  | Geochemistry of the Spokane River and Interactions with the Spokane Valley-Rathdrum Prairie Aquifer | Carmen Nezat |
| 17. Geology      | Megan Crim                      | GIS Analysis of Ice Age Flood Megaripples on the West Plains, Eastern Washington | Richard Orndorff |
| 18. Geology      | Justin Jarvi                    | Plant Nutrients Available Through the Weathering of Basalt and Granite | Carmen Nezat |
| 19. Geology      | Hana Chappell                   | Petrology and Geochemistry of Commingled Eocene Magmas Near Tum Tum, Washington | Jennifer Thomson |
| 20. Geology      | Michael Toma                    | A New Species of *Dyscritella* from the Kaibab Limestone of Southern Nevada | Ernest Gilmour |

| Group 4  
<p>| Rm. 306 |
|---------|--------|
| 21. Physical Therapy | Katlynn Hedgecock, Ruth Graham, Jesse Gefroh | The Relationship Between Physical Function and Physical Activity and Exercise Self-Sufficiency in the Year Following Coronary Artery Bypass Surgery | Kimberly Cleary, Tanya LaPier |
| 22. Physical Therapy | Ruth Graham | Fear of Falling and Balance Confidence in Community Dwelling Older Adults | Kimberly Cleary |
| 23. Computer Science | Erin Buehler, Justine Johnson, Karissa Price, Tierra Hopkins | Building on Technology (B.O.T.) | Carol Taylor |
| 24. CED Psychology | Elizabeth Baker | Reading Mastery’s Effectiveness as a Second Tier Intervention | Ryan Sain |
| 25. Anthropology | Rahel Wondimu, Kelsey Garason, Christina MacMurphy | Tuareg Salt Caravans of the Sahara | Jerry Galm |
| 26. Anthropology | Billie Slick | The Dinka | Jerry Galm |</p>
<table>
<thead>
<tr>
<th>Group 5</th>
<th>Rm. 306</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. Psychology</td>
<td>T. Dylan Moses, Jose Garcia, Maria Sanchez, Cynthia Mangane, Tera Jo Hines</td>
</tr>
<tr>
<td>28. Psychology</td>
<td>Esmeralda Adolf, Samantha Martell, Rasmiah Abou-Ammo, Nakina Lowry-Schiller, Cassandra Aguilar</td>
</tr>
<tr>
<td>29. Psychology</td>
<td>Michelle Prunier-Smith, Trevor Liebing, Mileva Yant</td>
</tr>
<tr>
<td>30. Psychology</td>
<td>Shannon Richardson, Brittany Shafer, Stephanie Seek</td>
</tr>
<tr>
<td>31. Psychology</td>
<td>Holly Conwell, Jamie Yantis, Chelsea Clarkson</td>
</tr>
<tr>
<td>33. Psychology</td>
<td>Andrea Griechen</td>
</tr>
<tr>
<td>34. Psychology</td>
<td>Renee Petitti, Kelly Arnold</td>
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<tbody>
<tr>
<td>36. Engineering and Design</td>
<td>Wil Samson</td>
</tr>
</tbody>
</table>
| Group 7  
<p>| Rms. 302/304 |
|---|---|---|---|
| 37. Biology | Brittany Davidson | A GIS Approach to Characterizing Bank Stabilization Measures Within the Box Canyon Reservoir, Washington | Margaret O'Connell |
| 38. Biology | Melissa Apperson, Nathan Lewis, Taylor Stoll | <em>Lemma minor</em> Can Remove High and Low Concentrations of Lead from River Water | Suzanne Schwab, Justin Baslow |
| 39. Biology | Justin Jarvi, Devin Sontag, Brenden Hayden, Russell Grigsby | Effect of Age on the Bioaccumulation of Lead in Swiss-Webster Mice | Karen Carlberg |
| 40. Biology | Chelsey LaRue, Allison Millward | Sigma Virus RNA is Present in <em>Drosophila melanogaster</em> Adults Lacking the Characteristic Sigma-Induced CO2 Sensitivity | Luis Matos |
| 41. Biology | Tammy Sammeli, Heidi Richardson | Clams Can Be Successful in “Poor” Habitats | Joanna Joyner-Matos |
| 42. Biology | Megan Korst, Gerald Claghorn | Burst Swimming Performance of Reintroduced Juvenile Coho Salmon in the Columbia Basin | Thomas Hancock |
| 43. Biology | Alexis Monetta | Methow Valley Beaver Relocation Project | Margaret O'Connell |
| 45. Biology | Jessica Allen | Assessing Marker Utility for Phylogeny Reconstruction in Perennial Spring Beauties | Robin O’Quinn |
| 46. Biology | Anthony Adams, Dustin Cousins | Free Radical Stress is Linked to Heritable Mutation | Joanna Joyner-Matos |
| 47. Biology | Olga Shiva | Identifying Promoters of <em>Helicobacter pylori</em> Genes in the Clinically Important Cytotoxin-Associated Gene Pathogenicity Island | Andrea Castillo |</p>
<table>
<thead>
<tr>
<th>Group 8</th>
<th>Rms. 302/304</th>
<th>Authors</th>
<th>Title</th>
<th>Advisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>48. Chemistry and Biochemistry</td>
<td>Sondra Spevack</td>
<td>Construction of ITPase Substrate Specificity Mutants</td>
<td>Nicholas Burgis</td>
<td></td>
</tr>
<tr>
<td>49. Chemistry and Biochemistry</td>
<td>Martin Aune, Anthony Adams</td>
<td>Biochemistry of Human ITPase Substrate Specificity Mutants</td>
<td>Nicholas Burgis</td>
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<tr>
<td>50. Chemistry and Biochemistry</td>
<td>Amanda Hill</td>
<td>In Vivo Characterization of Substrate Specificity Mutants of ITPase</td>
<td>Nicholas Burgis</td>
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</tr>
<tr>
<td>51. Chemistry and Biochemistry</td>
<td>Chris Evans</td>
<td>Development of Sugar Based Polyhydroxypolyamines as Antimicrobial Agents</td>
<td>Travis Denton</td>
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</tr>
<tr>
<td>52. Chemistry and Biochemistry</td>
<td>Daniel Olson</td>
<td>Towards Novel Gene Delivery Agents: Synthesis of Poly-4-Hexamethyl-4-Azaheptamethylene-D-Glucamide</td>
<td>Travis Denton</td>
<td></td>
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<tr>
<td>53. Chemistry and Biochemistry</td>
<td>Richard Sipes</td>
<td>Effects of the Proteasome Inhibitor MG-132 on Protein Degradation in Multiple Myeloma Cancer Cells</td>
<td>Nicholas Burgis</td>
<td></td>
</tr>
<tr>
<td>54. Chemistry and Biochemistry</td>
<td>Bridget Mummey, Alex Pentecost, Todd Talley, Palmer Taylor</td>
<td>Development of a New Class of Drugs for the Treatment of Alzheimer’s Disease</td>
<td>Travis Denton</td>
<td></td>
</tr>
<tr>
<td>55. Chemistry and Biochemistry</td>
<td>Steven McDaniel</td>
<td>Novel Drugs for the Treatment of Alzheimer’s Disease: Secondary and Tertiary 1-(3-pyridyl) Cyclic Amidines</td>
<td>Travis Denton</td>
<td></td>
</tr>
<tr>
<td>56. Chemistry and Biochemistry</td>
<td>Andrea Williams</td>
<td>Oxime Antidotes for Organophosphorus Nerve Agent Poisoning</td>
<td>Travis Denton</td>
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<tr>
<td>57. Chemistry and Biochemistry</td>
<td>Olin Anderson</td>
<td>Branched Chain α-Ketophosphonic Acids for the Study of Maple Syrup Urine Disease</td>
<td>Travis Denton</td>
<td></td>
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<tr>
<td>58. Chemistry and Biochemistry</td>
<td>Thomas Mustard</td>
<td>Synthesis of Malonate Derivatives for Click Chemistry Hydrogels and Polymers</td>
<td>Travis Denton</td>
<td></td>
</tr>
<tr>
<td>59. Chemistry and Biochemistry</td>
<td>Cassandra Hallmark</td>
<td>Light-Emitting Blood Enhancement Reagents: A Comparison Study in the Detection of Burnt Bloodstains</td>
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<td>60. Chemistry and Biochemistry</td>
<td>Maria Howard</td>
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<td>61. Chemistry and Biochemistry</td>
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Free Radical Stress is Linked to Heritable Mutation
Anthony Adams and Dustin Cousins
Joanna Joyner-Matos, Biology

Free radical damage to DNA is linked to mutations in non-reproductive tissues, but may or may not cause heritable mutations. Free radicals most commonly cause G-T mutations. In a mutation accumulation (MA) experiment with worms (Caenorhabditis elegans), MA worms had high but variable levels of G-T mutations. In the current study we tested whether differences in free radical metabolism correlate with mutation patterns. We developed a method to measure the type of damage linked to G-T mutations; DNA damage was positively correlated (p < 0.16) with G-T mutations. Free radical tolerance was measured as ability to develop when exposed to the chemical paraquat. Significantly fewer worms developed to adulthood when exposed to paraquat than when living in normal conditions (p < 0.05). MA worms had slower development when exposed to paraquat than did control (unmutated) worms (p > 0.05). These results suggest that animals with more free radical stress may pass more mutations to their offspring.

Life Events and Coping Strategies
Esmeralda Adolf, Samantha Martell, Rasmiah Abou-Ammo, Nikina Lowry-Schiller and Cassandra Aguilar

Kayleen Islam-Zwart, Psychology
Russell Kolts, Psychology

The sexual victimization of woman and children is a serious problem that needs to be addressed. The ability to perceive risk and then act accordingly can influence the chances of a woman being a victim of such a crime. Research suggests that women with a high level of mindfulness may show more resilience to psychological problems and be more aware of their surroundings than women who have low levels of mindfulness (Basmajian, 1989; Brown, 1998; Schwartz, 1984; Waldrup, 1992). The contrary is thought to be true for women who readily use dissociation as a coping strategy. To test this, participants completed the computerized Risk Perception Survey (RPS) to determine ability to perceive risk and respond appropriately. Participants were female college students aged eighteen and older. It was hypothesized that women low on mindfulness and high on dissociation would be less effective at perceiving risk than other women. Findings have implications for better understanding how different experiences impact how women feel and respond to better be able to provide quality preventions and interventions.
“School Isn’t Everything”
Jenna Ainslie
Rachel Toor, Creative Writing

I will be reading “School Isn’t Everything,” a piece of literary non-fiction that explores my journey of self-discovery, learning that there is more to life than getting an A no matter the cost.

Assessing Marker Utility for Phylogeny Reconstruction in Perennial Spring Beauties
Jessica Allen
Robin O’Quinn, Biology

Species in the genus *Claytonia* are northern hemisphere annuals and perennials that grow in diverse habitats. Previous phylogenetic analyses group this genus into three well-supported clades. Relationships among species in two of these clades are well resolved, however, relationships in the third clade, sect. *Claytonia*, are poorly resolved. Lack of resolution in sect. *Claytonia* is problematic because this clade presents interesting evolutionary questions, as well as taxonomic quandaries that cannot be addressed without a resolved phylogeny. The primary objective of this study is to develop markers capable of resolving species and subspecies level relationships in *Claytonia* sect. *Claytonia*. We have assessed sequence variation for three chloroplast DNA markers, for four taxa in sect. *Claytonia*, and have amplified and sequenced two of these markers. We are encouraged by the variation we see, and infer that these markers will be suitable for phylogeny reconstruction. Next, we will expand our sequencing efforts to all species in sect. *Claytonia*.

Moral Ambiguity and Modern Television
Maile Allen
Thomas Mullin, Theatre and Film

The 1990s American television saw a rise in moral flexibility in characters and content of programs. Events in American culture and politics directly influenced the change in "acceptable" behavior for main characters of shows. Programs like *The Sopranos*, *House MD*, *The Office*, *Dexter*, and *Breaking Bad* are example of these types of programs and are spread widely across a variety of networks. Specifically comparing *Dexter* and *Breaking Bad* reveals that two popular shows from two different networks feature protagonists with moral flexibility in areas generally viewed as taboo by our culture. These shows ask audiences to identify and empathize with the main characters encouraging us to question our morality.
Branched Chain α-Ketophosphonic Acids for the Study of Maple Syrup Urine Disease

Olin Anderson
Travis Denton, Chemistry and Biochemistry

Maple Syrup Urine Disease (MSUD) is a hereditary genetic disorder. Branched chain amino acids (BCAAs) build up in the blood. The aim of this project is the preparation, isolation and purification of α-ketophosphonic acid and monoethyl α-ketophosphonic acid bioisosteres of the branched chain α-ketoacids. These molecules will be tested as inhibitors of the branched chain keto acid dehydragenase complex to determine if they prevent the conversion of BCKAs into R-CoAs which are necessary intermediates in the tricarboxylic acid cycle. Perturbation of the TCA cycle is what leads to MSUD symptoms (i.e., lethargy and death). Branched chain diethyl α-ketophosphonates were synthesized using the Michaelis-Arbuzov reaction. The transformation of these diesters into the monoacid and diacid forms and their isolation and purification will be discussed.

“The Struggle Kills Me”
Brittney Andrade
Rachel Toor, Creative Writing

I wrote this piece for a Form and Theory of Nonfiction class. It started out as an imitation of George Orwell’s Shooting An Elephant, which turned into something a little different. I kept the struggles between the characters and events as Orwell had in his essay but twisted some things a slight bit to relate it to my own life. In my piece, I discuss the struggles I had with my uncle being on life support a little over a year ago and the relationship we had before the whole thing occurred.

Written Teacher Response to Second Language Writing: An Exploration of Issues and Methods for Improving Feedback

Jillian Andre
LaVona Reeves, English
Stephen Hoyt, English

This presentation will discuss both a review of research on several issues involved in teaching writing learners of English as a second language (ESL) and the rationale, method, and results of a case study completed by the presenter at Eastern. The case study was designed to explore the effectiveness of a method of written teacher feedback that was used in a native-English-speaking (NES) context in a 1982 study by Knoblauch and Brannon to avoid appropriating, or directing, the outcome of student texts. The presenter will explain results of her ethnographic case study that employed an adapted version of the 1982 method for an ESL composition course. Implications for teacher response and evaluation as well as further research will also be addressed.
“Headline News”
Rikki Andrews
Rachel Toor, Creative Writing

“Headline News” is a story about a woman who realizes despite her education and success she is unable to shake the feelings invoked when she encounters her first love several years later. She knows what could happen if she falls into old patterns, and she isn’t sure she cares.

An Investigation Towards the Development of the Next Generation of Alzheimer’s Drugs
Marcus Annable, Steven W. McDaniel, Todd T. Talley and Palmer Taylor
Travis Denton, Chemistry and Biochemistry

Over 5 million people in the United States are currently suffering from Alzheimer’s disease (AD). There are four medications that have been approved for treating AD and three of them focus on the inhibition of acetylcholinesterase. Recently, a pharmacological surrogate to the alpha-7 nicotinic acetylcholine receptor (nAChR), the acetylcholine binding protein, was discovered. This protein is currently being used as a high throughput screening tool for compounds targeting the alpha-7 nAChR. The focus of this project is developing a synthetic strategy for the preparation of a class of compounds that resemble nicotine to treat AD. Further aims are identifying and refining characteristics of the molecules by employing medicinal chemical strategies, including molecular modeling and toxicology assays. The results of these endeavors will be discussed.

Lemna minor Can Remove High and Low Concentrations of Lead from River Water
Melissa Apperson, Nathan Lewis and Taylor Stoll
Suzanne Schwab, Biology
Justin Bastow, Biology

In the current study we assess if Lemna minor (duckweed) and Spirogyra (live algae) are affective at reducing lead concentrations in river water. In order to test for the biosorption (i.e. biological absorption) of lead, Spirogyra and L. minor, were used in combination with a lead solution of one liter of river water mixed with 1.5g of lead acetate. Three different amounts of this mixture were added to 18 glass containers each. Water was taken from the Spokane River in Spokane Valley and a tributary to the Spokane River located in Marshall Washington. Spirogyra and L.minor were each added to 36 of the glass containers. The remaining 18 were control which allow for comparing to be done between each group. Lead levels were recorded again after one week. The results showed that L.minor had a significant effect on the uptake of lead and was better at removing lead from the water than Spirogyra. Spirogyra was only significant in the uptake of lead at the intermediate value.

The Middle Passage
Juventino Aranda
Greg DuMonthier, Art
Jenny Hyde, Art

Art Installation: Chain Link Fence, Barbed Wire, Dirt
Investigating African-Born Women and the Barriers That Stand in Their Way to Seeking Health Care After Arriving in the United States
Helen Arega
Robin Pickering, Physical Education, Health and Recreation

There are a large number of African-born women living in the United States and their number continues to rise due to low life expectancy, lack of jobs, and the growing number of HIV/AIDS cases in their African countries. The customs and traditions that these women practice and are often forced into in their home countries are for example, not having the right to refuse sex, asking to use a condom, and getting tested. These women tend to keep and continue to practice these traditions after arriving to the United States. My quest is to find the gaps keeping them from seeking screening for HIV, making appointments, and taking anti-viral drugs. In order to allow an in-depth and personal examination of how HIV/AIDS affect African-born women I will be conducting a qualitative study. By analyzing the interviews I hope to identify ways to eliminate the barriers that stand in their way. In my study I have focused on women from east Africa that have migrated to the United States, and customs and traditions that limit them from practicing healthy lifestyle choices in the United States. These countries make up some the countries in sub-Saharan Africa which 61% of the women are affected by this disease.

Chiune Sugihara Saved 6,000 Jews: The Story of a Japanese Heritage Hero
Miki Asai
LaVona Reeves, English

Chiune Sugihara saved roughly 6,000 Jews during WWII when he was a diplomat in Lithuania, issuing visas against Japanese government policy and eventually losing his job in the government. His story had not been told officially until 2000, when the Japanese government acknowledged his contribution publicly, and the Lithuanian government named a street after him. The purpose of this presentation is to analyze his story by applying the relevant virtues of Confucianism which he violated and explaining that he broke with tradition by defying his father’s decision for a career path. In the national core curriculum in Japan, his story has not been included in history books; therefore, Japanese scholars can contribute to a deeper awareness of relatively unknown Japanese people’s contributions to making the world a better place.

Facilitating Student Interest in Social Studies with Virtual Museums
Adam Attwood
Kevin Pyatt, Education

This researcher seeks to provide an answer to the question: How do virtual and physical museum artifacts and exhibits engage students in learning Social Studies content? Electronic Field Trips (EFTs) and Collaborative Virtual Environments (CVEs), for example, provide platforms for teachers to maximize student interest in Social Studies with virtual technology (Cassady, Kozlowski, & Kommann, 2008; Moore, Yufang, McGrath, & Powell, 2005). Primary qualitative and quantitative studies (such as Prosser & Eddisford, 2004) suggest that virtual museums foster student learning by making history more relevant. Virtual exhibits provide a means for students to have a more dynamic dialogue with the past.
Biochemistry of Human ITPase Substrate Specificity Mutants
Martin Aune and Anthony Adams
Nicholas Burgis, Chemistry and Biochemistry

Inosine triphosphate pyrophosphatases (ITPases) are part of a crucial DNA repair system. The human ITPase converts certain abnormal nucleoside triphosphates into their monophosphate counterparts to exclude them from incorporation into DNA. The inactivity or absence of ITPase can lead to mutations and chromosomal instability, resulting in cell death under certain conditions. Our lab has generated two human ITPase mutants, R178A and F149A, which substitute a small hydrophobic amino acid residue, alanine, for the positively charged arginine or bulky aromatic phenylalanine. These two residues are thought to have a role in determining substrate specificity. Our goal is to purify our mutant proteins using nickel charged columns that will isolate histidine-tagged recombinant proteins. Once purified, we will utilize thin layer chromatography to analyze reaction products of mutant and wild-type ITPase with various nucleoside triphosphates. Our results will provide further insight into the role of these amino acid residues in substrate specificity for the human ITPase.

Reading Mastery's Effectiveness as a Second Tier Intervention
Elizabeth Baker
Ryan Sain, Counseling, Educational and Developmental Psychology

One of biggest struggles for students around the world is the ability to comprehend and apply native and foreign languages effectively. Reading Mastery is a form of Direct Instruction (DI); which is a reading assistance program that is designed to teach pupils with carefully planned lessons. Direct Instruction uses an approach of taking small and specific steps to accelerate learning. The current study is an evaluation of an after school Reading Mastery intervention in multiple cohorts and multiple DI programs at two Spokane based elementary schools. Results were mixed with many students showing improvement.

Battle's End
Jon Barney
Thomas Mullin, Theatre and Film

Battle's End is based on the short story "The Upturned Face" by Stephen Crane. A war veteran returns from war and searches for the wife of a fallen comrade in an effort to fulfill his friend's dying wish. 14 mins.

Breaking Bad: An Interpretive View of the Introduction of Walter White
Jon Barney
Thomas Mullin, Theatre and Film

In this critical analysis of Vince Gilligan's AMC series, Breaking Bad, I examine the symbolic meaning behind objects, blocking, characters, and the characters' postures and interactions. Gilligan presents Walter White as a powerless man with no control over his life, as either a high school chemistry teacher or a methamphetamine producer.
Charles Dickens *A Christmas Carol: Connecting the Material to the Ideal*
Krista Beattie
*Beth Torgerson, English*

Victorians viewed themselves as economically, intellectually and morally progressive. However, many middle-class Victorians struggled with the ideal of moral progression when much of their wealth was built upon the backs of the poor. *A Christmas Carol* served both as a way of confronting the social issues that arose during this time and as a heart-warming tale that endorsed the material wellbeing of the middle class. Through *A Christmas Carol*, Dickens builds a bridge that links the Victorians’ duty to uphold the moral ideal with the middle class’s enjoyment of wealth, all under the joyous “spirit” of Christmas. In essence, in the benevolent “spirit” of Christmas, one could help the poor while still enjoying a golden goose.

Arousal and False Memory
Christine Belknap, Kayela Robertson, John Cash, Nasreen Shah and Tricia Wahler
*Leonard Stern, Psychology*

The study of individual differences in false memory induced by the Deese-Roediger-McDermott (DRM) procedure can contribute to our understanding of mechanisms underlying the memory phenomenon. In a previous study (2009), participants rated their mood on a pleasantness and an arousal dimension using the affect grid of Russell, Weiss, and Mendelsohn (1989). Higher rates of DRM-induced false recognition were found for participants with high vs. low levels of self-rated arousal. Levels of recognition memory and mood pleasantness were not found to be significantly associated with false recognition. Manipulating mood may thus affect the balance between item-specific and relational processing by changing arousal. These outcomes are consistent with findings of Corson and Verrier (2007) who manipulated the level of mood and arousal in a factorial design and found that, regardless of mood level, participants in high arousal conditions exhibited significantly greater false memory than those in low arousal conditions. The object of the present study is to attempt to replicate false memory effects and the influences of individual differences found in previous experiments.

Coyotes, Wolves, and People: Coyote Abundance Across an Urban-Wildland Gradient in Northeastern Washington
Candace Bennett
*Margaret O’Connell, Biology*

Coyote abundance across the United States increased during the past century due in part to 1) the decline of large carnivores (e.g., wolves) and 2) coyotes’ ability to adapt to human-modified habitats. However, the recent recolonization of wolves and increasing urbanization in parts of the west might have negative impacts on coyote abundance. To address this issue, we examined coyote abundance from return vocalizations. Abundance was compared between five land-use categories (urban center, low-density residential, close protected, unfarmed rural, and distant protected) using Kruskal Wallis. To date we have analyzed 274 vocalizations; abundance was greatest in the unfarmed rural land-use category, yielding more than 40% of the return vocalizations. In addition we measured nine natural and human-altered landscape characteristics using ArcGIS. Multiple regression analysis revealed that coyote abundance was negatively associated with roads and elevation change, but positively with wolf presence. This study will provide baseline information on the combined effects of increasing urbanization and initial recolonization of wolves on coyote abundance in northeastern Washington.
“‘Nihon Quarter’: A Love Story in Four Poems”
Dawn Bobby
Rachel Toor, Creative Writing

I will be presenting a quartet of poems set in Tokyo. As the title indicates, they tell a fictional love story in imagery and a bit of dialogue, based on my experiences living in Japan in the late 1980s. They address the differences of East and West and the cultural gap between the people.

Quasimodo Set Design
Brandon Bogaert
Donald McLaughlin, Theatre and Film

I will present a complete set and lighting design for *Quasimodo*, a show re-adapted by Donald McLaughlin from the original novel. I will provide a ground plan, light plot, instrument schedule, section drawings, and rendering for the show, as well as pictures from the last production.

Beauty is Power
Katie Bohnet
Greg DuMonthier, Art

As an artist, I focus on the issues of perceived beauty in contemporary American culture and the paradoxes that come along with such ideas. Often what we take for granted as beautiful looks very ugly or revolting when taken out of context, and the opposite can be said when strange objects are familiarized. I take inspiration from contemporary life: the clothes we wear, popular trends, the beauty and fashion industries, television, music and movies. That is to say, my work is inspired by everything we take for granted as popular culture. I aspire to probe deeper than the surface message, to examine what these messages actually say about all of us, its viewers and consumers. My sculptures are idea based, and thus the materials I use are dependent upon what is needed to convey the concepts. That said, I am typically drawn to false hair, fake nails, mannequins, textiles and other typical objects that reference the beauty and fashion industries. I am very interested in the symbolism that these manufactured body parts and adornments possess regarding class, ethnicity and femininity. Currently I am exploring the concept of beauty, questioning where the line between beautiful and ugly lies. I am also very interested in the relationship between appearance and sexuality, and how confusing social messages are about sexual freedom and sexual repression.
Synthesis of 1-Benzylpiperazine (BZP) using Laboratory Grade Reagents and in a Clandestine-Like Setting
Matthew Bos
Peter Bilous, Chemistry and Biochemistry

1-Benzylpiperazine (BZP) is an illegal drug that has a high abuse rate and no accepted medical use. 1-Benzylpiperazine can be synthesized from the combination of two different piperazines and benzyl chloride with various solvents and methods. This synthesis produces both the correct product (BZP) as well as the incorrect product (1,4-di-benzylpiperazine, DBZP). Eleven laboratory grade syntheses (cooks 1-11) were completed; the first nine syntheses were done in order to achieve BZP base and the last two syntheses to achieve the BZP dihydrochloride salt. The procedure used in the laboratory grade syntheses was adapted to prepare BZP in three clandestine-like setting syntheses. The source of piperazine was from a veterinarian de-wormer product for these three syntheses. The combination of this de-wormer product was shown to produce both forms of piperazine needed in the synthesis. Using these isolated piperazines from the de-wormer product, along with other reagents, proposes that BZP can be made in a clandestine-like setting and potentially at high yields. Analysis of all products was conducted using FT-IR and/or GC/MS using appropriate methods.

A Comparison of Two Fluorescent Dyes for the Visualization of DNA Fragments Separated by Agarose Gel Electrophoresis
Jennifer Bowman
Peter Bilous, Chemistry and Biochemistry

Agarose gel electrophoresis is used to separate nucleic acid molecules according to their size. The separated fragments can be visualized either by post-gel staining or by the inclusion of a stain during the preparation of the gels (precast-staining). A commonly used stain is Ethidium Bromide, which is a highly carcinogenic and toxic stain. Therefore, other methods of staining were investigated. This study tested GelRed™ Nucleic Acid stain as a potential replacement for Ethidium Bromide stain for the detection of dsDNA, ssDNA, or RNA in agarose gels. GelRed™ was chosen for this study because it is stable and environmentally safe. The two stains were compared for their ability to detect both high molecular weight (HMW) and low molecular weight (LMW) DNA by pre-cast and post electrophoresis staining of DNA separated by electrophoresis on 0.8% agarose gels. Results obtained in this study indicate that GelRed™ was as effective as EtBr for the detection of both HMW and LMW DNA, and therefore could be used as a safe, non-toxic alternative to Ethidium Bromide for DNA visualization.

“Math as a Second Language”
Asa Bradley
Rachel Toor, Creative Writing

Reading of a creative nonfiction essay about teaching students math as if it is a second language.
The Historical Rhetoric in the Debate on Economic and Health Reform in the United States
Daniel Brasher
Dana Elder, University Honors

The focus of my project is on the history and rhetoric leading up to the creation of two major historical pieces of legislation that are the foundation of personal economic security reform in the United States: Social Security in 1935 and Medicare/Medicaid in 1965. The campaign for economic security for US citizens has stretched out for over a century. Although the telos has remained the same, economic security for all, the debate and the focus of the issues of social economic reform have changed over time. The ambivalence regarding the adoption of a universal system of economic reform in the US rests on two contrary ideals. Historians refer to this as the Jeffersonian-Hamiltonian debate. Hamilton feared anarchy, thought in terms of order, and believed that government’s role is providing for the general welfare of the populace; Jefferson feared tyranny and thought in terms of freedom and rugged individualism. This project shows historical documentation and rhetoric of the debates.

Early Film Regulation and A Streetcar Named Desire
Vanessa Braudrick
Paul Lindholdt, English

In the 1930s, The Production Code was developed. Established by religious standards, the Code was a set of rules that determined what was to be omitted in films before they appeared to audiences. With harsh restrictions on films came those who attempted to defy them. Playwright Tennessee Williams would contend with PCAs rules. When his play, A Streetcar Named Desire, was under film production, it underwent censorship for its sexual and violent nature. Because of the tactical genius of director Elia Kazan and the help of Williams, the movie entered mainstream cinema and kept its controversial essence. This punctured The Production Code Administration’s (PCA) power. With the demand for more mature subjects in film, the PCA would eventually lose full power; and a rating system would replace it. A once restricted film society would now experience more liberal possibilities, more adult content.

Exotic and Native Plant Distribution on the Mima Mounds of Eastern Washington
Jessica Bryant and Brandy Reynecke
Rebecca Brown, Biology

Few natural Mima mound prairies, characterized by mounds of deep topsoil contrasting with shallow surrounding soil, remain globally. Most prairies have been transformed by agriculture or prevalent invasive species. The goal of this study is to preserve and restore native plant communities on Mima mounds in Turnbull National Wildlife Refuge. Thus far, I have analyzed relationships between native and exotic plant species distribution and geologic substrate, grazing history, and aspect. I found that the effect of grazing on exotic species distribution varied depending on geologic substrate. Surprisingly, recent grazing reduced exotic species richness and cover on mounds underlain by basalt substrate, but did not affect exotics on mounds underlain by alluvial gravels. Native species richness was not related to grazing history, but was found to be greater on mounds underlain by alluvium. Additionally, exotic species richness and cover was greatest at the top of Mima mounds compared to the sides; the opposite was true for native species. These findings will help establish techniques for reducing exotic species on Mima mounds.
Building On Technology (B.O.T.)

Erin Buehler, Justine Johnson, Karissa Price and Tierra Hopkins

Carol Taylor, Computer Science

In a technology driven society, the need for computing science professionals is substantial. Despite the increasing popularity of technology, there has been a marked decline in individuals joining computer science as a field and a lowering of interest in pursuing graduate-level degrees. Two populations in particular, women and minorities, have always been underrepresented in computers, but are continuing to dwindle at an alarming rate. In an effort to circumvent this potential calamity, we are turning our gaze on youth. Our project seeks to touch base with the next generation of prospective computing science aficionados. We are working in collaboration with a local elementary school to give 5th grade students an early, positive experience with computers and engineering. Utilizing LEGO® MINDSTORMS robotics kits, we are attempting to gauge children’s perceptions of computer science and give them a confident foundation in programming logic. Through demonstrations, lessons and interactive problem-solving, we hope to encourage all children to view computing sciences as accessible, fun and worth seeking-out as a career. B.O.T. is funded through CREU, a project sponsored by the CRA-W and the CDC.

A Life of Service

Clancy Bundy

Thomas Mullin, Theatre and Film

A Life of Service is about navigating faith in a not-so-perfect world. Arriving in a small community under the guise of a traveling servant of the Lord, Stephen’s interaction with the community cause him to question the man he works for, and the man he is. 27 mins.

Probe

Clancy Bundy

Thomas Mullin, Theatre and Film

Probe sends the audience back to a tense era of the Cold War, as Americans, Russians and extraterrestrials square off to bring peace to a troubled planet. 10 mins.

“Crop Land”

Benjamin Burbank

Rachel Toor, Creative Writing

My short, non-fiction essay is a look at the place I grew up (Reardan, WA) and should take about five minutes to read aloud.
The Federal Communication Commission’s Newspaper-Broadcast Cross-Ownership Rule: Should It be Retained, Relaxed or Abolished?
Alisha Burger
Peter Shields, Communication Studies

In the last decade, the Federal Communication Commission’s newspaper-broadcast cross-ownership rule has been the subject of heated debate. Implemented in 1975, the rule prohibits one company from owning a newspaper and broadcast station in the same market. Supporters of the rule argue that it is key to preventing a single corporate entity from becoming the sole powerful voice within a community. Those opposing the rule argue that such concerns are misplaced; the explosion of alternative information channels (e.g., cable news channels, internet), they argue, means no one corporate entity can hope to monopolize news. They also argue that permitting cross-ownership will save local newspapers and lead to expanded news content. Should the FCC’s rule be retained, relaxed or abolished? The purpose of the paper is to address this question. The paper, which is based on a systematic analysis of relevant primary and secondary documents and scholarly research, argues that relaxation or removal of the FCC’s rule would be detrimental to the public interest; the provision of local content may well be undermined and the opportunity for media ownership by minorities and women could be reduced significantly.

“Dante’s Inferno” for Strings and Percussions
Becca Castillo
Jonathan Middleton, Music

This is a composition in three movements based on various cantos from Dante’s Inferno: The Descent, The Wall of Dis, and the Ninth Circle of Hell.

WALL-E Re-imagined Through the Eyes of Post-Colonial Theory
Patricia Chambers
Heather Robinson, Communication Studies

More than any other Disney film, the science fiction animated film, WALL-E explores the effects of post-colonization in both the narrative of the post-colonized Earth, and the colonization of the “alien” space of the Axiom spaceship. Post-colonial themes of the subaltern, panopticon, locus of power, voice, production of identity and resistance to hegemonic control are all explored through the medium of the film. Application of the film’s theme that humans need to value authentic communication, aesthetics, love and life itself is prescribed.

Audition Monologues: Fun & Othello
Curtis Chandler
Jeffrey Sanders, Theatre and Film

A prepared monologue package that includes a piece from Howard Korder's Fun and William Shakespeare's Othello.
Petrology and Geochemistry of Commingled Eocene Magmas near Tum Tum, Washington
Hana Chappell
Jennifer Thomson, Geology

An outcrop near Tum Tum, Washington shows evidence of magma mingling (the process whereby two magmas of different composition come into physical contact with one another with little to no homogenization). The host rock is a granitoid characterized by plagioclase + K-feldspar + quartz + biotite + hornblende. Distributed throughout the granitoid, are spheroidal to ellipsoidal intermediate to mafic enclaves, with the contacts between the two units ranging from sharp to diffuse. Enclave mineralogy consists of plagioclase + K-feldspar + hornblende + biotite ± quartz. Both rock types contain accessory apatite, allanite, and Fe-Ti-oxides. Evidence that the two units were molten at the time of contact includes the presence of K-feldspar and plagioclase phenocrysts derived from the host granitoid now entrained in the enclaves. The mineralogy, petrography, mineral chemistry and geochemistry (major-, trace- and REE) of the two rock types are described. The host granitoid is metaluminous in nature and is similar to the Eocene Silver Point quartz monzonite. The enclaves are similar to Eocene dikes exposed in the region.

“These Three Poems”
Megan Charles
Rachel Toor, English

I, Megan R. Charles, will be reading three works of creative fiction. They will be short poems (no more than a page in length each) entitled: “Firelight Shadows,” “She Has Cancer,” and “Listen to the Creek”.

The Chicano/a Struggle in the Classroom in Predominately White High Schools
Gabriel Chavez
Todd Hechtman, Sociology and Justice Studies

This work in progress investigates high school Latino/a, Chicano/a students’ perceptions of racism and discrimination in their predominately Anglo white schools. The research interest is based in my lived-experience as a Chicano high-school student and my interpretation of my academic success compared to that of two best friends, who also are Chicano males. I believe that digging deep into the structure of schooling, racism, classism and discrimination is not enough. The next step is to understand students’ needs so that their voices are heard and interpreted through their educational goals. From information gathered in interviews with students, I intend to increase the understanding of racism at the institutional level as a link to Latino/a, Chicano/a students’ struggle in academics. The findings will inform proposals for institutional changes to increase the educational success of Latino/a, Chicano/a high school students.
El Tango: La Transgresion del Rol de La Mujer En "Boquitas Pintadas"

Crystal Chiemwichitra

Natalia Ruiz-Rubio, Modern Languages, Literature and Philosophy

El tango es reconocido hoy en día como una forma de arte muy expresiva, caracterizada con pasos elaborados y complicados y que presenta un espectáculo extravagante. Pero el tango tiene dos partes muy importantes: el baile y las canciones. La danza del tango de hoy tiene un aire refinado, digno de ser parte de los atributos culturales de la alta sociedad. Pero el tango tiene orígenes controvertidos, creado por las poblaciones marginalizadas: los pobres y los inmigrantes. Yo investigué esas raíces del tango para saber cómo algo inicialmente un baile considerado vergonzoso llegó a ser parte de la cultura nacional. La aceptación del tango puede ser relacionado con su reproducción y representación en la literatura, la radio, el teatro, las películas, y otras formas de publicación. En mi estudio, me enfoco en la interpretación del tango que el autor Manuel Puig presenta, y cómo es distinto de los tangos tradicionales. Puig emplea a las mujeres en su novela como las protagonistas, en contraste con el predominio típico de los hombres en las letras de las canciones del tango.

Scene from This Is Our Youth By Kenneth Lonergan

Christopher Clark and Chailee Friant

Sara Goff, Theatre and Film

Jeffrey Sanders, Theatre and Film

This is a short scene from the play This Is Our Youth by Kenneth Lonergan. It involves a pivotal moment in a budding relationship between Warren and Jessica, two Manhattan teenagers who are battling the hardships of life in a grownup world.

“My Mother's Garden”

Mary Clark

Paul Lindholdt, English

Humans often view the world as their oyster, and by the natural law of possession believe that its pearl belongs to them too. In Dr. Paul Lindholdt’s environmental literature seminar, active class discussion frequently questioned the validity of the anthropocentric worldview which most humans hold. I believe we operate under a presumptuous definition of nature which alienates humanity from its process, denying both its impact on us and ours on it. My mother planted her vegetable garden in a greenhouse on a small patch of unused empty, plumbed out of the middle of the maze of the mobile home park in which we lived. Gardens are not considered “nature” because they are made by people. But in my observation, non-human life flourished in, on, and around my mother’s garden. That presence of active, diverse, healthy, non-human life in the midst of human activity is the focus of this interpretive oral presentation, which features creative descriptions of the life in my mother’s garden as an example of the interdependence and coexistence of human and non-human nature.
**Owls and Larks: An Assessment of Perceived and Real Differences in Personality Traits and Behaviors Amongst Morning and Night People**

*Claire Collins and Chris Santoyo
Amani El-Alayli, Psychology*

Previous research by Hepburn et al. (1984) examined how Morning and Evening people rated themselves on various personality characteristics, and also looked at how a separate group of individuals rated their perceptions of Morning and Evening people. The purpose of the present study was to examine Morning and Evening individuals’ perceptions of themselves and their stereotypes of others to see if people’s stereotypes of morning and night people depend on their own time-of-day preference. Data are currently being collected from undergraduate psychology students at Eastern Washington University by having them complete a Morningness-Eveningness Questionnaire and then rate both themselves and others on an extensive list of personality characteristics, behaviors, and abilities. The data gathered over a two to three week period will be presented.

**Stereotypical Perceptions of Personality Type and Circadian Preference**

*Mitchell Colver and Chelsey Bershow
Amani El-Alayli, Psychology*

Throughout the years, there have been many studies that have investigated the correlation between personality characteristics and circadian preference (early risers vs. "night owls"). While one examined stereotypical perceptions of either group, none have examined how either group is stereotypically perceived to possess the Big Five personality characteristics, as measure by the Ten-Item Personality Inventory (TIPI; Gosling, Rentfrow, & Swann, 2003). The purpose of this study was to examine these perceived differences. Participants rated the extent to which they believed morning and evening people possessed each of the traits on the TIPI. Results revealed perceived differences on most of the traits. The relevance of these findings to stereotyping will be discussed.

**Episodes of Mania and Depression Correlate Negatively with Self-Worth**

*Holly Conwell, Jamie Yantis and Chelsea Clarkson
Kayleen Islam-Zwart, Psychology*

Various factors may influence the way in which a person perceives oneself as well as one’s overall importance as a human being. It is plausible that pathological mood may be a strong predictor of a whether or not people believe they are of value to themselves and to the rest of society. The purpose of this study was to explore the relationship between manic and/or depressive episodes and self-reported feelings of worth. This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000). It was hypothesized that people experiencing mood episodes would report differing levels of self-worth. The sample included 1,956 individuals between the ages of 15 and 54. Results supported the hypothesis that manic and/or depressive episodes predict a more negative view of the self as compared to people who had never experienced mania or depression. Also, those participants who had experienced both mania and depression at some point in their lives were the least likely to feel valuable as a person. Further research into mania and depression in relation to assessment of personal worth is needed.
Semiotic Theory & New Media: Peirce's Speculative Rhetoric in Digital Space
Jose Cortez
Molly Johnson, English

The Internet is a relatively new multimodal medium that affords the combination of text, graphics, audio, and video, and a website is the “space” between the sender and receiver of a message, the platform for persuasion. Web designers are able to order the virtual world according to schemas that create our culture, constructing a rhetorical reality meant to persuade users to adopt the reality of the designer. This new medium affords new composition and requires a new criticism, one that analyzes the elements of its composition as equal yet different manifestations of the same semiotic process- the exchange of feelings, actions, and information between minds by means of any kind of sign. Peirce’s universal rhetoric, “the general secret of rendering signs effective,” argued that every element of design, whether it be picture, letter, or sentence, is a corresponding sign of the same idea and thus has equal rhetorical potential. By applying Peirce’s semiotic theories and universal rhetoric to spatial theories of intertextuality, social presence, and spatial presence, we can analyze and reveal how design choices, i.e. choosing to display information as a graphic rather than text, create different realities and persuasions. I will apply this model to protectmarriage.com, the official support site of California’s Proposition 8 (2008) and explore the ways multimodal composition on the Internet influences our sociopolitical realities.

Underground Without a Headlight: Can the Northern Pocket Gopher Sense Magnetic Fields?
Dustin Cousins
Margaret O’Connell, Biology

The northern pocket gopher, Thomomys talpoides, is a fossorial mammal, which means it spends the majority of its life underground. It lives in a self-excavated system of tunnels that lead to foraging areas and to chambers for nesting, food storage, or waste. Fossorial lifestyles place constraints on these rodents; for example movement below ground can take 360 - 3,400 times more energy than above ground. Given this extreme cost, navigation is important to reduce energy expenditure. Living underground also imparts some sensory restrictions; visual landmarks are hard to see through dirt. Although three unrelated fossorial rodent species have been shown capable of sensing the earth’s magnetic field to navigate underground, there has been no investigation on how pocket gophers navigate. Under normal magnetic fields, I will first 1) observe orientation of tunnel and nest construction and 2) run animals through a maze until consistency in performance is obtained. Then I will reverse the magnetic field and repeat tests while monitoring for changes in performance.
GIS Analysis of Ice Age Flood Megaripples on the West Plains, Eastern Washington
Megan Crim
Richard Orndorff, Geology

During the Ice Ages (the last 2 million years of earth history), ice lobes connected to the Cordilleran Ice Sheet in western Canada flowed south into the United States. One of these lobes created an ice-dammed body of water called Lake Missoula. The ice dam failed multiple times approximately 15,000 years ago resulting in a sequence of giant floods. These floods sculpted the landscape of east and central Washington, leaving behind channeled scablands, giant coulees, dry waterfalls, ice-rafted boulders, debris fans, pendant bars, and megaripples. Megaripples are similar to wave ripples found on beaches and current ripples in streambeds, but they are much larger. Megaripples on the West Plains can be 15 feet high with a crest-to-crest spacing of 300 feet. Megaripples are indicators of flow direction and thus provide clues as to water movement during flood events. We present results showing mapped megaripples on the West Plains. Patterns and ripple clasts allow us to make hypotheses about flow direction, velocity, and timing of the latest Ice Age flood to influence this part of the state.

“Twelve Albino Camels”
Olivia Croom
Rachel Toor, Creative Writing

I will be reading a piece of creative nonfiction.

The Lost
Written and Directed by Rachel Crow
SpreadingWings
Film Score by Nick Bailey
Sarah Lee Monroe, Theatre and Film
Don Goodwin, Music

A young lost Native man wants to get away from his old life and leave the res. He parties most of the time because there is not really a lot to do. What if life was different? What if he left? Where would he go? Is there a better life? The musical approach we are taking on this film is to use the instruments of the Native American culture for the main theme such as flute and skin drums. We’d also like to have a second more patriotic theme for the Military pamphlets probably use marching snare and bugle or trumpet.
A GIS Approach to Characterizing Bank Stabilization Measures Within the Box Canyon Reservoir, Washington

Brittany Davidson
Margaret O'Connell, Biology

Channel meander and bank erosion are dynamic natural processes of alluvial floodplain rivers that humans often aim to control. Such measures to control geomorphology can be accompanied by changes in ecological function, such as nutrient retention, groundwater recharge, flood and erosion control, and wildlife habitat. Increased land development along the Pend Oreille River within the Box Canyon Reservoir has led to the implementation of a large number of bank stabilization projects in recent years. These range from planting native vegetation to the use of concrete retaining walls. I used GIS to characterize approximately 140 bank stabilization projects within the Reservoir by their geomorphology, vegetation, and relative rate of erosion hazard occurrence. Results suggest that the most common strategy, riprap (rock), is used irrespective of an area’s erosion potential. This characterization provides guidance in selecting environmentally appropriate stabilization techniques based on site condition. Furthermore, this case study provides baseline information I will use to compare stabilized sites to unstabilized sites in eroding and non-eroding areas to evaluate the effectiveness of different bank stabilization strategies in providing ecological function.

Geochemistry of the Spokane River and Interactions with the Spokane Valley-Rathdrum Prairie Aquifer

Klarissa Davis
Carmen Nezat, Geology

The Spokane Valley-Rathdrum Prairie Aquifer is in good connection with the Spokane River where it overlies the aquifer. Over the short distance between the Idaho border and Spokane Valley, the Spokane River changes from a losing stream (where it supplies water to the aquifer) to a gaining stream (where it gains water from the aquifer). A total of six locations were sampled in the Spokane Valley area, both from the Spokane River and from EPA monitoring wells in the aquifer, over the course of a month. These water samples were analyzed for pH, alkalinity, calcium, chloride, nitrate, phosphate, silica, conductivity, and turbidity using ion selectivity probes, titration, and colorimetric methods. The purpose of this study was to determine the effect of water entering the river system from an unconfined aquifer. We found that gaining reaches of the river were more alkaline and had higher alkalinity and dissolved ion concentrations when compared to losing portions of the river.
Deseure DeBerry
Pui-Yan Lam, Sociology and Justice Studies
Kelly Coogan, Women’s and Gender Studies

This research examines negative experiences of African American women working entry-level positions while residing in Spokane, Washington. Concepts of intersectionality, Black feminist thought, multiple jeopardy and consciousness, standpoint theory, Black women and negative stereotypes, oppression and resistance to such are foundations for research and analysis. Results address negative experiences stemming from perceptions of racism, sexism, both, or neither. Perspectives that speak more to awareness of racism as opposed to sexism in the participants’ experiences are discussed. Empowerment and/or resistance in response to these experiences varied among the participants, but themes of assertiveness, education and values contributing to their sense of resistance were common. The intent of this research is to address and value the experiences of African American women working occupations associated with low/middle class status. Doing this will expand previous research that addresses Black women’s oppressive experiences in middle/upper middle class, professional places of employment.

“Shapeshifter”
Tanya DeBuff
Rachel Toor, Creative Writing

This essay explores my lifelong issues with my shape, including but not limited to weight problems. It documents a personal journey that has not yet finished, but has perhaps began to level out.

The Challenge and Fulfillment of Service Learning: Creating a Community Newsletter
Heather DeCamp
Molly Johnson, English

The first service learning I was a part of taught me quickly the pros and cons of these types of projects. I, along with four other peers, put together the Fall 2009 Cheney Pathways to Progress newsletter. The project included interviewing people for the articles, acquiring images, writing and editing articles, and designing the layout. Working in a team and for a client helped me gain valuable experience about working in the real world. Unlike regular classes, the service learning project was fulfilling because I got to see my article in print and sent out to the local Cheney community.
Resin Cable Over Molding Project
Daniel Degelman
Donald Richter, Engineering and Design

A project was presented to EWU from Logan Industries (a company involved in producing custom cables for industrial use). The purpose of the project was to determine whether or not it was possible to create a rapid prototyped mold to produce cable over molding by the procedure of pour molding resin to create a fast and inexpensive way to produce a small production run of a custom cable. The goal was to cut the cost of production of traditional billet CNC molds by making a rapid prototype mold that can be used to pour mold the cable over moldings. The question arose of why has this not been done yet. I investigated this idea to determine the practicality of the project and decide if the benefits were great enough to yield a profitable product. To this date, it has not been found to have shown a profitable result. My research has gone into detail of why this has not been done and may not ever be a practical method of cable over molding.

Creative Works by Lux Devereaux, a Short Story, “Loose Cannon”
Francis Devereaux
Rachel Toor, Creative Writing

The central character is a young recruit, who is non-Indian, and is hired to work on gathering data for the environmental department of the tribal government. His job is to represent the tribe at planning meetings, where a history of contention exists between the counties and the tribe. He speaks out of the historic context of the tribal government, and finds himself in front of the Tribal Council being educated on the vision of the elders.

The Full Half of the Glass: Stress and Resilience in Minority College Students from Disrupted Homes: Is Achievement Motivation a Mitigating Factor?
Nicole Juliana Dewitt
Susan Ruby, Psychology

This study examines family structure, minority status, stress, resilience, and achievement motivation in today’s college student. An abundance of literature focuses on the distinctive stressors students from disrupted homes endure. Moreover, a growing body of research highlights the unique forms of stress college student’s encounter in their daily lives. The purpose of this study is to examine the environments of single parent homes and college variables with minority status to evaluate their distinctive stressors, and the effect on academics in this growing population of students. Students will have an opportunity to complete four psychological measures that will evaluate their levels of stress, resilience, and motivational achievement. I predict that a sense of higher achievement will result in higher levels of stress. Additionally, I anticipate students of minority and disrupted home status will have higher levels of resiliency, in turn affecting their achievement motivation.
Collegiate Female Volleyball Athlete with a Type II SLAP Tear: A Case Report
Kailynn Dolph, Julie Wight, Heather Pence and Liz Reinstein
Jeffrey Kawaguchi, Physical Education, Health and Recreation

The constant overhead hitting in volleyball causes numerous chronic pathologies to athletes’ shoulders; a more common injury being general instability and SLAP tears, or lesions. However, in this case, a SLAP tear was overlooked several times, causing a women’s volleyball athlete from a Division I institution unable to perform at her highest level. Her rehabilitation protocol changed several times based on her signs and symptoms and her pain. It is our intent to give basic knowledge of pertinent anatomy related to a SLAP tear, describe what a SLAP tear is, examine the differential diagnosis, and discuss a case study regarding a collegiate female volleyball athlete with a type II SLAP tear.

Fact or Fiction: The Shakespeare Conundrum
Amy Dotson
Paul Lindholdt, English

For centuries, conspiracy theories have surrounded the work of William Shakespeare and the authorship of his plays. Edward de Vere, Christopher Marlowe, and Francis Bacon have all been put forward by members of the academic community as possible writers of the work previously attributed to Shakespeare, and many of these theories have significant evidence to back up their claims. I have researched a selection of the myriad of authorship theories surrounding the work of William Shakespeare and will present my findings on the conspiracies that follow this legendary author and his writings.

"The Elusive Vindaloo"
Hannah Dutt
Natalie Kusz, Creative Writing

Is it possible to recreate a dish that tastes just like my memory of it? Is this just about the food? An essay on the frustrating quest to recreate a treasured traditional entrée and all that ensues.
Elk Hunting on Turnbull National Wildlife Refuge: Impacts on Elk Movement and Aspen Regeneration
Christopher Dwight
Margaret O'Connell, Biology

In the arid West, quaking aspen (*Populus tremuloides*) cover less than 10% of the forest landscape, yet support a disproportionate diversity of native plants and animals. When elk (*Cervus elaphus*) become overabundant, browsing prevents aspen regeneration, reduces survival, and consequently impacts local biodiversity. Given this, Turnbull National Wildlife Refuge (TNWR) is initiating a limited elk hunt to reduce numbers and disperse elk off the refuge. My study examines whether hunting is an effective way to disperse elk off the refuge and, indirectly, increase aspen growth and regeneration. To determine elk movement and usage of the refuge prior to and following the elk hunt, I am monitoring 34 radio-collared elk and performing elk-pellet count transects. Preliminary radio-telemetry data indicate that most elk are located in future hunt areas. To examine aspen response, I am comparing five measurements of aspen in 24 2x20m transects, located within and outside hunt areas. The results of my study will be used by TNWR to evaluate how well hunting meets the refuge’s management objectives.

“Bags of Particles”
Sam Edmonds
Rachel Toor, Creative Writing

Outward grieving is like acting in a play in which nobody has rehearsed, but everybody is expected to perform. In “Bags of Particles,” I explore my personal experience with many sides of public grieving and its stars, from the one-upmanship griever, to the violent griever, to the griever who uses the drama as an excuse to shoplift, and finally to my own inability to show outward grief, and the anger it has elicited in teary-eyed friends. “Bags of Particles” is a personal essay.

WITC and Tincan Projects in the Spokane Community
Gabe Ehrnwald
Rachel Toor, Creative Writing

I would like to talk about my work in Writers in the Community, more specifically, my involvement with the local non-profit Tincan. I’ve done two projects with them and would like to showcase our work with the community.
Development Of Sugar Based Polyhydroxypolyamines as Antimicrobial Agents

Chris Evans
Travis Denton, Chemistry and Biochemistry

The purpose of this research is to synthesize new sugar based polyhydroxypolyamine (PHPamine) biocides. A series of 4-alkyl-4-azaheptamethylene diamines, with varying alkyl tail lengths were synthesized by means of catalytic hydrogenation of the corresponding N-alkylbis (cyanoethyl) amines over Raney nickel. The 4-alkyl-4-azaheptamethylene diamines were then polymerized with activated glucaric acid to form polyhydroxypolymides (PHPAs). The PHPAs were reduced to the corresponding borate esters of PHPamines using borane-tetrahydrofuran complex, in tetrahydrofuran and the final PHPamines, as tri-hydrochloride salts, were liberated using aqueous hydrochloric acid. The PHPamines were assayed for their ability to kill, in a dose dependent study, standard KL-16 Escherichia coli. The results of the antibiotic assays and the detailed synthetic procedures will be discussed.

Os Trigonum Syndrome in a Collegiate Mens Basketball Athlete: A Case Study
Catherine Fairgrieve and AJ Ranjbaran
Garth Babcock, Physical Education, Health and Recreation

This is the case study of a 23 year old male basketball athlete suffering from Os Trigonum Syndrome. Os Trigonum Syndrome arises from the non-union of an accessory bone in the posterior foot, in many people it is asymptomatic, however in athletes it can be a performance ending problem. After a difficult diagnosis this athlete received conservative treatment and eventually the problem was resolved surgically. Through rehabilitation and other treatments coordinated by the EWU Athletic Training Staff the athlete was able to successfully complete the season.

Thwap!
Jon Faulks
Greg Dumonthier, Art

I am submitting a sculpture piece that I am doing which focuses on our perceptions of reality compared with those of dramatic influence. The piece involves installation of text within real world settings that blend fantasy and reality. I believe that our interpretation of real world experience is becoming more and more influenced by our intake of fictional life played out in television, music, and literature. My goal is to lift up the infra-ordinary through onomatopoetic devices in an attempt to create humor through otherwise humorless objects.

Poetry Reading
Ryan Flexer
Rachel Toor, Creative Writing

I will read an untitled poem. It will take approximately 1 minute.
Friends of the Library Service-Learning Project
Matthew Foos
Molly Johnson, English

I was a member of a group in Software Documentation, and one of our members was working for Friends of the Library (FoL). FoL hires student interns to work on their publicity material. At the time, the interns were well versed in design, and they anticipated that the organization would have a difficult time updating their materials once the students had graduated. We contacted FoL to ask if we could produce tutorials and instructions to help train incoming interns and staff who would be responsible for updating documents like the quarterly newsletter. FoL requested instructions and digital tutorials for learning, InDesign and Photoshop CS 4, the necessary software to update the newsletter. My group wrote and delivered an 86-page instruction manual and a tutorial CD with examples and scenarios for updating elements of the newsletter to FoL.

Nature-Deficit Disorder and Its Impact on Children's Play
Alexandra Franks and Allison Jost
Sue Wright, Sociology and Justice Studies

Historically, children have had unrestricted access to their natural environment. From the beginnings of humanity, interaction with nature has been a vital part to a child's physical and emotional development. With the recent explosion of technology and industrialized civilization, the opportunity for children to develop a sense of self in the outdoors has all but vanished. Coined by journalist Richard Louv, nature-deficit disorder is the concept that a new generation of children are spending less time outdoors and more time inside engaging in manufactured play. The concern for today's youth is that unstructured growth and play opportunities provided by nature are supplanted by technology. We explore this generational shift of the way children play and spend unstructured time, and its social causes, from the perpetuation of fear in our culture to the inaccessibility of natural, undeveloped areas. We also look at how these changes negatively impact the way children interact with their natural environment and their peers. With no end to the development of technology in our society or the sustained fear for the natural world, can this trend be reversed before causing irreversible damage?

Lighter Than Air: Wire, Graduating Plastic Sheets, White Duct Tape
Bridget Freeman Wamsley
Greg DuMonthier, Art

Loose abstractions can be made of many things in life. One can see kites, spines, or blank canvases for painting. What feelings do you have? What if you could do anything? Take those ordinary materials and make something extraordinary!

Untitled
Jessica Garcia
Tom Askman, Art

Medium: Acrylic, mixed media, crayon
Transinterpretive Criticism and *Beowulf*

Shannon Genzone  
*Logan Greene, English*

The many available translations of *Beowulf* give slightly different impressions of Grendel’s mother. Recent movie renditions, as well, offer radically different interpretations of this mythic figure. This paper examines the strengths and weaknesses of the presentation of Grendel’s mother in three widely used translations and argues that all, most notably the popular Seamus Heaney translation, fail to give this ugly but intriguing character sufficient depth and respect.

“Growing Up Nuclear”

Jeffrey Gerhardstein  
*Paul Lindholdt, English*

To grow up during the Cold War, in the shadow of Hanford, is to be doubly influenced by the nuclear zeitgeist: in a mixed-genre project combining elements of memoir, nature writing, and poetry, as well as vignettes inspired by poets Debora Greger and William Witherup, who grew up as children of Hanford nuclear workers, respectively, I examine the assumptions about the Bomb I learned as a child in the Tri-Cities. My poem “Growing Up Nuclear,” which seeks to reconcile being a child in a time and place which accepted the possibility of nuclear destruction as a political reality and turned that fact into economic opportunity, is at the heart of this project. It is this notion of growing up “nuclear” which ties the various elements and genres of the creative project together.

Writers in the Community: Learning Through Teaching

Brandon Getz, Melina Rutter, Paul Merchant, Sam Edmonds and Gabe Ehrnwald  
*Rachel Toor, Creative Writing*

Graduate interns with EWU’s Writers in the Community program will describe teaching experiences in a variety of settings: teen homeless shelter, prison, and elementary school.
Vegetation Analysis of a Riparian Zone After Livestock Exclusion, Cow Creek, WA

John Getz
Suzanne Schwab, Biology
Rebecca Brown, Biology

Up to 80% of riparian zones in the western United States have been degraded by human disturbance, including livestock grazing. Riparian zones provide forage and water for livestock, but continuous grazing adversely impacts riparian plants and water quality. The Washington State Department of Ecology and the Adams County Conservation District have installed fencing to exclude livestock in a riparian buffer zone along Cow Creek in eastern Washington to comply with clean water mandates. We did a vegetation survey in the Cow Creek riparian zone to gather baseline information on plant communities for long-term monitoring of their recovery. We surveyed 47 100m² plots (17 reference, 17 currently grazed, 13 fenced 3-5 yrs) by collecting physical data and estimating cover of each plant species in each plot. We found greater richness in grazed vs. reference plots, which was likely due to an increase in non-native plants introduced by livestock disturbance. We also found that plots fenced 3-5 years had less species richness than currently grazed plots, which is counter to the intermediate disturbance hypothesis.

And the Children May Know Their Names: How the Hidden Meaning of Names Informs Toni Morrison's Song of Solomon

Aubra Godwin
Beth Torgerson, English

It is no secret that names have the ability to illicit powerful responses from people. Say the name “Hitler” and immediately a discussion on Nazis is liable to ensue. Speak of “Ghandi” or “Mother Theresa” and the image of a person who is willing to give everything of themselves for others comes to mind. Names carry history, identity, and memories. In the case of Toni Morrison's novel Song of Solomon, the name of each character is chosen with a definitive sense of purpose; the reader is given the clues to understanding the significance of each character through the name Morrison bestows upon them. Examples of the names used in Morrison's novel include Pilate, Hagar, Guitar Bains, and Macon “Milkman” Dead, III, and by exploring the cultural, historical and linguistic significance of these names, it provides a deeper understanding of what roles each character plays within the novel Song of Solomon.

The Victorian Fallen Woman: Influences in Christina Rossetti’s “Goblin Market”

Aubra Godwin
Beth Torgerson, English

In 1862, Christina Rossetti’s poem “Goblin Market” was published as part of a collection by Alexander MacMillan. The poem, full of lyrical rhythms and a hypnotic rhyme scheme became an instant hit. Since the time of its writing, numerous scholars and students the world over have studied every aspect of Rossetti’s “Goblin Market.” It is the very multifaceted nature of “Goblin Market” which gave it such a wide Victorian audience and one of the reasons it is still popular to this day. However, possibly the most significant theme within the poem involves the ideas it puts forth in regard to helping Victorian “fallen” women, i.e. prostitutes, for this poem turns on its head the idea that women were the cause of prostitution, and instead lays the blame solidly in the laps of men.
Analysis of Two Ergonomic Interventions for Lifting Concrete Blocks Over Rebar Wall Supports in the Masonry Trade
Stephen Goldrick, Ryan Mizner, Jennifer Hess and Laurel Kincl
Daniel Anton, Physical Therapy

Purpose: To determine the effectiveness of two ergonomic interventions, high lift grouting and H-block, designed to reduce awkward shoulder postures while lifting concrete block over rebar. Background: Lifting block over rebar requires a substantial amount of overhead work by bricklayers. Overhead work is associated with increased risk of musculoskeletal disorders (MSDs). Methods: Seventeen apprentice and journey level bricklayers were asked to build three walls using three techniques (high lift, H-block, and conventional) while shoulder motion was recorded with a motion analysis system. Results: Row 6 on the wall was similar across conditions. Row 7 was found to reduce peak shoulder elevation using H-block and high-lift techniques (p < .001). At row 8, H-block was found to reduce shoulder flexion (p = .04) but high-lift was not statistically different than the conventional method (p > .05). Conclusions: H-block and high-lift may be useful in reducing shoulder flexion during wall construction, thereby reducing the risk for shoulder pathology.

Fear of Falling and Balance Confidence in Community Dwelling Older Adults
Ruth Graham
Kimberly Cleary, Physical Therapy

More than one in three people in the United States aged 65 and older fall at least once per year. Fear of falling is also prevalent among older adults, including those who are community dwelling. The purpose of this presentation is to describe fear of falling and balance confidence in older adults. Forty-six subjects aged 65 and older considered “well elderly” (people who live independently and can walk in their home without help from another person) participated in this study. More than one third of subjects reported a fear of falling (36%). Many subjects (37%) reported reducing their recreation activities, and some (15%) had even reduced their household activities because they were worried they might fall. Subjects rated their confidence in maintaining balance while performing specific functional tasks using the activities specified balance confidence scale (ABC). The ABC item with the highest confidence score was “reach for a small can off a shelf” (x = 86%), and the item with the lowest confidence score was “stand on a chair and reach for something” (x = 40%).

Wind Tunnel Experiment to Show the Effects of Drag on Dimpled vs Smooth Golf Balls at Different Velocities
Eric Grant and Sandra Rich
Jason Durfee, Engineering and Design
Donald Richter, Engineering and Design

As a spherical object moves there are two basic airflow conditions around the object that have an important influence on the drag. These two types are called laminar and turbulent flow. Laminar flow is very smooth, if you could see a particle of air it would travel in smooth graceful, predictable lines. It is generally desirable as it results in less drag over a surface area. Turbulent flow is very chaotic or mixed. The air particles would be moving in different and unpredictable directions. These two airflow conditions can be used to calculate a drag coefficient that can be used in calculating the force of drag on objects at various velocities. We set up an experiment with the wind tunnel that will illustrate the two flows and the effect they have on a dimpled and a smooth golf ball. The experiment will show that when the airflow is more turbulent the separation of the air on the surface on the golf ball is further back on the ball creating a smaller pressure wake behind the ball creating less drag.
HPPV - Team EagleRiders
Eric Grant, Steven Butterfield, Darrell Pope and John Parra
N.M. Awdal Hossain, Engineering and Design
Donald Richter, Engineering and Design

We worked on constructing a vehicle for Eastern Washington University’s Human Powered Paper Vehicle competition. Our design was a three wheeled vehicle that had the two wheels in front and a pedal driven wheel in the rear. The operator would be riding in the prone position and steer with their arms by simply grasping and turning the entire front axle. The main goal was to create a vehicle out of paper products that could weigh no more than 75 lbs with an allowance of 10% of the total weight being any kind of material other than paper. The vehicle will be maneuvered through an obstacle course to test its durability and its functionality. This experience has enabled us to become better engineers and designers because we had to be innovative and at the same time keep within the competition restraints.

The Delivery Man
Devin Greenman
Mindy Breen, Engineering and Design

A girl who takes her world for granted is force to come to terms with how quickly things change, when a strange delivery man shows up at her door with a choice. 9 mins.

Crime-Related Substance Use and Alcohol Expectancy for Sexual Behavior Among Jail Inmates
Andrea Griechen
Kayleen Islam-Zwart, Psychology

Purpose: Alcohol expectancies are the beliefs that a person holds about the positive or negative consequences as a result of alcohol ingestion (Abbey, 2001). It seems plausible that an individual’s use of certain substance types as well as future intentions regarding use would relate to alcohol expectancies, especially when that substance use is intertwined with legal consequence. It was hypothesized crime-related use of particular substances (i.e., no substance involvement, just alcohol involvement, just drug involvement, and both alcohol and other drug involvement) and intention to continue use after incarceration would correspond to alcohol-related sexual expectancies. Method: Participants were 144 inmates at a metropolitan county jail. Mean age was 29.82 (SD = 8.13). Participants completed a clinical and demographic interview and packet of questionnaires including the AESASVQ. Results and Conclusions: Four ANOVAs revealed a significant difference in sexual affect and sexual drive as a result of crime-related substance use, but not for sexual coercion or sexual aggression. In both cases individuals reporting a crime both alcohol and other related reported significantly higher sexual drive and affect than individuals in the other groups. Interestingly, follow-up ANOVAs examining intention to use substances after release from jail, did not reveal significant differences for alcohol-related sexual affect; whereas sexual drive approached significance. In this case, individuals planning to use only drugs after release reported higher expectancy for alcohol-related sexual drive than those individuals not planning, planning only to drink, and planning to both drink and use other drugs.
Media and the Criminal Justice System
Andrea Griechen, Kayla Grubaugh, Cindi Harding, Nate Wareham and Tina Myers Kayleen Islam-Zwart, Psychology

Television programming is inundated with many variations of factual and dramatized accounts of the criminal justice system. Many of these new programs focus on high profile criminal cases and individuals must choose on what they will base their opinions. So far, studies that have attempted to correlate media exposure with public perceptions of the criminal justice system have not been successful (Ackerman, Anderson, Jensen, Ludwig, Montero, Plante, et al., 2001; Charmak, McGarrell, & Gruenewald, 2006; Rosenbaum, Schuck, Costello, Hawkins, & Ring, 2005). The purpose of this study was to gather information about public opinion and knowledge concerning current events and issues within the criminal justice system to determine the impact of media exposure and real knowledge on individual perceptions of the criminal justice system. Multiple-choice questionnaires were administered to test for real court knowledge and assessment of their trust or mistrust of the criminal justice system. Participants were 330 undergraduate students at a regional university in the Pacific Northwest. Results and implications to be presented.

Nagorno-Karabakh and Its Effects on the Formation of Azeri-Israeli and Armenian-Iranian Relations
Enver Guseynov
Jerry Galm, Anthropology

This research examines how the Nagorno-Karabakh conflict between Armenia and the Republic of Azerbaijan directly facilitated the establishments of Azeri-Israeli and Iranian-Armenian axes. In addition to becoming the focal point of each state’s foreign policy, the conflict rapidly pulled in two of Middle East’s major powers, Iran and Israel. Concerns about Azerbaijan’s strong nationalist and pro-Turkish platform, which consisted of implicit calls for reunification with Iran’s Azeri populated Northern provinces, prompted Iran to back Armenia despite sharing cultural, ethnic and religious roots with the Republic of Azerbaijan. Landlocked between its chief regional adversaries Azerbaijan and Turkey, Armenia has heavily relied on bordering Iran for its resources. Iran’s political and ideological rival Israel, motivated by Azerbaijan’s pro-Western orientation and its status as an oil exporter, began to actively support Azerbaijan’s aspirations to preserve its territorial integrity. Azerbaijan’s desperate need for material and diplomatic backing throughout the conflict prompted the secular Muslim state to accept Israel’s support. These somewhat paradoxical Azeri-Israeli and Iranian-Armenian axes have restructured the state of affairs in the Caucasus region, illustrating that when pressing matters are at stake, geopolitical considerations are given priority over other factors.
Light-Emitting Blood Enhancement Reagents: A Comparison Study in the Detection of Burnt Bloodstains

Cassandra Hallmark

Peter Bilous, Chemistry and Biochemistry

Forensic scientists rely on various blood screening tests to detect and identify the presence of blood at crime scenes. While many crime scene blood samples can be readily detected, there are circumstances when latent bloodstains need to be chemically enhanced; such as, when the crime scene has been deliberately cleaned in an effort to remove and or destroy any blood evidenced. In situations such as these, sensitive light-emitting blood enhancement reagents- Luminol, Bluestar®, Fluorescein and Hemascein™ are used to locate trace quantities of blood. Furthermore, arson-homicide scenes where the perpetrator has deliberately set a fire for the purpose of covering up the crime or destroying evidence creates significant challenges in detecting and identifying blood. In these circumstances the usage and effectiveness of blood enhancement reagents is not well documented. In this study, Fluorescein and Hemascein™ were quantitatively compared using a Fluorometer for their sensitivity of detection and light emission characteristics when used to detect burnt and unburnt blood samples.

Service-Learning: Professional Education

Gregory Halvorsen

Molly Johnson, English

The service-learning project has been an integral part of my education here at Eastern Washington University. As technical-communication students, we have very unique goals we seek through our education. To gain professional experience, we both learn and apply related theory. Through classroom work and real client interaction, service-learning accomplishes both of these goals. Along with a team of 3 other members, I completed the project I will present during an Engl 305 Professional Writing course. The client we served was the Puget Sound Naval Shipyard (PSNS). Our PSNS representative was Ben Shepherd. To improve their technical documentation and thereby their work efficiency, which is integral to military success, our specific project goal was to rewrite the maintenance procedures for a hand-chain operated chain hoist. Throughout this project we: • Learned and applied professional standards • Met specific guidelines provided by PSNS • Conducted frequent progress updates for our client • Received critical feedback • Researched the machine • Created professional quality procedures • Gained invaluable professional and academic experience. Through these crucial features of the project, which I believe can only be accomplished simultaneously through service learning, I gained working knowledge in technical-communication theory and conventions, provided a quality service for an important client, and gained lasting professional experience.
The Experience of Individuals with Parkinson's Disease Participating in a Dance Class

Danielle Hansen, Lauren Thrasher, Christina Reed, Levi Estes and Alicia Ware  
Wendy Holmes, Occupational Therapy  
Gregory Wintz, Occupational Therapy

Parkinson’s disease affects over one million people in the United States. It is estimated that one in twenty people over the age of 80 have Parkinson’s disease. This disease decreases quality of life and one’s ability to participate in daily life activities. Current treatments are presently assisting with symptom management such as medications, surgeries, and movement therapies. One of the movement therapy options available is dance therapy. The purpose of this qualitative study was to understand the experience of individuals with Parkinson's disease who participated in a dance class designed for persons with movement challenges. Five, thirty minute individual interviews were conducted, transcribed and analyzed. Initial results indicated the dance class resulted in an increase in confidence, improved balance, and increased social participation. This exploratory study helps to establish a foundation for further research in the area of dance therapy and Parkinson’s disease.

Dog

Adam Harum  
Thomas Mullin, Theatre and Film

Dog is an adaptation of the short story “The Upturned Face” by Stephen Crane. When Charlie, a cynical alcoholic, teams up with his buddy Tim, a sleep deprived optimist, to kidnap and release a neighbor’s dog “into the wild”, things go from bad to horrible. 27 mins.

Fade

Adam Harum  
Thomas Mullin, Theatre and Film

After his wife slips into a coma, due to a nearly fatal drug overdose, Evan Reave is left alone and heartbroken. With no one left to turn to, Evan decides to find the man responsible for his wife's state -- no matter the cost. As Evan's investigation progresses into darker and darker places, it becomes apparent that his obsessive quest for revenge is beginning to literally tear him apart. 20 mins.

“Hung Up On My Landline”

Sarah Hauge  
Rachel Toor, Creative Writing

I will be reading a personal essay, "Hung Up On My Landline," about my love/hate relationship with my home phone.
The Relationship between Physical Function and Physical Activity and Exercise Self-Efficacy in the Year Following Coronary Artery Bypass Surgery
Katlynn Hedgecock, Ruth Graham and Jesse Gefroh
Kimberly Cleary, Physical Therapy
Tanya LaPier, Physical Therapy

The purpose of this study was to examine the relationship between patient functional status at the time of hospital discharge and physical activity level and exercise self-efficacy 3, 6, and 12 months following coronary artery bypass (CAB) surgery. This study included 28 patients hospitalized following CAB surgery who were at least 65 years of age and within two days of discharge. During hospitalization, we objectively measured symptom impact, cognition, balance, aerobic capacity, and strength. Physical activity and exercise self-efficacy measurements were obtained via telephone interview at 3, 6, and 12 months following surgery. Study results suggest that physical function at the time of hospital discharge is related to habitual physical activity level during the first year following surgery. Symptom burden appears to be inversely associated with exercise self-efficacy 3-6 months post-surgery. Additionally, patient cognitive function and age at the time of hospital discharge may influence habitual physical activity level after CAB surgery.

Reflections on a Year of Teaching in China
David Herman
LaVona Reeves, English

From 2006-2007, David lived and worked in Beijing, China, teaching English to Chinese adults at a private language school. Entering the country generally unaware of the workings of the language and culture of China, he encountered a great number of challenges while attempting to understand his new surroundings. Upon returning to the US, he began reflecting and researching the workings of Chinese education and culture. This presentation focuses on his findings and implications for teachers interested in working with students from China as discussed in his master’s thesis regarding cultural differences between the US and China. David will discuss the expectations and roles that are played in Chinese education based on first-hand experience and secondary research.

A Nation Is Not Defeated: An Activist's Response to a Cheyenne Tradition
Summer Hess
Deirdre Almeida, American Indian Studies

This author explores her personal reaction to the content of IDST 498: Contemporary Indigenous Women and Their Roles in Struggles for National Liberation. She uses her reflection on a traditional Cheyenne saying to consider the role of women from the dominant culture in advocating for the rights of indigenous women. She also contemplates how women from the dominant culture can support their efforts towards sovereignty and self-determination.
The Fulbright Application: Tips from 2010-2011 Scholar
Summer Hess
Stephen Schwalbe, International Student Program

The U.S. Fulbright Program provides funding for students to undertake graduate study and advanced research abroad, and it is one of the most competitive and prestigious scholarly opportunities for students from the United States. The Fulbright grant allows students to choose their research project and organize it according to their academic strengths and interests. Eastern student Summer Hess, a 2010-2011 Fulbright Scholar from the Creative Writing Department, will share her experience with the application process offer advice on how to organize, write, and edit an application.

In Vivo Characterization of Substrate Specificity Mutants of ITPase
Amanda Hill
Nicholas Burgis, Chemistry and Biochemistry

The human ITPase protein is essential for life and distinguishes between normal and abnormal purine nucleoside triphosphates. This is helpful in eliminating abnormal deoxynucleotide triphosphates (dNTPs) such as deoxy-HAP-triphosphate (dHAPTP) and deoxyinosine triphosphate (dITP) from the pool of DNA precursors. In addition to these, metabolites of the immunosuppressant drug azathioprine can form 6-thio-inosine-5’-triphosphate, and when given to patients with an ITPase deficiency can cause adverse drug reactions. These abnormal purines are mutagenic because they form hydrogen bonds ambiguously. When incorrect bases like these are incorporated into DNA during replication it can cause DNA damage and genomic instability. Experimental design focuses on complementation assays with substrate specificity mutants in *Escherichia coli* cells mutant for the ITPase homolog to see how they protect against abnormal purines. This research will provide a better understanding of the function of amino acid residues in substrate specificity and the data gained will aid in the design of next generation chemotherapeutics in an effort to alleviate side effects of azathioprine.

Ancient Greek Music Theory: A Comparison of Aristoxenian and Pythagorean Thought
Davis Hill
Jane Ellsworth, Music

Comparison of the ancient Greek Aristoxenian and Pythagorean schools of musical harmonics. The Pythagoreans believed that the same mathematical laws that govern music also govern the harmony of the soul, the social and political state, and the universe. By discovering certain fundamental musical intervals and harmonic relationships, they would be able to discover the ratios and inherent mathematical laws that govern the earth, the heavens, and the spheres. Aristoxenus, on the other hand, was interested in music only for its own sake. He dismissed the Pythagoreans’ obsession with numbers as external to the study of music. Aristoxenus intended not to discover the ordering of the universe, but to explain how melodic phenomena combine to create coherent music. Music, he argued, is not a means but an end- and any study of music must address it as such. This presentation will examine the essential differences in thought between these two schools of thought, with emphasis on the Aristoxenian school.
Warnings from Beyond the Grave: Agency for the Dead in Hardy’s Early Poetry
Max Hohner
Beth Torgerson, English

Thomas Hardy’s own background, as the son of a working class father, and an agnostic, showed him the strong emphasis that Victorian society placed on class and cultural distinctions. This recognition of “the other” inspired Hardy to often write from a point of view other than his own, and his poems often feature working class or female speakers. The voices of these speakers could be considered “unconscious,” or silent, in Victorian culture, because white, male writers like Hardy dominated publication. While Hardy could conjure sympathy for the underdogs of Victorian society by imitating their voices in a poem, as a white male he could not actually grant them “agency,” allowing them to speak. However, many of Hardy’s Victorian poems, such as “Her Immortality” or “A Christmas Ghost-Story,” featured deceased speakers. These deceased speakers functioned as a loophole for Hardy, allowing him to grant agency to a culture other than his own, since Hardy was clearly alive while writing poetry. Since the dead cannot physically speak for themselves, they defy cultural distinctions, and do not restrict writers of any creed or color from invoking their voice. When Victorian critics reacted harshly to Hardy’s late novels, he felt the silence of his own voice from culture, and became obsessed with attempting to grant agency to the other. This harsh reaction caused an estrangement between Hardy and his wife, Emma, that was never reconciled before her death. When Hardy allowed Emma’s ghost to speak in poems such as “The Haunter” or “The Phantom Horsewoman” he continued to utilize a trope of agency for the dead, to expurgate his guilt over their estrangement, and to place himself in a position similar to the husband of “Her Immortality.”

Homeric Values in Lost; Social Roles and Virtue
Maxine Holden
Christopher Kirby, Philosophy

The Homeric Values of athleticism, loyalty, justice, ingenuity, intuition, hospitality, respect, and teamwork create a moral code which is still respected in modern times. The character from the television series Lost, Dr. Jack Sheppard, resembles the hero from Homer’s Odyssey, the arrogant Odysseus. Not only do Jack and Odysseus acquire many of the same virtues, but the motivation of the characters to become more virtuous men stems from the need to execute their roles. Alasdair MacIntyre, a present-day philosopher, suggests that we develop virtue in accordance with the demands of our social roles; failing to develop virtues necessary to successfully fulfill our social role is interpreted as vice. Throughout the Odyssey and Lost, we observe how Jack and Odysseus overcome their vices to become more virtuous men. The ultimate purpose of this paper is to demonstrate how both Jack and Odysseus acquire the Homeric Values in accordance with MacIntyre’s theory, as well as how we might learn from Jack’s and Odysseus’ examples to no longer allow our pasts to define us; but, rather, be the people we desire to become.
WALL-E Re-imagined Through the Eyes of Feminist Theory
Jaime Hollis
Heather Robinson, Communication Studies

Feminist Perspective Stereotypes are commonly used to attribute certain characteristics to a particular sex. Quite often when one characteristic gets attributed to a male, the opposite of that attribute is used to describe female characteristics. For example if a male is aggressive a woman should be passive. If a woman is aggressive it is said she is “acting like a man.” We have seen these traditional gender roles in many Disney classics, such as, The Little Mermaid and Beauty and the Beast. The answers to all of Ariel’s dreams reside on winning the love of a man, and she must do it without the use of her voice. Belle, in Beauty and the Beast is virtually a victim of domestic violence, being held captive against her will until she falls in love with the Beast. Many of Disney’s themes revolve around the passing of a woman from father to husband and quite often the female lead has submissive qualities. The movie WALL-E was a refreshing break from Disney movies of the past. WALL-E is set 700 years in the future and perhaps mirrors a world we long for today. The two main characters, WALL-E and EVE, have shaken up traditional gender roles.

The Detection of Bloodstain Patterns on Simulated Burned Samples Using Light-Emitting Blood Enhancement Reagents
Maria Howard
Peter Bilous, Chemistry and Biochemistry

Blood evidence is typically found at homicide scenes but when criminals attempts to destroy crime scene evidence by setting fires, blood evidence may be difficult to detect in the resulting debris. This study attempted to detect burned bloodstain samples using four different light-emitting, blood detection reagents: luminol, Hemascein, water-based fluorescein, and ethanol-based fluorescein. As a source of visualization and documentation, photographs were taken of the results. Results of this study show that three out of the four techniques were overall effective in detecting burnt blood patterns, but Hemascein and water-based fluorescein stood out among the rest.

The Detection of Blood Patterns Under Multiple Layers of Paint Using Presumptive Tests and Alternate Lighting
Maria Howard
Peter Bilous, Chemistry and Biochemistry

Blood patterns were detected through layers of paint using five different techniques including ALS, IR, BlueStar® Forensic, luminol, and fluorescein. As a source of visualization and documentation photographs were taken of the results. Results of this experiment show that all five techniques were overall effective in detecting blood patterns.
Recognizing shapes and their orientation is easy for humans, however it proves to be difficult for computers and robots to accomplish. This project used digital image processing concepts to accomplish these tasks in a fast and reliable way. After prototyping several techniques and comparing their effectiveness, two key elements were developed: 1) a method for frequency-domain analysis of the shapes, and 2) selection of 2D marker shapes that have unique frequency signatures. These two concepts were used to detect the orientation of a two-dimensional marker from a live video feed and interpret its three-dimensional orientation. The interpreted values are applied to virtual three-dimensional objects in a graphical user interface. The positioning and size of each marker shape is used to compute the positioning of the marker in three planes with respect to the camera. A virtual three-dimensional object is displayed, and the view is altered triaxially according to the resolved position information. This process can be extrapolated to create markers with unique digital signatures encoded in the vertices of the shapes. The technique could be used on camera-equipped personal computers or mobile phone devices.

**Euboxus**
Inga Illich
Greg DuMonthier, Art

This sculpture features a reconstitution of cardboard boxes, and was created to explore effective recycling solutions from conflicting viewpoints. It also delves into the dynamic relationships between humanity and its creations, sentience and unawareness, and mass-production and future consequences.

**Broken Glass**
Written and Directed by Hyun Woo
Film Score by Davis Hill
Sarah Lee Monroe, Theatre and Film
Jonathan Middleton, Music
Don Goodwin, Music

_Broken Glass_ depicts a man with anger issues due to emotional stress pent up from childhood memories of a family plagued by domestic violence. The score helps to portray the feelings that the young man is going through and how he copes, or fails to cope, with his past. The score uses mainly damped piano and other sounds that can be created within the piano (without using the keys). This approach gives low, soft, menacing sounds with timbres subdued in absence of pitch color. The music focuses on rhythmic ideas, especially jagged rhythmic figures, instead of melody. I feel that this better fits the dark and jarring nature of the film.

**Doublethink**
Katie Irvin
Mindy Breen, Engineering and Design

_Doublethink_ is a website dedicated to creating avenues for college students to advocate current social, political, religious, and environmental issues that they care about. It creates not only a place where students can go to learn about current events surrounding said issues, but it allows them to collect, create, and distribute collateral material in order to spread the word about what's happening in the world to their respective communities.
A Collegiate Football Athlete with DVT
Hilary Ishii, Melissa Spacek, Taylor Ferguson and Katelyn Hill
Garth Babcock, Physical Education, Health and Recreation

Our objectives for the audience are to know the causes of Patellar tendonitis and the athlete’s progression up until surgery. How an athlete can get Deep Vein Thrombosis (DVT), to recognize the signs and symptoms of DVT, and to be familiar with the risks associated with DVT. Deep Vein Thrombosis is caused when the blood flow becomes slow and is a risk after surgery if a patient does not have sufficient movement of the body. Most DVT occur in the thigh or lower leg. Deep Vein Thrombosis in itself is not dangerous. The danger is that a piece of the thrombosis (embolism) will break off and travel back through the heart and also into a lung. Not everyone has the signs and symptoms of DVT, but if the signs and symptoms are present they occur in the leg with the DVT. Some of the signs and symptoms of DVT include redness or discoloration of the skin, pain or tenderness in the leg (especially with standing or walking), swelling of the affected leg, and increased warmth in the affected leg. Deep Vein Thrombosis may be present if signs and symptoms of an embolism in the lung (pulmonary embolism PE) is present. Signs and symptoms of a PE include unexplained shortness of breath, pain with deep breathing, and coughing up blood.

Plant Nutrients Available Through the Weathering of Basalt and Granite
Justin Jarvi
Carmen Nezat, Geology

Rock samples of vesicular basalt collected from the Saddle Mountain Formation and granite collected from the Latah Formation near Spokane, Washington were analyzed for elements which are important plant nutrients. To mimic rock weathering, samples were crushed and leached in varying nitric acid concentrations (0.1 M and 1 M HNO3) for seven days. The leachates were then analyzed on an inductively coupled plasma optical emissions spectrometer (ICP-OES) for aluminum, calcium, iron, potassium, magnesium, sodium, phosphorus, silicon, and strontium. Relative to granite, basalt released significantly higher concentrations of all elements except for silicon. According to the results of this study, weathering of basalt contributes much higher concentrations of nutrients necessary for plants, even at different weathering rates.

Effect of Age on the Bioaccumulation of Lead in Swiss-Webster Mice
Justin Jarvi, Devin Sontag, Brenden Hayden and Russell Grigsby
Karen Carlberg, Biology

Studies have shown that ingestion of various lead compounds can have a significant impact on growth, neurological abilities, and reproduction of mammals. This study evaluated the effect of age on the accumulation of lead in the blood and bone of Swiss-Webster mice when it was ingested in drinking water. Four groups were used in the study: 10 recently weaned; 10 adolescent; 10 adult; with 3 of each cohort as experimental controls. Each age class was administered a dose of 250 mg/L lead acetate trihydrate (136 ppm lead in solution) in water. Blood was drawn at the end of the 3 week study, diluted in nitric acid, and run in triplicate through a flame atomic absorption spectrometer (FAAS) to obtain lead levels. After euthanasia, femurs were extracted,ashed, dissolved, and run through the FAAS to determine bone lead levels. Statistical analysis revealed significantly more lead sequestered in younger aged groups for both blood and bone.
The Early Beginnings of Black and Chicana Feminisms: Gender Relations and Cultural Influence in the Civil Rights and Chicano Movements
Diana Johnson
Ann Le Bar, History

This study explores the origins of black and Chicana feminisms during the Second Wave by analyzing gender discrimination in the Civil Rights and Chicano Movements. I investigate how black and Chicana female activists reacted to sexism in their respective movements, focusing on why some activists broke away to begin feminist organizing while others refrained. I emphasize the unique cultural histories of both races and how the historical experiences of blacks and Chicanos contributed to sexism in both movements. Sexism created a negative atmosphere for female activists who were denied respect and responsibility while being warned that feminist organizing would threaten the success and reputation of the Civil Rights and Chicano Movements. However, as male activists tried to discourage feminist organizing, they simultaneously illustrated its necessity. When analyzing the documents and purpose statements of some of the first black and Chicana feminist organizations as well as the writings and statements of the leaders in these organizations, I have concluded that while sexism caused some women to retreat from feminism, leaders in the first black and Chicana feminist organizations used their experiences with sexism in the Civil Rights and Chicano Movements as direct motivation.

The Whitman Mission and Shamanism on the Columbia Plateau
Eric Johnson
John Dorwin, Anthropology

The Whitman Massacre of 1847 is a prominent event in the U.S. settlement of the Pacific Northwest which influenced subsequent intercultural interactions in the region. The predominant narrative of the event has been that the Whitmans were innocent martyrs. By reexamining this event in light of Cayuse culture it is evident that an alternative explanation is plausible and should receive attention in that narrative. The Whitmans established their mission in order to convert the Cayuse to Christianity, but when this purpose was abandoned the Cayuse interpreted the Whitmans to be more interested in facilitating white settlement of the region than religious conversion. Furthermore, the Whitmans were cruel and disdainful of the local people, using uncompensated labor to build their farm. Marcus Whitman also practiced medicine. It was a Cayuse custom for the bereaved to kill unsuccessful Shamans because failure was interpreted as evil intent. When unable to ameliorate a measles epidemic, the Cayuse interpreted Whitman as a failed Shaman and killed him in accordance with their cultural tradition.

Creative Nonfiction
Erik Johnson
Rachel Toor, Creative Writing

A creative nonfiction essay on life in the Northwest.
Rachel Carson and the Lorax: Partners in Advocacy
Jessica Johnson
Paul Lindholdt, English

Rachel Carson’s book *Silent Spring* is known far and wide as one of the most influential works of Environmental Literature in American history, thanks to the fact that Carson awakened the general American populace to the dangers of chemical pesticides. However, her influence is more far reaching than many people realize. Unbeknownst to most, in the popular children’s book *The Lorax*, Dr. Seuss tells virtually the same story of environmental destruction at the hands of humans that Carson relates in *Silent Spring*. More than simply a work of children’s fiction intended to entertain with its colorful illustrations and imaginative words, *The Lorax* mirrors the real-life environmental horror story told in *Silent Spring*. In fact, not only does the tragic story of the Lorax parallel the inherent conflict of man’s dangerous attempt at domination over nature in *Silent Spring*, but arguably, Dr. Seuss crafted the very character of the Lorax to represent Rachel Carson herself, bringing her messages of environmental awareness to an even wider audience than she had reached. Thus, through their surprising similarities, the figures of Rachel Carson and the Lorax become partners in environmental advocacy, making *Silent Spring* and *The Lorax* unexpectedly effective companion pieces to each other.

Violence, Fight!
Isaac Joslin
Thomas Mullin, Theatre and Film

The story of one man’s surreal quest to save the world from itself. 13 mins.

Debt Literacy Among Social Work Students
Sally Kakoti
Vernon Loke, Social Work

In the U.S. today, more than 56% of individuals are in debt ("The Survey of Consumer Payment Choice," Federal Reserve Bank of Boston, January 2010). A recent study found that only one-third of Americans are debt literate. Debt literacy is the ability to correctly access debt contracts and compounding interest when making financial decisions about loans, credit cards, interest rates and fees (Lusardi & Tufano, 2009). The most financially vulnerable are those who live in poverty. Thus, it is imperative for social workers, who predominately serve low-income populations, to have a competent level of debt literacy. In this study, second year masters in social work students at Eastern Washington University were surveyed on their level of debt literacy. Results indicate that students had a better understanding of calculating compound interest compared to the general public. However, with respect to understanding the current and future value of money, students fared worse. Implications of debt literacy to the development of the social work curriculum are discussed.
Puff Puff Pass: The Relationship Between Marijuana Use and Expressive Characteristics  
Stuart Kelly, Joshua Diemert and Eric Trench  
Kayleen Islam-Zwart, Psychology

Previous studies have overlooked the relationship between marijuana use and creativity, artistry, and imagination. Little research has been done to prove or disprove an association between the “urban myth” of marijuana use contributing to creativity. Bourassa and Vaugeois (2001) concluded that marijuana use had no positive effects on creativity in beginning users and actually reduced creativity in regular users. We conducted this study to elaborate on previous research by utilizing archival data collected as part of the national Comorbidity Survey (Kessler, 2000). 5,792 participants were included, with a mean age of 27.33 (SD = 6.98). A Multivariate Analysis of Variance (MANOVA) revealed a significant difference in report of imaginative and artistic traits as a function of marijuana use. However, there was no relationship between marijuana use and creativity. Further research is necessary as results suggest marijuana use may contribute to artistic and imaginative feelings, but it may also be that such individuals are more likely to use marijuana.

Illustration In Design  
Brian Kendall  
Mindy Breen, Engineering and Design

These two posters highlight the value of freehand illustration and its transition to electronic design work.

Short Film  
Written and Directed by Lewis Kendall  
Film Score by David Kobaly  
Sarah Lee Monroe, Theatre and Film  
Jonathan Middleton, Music

The film takes place over the course of two days in the lives of three connected characters. There is no overarching plot that requires thematic material or directional music. The film successfully covers the topics of friendship, love, and betrayal in a very short amount of time. Since the film is not plot driven, the music is significantly incidental, either keeping out of the way or mirroring the immediate mood or actions. The music will not lead or foreshadow.

Marietta  
Michael Kenney  
Mindy Breen, Engineering and Design  
Greg DuMonthier, Art

My work is aimed at challenging centuries old Christian ideologies. What if the second coming of Christ happened today, not shrouded in medieval mysticism, but modern, cold and bureaucratic? Would your views of this exalted event change if those who are cleansed from the earth turned out to be your mother, your sister, your brother; taken away in the middle of the night, never to be seen again? The information is presented in a graphic format, void of any text and dialogue; an homage to the wordless novels of the 1920s and 1930s.
**Bike to Work Week Poster Series**  
Heather Kerns  
*Mindy Breen, Engineering and Design*

This is a poster series for Bike to Work Week of Spokane explaining that people should ride their bikes to work instead of taking a motor vehicle. There are three posters that work as a series explaining what riding a bike to work for the week could do for the person instead of driving. The concepts are enjoying the outdoors, inspiring others to ride their bikes and riding a bike will energize the person for their day of work.

**My Lover’s Back... It’s Not What I Expected**  
Written and Directed by Woo Kim  
Film Score by Dexter Moetului  
*Sarah Lee Monroe, Theatre and Film  
Jonathan Middleton, Music*

Sean Riely and Kaylee Ashmore, two former high school friends who have been separated for a long time, reunite when Sean returns home to tell her he’s getting married.  
The musical setting for the score began with a basic chord progression that was expanded through variations of rhythm, pitch, and chord qualities.

**Assessment of Cow Creek Following Riparian Restoration**  
Danielle Klinzing  
*Camille McNeely, Biology*

Cow Creek (Adams County, WA) has been degraded by livestock grazing, but is currently the subject of a riparian restoration project by the Washington Department of Ecology. I am assessing the water quality of Cow Creek using benthic macroinvertebrates and nitrogen uptake rates. Characterization of benthic macroinvertebrate communities is a well-established method for monitoring stream water quality, but provides little information on ecosystem function. In contrast, measurements of nutrient uptake provide information on how efficiently the stream uses and recycles nutrients. The study includes a control site, which has not been grazed for over 10 years, 2 impacted sites, and 2 reference sites on Crab Creek. Uptake of N was measured in late summer using a whole-stream addition of ammonium. Uptake lengths were calculated from the decline in ammonium concentrations with distance downstream. Uptake lengths ranged from 55.7 m for Crow Creek below Cow Lake to 2777.8 m for Crab Creek- Hobb Ranch site. Uptake lengths were shorter in streams with lower discharge, and lower N/P ratios. There was no clear relationship between uptake length and our prior expectations of ecosystem health. Uptake velocity, which is thought to provide a more reliable index of nutrient demand relative to supply, was highest at the Cow Creek site near Benge.
Unanswered Phones
Written and Directed by Kate Knox
Film Score by Alex Wolfe
Sarah Lee Monroe, Theatre and Film
Jonathan Middleton, Music

Unanswered Phones is the story of the end of a marriage. Miranda, a perfectionist housewife, discovers evidence which leads her to believe her husband has been cheating on her. The film score incorporates musical references to diegetic sounds such as telephone rings, ring-tones, dial tones, vacuums, and background noise. The score also uses repetition of themes to indicate moods or people, as well as reliance on elements of improvisation and chance.

“Living”
Kennan Knudson
Rachel Toor, Creative Writing

I will be reading an essay about my relationship with the diva of domesticity, Martha Stewart.

Duo for Cello and Bassoon
David Kobaly
Jonathan Middleton, Music

The basis for this piece was a twelve-tone row that I used to create a matrix, from which I drew many different variations of the original row, including inversions, retrogrades, and retrograde-inversions. The piece is held together by frequent repetitions of the main melody (the original row) and harmonies and interplay between the cello and bassoon result from the stacking, overlapping, and succession of different row variations. It was my intention to create a piece free from traditional harmonic rules and context, but also to make as much use of consonance as I did dissonance. I hoped to treat atonality as I would a tonal piece, and thus achieve a higher sense of genuine expression and direction than is largely expected of atonal music.

A Male Track and Field Athlete with a Sacroiliac Joint Dysfunction
Caitlin Kokot, Tara McLaughlin and Yoshi Tsumekawa
Jeffrey Kawaguchi, Physical Education, Health and Recreation

A sacroiliac joint dysfunction is an injury that occurs where the sacrum and the ilium connect. The dysfunction can be a result of an acute injury resulting in a sprain of the ligaments connecting the joint, hypomobility, or hypermobility of the joint. This is a common injury in the athletic population but is often misdiagnosed. This case study focuses on a 21 year old male track and field athlete with a sacroiliac joint dysfunction due to hypomobility and a functional leg length discrepancy. Muscle Energy Techniques (MET) were used to treat the leg length discrepancy while conservative rehabilitation, symptomatic treatment, and chiropractics were used to help manage this condition.
Burst Swimming Performance of Reintroduced Juvenile Coho Salmon in the Columbia Basin
Megan Korst and Gerald Claghorn
Thomas Hancock, Biology

Coho salmon (*Oncorhynchus kisutch*) were extirpated from the middle and upper Columbia River in the 1900’s and the Yakama Nation is currently reintroducing a basal stock of coho from the lower Columbia into the mid-Columbia. Consequently, these reintroduced stocks have to traverse dramatically longer migration distances. Natural stocks of coho that vary in their migration distance possess differing swimming abilities and our research questions whether selection for traits favoring long distance migration and endurance may be occurring here. Prior research has shown a decrease in sustained maximum swimming speed in the reintroduced stock, thought to be a trade-off for endurance swimming. This study is utilizing a high speed camera to measure burst swimming ability in both groups. Burst swimming is rapid (< 1 sec) and utilizes white muscle and anaerobic metabolism. Our results show a lower burst speed in reintroduced fish, but results were not significant indicating little if any selection for sprinting ability. Other traits may be responsible for the increasing success of these reintroduced stocks.

ITB Syndrome Case Study
Travis Laird, Brittney Doran and Syaka Yasui
Garth Babcock, Physical Education, Health and Recreation
Jeffrey Kawaguchi, Physical Education, Health and Recreation

Iliotibial (IT) band syndrome is a common injury that affects athletes in all types of sports and at all levels of competition. There are many predisposing factors related to the development of IT band syndrome, including muscular tightness and repetitive high velocity hip and knee flexion and extension. When the IT band becomes tight it can snap over the lateral epicondyle of the femur causing pain and discomfort. The syndrome usually has a gradual onset and can last weeks or months if not properly treated. In this case study we investigate a male cross country athlete from Eastern Washington University who suffered from IT band syndrome, from his first complaint of pain to his return to activity. Issues addressed include compliance of athletes to their rehabilitation programs and ways an athletic trainer can encourage adherence.

Creative Prose
Jessica Lambert
Rachel Toor, Creative Writing

I will be reading a piece of creative fiction.

The Changing Faces of GLBT Commitment
Rebekah Largent
Heather Robinson, Communication Studies

This presentation focuses on the evolution of images of LGBT couples in print media since 1996. It centers around the sexuality and images of normalized commitment in these images, the types of companies using LGBT images, and who the audience for these images is.
Sigma Virus RNA is Present in *Drosophila melanogaster* Adults Lacking the Characteristic Sigma-Induced CO2 Sensitivity
Chelsey LaRue and Allison Millward
*Luis Matos, Biology*

The sigma virus (Rhabdoviridae) is carried by a small percentage of wild fruit flies (*Drosophila melanogaster*, Diptera: Drosophilidae). The sigma virus- *D. melanogaster* system is a newly established model for the evolution of host-shifts and the evolution of virulence. The virus produces carbon dioxide sensitivity in the infected flies. As a result, exposing infected flies to pure carbon dioxide for five minutes kills them. Thus, carbon dioxide sensitivity is commonly used as an indicator of sigma virus infection. In our lab, some of the supposedly infected flies do not die when exposed to CO2 for up to 15 minutes. In this study we used the polymerase chain reaction and DNA sequencing to determine that these flies do possess sigma virus RNA. The presence of this virus in flies that are not CO2 sensitive indicates that the current estimates of sigma virus infection rates in wild and in lab *D. melanogaster* populations likely are incorrect (underestimated) and should be re-examined. In future studies we will quantify the amount of viral genome copies in each infected fly to test the hypothesis that sigma virus load must reach an as of yet undetermined threshold before CO2 sensitivity is observed.

The Mycenaean Warrior Aristocracy of the Late Bronze Age
Lucas LeCaire
*Georgia Bazemore, History*

The Late Bronze Age Mycenaean culture of Greece, was one of the most warlike societies of the second millennium B.C. Although the Mycenaeans left little writing to document their history, we can study their culture through its archaeological remains. Thus, here, the art and artifacts of Mycenaean society will be examined for the evidence they provide for this warrior aristocracy. The depictions of warlike activities and hunting in Mycenaean frescoes and pottery show the Mycenaean aristocratic class was proud of their warlike culture. Prestige items are associated with weapons to illustrate the wealth of this warrior class. This archaeological evidence allows a glimpse into the lifestyle of one of the earliest and most violent Greek societies.

“Encrypted Existence”: Studies in Confessional Poetry
Karhonkwison Logan
*Paul Lindholdt, English*

I use Confessionalism because I prefer to write through the lens of my own perception. Confessional poetry should, in my opinion, transform the details of everyday life into emotive imagery. In my collection, each poem stands as a journal entry to my experience while still striving for accessibility and universality. By using the imagery of local nature, I try to place my experiences in the common ground we share here in Eastern Washington. By establishing a real location for the reader through imagery, I hope to translate feelings that are not uniquely my own. Specifically in the poem, “Our Father” I’ve transplanted myself into the experience of my father in order to retell his boyhood in Sacramento, CA. By using the style of Confessionalism, I’ve come to see him more clearly by writing about the most tragic experience of his life.
**Thought Bubble**
Joseph Loring  
*Greg DuMothier, Art*

Inflatable space for people to enter. Inspired by advanced sculpture students, instructor and my passionate love for pillows.

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**An 18 Year-Old Female Collegiate Soccer Athlete with Coalition of the Subtalar Joint**
Irene Lowe, Chris Williams, Josh Arness and Tiffany Cummings  
*Garth Babcock, Physical Education, Health and Recreation*

Within this presentation, we explore the occurrence of osteoarthritis in an 18 year old collegiate soccer player’s ankle that lead to coalition of the subtalar joint. Our discussion will include the anatomy pertinent to the ankle, the differential diagnosis that led up to the discovery of the coalition, and the methods used by the athletic training staff and medical doctors in order to control the pathology and return the athlete to full sport participation. We further take a look at the use of cortisone injections and osteoarthritis in the athletic population.

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**Multilingual Writers’ Representation of Sacrifice in Response to Miss Saigon**
Huei-Ting (Maggie) Lu  
*LaVona Reeves, English*

This presentation focuses on the final data analysis of Lu’s master’s thesis for which she collected 22 journals written in response to “I’d Give My Life for You,” a song from the Broadway play, *Miss Saigon*. As in *Madame Butterfly*, the main character commits suicide at the end of the play, stating that her infant son will have a better life as a bi-racial child raised in the United States with his American father and his father’s new wife. The journals are analyzed by applying Florczak’s (2004) three categories of sacrifice: religious, sociological, and psychological. A brief cross-cultural history of the concept of sacrifice is provided. Lu discusses how reader response criticism helps others understand perspectives of sacrifice across cultures within a college composition class.
Prime-Time Television as Indicator of Attitude Change: Measuring the Impact of the 2008 Presidential Campaign
Casey Lytle, Mark Ward and Jill Mattson
Gail Hicks, Psychology
Amani El-Alayli, Psychology

Television has long attempted to be a reflection of American culture and to anticipate trends in viewer preferences in order to attract the largest possible audience (Ang, 1990). As a ratings-driven private enterprise it is in the best interest of television programmers to give the consumers what they want, rather than force-feed them an undesirable product. Network programmers watch for cultural trends in order to predict viewer preference and integrate it into their programming. The current study examined the most recent two network television seasons, and to a lesser extent two earlier seasons, to measure changes in the representation of minority characters, with the prediction that the 2008 Presidential primaries and campaigns represented a cultural trend that would result in a positive change in how minorities are portrayed on prime-time television.

The Movement from Skepticism to Kant and the Philosophy Behind George A. Kelly's Personal Construct Psychology
Madeline Mahugh
Kevin Decker, Philosophy

Philosophy has birthed many disciplines since the ancient Greeks first pondered monism and Thales concluded that humans came from and were made up of the ocean (he wasn't that far off, the average human body is more than half comprised of water). Since then bizarre philosophical concepts have led to breakthroughs in other fields. Hippocrates's supposing that illness was the result of an imbalance of black bile in the stomach led to a revolution in thinking about health as the result of dietary and environmental issues rather than curses from the gods. Monism led to Leibniz's theory of monadology, which strikes an uncanny semblance to atomic theory. In the modern era we begin to see the precursors to psychology as the philosophers of this time begin to contemplate their own minds and how they process information. As a result epistemology and later psychological inquiry were born, but as the two disciplines have been refined, they have seen a significant disjunct. The epistemological question has been philosophically oriented, disregarding the emotive reality of a person for the cognitive reality of the human mind. Psychology, on the other hand, has been oriented around explaining the potentially unanswerable question of what motivates humans to act as they do. The two overlap only in their theories about cognitive understanding and provable scientific facts. George A. Kelly was a revolutionary psychologist in that he fully acknowledged the tenets of skepticism and built his psychological theories from that philosophical framework. In this essay, I will explore the skeptical position of Descartes and compare it to Kelly's tenets of Constructive Alternativism, while showing that the same flaws in skeptical thinking that Kant solves with his empiricism are addressed by Kelly in his theory and other psychologists after him. This will show that Kelly's construct theory is an important step in reconciling epistemology and psychology and understanding our own minds regardless of how our senses may be misleading us.
Wealth and Happiness
Written and Directed by Mike Malsam
Film Score by Natalya Lainhart
Sarah Lee Monroe, Theatre and Film
Jonathan Middleton, Music

Wealth and Happiness is the story of a young woman named Grace who lives in an apartment with her parents. Her clothes are not expensive and her jewelry is fake but she wears it because she desperately wants to have the image of a rich teen. Grace spends an evening in luxury to find out that money is not as important as family. The music is based on fantasy theme that is magical and unrealistic. The fantasy theme evolves in order to help the audience follow Grace’s feelings.

The Immigrants’ Issue of Social Identity and Heritage Language Transfer to Their Children
Paula Márquez-Lavine
LaVona Reeves, English
Tracey McHenry, English

Moving to a new country presents many challenges to families; one of them being the preservation of their language and cultural values. ESL teachers across the United States are often asked by migrant parents what they should do. Should they switch to English as the household language? Should they assimilate to their new American culture and society, leaving behind their cultural heritage? ESL teachers play an important role in helping parents find their new social identity in the US while fostering their children’s interest in their heritage language and culture. As an aspiring ESL teacher, recent immigrant and mother, I will share some insights on the various facets of this very current issue.

La Superficialidad de los Medios de Comunicación
Nereyda Martínez
Natalia Ruiz-Rubio, Modern Languages and Literatures

Los medios de comunicación tienen una gran influencia sobre las vidas de los personajes en Boquitas Pintadas de Manuel Puig. Las telenovelas, las películas, las revistas y las canciones exponen mensajes de fantasías que las mujeres en la novela perciben como la realidad. Los tres personajes principales, Nené, Mabel y Raba, creen en el modelo de amor de los medios de comunicación cuando son jóvenes. Sin embargo, cuando son adultas, descubren que la vida real no es igual a esta realidad superficial y deciden rebelarse contra este modelo de las películas. Los medios de comunicación manipulan a la gente a creer en un mundo perfecto e irreal. En Boquitas Pintadas, los medios de comunicación predominan los deseos y las acciones de las mujeres para alcanzar la posesión de lo material. Al final, la novela demuestra que la vida real no es igual que las películas y que lo material no resulta en la satisfacción de la vida.
“Meditations in Poetry”  
Sabrina Mauritz  
*Christopher Howell, Creative Writing*

Creative writing student, Sabrina Mauritz, will read poems from her master's thesis exploring a meditative voice.

“I Always Knew”  
Terra Maus  
*Rachel Toor, Creative Writing*

I will be reading a short story about a girl who grew up living outside of reality. Erika is looking back on her school years and how they have been affected by her inability to accept the real world. Her imagination fills her world with beauty, but it gets in the way of her real life responsibilities.

*Original Compositions for Voice and Acoustic Guitar*

Levi Mazurek  
*Robert Tapper, Music*

Kristina Ploeger, Music

Levi Mazurek will be presenting *Original Compositions for Voice and Acoustic Guitar*. The compositions are inspired by American folk and 90's alternative rock music.

The Gaze for Art’s Sake: Female Power and the “Icarian Fall” in Levy and Tennyson  
Kayla McAllister  
*Beth Torgerson, English*

In *The Romance of a Shop* (1888) Amy Levy portrays women who open their own business and defy many of the social constructs that dictated the lives of Victorian women. Because of the nature of their work, the Lorimers are forced outside of the female sphere and into public life where they are able to use their gaze to make a living. Levy thus creates a dynamic story of female power gained and given. Fifty-six years later Alfred, Lord Tennyson also uses the female gaze in *The Lady of Shalott* (1832). In both stories, the women may use their gaze for art while at a distance from the objects of their gaze. For Tennyson, this means a woman’s gaze is strictly for art with the object at a distance while the male gaze is more powerful. Levy’s view shows a woman’s gaze is preferably used for art with some distance between subject and object; a woman may have a powerful gaze, but marriage is still preferable to this power. Levy's *The Romance of a Shop* offers some agency to women and their gaze, but it ultimately still gives the majority of the power to men.
Novel Drugs for the Treatment of Alzheimer’s Disease: Secondary and Tertiary 1-(3-pyridyl) Cyclic Amidines

Steven McDaniel

Travis Denton, Chemistry and Biochemistry

Alzheimer’s disease (AD) affects over 35 million people worldwide. Nicotinic acetylcholine receptors (nAChRs) are down regulated in the brain of AD patients, although one nAChR, the α7 nAChR, is down regulated to a much lesser extent than the other nAChRs. The α7 nAChR regulates calcium permeability and thus, synaptic transmission in nerve cells. Since nicotine has been proven to stimulate the 1±7 nAChR, analogs of nicotine that are far more potent agonists of the α7 nAChR are the targets of this project. To synthesize these analogs, 3-cyanopyridine is reacted with various diamines in an ultrasonic bath in the presence of elemental sulfur as an oxidant. The products of these reactions are further functionalized by alkylation of the amidine nitrogen. These compounds will be tested for binding to the acetylcholine binding protein, a soluble surrogate of the α7 nAChR. The current results of these experiments will be discussed.

Surrealist Inspired Poetry

Jennifer McIntyre

Rachel Toor, Creative Writing

I want to read three poems that came out of the process of studying and practicing surrealist methods of writing.

Personality Theory: A Self Discovery

Tristan McKay

Kayleen Islam-Zwart, Psychology

Personality Theory: A Self Discovery Tristan McKay, Undergraduate Kayleen Islam-Zwart, Psychology A Psychologist in any field has some view on personality, but each person reaches their position in different ways. Some develop their understanding through self exploration, and others take after their predecessor’s. This oral presentation examines one particular avenue into the understanding of personality through self discovery and research on past theories, and also addresses some of the questions and answers found along the way. Do humans solve problems only when presented with them, or do we have a drive to find problems to solve? Is the unconscious a cohesive entity, or is it a series of independent thoughts?

“Genre Bending”

Kathryn McKenna

Jonathan Johnson, Creative Writing

Currently it is common practice amongst creative writers to define themselves within a genre of writing (although often you’ll find that even though a writer defines herself as a fiction writer she does dabble in poetry and/or non-fiction). In fact, upon hearing that you’re unafraid to claim the title of writer, most people ask, even before they ask if you’ve been published, what do you write? Well, hmmm, good question. This creative work, hopefully, will blur the distinction between the genres. Currently in literary practice we are seeing new forms of writing that are not easily defined. There is the prose poem and the lyric essay. And, there is some discomfort regarding these hybrid forms. Lia Purpura describes her coming out as a Lyric Essayist in the following words: “Mom, Dad, sit down. I have to tell you something (held breaths all around, here it is, they saw it coming): I love sentences. I think I’ve always loved sentences. I just didn’t know it until recently. I mean, I love both lines and sentences. They each give something the other can’t- and I want to live with them both.”
The Significance of Surrealism as a Literary Movement
Kathryn McKenna and Anna Schmidt
Christopher Howell, Creative Writing

Surrealism refers to a heightened state of reality. This panel will present on the influence of Surrealism on particular poets of various nationalities, such as Lorca, since the movement’s inception. This panel will also explore the importance of auditory registering (sound) as a basis for the brain’s receptivity. As literary surrealism often involves a juxtaposing of image against image and non-linear movement, the importance of recognizable patterns (such as sound) are necessary for conscious and/or unconscious resonance. Although Surrealism is primarily a literary movement, to view it as a distinct aesthetic, with artistic and philosophical values, allows a reader to fully appreciate the value of this form. As such the reader must engage actively while remaining receptive to this heightened state of reality. A reality that is capable of offering a complete, or holistic, vision of the self.

"Jacob"
Dylan Medina
Rachel Toor, Creative Writing

“Jacob” is a short story that deals with inter-family relationships focusing on a young man, Jacob, who has run away from home. The story is a character study of Jacob and his interactions with his father, his sister, and the people around him. “Jacob” addresses both the obligations and emotions within a blood-related family and a family of choice.

On His Own Terms: Abbey’s Movement from Technophobia to Community
Dylan Medina
Paul Lindholdt, English

The academic community frequently neglects to include the works of Edward Abbey in the curriculum, even in the realm of environmental science. They dismiss Abbey as a misogynist, a racist, an anarchist, and a misanthrope. While Abbey does reflect a number of these sentiments, and incorporates in his writing a feeling of righteous indignation, Abbey primarily directs his indignation toward the technocracy and social progress that threatens the natural world. Abbey finds peace by escaping from the oppressions in society into a direct interaction with the unadulterated natural world. He then suggests that this kind of appreciation of the natural world will lead to human advancement and the formation of a better community based on individual liberty and a respect for the intrinsic values of other people and the environment.
Design of CNC Mill with “Mill by Wire” Capabilities for Rapid Prototyping
Branden MeltingTallow, Jeremy Ziegler and Matt Garrett
William Loendorf, Engineering and Design
Jason Durfee, Engineering and Design

Computer numerical controlled, or CNC, has become a integral part of today's manufacturing world. One of the disadvantages of this technology is the lack of accessibility found in manual milling machines. A design that incorporates the productivity of CNC with the freedom of manual milling eliminates the need for two separate machines and promotes functionality. An interdisciplinary engineering design approach has been taken to incorporate electrical and mechanical engineering. This hybrid design incorporates a variable frequency drive, precise stepper motor control, human machine interface design, and PC inter-connectivity for CNC operation using g-code.

A Vegetation Survey of a Disturbed Riparian Zone in Deep Creek, Washington
Meleah MeltingTallow
Rebecca Brown, Biology

Riparian zones, despite their ecological importance, are being degraded in many areas. The health of plant communities in these areas may be adversely affected by such disruptions. I conducted a vegetation survey in a disturbed riparian zone along a tributary of Deep Creek in Spokane County, Washington. Specifically, my study objectives were to determine the diversity of the plant community as well as the abundance of native and non-native plants as indicators of ecosystem health. I conducted my study by utilizing a three meter by three meter quadrat survey method and by calculating standard diversity indices. I anticipated that because the area is so disturbed as a result of agricultural and other applications, this site would host a higher number of non-native than native plant species and that plant diversity would be low. In terms of species richness, non-native species were no more abundant than were natives (p = 0.71), and native plant species represented a higher percent cover than did non-natives (p = 0.01). Overall plant diversity was low (mean Shannon diversity value = 1.29), indicating that the health of the riparian zone may be impaired and restoration efforts should be considered.

“Imbecile”
Paul Merchant
Rachel Toor, Creative Writing

I would like to read a short work of fiction (less than 1500 words) entitled "Imbecile." Extract: "The Olds was fifteen years old. The only thing that ever went wrong with it was the electrical glitch that made the interior and exterior lights turn off all of a sudden. They always came right back on, but try having that happen on a winding reservation road in the middle of the night to make you catch your breath and say a prayer to be alive. It only happened to Danla the one time. She never would drive it again. Ry couldn't have left her the car if he wanted. Which he didn't."
Ladybug Under the Leaf: The African American Women in the Civil Rights Movement
Chris Lorenz Miclat
Terrance MacMullan, Philosophy

With his courage, diligence, beliefs and devotion to his community, Reverend Dr. Martin Luther King, Jr. has become the symbol for African American's struggle for freedom and he is one of the most famous figures associated with the civil rights movement. In addition, Malcolm X, Andrew Young, and Jesse Jackson are also well-known leaders, who have been recognized for important contributions to the movement. However, the significant contributions made by black women within this movement, women such as Septima Clark, Ella Baker, and Fannie Lou Hamer, are still not familiar to many. Although these women were integral to this movement and this nation's progress towards justice, their experiences and influences have not been observed by some scholars. This work will strive to recall, praise, and analyze their contributions, not only to racial justice, but to the very ideals of equality and freedom. It also explores how these women used legal leverage effectively along with their community values to transform social policy. Additionally, this work will offer some small measure of long-overdue acknowledgement for their contributions as organizers and activists. Furthermore, it will reexamine the ideological women leaders and organizations of the civil rights movement.

Construction Solutions Database
Michael Milanoski, Blake Novoa and Zack Sinner
Daniel Anton, Physical Therapy

Work-related musculoskeletal disorders (MSDs) in the construction trades result in millions of dollars worth of lost time and productivity each year. The physically demanding nature of the work predisposes workers to occupational hazards and puts them at risk of developing a variety of MSDs. Many of these can be avoided by implementing the use of available tools and techniques that reduce the strain placed on the muscles and joints. To assist with this, we are developing a website database that provides an analysis of MSD hazards and identifies possible solutions, including tools and methods, for different construction trades. The website is an easily accessible resource that contractors and workers can refer to for information on reducing the risk of work-related MSDs. The purpose of this presentation is to describe how we work with industry professionals to identify risks, discover available solutions and present them in a way that will show the benefit of their implementation.
Method for Implementing a Participatory Ergonomics Program to Reduce Risk of Musculoskeletal Disorders (MSDs) in the Grocery Industry
Samantha Modderman
Daniel Anton, Physical Therapy

Therapy Musculoskeletal disorders (MSDs) are common among grocery workers due to the nature of their work. Lifting heavy loads and repetitive awkward postures place increased stress on joints and muscles. Participatory ergonomics programs are effective in reducing the risk of work-related MSDs. These programs have shown benefits among manufacturing workers but have not been tested among grocery workers. The purpose of this study was to implement and evaluate the effectiveness of a participatory ergonomics program for grocery workers. A two-group pre-post test trial was conducted at two grocery stores. The safety committee at one store received education in participatory ergonomics, and the other store acted as a control, receiving no education. Demographic and health survey information was collected at both stores along with videotape of specific grocery store tasks. Tasks were analyzed with ergonomic assessment methods. Methods of the study will be presented, since the results are pending.

Killer vs. Socialite: Metaphoric Constructions of the Orca Whale
Peter Moe
Paul Lindholdt, English

Aristotle claims that metaphors function primarily to teach us about the unknown through a transference of meaning between a familiar object and an unfamiliar one, and I posit that humans use two primary metaphors to understand orca whales: that of killer and that of socialite. Viewed at one time as the “demon dolphin” (its scientific name Orcinus Orca literally means “whale belonging to the realms of the dead”) due to the orcas’ seemingly insatiable appetite and position as the apex predator of the ocean, orcas now seem to be viewed primarily as lovable leviathans, tame circus performers at SeaWorld. Perhaps the disjunction between these two constructions of the orca accounts for the public shock at the recent death of a SeaWorld trainer in Florida, causing us to rethink our relationship with the orca - and with nature. I aver that neither the killer nor the socialite metaphor is an accurate representation of the orca; a new metaphor is needed for the orca, one that better articulates the complexities of this highly social, yet highly predatory, animal.

Cook It Over
Written and Directed by Dexter Moetului
Film Score by Jill Pendleton
Sarah Lee Monroe, Theatre and Film
Don Goodwin, Music

Cook It Over is a short film about a young girl who is conquering an infatuation with her ex-boyfriend. Amanda works part time at a local diner with James who has a huge crush on her. Unfortunately for James, Amanda has been hurt before and won’t let go of her past relationships. The music for Cook It Over was written to help create depth and sincerity to Amanda's emotions. By creating a main theme to represent her, her theme permeates throughout the score creating musical consistency. Then as it is set over different harmonic structures, rhythms and styles, Amanda's theme musically reflects her emotions and develops musical maturity alongside her onscreen emotional development.
Methow Valley Beaver Relocation Project
Alexis Monetta
Margaret O'Connell, Biology

Beavers, with their engineering abilities to reestablish complexity to streams, were utilized in the Methow watershed to repair the effects of over trapping along with other factors that have contributed to simplification of stream channels and reduced thermal diversity to a fraction of what it was historically. Beavers were removed from locations where there was conflict with landowners and released in unoccupied habitat higher in the watershed where they will not cause future problems. These release sites provided significant, measurable improvements to water quality. In 2008 and 2009 51 beavers in 13 release sites were released into the Methow watershed. Of the 13 release sites 9 are currently active as of late fall 2009. Release sites are currently monitored and reassessed for occupancy and activity.

Resisting to the Latino "Migrant Nightmare" in the United States
Maria Morales
Sean Chabot, Sociology and Justice Studies

This discursive analysis intends to answer the question, “What is the migrant nightmare that Latinos face in the U.S and how do they organize to resist such oppressive conditions?” In this paper I describe the various forms of oppression and discrimination Latino immigrants face from the onset of their immigration to their established lives in society. I explore certain economic, political, and social factors that contribute to this oppression which I call the “migrant nightmare,” and the many implications that come with it. Furthermore, I begin questioning and investigating resistance through community organizing and the strategies used by Latinos especially in more contemporary times. Lastly, I introduce the strategy taught by Mexico’s Zapatista movement with respect to organizing and resisting and suggest ways Latinos can translate the Zapatista strategies to the immigrant experience in the United States. Essentially, this paper is an exploratory discussion of some of the critical ideas I hope to develop into a more theoretical long-term project surging from my personal passion towards world of borderless justice.

Factors Predicting Intention to Co-Habitate in College Students
T. Dylan Moses, Jose Garcia, Maira Sanchez, Cynthia Mangane and Tera Jo
Theresa Martin, Psychology

This poster presents work from a student research laboratory group project. Five undergraduate students from the Dept. of Psychology researched background literature on factors that have been identified in the phenomenon of co-habitation. Our research represents an extension of this historical research in that we have included a measure of participants' sensation seeking tendencies in a questionnaire modeled after the Theory of Planned Behavior. We predict that participants high in sensation seeking will be more likely to express intention to co-habitate with a current or future intimate partner. Although data collection will still be under way at the time of the Symposium, we will present the data that has been analyzed by that date.
Development of a New Class of Drugs for the Treatment of Alzheimer’s Disease  
Bridget Mummey, Alex Pentecost, Todd T. Talley and Palmer Taylor  
*Travis Denton, Chemistry and Biochemistry*

Alzheimer's disease (AD), the most common form of dementia, is a disease that results from nerve cell death in areas of the brain that are vital to memory and other cognitive abilities. GTS-21, one of the first alpha-7 nicotinic receptor agonist drug candidates, will be developed and used as a lead compound. The goal of this research is the preparation of a library of substituted Myosmines (bioisosteres of GTS-21). The library of compounds will be tested, as an initial screen, as ligands for the acetylcholine binding protein (AChBP). As a result, the chemical compounds that show the most promise at the AChBP will be screened for efficiency at the functional alpha-7 nicotinic receptor expressed in human cell lines. The data obtained from these studies will be compared to that of known potential drug candidates. The current results of these steps will be discussed.

Breaching Gender Constraints: the Mestiza Heroína’s Search for a Mestiza Consciousness in Sandra Cisneros’s *House on Mango Street*  
Carlos Munoz  
*Winona Wynn, English and Humanities at Heritage University*

In the novel *House on Mango Street*, Sandra Cisneros captures the remarkable journey of the Chicana who needs to create a space for herself within her culture and society. For instance, the traditional women characters believe they are not in control of the catalyst that initiates the events in their lives. Instead, many passively accept poverty and racism from the dominant society and endure the patriarchal oppression from the men in their lives, while surrendering their voices and choices to be considered good girls, wives, or mothers. However, the protagonist- Espéranza Cordero- disrupts the normalized gender role of women in her culture and society because she refuses to inherit her grandmother’s rolling pin and silence. Therefore, this essay examines how the protagonist- Espéranza Cordero- breaches gender constraints and creates a self-defined space for herself that acts as a discourse of resistance to patriarchal traditions by using my provisional Mestiza heroína cycle definition based on the conflation of Joseph Campbell’s elements of an epic hero cycle and Gloria Anzaldúa’s mestiza consciousness that asserts Espéranza Cordero as a Mestiza heroína who breaches the traditional gender domains and creates a new space for women in heroic literature as heroínas.

Service Learning Project: Understanding the Dynamics of Working in a Group  
Carlos Munoz  
*Molly Johnson, English*

As part of my English 407 Proposal Writing class, I completed a grant writing service-learning project with Northwest Boulevard of Eastern Washington University. Service learning is generally defined as a form of experiential education in which the student engages in activities that both addresses a community need and enhances the student’s learning and development in terms of the course learning objectives. In this particular case, the service learning project assisted me in the accumulation of complex technical knowledge, applied skills, and an understanding of the critical dynamics of working in a group to produce the desired results. Thus, this essay examines my experience of working in a group to produce not only a potentially successful grant but to gain practical and effective methods in completing challenging technical writing in a collaborative environment.
Mary Had A Little Bat: The Modern Mother of Batman
Sarah Murphy

Beth Torgerson, English

There is much controversy surrounding the origins of Bob Kane’s Batman character, originally published in 1940. This presentation will give voice to the possible literary origin, Mary Roberts Rinehart’s 1920 play and 1926 silent movie of the same name, The Bat. I will show parallels between Rinehart’s creation and Kane’s superhero, such as the manipulation of other characters and the perceived audience based on an ability to transcend societal constraints, and present evidence that Kane not only had access to Rinehart’s work, but admitted to having been influenced by it in his creation of Batman. I will also discuss the greater implications of American society’s embracing of an individualized embodiment of justice during the 1940s, especially in light of a post-world war reality, and what character traits of Batman, stemming from Rinehart’s work, have helped a creation introduced in 1940s America have enduring popularity.

Synthesis of Malonate Derivatives for Click Chemistry Hydrogels and Polymers
Thomas Mustard

Travis Denton, Chemistry and Biochemistry

Most petroleum based polymers today are not biodegradable. This project is aimed to synthesize polymers from renewable resources with useful physical properties such as biodegradable plastics and hydrogels. One portion of the project is the alkylation of diethyl malonate to afford dialkynes to be used in a “Click” chemistry based approach for the preparation of polymers in conjunction with the second portion of the project. Recent studies on the kinetics and thermodynamics of the malonate alkylation has provided information necessary to preferentially guide the reaction toward either mono- or di- alkylation. In a second portion of the project, the synthesis of a library of diazides are to be used in combination with dialkynes to make a library of “Click” based polymers. The results and strategies will be discussed.

Busted Knuckle Brewing Co.
Oscar Nelson

Mindy Breen, Engineering and Design
Greg DuMonthier, Art

This project involves branding and developing Busted Knuckle Brewing Co., a micro brewing company with the goal of exploring the relationship between hand crafted micro brewing and the custom hand crafted hot rods. Focusing on the custom cars and trucks from the ‘30s, ‘40s, and ‘50s giving the project a vintage feel.
A Football Athlete with a Bimalleolar Ankle Fracture with Syndesmosis Disruption

Venessa Nersten, Erek Arnold, Amanda Laurita and Shawna Crosley

Jeffrey Kawaguchi, Physical Education, Health and Recreation

A Pott's fracture is an archaic term loosely applied to a variety of bimalleolar ankle fractures - which means that at least 2 elements of the ankle ring are involved. A bimalleolar fracture with syndesmosis disruption is not a common injury that you see every day. Out of all the ankle injuries evaluated only 15% end up being ankle fractures (Iskyan, & Aronson, 2010). This case study describes the history and rehab of a 20 yr. old intercollegiate football athlete at a Division I-AA institution that was diagnosed with a closed bimalleolar fracture with a syndesmotic disruption.

Cinema as Truth: Philosophy in the Films of the Nouvelle Vague

Laurel Newnham

Barbara Miller, Art

The French New Wave, or nouvelle vague, marked a critical turning point in cinema. A group of five avant-garde directors, referred to as the Young Turks, transformed film from the highly theatrical, polished pre-World War II cinema into a tool of artistic and philosophic exploration. Among these directors were François Truffaut, Jean-Luc Godard and Eric Rohmer, who experimented with new techniques in order to create a ‘true’ cinema defined by human emotion instead of literary archetypes.

Service Learning: Technical Documentation for the Nuclear Branch of the Puget Sound Naval Shipyards

Eliza Nichols

Molly Johnson, English

At the Puget Sound Naval Shipyards in Bremerton, Washington, the United States Navy is challenged with creating procedural documentation that can be followed flawlessly in a nuclear safe environment. In January of 2009, the Navy sent representatives to Eastern Washington University to collaborate with my Technical Communications writing team. Our task was to rewrite and redesign a set of procedures for the maintenance of chain hoist. It was necessary for us to use the actual chain hoist while editing the twenty-eight page original document. We relied on communications between naval subject matter experts to ensure accuracy while working to meet documentation requirements such as minimal word usage, limited number of action verbs, and specific nomenclature. After editing, my team reduced the document size by ten pages. A design team then added 3D images to the layout, and the end product offered the Navy a concise set of user friendly procedures that inspired them to hire a full time technical writer from EWU, and resulted in a post college career for me.
What Would a Compassionate University Look Like?
R. Skyler Oberst
Robert Sauders, History, Anthropology
Kathryn Julyan, Philosophy

This presentation will examine the benefits and incentives of instilling the idea of compassion in the university setting, and creating a more peaceful academic environment. The current absence of compassion at administrative, faculty, and student levels has proven an ineffective method of producing enriched lives. It is therefore imperative that compassion be placed at the heart of university to provide a safe stimulating and humane atmosphere. The discussion will be aimed at a possible solution compassion offers in an otherwise dangerously polarized world.

Towards Novel Gene Delivery Agents: Synthesis of Poly-4-Hexamethyl-4-Azaheptamethylene-D-Glucaramide
Daniel Olson
Travis Denton, Chemistry and Biochemistry

The use of viral vectors as a nucleic acid delivery system can result in life threatening immune responses and integration of foreign genetic material into a patient’s genome. However, viral vectors are still the most commonly used delivery system. Because of these facts, it is of unparalleled importance to develop non-viral, gene delivery agents capable of delivering nucleic acids efficiently to cells with minimal toxicity. In light of this, novel poly-4-hexamethyl-4-azaheptamethylene-D-glucaramide was developed and synthesized for use as a new nucleic acid delivery system. Results of these experiments will be discussed.

Falls: Functional Status and Exercise Behaviors in Well Older Adults
Janna Ott and Jen Lambery
Kimberly Cleary, Physical Therapy

Falls are the leading cause of injury, traumatic hospital admission and death among older adults in the United States. In addition to physical injuries, falls are also associated with a subsequent decline in function and reduced participation in activities. Forty-six subjects aged 65 and older considered ‘well elderly’ (people who live independently and are able to walk in their home without help from another person) volunteered to participate in this study. The purpose of this presentation is to describe the incidence of falls, functional status and exercise behaviors in community dwelling older adults. Most subjects were female (70%), had completed at least grade 12 (96%), and had health insurance (98%). More than one-third of subjects (36%) reported a fall in the previous year. Most subjects (78%) were independent with activities of daily living, but some (22%) needed help with activities like dressing, getting in and out of a chair, and bathing. Many subjects (76%) reported exercising regularly, including aerobic exercise, stretching and strengthening, and specific activities.

“An Introduction to Several Worlds”
Dalton Paget
Rachel Toor, Creative Writing

A theatrical reading of descriptions of several fictional worlds.
Movements of Bull Trout Above and Below Albeni Falls Dam
Mark Paluch
Allan Scholz, Biology

Dams built without fish passage, such as Albeni Falls Dam constructed on the Pend Oreille River, ID in 1957, allow downstream passage during power generation and overflow from the spring runoff, but block upstream spawning migration to natal tributaries. The purpose of this study was to evaluate biological data collected from the movements of bull trout *Salvelinus confluentus* above and below the dam to evaluate the feasibility and possible location of establishing permanent fish passage. Bull trout were collected via electrofishing, surgically implanted with transmitters, and had their movements monitored using radio and acoustic telemetry. Genetic analysis was used to determine probable tributary of origin. Six bull trout were relocated above the dam, of which three entered tributaries matching their genetic assignment and three returned to Lake Pend Oreille. Seven were left below the dam and were found to explore the entire face of the dam. Movements were detected at four sites where establishing a permanent fish passage facility have been identified. Providing passage upstream from dams will protect genetic diversity of threatened bull trout.

Continuous Connections
Care Pantojan
Mindy Breen, Engineering and Design

An array of circles which symbolize the different choices and the many pathways one can choose throughout a lifetime.

Riding into the Wind: “Innovate or Die”
Care Pantojan
Mindy Breen, Engineering and Design

This poster is made for SPECIALIZED bikes inspired by the challenges of an individual to push him/herself.

Hurting All Over: An In Depth Look at Narcotic Pain Relievers and Misuse
Renee Petitti and Kelly Arnold
Kayleen Islam-Zwart, Psychology

Non-medical use of pain medication has been rising over the last few years. The purpose of this study was to examine the relationship between gender and misuse of narcotic pain relievers on endorsement of negative emotions. Although research is limited it seems likely that mood impacts and is impacted by analgesics misuse. This study utilized archival data collected as part of the National Comorbidity Survey (Kessler, 2000). 5,832 participants responded to a four-item composite assessing negative emotions (tense, anxious, irritable, and temperamental). It was hypothesized that people who use analgesics experience more negative emotions than non-users. Results showed that people who used analgesics reported more negative emotions than people who did not. Additionally, women reported more negative emotion than men. There was no interaction. This study addresses limitations of past research by further examining the relationships among pain medication misuse and other factors.
The Spatial and Temporal Distribution of Metals in the Spokane River
Nerissa Pettett
Carmen Nezat, Geology

The Spokane Valley-Rathdrum Prairie (SVRP) aquifer, which is the sole source of drinking water for over 500,000 people in Washington and Idaho, interacts with the Spokane River along its course. Contaminants in either system may move into the other. To gain fuller insight into the connection between the Spokane River and the SVRP aquifer and flow paths within the aquifer, samples were collected periodically at six locations along the Spokane River from fall 2009 to spring 2010. These samples were analyzed for their concentrations of zinc and cadmium levels, metals which are known to be elevated in the water from mining upstream in Silver Valley, Idaho. Calcium, potassium, magnesium and strontium concentrations were also analyzed to understand the natural sources of metals to the Spokane River.

Swim Training Effects on the Morphology of Juvenile Kokanee Salmon
(Onchorhynchus nerka kennerlyi)
Cassandra Pharr
Thomas Hancock, Biology

Developmental plasticity is the capacity of a single genotype to produce different phenotypes as a response to varying environmental conditions. Water velocity and the act of swimming against it have been shown to cause variable phenotypic expressions in morphology, muscle characteristics, and consequent swimming ability. Swim trained adult salmon tend to have shorter pectoral fins, larger caudal and dorsal fin lengths, greater body depths, and longer head lengths. However, few studies have analyzed how training alters phenotypes within juvenile fish, where environmental factors could potentially induce more permanent phenotypic changes. In this study juvenile kokanee salmon were swim trained for 63 days at 2.5 BLs-1 for 4 hours, 5 BLs-1 for 30 minutes, and compared to an untrained control group. Initial analyses of morphological traits indicate trends where both types of training decrease body depth, body width, and head depth; and endurance training decreases the condition factor, reflecting a more slender fish. Swimming performance has also been measured and muscle fiber analyses and enzyme profiles are also planned.

Towards the Treatment of Cancer: Polyamides and Polyamines as Gene Delivery Agents
Whitney Pinches
Travis Denton, Chemistry and Biochemistry

The American Cancer Society estimated 1,479,350 cancer cases and 562,430 cancer-related deaths will occur in 2010 in the US. Consequently 67% of gene therapy clinical trials are aimed towards the treatment of cancer. Although effective therapeutic genes have been developed, the drawback to gene therapy is the transport agent used to deliver the genetic material. Polyamides and polyamines have been strategically developed for the use as gene delivery agents. To be an effective non-viral therapeutic agent, polymers must be non-toxic to cells, condense genetic material and be consumed by cells. Results of recently prepared polyamides and polyamines as gene delivery agents will be discussed.
Comparison of EWU Students’ Attitudes Towards Non-Native English Speaking Teachers with the Perceptions of Non-Native English Speaking Teachers Experiences of Teaching English in the USA: Controversy

Elena Pipenko
Tracey McHenry, English

Elena Pipenko, a non-native English teacher herself, by using the online survey system www.surveymonkey.com surveyed English 100-101-201 students and international students in MA TESOL programs who have taught English in the USA/might teach in the USA. After comparison of the results, she came to conclusions about an existing mismatch between what students and teachers perceive as a difficulty/challenge.

Strengthening Concrete Structures by Chemical Admixtures and Fiber Materials

Darrell Pope and Harley Dobson
N.M. Awlad Hossain, Engineering and Design
Donald Richter, Engineering and Design

Mechanical Engineering Technology Concrete is construction materials widely used in many engineering applications. Concrete, usually composed of cement as well as other materials such as fly ash, aggregate water, and chemical admixtures, is mainly used to withstand the compressive load. During this research, an extensive experimental work will be conducted to improve the compressive strength by changing the chemical admixtures such as plasticizer. Different types of plasticizer will be added by different amounts and the compressive strength will be examined. For a particular amount of plasticizer, experimental work will be repeated with changing the aspect ratio of composite samples. Additional experimental effort will be provided to strengthen the concrete structures when confined with fiber materials such as carbon and Kevlar fibers. Experiments will be repeated to determine the compressive strength of concrete with increasing the number of fiber wraps. Finally, the concrete strength will be investigated with the combined effect of plasticizer and fiber confinement.

Haiti, January 2010

Matthew Preston
Elisa Nappa, Art

Haiti, January 2010 is a tile dealing with the aftermath of the Haiti earthquake. Specifically the tile addresses the necessity to quickly dispose of the deceased and, because of the worries of disease and sanitation, how they become part of the trash and rubble. The tile is 8 by 14 inches made of ceramic material specifically Terracotta. A “sheet” under which we see silhouettes of bodies covers the top half. Feet are projecting from under the sheet and become part of the trash (plastic bottles, paper refuse) that is on the bottom of the tile.
Moral Disengagement in Response to Torture in US and Botswana Students
Michelle Prunier-Smith, Trevor Liebing and Mileva Yant

Mahlon Dalley, Psychology

Based on Bandura’s Moral Disengagement and Engagement theories, Malley-Morrison’s research team, the Group on International Perspectives on Governmental Aggression and Peace (GIPGAP) has been collecting international data from responses to the Personal and Institutional Rights to Aggression and Peace Survey (PAIRTAPS). This survey has six subscales. We focused on one statement, “The government has the right to order the torture of prisoners in time of war.” Respondents were asked to rate the statement on a Likert-type Rating Scale. Our hypothesis was that no difference would be found between Eastern Washington University and University of Botswana students in moral disengagement using quantitative ratings and qualitative comments as dependent variables. Additionally, we believed that no gender effect would appear. Undergraduate students from the University of Botswana (UB), n = 68, and Eastern Washington University (EWU), n = 124, took the PAIRTAPS. The above “torture” item was analyzed. A 2 (location) X 2 (gender) ANOVA was performed for the quantitative data. As expected, no difference between the EWU and UB students was found, F (1, 183) = 1.37, p = .24; however, there was a significant difference between gender F (1, 183) = 5.30, p = .023 with no interaction effects. From those commenting, 72% of EWU students and 74% of UB students endorsed Moral Engagement; whereas only 28% of EWU and 29% of UB students endorsed Moral Disengagement, consistent with some of Malley-Morrison’s results.

Low Cost Remote Data Gathering Tools Using Off the Shelf Equipment
Phillip Rabideau and Ben Kozubenko
Douglas Bickerstaff, Computer Science

As part of the assignment for the advanced database class we were asked to use off the shelf equipment to gather data remotely. Devices that we used included a personal digital assistant (PDA) made by Dell and an attachable Global Positioning System (GPS) device. Using these devices any data can be collected remotely and later uploaded to a central server for study and analysis. In addition, with use of GPS, location coordinates can be used to create maps to help gain a better understanding of the collected data. After creating several simple applications with our equipment we realized that these inexpensive devices can be put to a good use in many fields of study. One example is to collect data on flowers and plants at a location like Turnbull National Wildlife Refuge and organize it to help further study and understand the types of flowers and plants that grow there. This can be very useful for EWU’s Biology department. Many other similar applications can be created for other fields of study to help collect data and organize in a useful manner.
American Naturalist Stephen Crane is best known for his works *The Red Badge of Courage* and *Maggie: A Girl of the Streets* for their gruesomely realistic depictions of the Civil War and the Bowery district of New York, respectively. Lesser known are Crane’s short and puzzling poems. Within this presentation, I will analyze several examples of his poetry according to his definition of Naturalism. Additionally, I will discuss Crane’s reception as a poet in his own time as well as the reactions of modern scholars. In so doing, I will illustrate how truly insightful Crane’s poetry is and how important it is for students of literature to appreciate it for its Naturalist elements.

**Carbon Turnover Rate of Gammarus Tissue**

**Elliott Reams**  
*Camille McNeely, Biology*

Stable isotope ratios ($\delta^{13}$C) are widely used to trace carbon flows through food webs. One disadvantage of this otherwise powerful technique is that it is often unclear how quickly consumer body tissue turns over, and therefore over what period of time consumer tissue $\delta^{13}$C integrates information about diet. This is especially true for freshwater macroinvertebrates. We determined $\delta^{13}$C half-life for whole body *Gammarus lacustris*, a widespread crustacean that is often important in aquatic food webs. In three laboratory controlled water temperatures, we fed *G. lacustris* (initial $\delta^{13}$C - 24.30‰) a diet of C4 plant material (*Zea mays*, $\delta^{13}$C - 13.11‰). Carbon isotope ratios of *G. lacustris* parallel those of an abundant C3 plant in their habitat, *Phalaris arundinacea* ($\delta^{13}$C - 27.05‰). We sampled corn-fed *G. lacustris* from each temperature after intervals ranging from 3 to 52 days, and determined their $\delta^{13}$C to estimate the length of time when 50% of the carbon in the amphipods’ bodies was replaced by carbon derived from corn ($\delta^{13}$C half-life). Our results indicate that $\delta^{13}$C half-life in whole body *G. lacustris* tissue occurs in less than 25 days at 23 °C.

**My Body is My Body: Preventative Measures of Child Sexual Abuse and Associated High Risk Behavior**

**LaMeshia Reese-Taylor**  
*Dorothy Munson, Counseling, Educational and Developmental Psychology*

My research focuses on the prevalence of Child Sexual Abuse (CSA), how it occurs, and the steps necessary to protect children. The existing research indicates that CSA leads to high-risk behavior in adolescent and adult years. The method used in this study was a comprehensive literature review critically analyzing the preventive measures of child sexual abuse that currently exist. A need exists for programs and interventions to mitigate high-risk adolescent behavior that often result from CSA. This study reiterates that prevention programs are necessary to help children, adolescents, and adults understand what sexual abuse is, and how it can be avoided. I anticipate that a key dimension of effective prevention programs will be the need for developmentally appropriate materials and interventions for children used in conjunction with adult prevention programs. It is likely that a considerable amount of time should be taken to develop programs that are rich in content, easily understood, and remembered by children and adults across varying cognitive developmental stages.
Women Who Won Their Wings: WASP Pilots in the Northwest During WWII
Michelle Reid
William Youngs, History

In June, 1944, outside a ranching town in Montana, a P-39 fighter plane’s engine malfunctioned, and the pilot was forced to bail out. Residents of the area were accustomed to the drone of fighter engines overhead, but were shocked to find that the pilot who parachuted to the ground and hiked to the highway was a woman, Ms. Betty Shea of the Women’s Airforce Service Pilots. Women at the controls of combat aircraft during the war was controversial and experimental. Even so, the program quickly grew to employ female pilots for many domestic missions. Performing work considered dangerous even for men, WASPs were both given elite status as “fliers” and targeted as feminists. Reid will present on the role of female pilots who supported the 7th Ferrying Group. They flew Lend-Lease aircraft from factories across the nation to Central Montana. From there, male pilots took the aircraft to Alaska where Russians picked them up and continued the journey to the Eastern Front.

Design and Production of an Advanced A-Frame Signboard for Sidewalk Advertisement
Sandra Rich and Jason Krienke
N.M. Awlad Hossain, Engineering and Design

Advertising is a form of communication to influence individuals to purchase products or services. Frequently it conveys a message that includes the name of the product or service and how that product or service could potentially benefit the consumer. During this research project, an advanced “A-frame advertising board” was designed and manufactured. This noble product offered an interactive form of advertisement that essentially senses the presence of customers and actively grabs their attention by playing a customized recorded voice. First, extensive research has been performed to design and integrate an electrical circuit, which can properly activate an infrared motion sensor. When it senses the motion, it actuates the recorded voice to play for a preset amount of time. Additional efforts were directed to modify the electrical circuit to integrate a batch of LED lights to simultaneously activate with the recorded voice. The electrical circuit also contains a photo resistor, which triggers the LED lights to stay on when the outside illumination gets dark. Besides the unique features as mentioned above, this design product contains all the traditional appearances including a writing surface enclosed within a weather resistant glass frame. It also houses a customized laser engraved company logo on clear acrylic material. Overall, the final product was the combined effort of Mechanical, Manufacturing, and Electrical engineering knowledge that simulate a real world situation with engineering challenges that many of the undergraduate students will face after their graduation.
Clams Have Higher Fitness When Living with Less O2
Heidi Richardson and Tammy Sammeli
Joanna Joyner-Matos, Biology

While normoxic (air-saturated) levels of dissolved O2 (DO) are thought to be optimal for aquatic organisms, normoxia may cause free radical stress. Freshwater clams (*Sphaerium sp.*) inhabit a swamp/stream system in Uganda in which DO levels vary from extremely low (swamp) to near normoxia (stream). Clams are most abundant and have less free radical stress in the swamp. Clams were collected for 1 year from four sites. DO was significantly lower in the swamp than stream (p < 0.0001). We tested whether clam reproductive success (fitness) varied with DO by dissecting clams and counting their internally-brooded young. Clams brooded year-round, in contrast to all known temperate Sphaeriids. Proportions of brooding clams were higher in the swamp than stream (p = 0.10). Mean brood sizes were significantly higher (p < 0.05) in the swamp than stream. These data suggest that clams living in low DO have higher fitness than clams in near-normoxia, likely because normoxia increases free radical stress.

Perception of Relationship Support in Men and Women with and Without Panic Disorder
Shannon Richardson, Brittany Shafer and Stephanie Seek
Kayleen Islam-Zwart, Psychology

Previous studies have indicated that individuals with panic disorder are more likely to appropriately use mental health services when they have sufficient social support, and less likely to use more intensive and costly psychiatric treatments (Maulik, Eaton, & Bradshaw, 2009). This study examined perception of support in relationships as a function of gender and panic attacks. A 2 (male vs. female) X 2 (panic attacks vs. no panic attacks) Analysis of Variance (ANOVA) was conducted using archival data provided by the National Comorbidity Survey (Kessler, 2000). Participants were 4,392 individuals with a mean age of 36.75 years (SD = 8.91). Results showed individuals who suffer from panic disorder report receiving less support from their partners than do those without panic disorder and women report less support than men. There was no interaction. Findings may help in developing new treatment methods for panic disorder.

Diesel Fueled Turbine Engine Research
Michael Richter and Robert Speerstra
Jason Durfee, Engineering and Design

The turbine engine, also known as a jet engine, is a remarkable tool in modern society. Eastern Washington University students will soon be allowed to research the fluid mechanics involved in this technology through “a hands on” lab that the Engineering and Design Department will be offering soon. Our project was to develop a lab using an actual operating jet engine that was purchased by the department and will offer the students background information and procedures on how to calculate the forces on air as it travels through the engine and ultimately produces thrust. This lab will also allow the students to manipulate the controls and observe the changes inside a jet engine through software to provide an understanding on how these engines work in a controlled, safe setting.
Strategies of Single Motherhood
Amara Rieken
Julia Smith, Anthropology

Politicians and the media have stigmatized single mothers, blaming them for using welfare, for producing troubled children and for enabling the collapse of the family unit. Does this image of single mothers depict their real experiences or is it just an image created for political purposes? To answer this question I conducted fifteen semi-structured interviews with single mothers living in the Spokane, Washington, metropolitan area. The image of single motherhood they depicted was very different than the stereotype. For these women, providing a stable and loving home for their children was their priority. These women put into practice a set of strategies for being good single mothers without expecting or receiving help from the fathers of their children or other men in their lives. This preliminary study suggests that some specific policy changes would help single mothers to better provide stable family environments for their children.

From Apes to Eloi: The Impact of Darwin on the Novels of H.G. Wells
Kristina Ries
Beth Torgerson, English

Charles Darwin's writings left an indelible mark on the Victorian imagination. This paper explores the relationship between Darwin's theories and the novels of H. G. Wells, including the Victorian crises of faith and the subjects of literary and social Darwinism as presented in the novels' characters and plots. For example, *The Time Machine* deals with the ideas of evolution and social Darwinism taken to an extreme when humanity evolves into two separate species due to social inequality. *The Island of Dr. Moreau* and *The Invisible Man* both serve as a warning against man attempting to meddle with the evolutionary process. H. G. Wells' imagination was so captivated by Darwin's theories that they colored every one of his major novels and the entire Victorian literary landscape.

Service Learning with the U.S. Navy in Technical Communication
Hannah Rile
Molly Johnson, English

In the field of technical communication there are many opportunities to participate in service learning projects. Many different learning aspects go into a service learning project. For EWU’s Student Research and Creative Works Symposium I will be presenting a poster on service learning that details the steps that I went through and what I learned during my service learning project for the U.S. Navy’s Chain Hoist Manual. For my poster presentation I will be outlining the process that my group members and I went through to complete the Chain Hoist Manual. At the beginning of the project we were given a manual document from the Navy. We were asked to rewrite, edit, and redesign the manual so that it would be easier for users to operate with it. From usability testing, to editing, to writing, to designing, to queries, to meetings, and to teamwork, there were many things that we did that contributed to the good of the community through the manual for the Navy.
Case Study of Collegiate Softball Player with Epilepsy
Jake Ritter and Joe Kreilkamp
Jeffrey Kawaguchi, Physical Education, Health and Recreation
Garth Babcock, Physical Education, Health and Recreation

This case study describes a female collegiate athlete with epilepsy and the trials and complications with managing her illness while being an active athlete. Also, we will attempt to educate the viewer regarding the pathology of epilepsy, the etiology of an episode, the warning signs of an episode, first response procedures, management of the condition and management of medications.

Design and Production of Lightweight Noble Longboard Decks
Joseph Roberts and Jesse Newberry
N.M. Awlad Hossain, Engineering and Design

A longboard simply represents a skateboard with a longer and wider shape commonly used for cruising, downhill racing, and surfing. It also becomes very popular for transportation for the school/college going young students. Longboard decks are found in different shapes, which can satisfy the requirements or preferences of an individual rider. In general, longboard decks carry bearings, trucks, and wheels to fulfill the intended performances. Most of the traditional longboard decks are heavy and bulky, which makes them less suitable to carry and imposes some difficulties in many skateboarding tricks. During this project, a lightweight and noble longboard deck has been designed and fabricated with the combined effort of mechanical and electrical engineering knowledge. First, the longboard deck has been fabricated with ultra lightweight polystyrene foam material strengthened by carbon fibers. To ensure the required strength, carbon fibers were bonded with foam at different directions (or orientations), where epoxy resin was used as a bonding agent. Additional efforts were directed to design and fabricate lightweight longboards with honeycomb structures. This lightweight longboard deck also incorporates a lighting system to offer enough illumination for safe late-night riding. Besides, a braking system has been designed and integrated with the longboard deck to safely reduce the speed at any emergency. This new lightweight longboard deck not only carries the common traditional appearance but also offers other noble features to make it more imposing, demanding and smart. The design and fabrication process of this lightweight longboard deck simulates a real world situation with engineering challenges that many of the undergraduate students will face after their graduation.

Developing Nondestructive Testing Laboratory Experiments for Mechanical Engineering Technology Curriculum at EWU
Joseph Roberts and John Parra
N.M. Awlad Hossain, Engineering and Design

Nondestructive Testing (NDT) is a wide group of analysis techniques used in science, engineering, and medical fields to evaluate the properties of a material, component or system without causing damage. Because NDT does not permanently alter the article being inspected, it is a highly-valuable technique that can save both money and time in product evaluation, troubleshooting, and research. NDT encompasses several methods including ultrasonic, magnetic-particle, liquid penetrant, radiographic, and eddy-current testing. This research will develop several ultrasonic laboratory experiments for Mechanical Engineering Technology curriculum at EWU including the theory and detailed physics. Laboratory experiments will include detailed procedures for flaw detection and thickness measurements for metals and non-metals. Extensive effort will be provided to study the experimental response with changing the flaw size and location. Additional efforts will also be dedicated to develop similar ultrasonic laboratory experiments dealing with composite materials.
EWU Mechanical engineering technology HPPV. Human power paper vehicle contest is an annual event sponsored by and held at EWU since 1997. In this event, teams of 4 construct a vehicle made out of paper products with a maximum weight of 75 lbs with 10% being non paper weight. In order to build a vehicle to complete the course, which includes a 10% grade ramp, the teams must research how to construct their vehicle so they will hold together while negotiating the course. Our team decided to build a three wheeled vehicle with the two front wheels being six feet tall and two inches wide. The real challenge is how to cut a pattern in the wheel to bring the weight down from seventy two pounds to fewer than thirty while having it not fail during the course. Our research of the properties of cardboard using knowledge gained from the studying of statics, dynamics, and strength of materials coupled with engineering programs such as Solid Works (3D modeling) and Ansys (stress analysis program) allowed us to accomplish this challenge.

Lattice
Ben Robertson
Jonathan Middleton, Music

Through the application of auditory roughness models pioneered by Dr. Jonathan Middleton and Dr. Pantelis Vassilakis, the composer, Ben L. Robertson, has developed an interactive software environment that transforms nuances of pitch and timbre (performed by the improvising musician) into a single, evolving sound-object. The frequency and intensity of each harmonic overtone within this object represent a latticework of calculations and subsequent re-synthesis of its acoustic components. In practice, these calculations are informed by the degree of perceptual intensity, or roughness, existing between sound waves, emanating from the performer. While algorithmic precision secures a tangible sense of sonic cohesion within the piece, its improvisatory character guarantees indeterminacy in performance.

Creative Writing and Contemporary Pop Song: a Pedagogical Folk-Rock Opera in One Song
Liz Rognes
Rachel Toor, Creative Writing
Natalie Kusz, Creative Writing

In this presentation/performance of creative pedagogy, I will demonstrate the ways in which contemporary popular music can be used as a tool for teaching facets of creative writing. As a multi-disciplinary artist, I will use my own songwriting and background in musical performance as a tool for discussing popular definitions of contemporary popular song form, sound, rhythm, and variation as a way of accessing formal poetry in a student population. I will perform an original song in standard pop song form and then discuss creative poetic devices.
Las obras de Paco Ignacio Taibo II "Cosa fácil", "Algunas nubes" y "No habrá final feliz", se clasifican como novelas policíacas, o sea novelas negras. No obstante, estas obras de ficción no sirven sencillamente para la diversión del lector. Mediante las historias que nos cuentan y los personajes que nos presentan dentro sus obras, el autor crea una crítica profunda de la historia y la sociedad.

Working Title
Garrett Rowe
Rachel Toor, Creative Writing

Reading a Piece of Non-Fiction. Author is Garrett Rowe. Working Title.

Clams Can be Successful in “Poor” Habitats
Tammy Sammeli and Heidi Richardson
Joanna Joyner-Matos, Biology

Optimal conditions for freshwater clams typically are described as high dissolved O2 (DO), neutral water pH, and water flow rates sufficient to transport food and wastes. A previous, dry-season study of a clam (Sphaerium sp.) population in a swamp/stream system in Uganda found that clams were most abundant in the low-DO, acidic, low-flow swamp. In the current study we measured clam abundance, size, and reproduction along a swamp-stream transect for 18 months. Swamp sites had significantly lower DO and flow rates (p < 0.05) than stream sites. Clam abundances were negatively related to DO and flow rate (p < 0.05) but were not related to water temperature or depth (p > 0.05). Clams were reproductively active year-round, with DO explaining more of the variation in reproductive success than flow rates, water temperature or depth. These results suggest that we need to re-evaluate how we characterize the quality of aquatic habitats.

Still Not Taking Responsibility
Wil Samson
Mindy Breen, Engineering and Design

"Exxon" is a public service announcement regarding the Exxon Valdez oil spill that occurred in 1989. Using key visual elements, the poster visually portrays the effect that the oil company has had on the state of Alaska. It reminds the audience of the disastrous event and informs them that Exxon is still not taking full responsibility for spill and the continuous environmental damage that it caused.
“Birds, Flowers, the Moon”  
Brent Schaeffer  
*Rachel Toor, Creative Writing*

I am currently developing my thesis for the MFA in Creative Writing here at Eastern Washington University. I am exploring contemporary and regional diction in my work. My poetry draws on the influences of David Wojahn, Jack Gilbert, Wislawa Szymborska, Sharon Olds and Jack Spicer. These are poets of distinct styles, decidedly contrary to the “Birds and Flowers” poetry of the later 20th century Frostian disciples.

The Wonders of a Service Learning Grant Project  
Sarah Schuster  
*Molly Johnson, English*

Grant writing is an important part of the technical writing world. Through a service learning project here at EWU, I was able to take part in writing a grant, and learn valuable skills to use after college as I enter into the professional life. While doing this project my group and I did everything from researching grant foundations, interviewing clients, and writing an entire grant to turn in for award money for our organization. With the skills I have learned here, my poster will present the process I went through writing a grant and the lessons learned along the way. It will show how getting involved in the community was not only helpful for me, but for the group we worked with, the Animal Advocates of the Inland Northwest. We helped them gain funding for their goals and showed them how to set up a grant for future use. After submitting our grant proposal, our organization was given $5,000 to help with their goals, and we were given the satisfaction of knowing that we can write an effective grant.

*siblings*  
*Written and Directed by Justin Sen-Crowe*  
*Film Score by Brian Burke*  
*Sarah Lee Monroe, Theatre and Film*  
*Don Goodwin, Music*

*siblings* is a story about a brother and sister who settle their differences at the cemetery of a family member. Justin’s film is a juxtaposition of emotions—on one hand somber, depressing, thoughtful, and poignant while on the other tensely humorous and sarcastic. The score attempts to evoke all of these emotions, forging a counterpoint between sorrow and jollity. Light orchestration, using few instruments and including piano, will help evoke the more somber emotions while the characters confront the anniversary of their mother’s death. To aid in representing this darker tone, minor key tonalities were employed with disorienting atonal elements as well as liberal use of unusual percussion instruments or synthesizer tones. While still mostly utilizing minor keys, upbeat rhythms might help to lighten the mood during the scenes in which brother and sister fight over radio stations and smoking in the car on their way to their mother’s grave. Themes were composed for all three characters present in the film—two physical (the siblings) and one ethereal (their deceased mother) – which will be presented separately and gradually intertwine as the film progresses and comes to its conclusion.
Si No Sale en Televisión, No Existe
Thomas Shalloe
Natalia Ruiz-Rubio, Modern Languages and Literatures

El consumo de los medios de comunicación forma la percepción de la realidad de mucha gente. En la novela mexicana No habrá final feliz de Paco Ignacio Taibo II, se expresa esta idea y la crítica con uno de sus personajes. Zorak es un personaje de la televisión mexicana, en la que hacía programas de espectáculo, los cuales lo convirtieron en todo un símbolo de la patria mexicana. Esta misma idea aparece también en la canción “Padre de la patria” del grupo musical uruguayo No te va gustar en la que denuncian las atrocidades durante la dictadura militar en Uruguay de los años 70 y 80. Debido a que estos eventos no salieron en televisión, los oficiales gubernamentales “dicen ‘son sólo palabras,’” o sea niegan la ocurrencia de estas atrocidades pretendiendo que si hubieran sucedido de verdad, habrían salido en televisión. Según esta idea la única manera de comprobar la existencia de algo para muchos, es que tiene que salir en los medios de comunicación aunque éstos puedan manipular la realidad.

Definition Begets Deficiency: A Critical Analysis of the Creation of a Contested Indigenous Identity
Yvonne Sherwood
Todd Hechtman, Sociology and Justice Studies

Contested identities, as well as all identities, are often regulated by naming. Naming is an act of defining, and defining an act of legitimizing or delegitimizing those who find themselves marginalized. To name something is to assert control over the defined space. This paper examines the formulation of identity from a multi-theoretical perspective. It seeks to challenge the dominate discourse that states identity formulation is a linear progression from placeless to placed and that other must be used in the creation of self. Those pushed out into the corridors between regulated spaces such as race, culture, and gender, recognize that those spaces have become policed by both members and structures within and outside of the bordered space. For Indigenous people we have fought for many years to be considered human beings, now we fight to be Indians. Those who do not meet the criteria, whether through concepts such as location, language, blood-quantum, or skin color, are marginalized within the community. Illuminating the identity bound by dominant texts encourages the individual to examine place and self. Identifying self through name or experience or moving identity from static to dynamic still dehumanizes. If identity is reconfigured as a fluid space through the critical and integrated texts- it cannot be tied by static definition or defined experience.
Identifying Promoters of *Helicobacter pylori* Genes in the Clinically Important Cytotoxin-Associated Gene Pathogenicity Island

Olga Shiva  
*Andrea Castillo, Biology*

*Helicobacter pylori* is a gram negative, helical shaped microaerophilic bacterium that inhabits the stomach and duodenum of 50% of the world’s population. Approximately 10% of infections result in gastric disease, including peptic and duodenal ulcers, mucosa-associated lymphoid tissue lymphoma and gastric adenocarcinoma. The more severe pathologies have been associated with the presence of the cytotoxin-associated gene pathogenicity island (cagPAI) in infecting *H. pylori* strains. Relatively little is known about how the ~30 cagPAI genes are regulated. In my study, I have amplified the 40kb cagPAI region as X PCR amplicons and begun cloning digested fragments of this region into a reporter plasmid. To functionally identify cagPAI gene promoters, I will transform this cagPAI fragment-reporter plasmid library into *H. pylori* and look for expression of my reporter, read as antibiotic sensitivity. Finally, I will analyze my functionally identified promoters by sequencing. Currently, I have 4 putative promoters sequenced.

Las Fuerzas del Bien y del Mal

Dori Simpson  
*Natalia Ruiz-Rubio, Modern Languages and Literatures*

Cada día, las fuerzas del bien y del mal tienen una mayor presencia en el mundo. De los inocentes a los criminales, hay muchos ejemplos de esta realidad en la vida. Lo podemos ver en muchos de los medios de comunicación, incluyendo las novelas. Muchas veces, estos medios de comunicación describen el conflicto entre lo bueno y lo malo, y no es diferente en la novela popular de Paco Ignacio Taibo II. *No habrá final feliz*. En su novela negra, presenta este tema a través de una historia que nos hace pensar, no solamente sobre una historia de ficción, pero también sobre los hechos verdaderos de la historia de México. En la novela, Taibo II denuncia el Estado y la censura del pasado a cualquier costo – incluyendo la vida del protagonista, Héctor Balascoarán Shayne. De esa forma, él recrea la oportunidad para los lectores de recordar la existencia del conflicto entre lo bueno y lo malo en la historia real de una masacre en México.

Effects of the Proteasome Inhibitor MG-132 on Protein Degradation in Multiple Myeloma Cancer Cells

Richard Sipes  
*Nicholas Burgis, Chemistry and Biochemistry*

Multiple Myeloma (MM) is a cancer of white blood cells (WBCs) and currently affects 60,000 Americans. A current treatment for MM is the chemotherapy combination of melphalan and bortezomib. Melphalan is a DNA damaging agent and acts to stop DNA synthesis. The molecular mode of anticancer action for bortezomib has not been determined; but it is thought to modulate some aspect of protein metabolism. It is believed that these drugs work synergistically to selectively kill MM cells. Our experiments show that the rate of protein synthesis and rate of protein degradation are elevated for MM cells. Our experiment aimed to determine if the proteasome inhibitor MG-132 exerts its anticancer effects via a gross defect in protein degradation. The lysosome inhibitor chloroquine was included to determine if it could work synergistically with the proteasome inhibitor to modulate protein degradation. Interestingly, the rate of protein degradation is reduced to a greater extent for noncancerous WBCs than it is for MM cells after treatment with MG-132 and chloroquine alone or together. This suggests that protein degradation is dysregulated for MM cells. Therefore it does not appear that proteasome inhibitors exert their anticancer activity via causing a gross defect in protein degradation.
The Dinka
Billie Slick
Jerry Galm, Anthropology

The Dinka from east Africa will be represented in a poster. The Dinka have been driven off their land by invaders from the north for over twenty-five years. Until colonization by the British they had lived virtually unchanged for hundreds of years. The Dinka are closely tied to their economic base, cattle herding. This discussion will examine the Dinka family traditions, marriage, and religious beliefs. Dinka life revolves around their skill at cattle herding and moving throughout the year to obtain viable grazing land. The Dinka cow is deeply revered and they rely on them for daily milk and blood. Through invasions from the north they have lost many cows and much of their ancestral land. Hundreds of Dinka have been killed or taken as slaves. Numbers of Dinka that no longer live in the ancestral lands, stay involved to make life better for those who remain.

Lilith in History and Literature
Cori Smith
Paul Lindholdt, English

Although the female character of Lilith has become a popular icon for several contemporary women’s associations, her role throughout history has not always been so well received. Originating from Jewish mythology, Lilith was the first wife of Adam who was exiled from the Garden of Eden for refusing to abide by her husband’s wishes. Because of her disobedience, she has often been viewed as a pinnacle of female immorality and sexual seduction. Nevertheless, by examining Lilith’s mythical origins, along with her function in literature, this presentation will investigate how a once-banished woman has evolved into a modern-day emblem for female sensuality and independence.

Lewis, Clark and the Fur Trade of the Far West
Mitch Smithpeter
William Youngs, History

The post-1806 boom of the fur trade and the subsequent development of the West owe in large part to the Lewis and Clark Expedition. Their thorough categorization of the region’s numerous fur-bearing animals, their meticulous description of the region’s geography and their establishment of good relations with several of the Indian tribes all contributed greatly to the subsequent boom of the North American fur trade. With the boom that they triggered came trading posts and expansion, and as a result of that expansion the American West was eventually shaped into what it is today. As there have been many volumes written on the Corps of Discovery experiences, my paper has sought to view their trek and their successes through the greater scope of the North American fur trade and not merely recount the happenings of their expedition. Therefore, the early history of the fur trade, the accomplishments and experiences of the Corps and the post 1806 fur trade are all examined and linked, giving a fairly good before and after picture of the fur trade and the early developments of the American West.
Construction of ITPase Substrate Specificity Mutants
Sondra Spevack
Nicholas Burgis, Chemistry and Biochemistry

During DNA replication abnormal precursor molecules can be incorporated into the new DNA strands resulting in a mutagenic event, or other damage to the cell’s DNA. ITPase is a protein that has the ability to distinguish between abnormal and normal precursor molecules. The substrate specificity of ITPase is very high for a certain subset of abnormal DNA precursor molecules, and it neutralizes them to exclude them from DNA precursor pools. Our project aim is to determine the role of amino acid residue #149 in substrate specificity. This amino acid residue is located in a region that has been found to be highly conserved in mammals. The region determines the substrate specificity for ITPase to distinguish between normal and abnormal bases. We have used a PCR based site directed mutagenesis strategy to create this mutation and analyze the affect on substrate specificity of ITPase by switching out phenylalanine for the smaller amino acid alanine. PCR methodology and recombinant DNA technology is required to examine the effects of this mutation in living cells.

Summertree by Ron Cowen Designed by Rebecca Spining
Rebecca Spining
Donald McLaughlin, Theatre and Film

For Symposium 2010 I designed the show Summertree written by Ron Cowen. I compiled what I believed to be the most important technical aspects, such as the set, scenic, costume, lighting and sound design, going as far as preparing a cueing script for an actual production of this show.

Character Poetry
Victoria Stedham
Rachel Toor, Creative Writing

I will be reading two poems that I wrote last year.

Cloning of Ribulose-1,5-Bisphosphate Gene from Jatropha
Terence Stephens
Prakash Bhuta, Biology

The physic nut, Jatropha curcas, has gained attention because its high oil content makes it a potential source of bio fuel. This plant grows in tropical and sub-tropical areas, is easy to propagate and resistant to drought. Moreover, it can grow in soils unsuitable for traditional agriculture and is not an edible source of food unlike other bio fuels. The goal of this study is to clone and analyze the gene sequences of a key enzyme, ribulose-1,5-bisphosphate (RuBisCO), that carries out the initial rate limiting step of CO2 fixation forming a 3-carbon compound. This product serves as a starting point in oil synthesis. RuBisCO is a bifunctional enzyme consisting of 8 large subunits (LSU) and 8 small subunits (SSU). LSU genes are present on the chloroplast genome whereas SSU are present on the nuclear genome. We will design primers for cloning and amplification of RuBisCO genes by using Primer3 software based on the gene sequence of Arabidopsis. Once amplified, the genes will be sequenced to compare J. curcas with those in GenBank. Identifying and analyzing the gene sequences of RuBisCO in Jatropha species will be the first step towards genetically modifying Jatropha plants to improve its oil production.
“Mechs of Valhalla”
David Stewart
Rachel Toor, Creative Writing

I’d like to read a short piece of fiction titled "Mechs of Valhalla" during the creative work portion of the Symposium. This story is part one of a longer work that is still in progress. The genre is science fiction.

The Campbell House Food
Sydney Stover
Lawrence Cebula, History

The Campbell House Foodway project was researched from a list of all the check records pertaining to the purchase of food by the Campbell House from 1898 to 1924. The PowerPoint shows the connection between the Campbell House and a variety of foodway companies and people in and around Spokane between the late 1890s and early 1920s. The PowerPoint includes a section on research techniques, many detailed photographs, and a foodway timeline of the Spokane area during the Campbell House time period.

Experiences of Parents Whose Children Participate in an Adapted Sports Program
Kurt Stranberg, Kelly Kinzebach, Brandee Stafford, Arman Mohsenian and Brett Hughes
Wendy Holmes, Occupational Therapy
Gregory Wintz, Occupational Therapy

For many children, sports provide exercise, social participation, and skill development. The experiences of youth in sports, along with their parents, have been the focus of much research. However, in the area of adapted sports for youth with disabilities, the experiences of parents have not been well researched. To bridge this gap, the researchers conducted a phenomenological study to understand the experiences of parents whose children with physical disabilities were involved in organized sports. The research methods included six, in-depth interviews of parents from Team St. Luke’s, an adapted sports program. Initial results suggest the following broad themes are integral to the parents’ experience: a) athlete’s increased social participation, b) athlete’s overall experience, c) inter-parental relations, d) team travel, e) coaching methods, f) team’s organization and management, and g) the role of competition. Outcomes of this research will help to increase the awareness and understanding of adapted sports programs and parents’ role in supporting their children in this meaningful activity.

Found and Given
D. Lynnette Tate
Greg DuMonthier, Art

Acrylic Painting on canvas 18 x 24 inches.
Loma Chocolate
Violet Tchalakov
Mindy Breen, Engineering and Design
Greg DuMonthier, Art

Loma Chocolate is a project consisting of the creation and branding of a fictional chocolate company. The project consists of logo design, product packaging for varying sizes of chocolate bars and a series of promotional posters. Loma is centered around the idea of merging travel and photography into the experience of eating a bar of chocolate. Each bar is designed for a different country, with a unique flavor pertaining to that country. This is meant to give the idea of traveling to these countries through the flavors of the chocolate. Each bar also includes a postcard inside with a photo taken with a specific film camera. Each camera is featured on the bar to inspire people to take photos and look at the world through the lens of a camera.

Playing by the Rules: Victorian Society and Lady Gregory
Hannah Teachman
Ann Le Bar, History

Although Lady Augusta Gregory was a product of the Victorian era, and her part within the Irish literary Revival was important, little has been written on her in relation to Victorian social standards. My research looks at the Victorian expectations of women; how Lady Gregory used Victorian cultural restraints to her advantage. Through research of primary and secondary sources I have learned that her lifelong dedication to charity gave her access to the folk histories and native language of Ireland, which were the focus of the Revival. Her responsibility to her family eventually became a duty to her country, leading to her prominent position in the creation of a national theater. My research sheds light on the motivations of Lady Gregory and her work, while adding another layer of knowledge to her role within Victorian society. Through the Victorian ideals of duty and philanthropy learned throughout her life, Lady Augusta Gregory helped create the Abbey theatre.

Auifillo
Sebastien Thibeau
Thomas Mullin, Theatre and Film

Images can inform, entertain or criticize, but also reveal inherent subconscious feelings. "There is one terrible thing in this world, and that is that everyone has their reasons." -- Jean Renoir's The Rules of the Game. 7 mins.
Does *Eriogonum umbellatum* Limit Invasive Plants in Eastern Washington Mima Mound Prairies?
Regina Thompson and Cesar Raudez

Rebecca Brown, Biology

In Eastern Washington prairies, invasive plants such as *Bromus tectorum* (cheat grass) threaten biodiversity. We studied the distribution of invasive plants in Mima mound prairies at Turnbull National Wildlife Refuge in April 2010. Mima mounds are hemispherical sediment deposits overlaying hard substrates; their greater soil depth seems to favor invasive species. *Eriogonum umbellatum* (buckwheat), a common native species, appears to outcompete invasive species on mounds. We determined: 1) Are there more invasive plants on mima mounds than between, and 2) Does *E. umbellatum* limit invasive species? To address these questions, we compared ten between mound sites, ten mounds with *E. umbellatum*, and ten mounds without *E. umbellatum* using 1 m² vegetation plots. In each plot we recorded percent cover of all identifiable species. We used ANOVA to compare percent cover of invasive species among the three treatments. We found that there were more invasive species on mounds than between, and on mounds without *E. umbellatum*. Our results suggest that restoring *E. umbellatum* on Mima mounds may limit invasive species.

A New Species of *Dyscritella* from the Kaibab Limestone of Southern Nevada
Michael Toma

Ernest Gilmour, Geology

Based on more than 70 specimens, this species is distinguished from previously described dyscritellids by the small number of exilazooecia, the number of autozooecia per 2 mm, size range of autozooecia, lack of diaphragms, and ratio of endozoon to exozoon size. The most similar species are *Dyscritella minuta* Morozova, 1986, from southern New Zemlya; *Dyscritella tenuirama* Crockford, 1957, Fitzroy Basin, western Australia; *Dyscritella lucida* Morozova, 1986, Arctic Ocean region; and *Dyscritella savinaensis* Morozova, 1986, southern New Zemlya.

More than 80 species of the trepostome genus *Dyscritella* of the Phylum Bryozoa have been described and named from rocks of the Permian System. Twenty-three of these species have been found in the Artinskian and Kungurian Stages of the Lower Permian. Dyscritellids are extremely cosmopolitan having been described from marine rocks of the boreal, temperate, tethyan, and notal seas in all geographical areas.

A Scene from William Shakespeare's *The Taming of the Shrew*
Lenea Tomoson, Teko Dumoulin and Carolee MacDonald

Jeffrey Sanders, Theatre and Film

We would like to perform Act 4, Scene 5 from *The Taming of the Shrew* by William Shakespeare.
Cheney Merchants Association Spring 2010 Newsletter Service Learning Project

Jennifer Trumbull
Molly Johnson, English

A senior technical writer, a freshman design student, an engineering student, and an editing student with 20 years of professional experience come together to create a newsletter. Sounds like the beginning of a joke that involves walking into a bar? No, this is an English 205 service learning project for the Cheney Merchant’s Association. Over the course of 10 weeks, we interviewed eight different Cheney community members or business owners for articles, designed a professional newsletter format, wrote and edited each article, and finally compiled the final print and web newsletters. Throughout the process, we were able to use each member’s skills to enhance our project. Additionally, we wrote a project proposal to the Cheney Merchant’s Association for approval before beginning and submitted a project update half-way through the quarter. Our class learned how to work with a client to obtain feedback follow project timelines. We used Adobe InDesign CS4 to assemble both the print and web newsletters. Problems associated with this project involved interview scheduling, software compatibility, various writing and design skill levels, and time constraints. Our design and several of our group’s articles were chosen for the final newsletter that is currently being distributed by the Cheney Merchants Association.

From the Iron City to a Human City: A Comparative History of Environmental Disasters in Mariupol, Ukraine and Pittsburgh, Pennsylvania

Petro Tsyukalo
William Youngs, History

The city of Mariupol is among the 12 most polluted cities in the world. There are two largest contributors to the environmental disaster, steel mills Ilyich Works and Azov Steel, leaders of the Ukrainian steel industry. About 80,000 steel workers provide a modest living standard for their families in this poor Eastern European country. Mariupolians pay high price for having the jobs. High amounts of hazardous wastes exceed safety limits. Pollutants shortened lifespans of male inhabitants to 58 years, they cause a very high rate of diseases. The current situation in Mariupol in many aspects looks alike to the former environmental crisis in Pittsburgh. The Pittsburgh experience of restructuring the economy has provided a successful example for other industrial cities including Mariupol. In the research, the author analyzed the history of environmental and managerial problems and traced possible ways to improve the regional ecology.
HPPV Vehicle Design and Construction for the Human Powered Paper Vehicle
Andrew Twitchell, Sandra Rich, Harley Dobson and Jason Krienke
Hani Saad, Engineering and Design

As a graduate from the Eastern Washington Mechanical Engineering Technology program we will be expected to enter the work force ready to develop our own projects and follow them to completion. The Human Powered Paper Vehicle contest is a perfect way to test our skills that we have developed during classes. During this project we designed, produced an advanced truss style vehicle made almost completely out of paper products. Our HPPV vehicle tested our research, design, and manufacturability skills to our upmost limit. First we had to develop an innovative vehicle that had not been attempted in a prior competition (we are trying to win the most innovative design award). By choosing a truss frame recumbent tricycle we achieved this goal. In prior races teams had used other tricycle designs but the recumbent tricycle had yet to be created. Second we had to design a vehicle that could be manufactured almost completely out of paper products, keeping the non paper weight to a bare minimum. To effectively manufacture our vehicle we had to research materials that were both strong, made in a size and shape that was necessary for the design and made from a paper product. Overall, the final product was the combined effort of mechanical engineering, design and manufacturing knowledge that simulated a real world situation with engineering challenges that we will face after graduation.

Cooling Towers
Andrew Twitchell and Jesse Stevens
Hani Saad, Engineering and Design

Cooling towers are used in a wide variety of applications. It is important for students to understand the thermodynamic principles of cooling tower applications. Cooling towers are essential in many different applications such as nuclear power plants and heating, ventilation and air conditioning systems. For this presentation, we are going to discuss our main objective, which is for students to learn about the thermodynamic properties of cooling towers and the different uses for them.

“Chauncey's Fire”
Joe Tynan
Rachel Toor, Creative Writing

It was fight night at the Coeur d’Alene Casino about eight years ago. His name was Chauncey. He was a doughy underdog boxer who broke through everyone’s prejudices with a competitive fire that has been burned into my memory ever since. This is a nonfiction piece about how the crowd and Chauncey’s opponent got a lesson in how we should never judge a person by outside appearances, especially when there are punches involved.
"Attributes of Resiliency": How ESL College Writers Respond to Music and Demonstrate Future Orientation
Dan Ubaldo
LaVona Reeves, English

When ESL college writers respond to American music, their journals indicate that they are applying "Attributes of Resiliency" (Pipher, 2002) to their lives. This oral presentation focuses on writers' responses to the song "You'll Never Walk Alone." In responding to the music, they demonstrate resiliency in their academic and future orientation, and display multiple intelligences (Gardner, 1999) in their journals. Ubaldo presents the literature on "future orientation" and analyzes learners' journals, applying Gardner's musical and intrapersonal intelligences.

Othello: Act 4, scene 3
Alicia Uecker and Jessica Johnson
Jeffrey Sanders, Theatre and Film

In this scene from Shakespeare’s famous tragedy, the relationship between Desdemona and Emilia is brought into focus during a brief moment of calm before the storm, which speaks more of what is to come by what is left unspoken.

The Way You Wear Your Hat
Kelsey Vance
Tom Askman, Art

Acrylic on canvas

Did you Know".tHat;,(DanDElionS)) ArE* ((BeautIFul))*.?
Ashley Vaughn
Tom Askman, Art

Acrylic paint on canvas
Hooked on Louis: A Comparison of Louis XIV and Captain James Hook: Louis' Image in Modern Society
Lindsey Vercruyssen
Barbara Miller, Art

J.M. Barrie’s Peter Pan has captivated audiences around the world with its imagery and characterization, leading to extensive research into the varying aspects of the “boy who never grew up.” But what of his pirate nemesis? Captain James Hook is many things and Barrie drew from a variety of characters from his own day and past to create this notorious pirate. But who have Disney, Spielberg, and Hogan drawn from for their characters? King Louis XIV is a prime character in history for his absolutist government to his patronage of the arts. Disney and the other directors deviated from Barrie’s intended inspirations and created a character in greater likeness to Louis’ in appearance, authority, and setting. Louis’ resurgence as Captain Hook in American popular culture gives more understanding in how Louis is viewed as a historical figure.

Seeing and Interacting with Sound- Oscillo-Tube Science Exhibit
Justin Wagner, Adam Huson, Nathan Cutler and Dan Niehenke
Claudio Talarico, Engineering and Design
Min-Sung Koh, Engineering and Design

What does sound look like? Why do some noises sound different than others? These are just some of the questions the Oscillo-Tube, a project in development for Mobius Science Center of Spokane, Washington, will be able to answer. The Oscillo-Tube project is a visual representation of the waves that make up sound which will be displayed using a custom laser and optics system. It displays these waves on a tube that is viewable from 360 degrees so the unit can be placed in an open area. The user can select a sound source and then use a mixing station to see how modifications in amplitude and frequency change the signal. While speakers (or headphones) play the altered sound, the same wave used to create the sound is displayed on the tube. The result is a 360 degree visual representation of sound waves. Throughout the design process, constant consideration ensures that the exhibit not only illustrates physical concepts in a technical and accurate manner, but also captivates the broad range of audiences.

Case Study: A Female Basketball Player with Bilateral Achilles Tendon Ruptures
Carla Walter, Hirotomo Mikami and Jennifer Dawson
Jeffrey Kawaguchi, Physical Education, Health and Recreation

The acute rupture of an Achilles tendon is one of the most severe acute muscular injuries in the lower leg. The injury commonly occurs after a sudden forceful plantar flexion of the ankle while the knee is extended. This mechanism is common in jumping or accelerating during a sprint. The rupture can be partial or complete, which helps determine the decision for operative or non-operative repair. Post-operative rehabilitation procedure is commonly characterized by four to six weeks of immobilization with a progression into range of motion and strengthening exercises. Return to full, unrestricted activity commonly occurs approximately six months post-operation. This study highlights an individual female basketball athlete’s progression from initial injury through return to division I competition after sustaining bilateral Achilles tendon ruptures.
The GOAL Project: A Helping Hand in Reentry
Tracey Waring
Robert Zinke, Urban and Regional Planning

Ex-offenders are one of the most overlooked populations in the social service arena. Often facing multiple barriers to success, the George W. Bush administration called on states and faith-based organizations to develop reentry programs in 2005, and signed the Second Chance Act in 2007. With the recent economic downturn, the State of Washington has cut their reentry appropriations by half and requested community- and faith-based organizations step in to provide programming. The purpose of the research project was to conduct a needs assessment to ascertain which types of services are needed by offenders transitioning back into the community and what barriers they face in Spokane County. Utilizing a mixed method of individual interviews and focus groups, 35 Community Correction Officers, ex-offenders, and community stakeholders participated to offer their insights. The information gathered is being incorporated in program development of the GOAL Project Resource Center.

William James: A Norse Concept of the Afterlife
Andrew Webb
Kevin Decker, Philosophy

This article investigates the claim of parallels between the theistic philosophies of William James with the polytheistic Norse mythologies regarding the state of the dead, and events in the after life. The parallels are the correlations between Jamesian variable “careers” in the after life, including conditional immortality and reincarnation with a Norse type of multiple destinations including a type of mortal immortality - meaning an after life that can experience a second death, as well as a unique type of reincarnation. There are also parallels regarding the effect our actions have on the after life and reincarnation. This article was originally part of a larger paper that included parallels with Jamesian theistic pluralism and Norse polytheism. It has been trimmed down to conform to the Symposium time constraints.

First Victims: A Proactive Criminal Justice Program to Prevent Sex Offences
Elizabeth Welch
Dennis Anderson, Psychology

The prevention of sexual offences has been an area of interest for many years. At the moment the Criminal Justice System prevents sexual offences from occurring by placing already convicted sexual offenders into therapeutic programs. The following is a detailed examination of sexual offenders in society and in the literature. The literature indicates that these individuals suffer from high rates of insecure attachment and associated disorders (e.g. anxiety, rejection sensitivity, etc). It is obvious that insecure attachment should be the main focus in regards to treatment and prevention of sex offenders. Following the sex offender examination is an outline indicating the direction of a future proactive program that will be aimed at treating people who suffer from adult attachment disorder and are not convicted sex offenders in order to prevent a sex offender from developing.
Integration and Process in Frondizi and Teilhard: A Speculative Axiology Out of Frondizi Via Comparison
Ryan Weldon
Terrance MacMullan, Philosophy

Frondizi wishes to establish the reality of the self in order to lay a proper foundation for the discussion of value. I stipulate, however, that value does not happen in a vacuum. It involves real people with real experiences, wants, and needs, who are engaged in real situations. Frondizi keeps his scope limited to the self and does not project the possible values that could reasonably proceed from his construction of self. Values, however, particularly social values, can be derived from his discussion of the self, especially when the process theory underlying his discussion of self is compared to the process metaphysics of Teilhard de Chardin. The two philosophers possess significant points of contact between their theories, and those points of similarity provide fertile ground for axiological synthesis and projection when compared to their differences in scope, and their differing emphases on multiplicity and unity.

First Foods of Salish People
Cree Whelshula
Sarah Keller, Anthropology

Salish people all have stories about how their first foods came to be. There is a reason why and when foods are eaten and harvested. Salish legends shine a new light on traditional foods and give people a reason to be thankful. Research from interviews with Salish elders will be presented from a tribal perspective. The content will include, but is not limited to, everyday use of food, ceremonial use, and taboos through legends and oral teachings.

Oxime Antidotes for Organophosphorus Nerve Agent Poisoning
Andrea Williams
Travis Denton, Chemistry and Biochemistry

Organophosphorus (OP) nerve agents, such as Sarin, are used as chemical weapons because they are extremely lethal, even at low doses, unless the affected individual is quickly treated by an antidote. OP nerve agents work by inactivating acetylcholinesterase (AChE). AChE is the enzyme responsible for the basal metabolism of the neurotransmitter acetylcholine. OP nerve agents form a covalent bond with the hydroxyl “R” group of a serine residue within the active site of AChE, which causes a build up of acetylcholine in the synaptic cleft. If AChE is unable to metabolize acetylcholine, then continuous synaptic firing occurs which causes seizures and the loss of control of bodily functions. Oximes have been shown to restore AChE activity by regenerating the active site that has been inhibited by OP. The goal of this project is to synthesize a library of lead driven oximes to be assessed as antidotes for poisoning by OP nerve agents.
"Kitsunetsuke" and "Sirena" (Two Pieces of Poetry)
Lindsay Williams
Christopher Howell, Creative Writing
Rachel Toor, Creative Writing

I will be reading two pieces of short poetry, both with a focus on magical realism. The first, titled "Kitsunetsuke," is based on Japanese folk tales about the fox spirit. The second, "Sirena," has its origin in Chamorro folk tales about a young girl who is cursed with the tail of a fish.

Creative Writing
Bailey Wolff
Rachel Toor, Creative Writing

I will read a piece of creative writing.

Tuareg Salt Caravans of the Sahara
Rahel Wondimu, Kelsey Garason and Christina MacMurphy
Jerry Galm, Anthropology

This presentation examines the Tuareg people of the Sahara, an Islamic matrilineal society. The Taureg are one of the last peoples in the world who continue the practice of camel caravanning, which remains the focal point of their economic system. Their caravanning routes follow ancient trade routes and take them through thousands of miles of harsh desert conditions. The main objective of these journeys is the acquisition of salt. Salt has always been a precious commodity, going back thousands of years, because it is essential in the diet of people and livestock. Today, the introduction of trucks and the combined forces of globalization are threatening the sustainability of this ancient, traditional venture.

Creative Nonfiction
Alicia Wyborny
Rachel Toor, Creative Writing

A creative nonfiction essay on life and food.
The Transformational Process of Identification: A Message Model for Volunteer Recruitment

Joy York
Jeffrey Stafford, Communication Studies
Patricia Chantrill, Communication Studies

Volunteers satisfy important needs for organizations and communities in the U.S., and are valuable to the functioning of society. However, the challenge many nonprofit organizations face is the recruitment of this valuable workforce. To address the challenge of volunteer recruitment, I discovered connections in the research on volunteerism, transformational leadership, and Burke’s rhetorical strategy of Identification and, from this theoretical foundation, created a practical model for recruitment message construction called the Transformational Process of Identification (TPI) model. The research questions of this thesis were: RQ 1) how effective is the Transformational Process of Identification model in constructing persuasive recruitment messages? RQ 2) Were recruitment messages with all of the TPI markers more persuasive than messages with fewer TPI markers? The working hypothesis was that a recruitment message that included all of the TPI model markers would be the most persuasive to potential volunteers when compared with three other recruitment messages that contained fewer TPI model markers. To address the hypothesis and answer the research questions, I conducted a discourse and content analysis to establish the presence of TPI markers in the messages, surveyed 242 potential volunteers to evaluate the degree of persuasiveness of four recruitment messages, and finally, surveyed public relations professionals for specific feedback about each recruitment message and what could be done to improve them. Findings from these analyses indicate that the proposed TPI model is effective for the creation of persuasive volunteer recruitment messages.

Environmental Geology as a Factor in Middle Eastern Conflicts: Water Accessibility and Management in the Jordan Basin

Sarah Yount
Robert Sauders, History, Anthropology

While ethnic background, religion, and politics all play a more public role in the Middle East’s conflicts, geologic and environmental issues contribute greatly to the conflicts and violence in the area. Both in the media and the public consciousness, oil reserves are the geologic features that most frequently come to mind and are associated with the Middle Eastern conflicts. Water, while not as widely discussed, plays an equally important role. To prove this point the issues of water accessibility and management in the Jordan Basin will be examined.
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