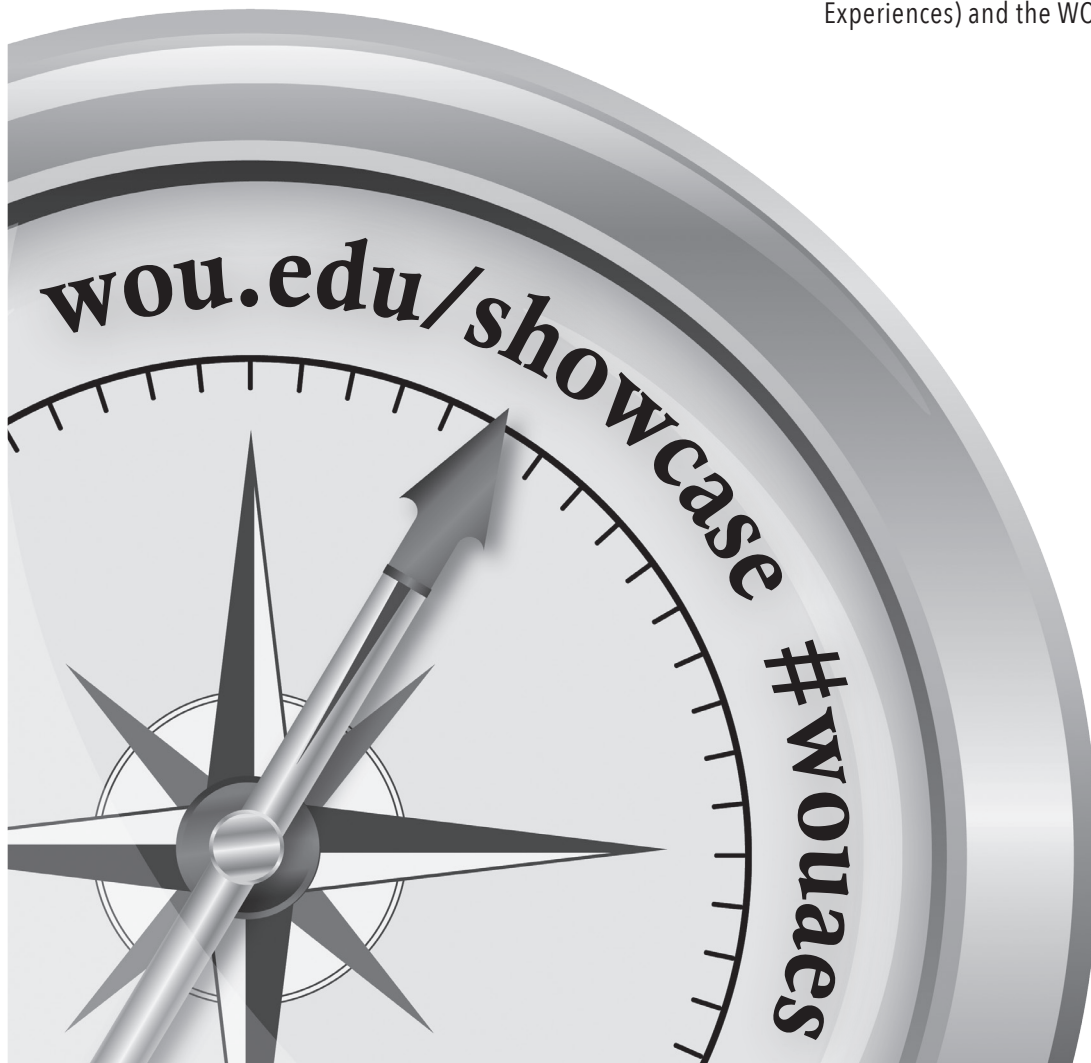


11<sup>TH</sup> ANNUAL  
**ACADEMIC  
EXCELLENCE  
SHOWCASE**

THURSDAY · **MAY 26** · 2016

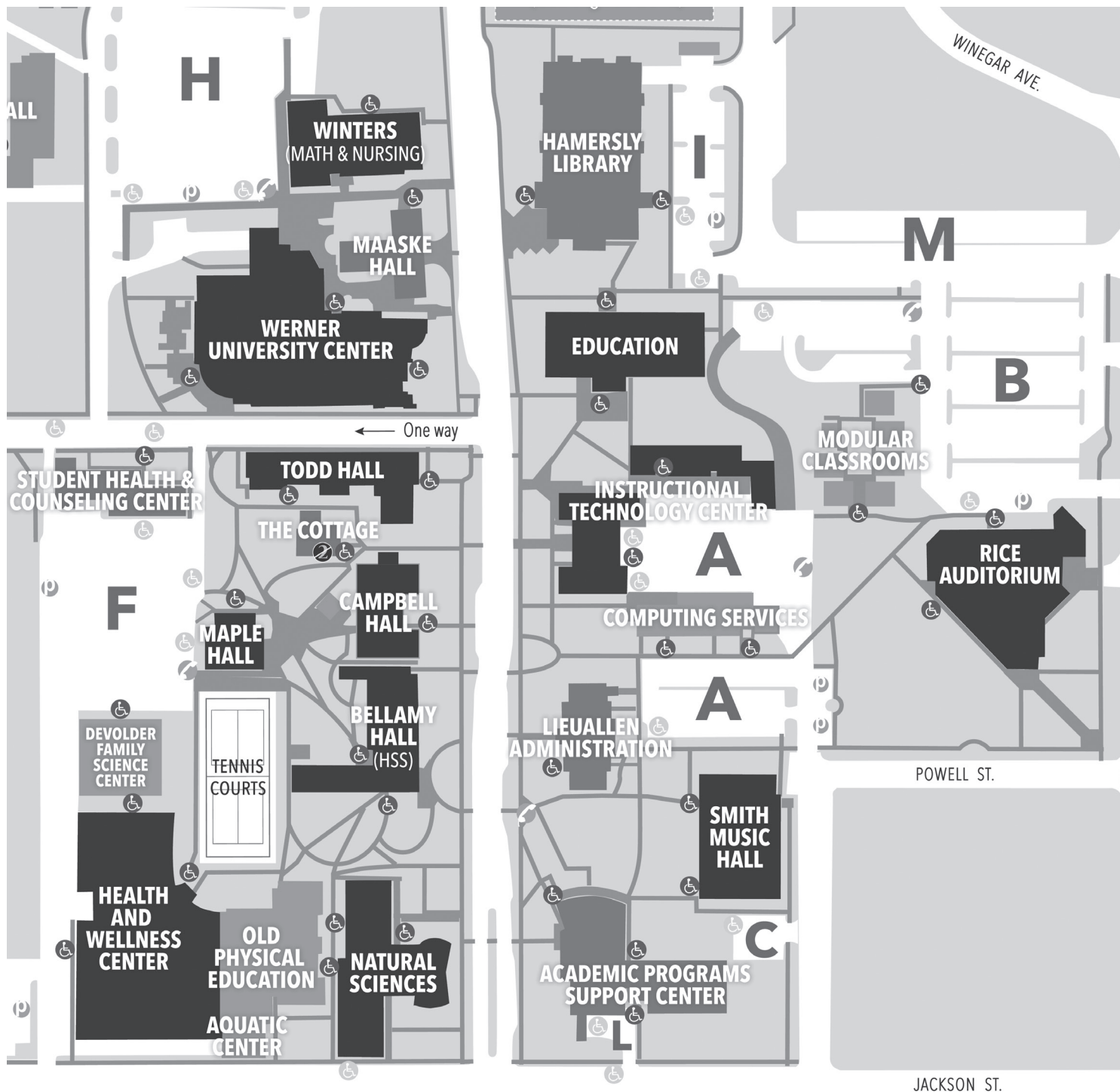
A joint project of PURE (Program for Undergraduate Research Experiences) and the WOU chapter of Phi Kappa Phi

**pure**  
Program for Undergraduate  
Research Experiences



If you have a disability that may require some accommodation in order to participate in a WOU activity, please notify the Office of Disability Services: 503.838.8250 or [ods@wou.edu](mailto:ods@wou.edu) at least 72 hours in advance.

# INSET OF CAMPUS MAP



## AES EVENTS WILL BE HELD IN THE FOLLOWING BUILDINGS/ROOMS:

Bellamy Hall (HSS 235)

Campbell Hall (CH 101)

Education (ED 204/205 and 217)

Peter Courtney Health and Wellness Center (HWC 203)

Instructional Technology Center (ITC 211)

Maple Hall (MH)

Marc "Ted" Winters Building (MNB 104)

Natural Sciences (NS 101)

Rice Auditorium (RA 113)

Smith Music Hall (SH 121 and 122)

Werner University Center (WUC):

Calapooia Room

Columbia Room

Ochoco Room

Pacific Room

Santiam Room

Willamette Room

# ACADEMIC EXCELLENCE SHOWCASE

THURSDAY · MAY 26 · 2016

## Proceedings of the 2016 Academic Excellence Showcase

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## A message from Western Oregon University President Rex Fuller

This year's Academic Excellence Showcase marks its eleventh year anniversary. This long-standing tradition is a fundamental aspect of Western's commitment to engaged learning. The presentations by our students provide strong evidence that Western Oregon University is, first and foremost, a university dedicated to student learning. At Western, students are encouraged to explore the practical application of their studies under the guidance of faculty by engaging in professional-level research. Some of our students whose projects are abstracted in this publication will go on to present their work before state, regional or even national conferences. Some will be published in WOU's PURE Insights, a competitive journal of student work. Still others will be presenting work that has become the basis of a lifetime pursuit and passion.

Whatever comes after the Academic Excellence Showcase, these students are the embodiment of a thorough education that stimulates lifelong learning and exploration. I congratulate our faculty who motivate and engage our students to take their classroom experience on a journey that transcends the boundaries of the traditional classroom.

The Academic Excellence Showcase is one of the university's highlights during the academic year. I want to thank the students who have chosen to share their work with us, and the faculty for nurturing and guiding the pursuits of our students. Western Oregon University commends your dedication, and we are proud of all you do.

## A message from Vice President of Academic Affairs Stephen Scheck

Today's Academic Excellence Showcase provides compelling snapshots of the academic discoveries that take place everyday at WOU -- on stage, in the lab, at the library or in the field. We are a place where the faculty encourages students to view learning as a dynamic process that extends beyond the traditional classroom, where students are urged to pursue their interests, and to commit to a quest of creativity and inquiry.

Today's showcase is vibrant evidence of that intellectual and personal growth, illustrating the richness in diversity of scholarship. It is a pleasure for me both to acknowledge the efforts of our students presenting their work today and to convey my appreciation to our faculty for its support of our students. I strongly encourage those students participating today as observers to become involved and to take advantage of being at WOU where professors are eager to mentor you in your own engagement of discovery



*Don't want to carry around a proceedings  
from session to session?*

For an electronic showcase schedule and to  
download events to your mobile device or  
calendar, go to:

[http://digitalcommons.wou.edu/aes\\_event/2016](http://digitalcommons.wou.edu/aes_event/2016)

## MORE EVENTS CELEBRATING STUDENT EXCELLENCE:

### Phi Kappa Phi First Year Writing Award

These awards are given to students, both domestic and international, who have produced outstanding writing projects in WR 115 and WR 135.

8:30 a.m., WUC Willamette Room

### Health and Exercise Science Outstanding Student Award Reception

Outstanding majors in Community Health and Exercise Science are recognized and celebrated. Selection criteria include GPA, professional development and service, community service, and leadership experience.

11:45 a.m., Peter Courtney Health and Wellness Center, HWC 301

### "I can be..." anything? Findings from and media interpretations of an experiment using Barbie and Mrs. Potato Head

In this keynote address, Dr. Sherman will present research showing that girls' career aspirations are negatively impacted by gendered toys (e.g., Barbies).

1 p.m., WUC Columbia Room

### Maurice Undergraduate Initiative: \$5,000 Award Presentation

2 to 3 p.m., Werner University Center (WUC) • Ochoco Room

Please join us at this reception to celebrate the Maurice Challenge Competition, including the presentation of the \$5,000 award to the student winner of the 2016 competition, followed by a brief overview of the winning project by its students. Learn more about the competition, its student winners, and how more students might participate in the future. This year's finalists and their projects are: Ashley Baxter, #BelieveSurvivors, Johnathan Hall, Sex Card, and Ranjit Kayastha, Prevent Mass Shootings

This unique competition offers WOU students a rare opportunity to win an unrestricted cash award based on their ability to define a problem of importance to them, and to pursue solving that problem without restrictions on their creativity, innovation, or execution. Ultimately, the competition intends to help students broaden their knowledge about themselves and their abilities, as well as learn more about the global community. The winner(s) are chosen by the committee based on the a) innovation, design, and execution of the project over its implementation, b) depth of knowledge gained through the student's project, c) impact of the project on the campus and community, and d) the quality, clarity and appropriateness of the analysis report and presentation to the committee.



## A Message from the Western Oregon University Chapter of The Honor Society of Phi Kappa Phi

Western Oregon University's chapter of Phi Kappa Phi is pleased and honored to provide ongoing support to the university's important tradition of recognizing and celebrating student excellence through the 2016 Academic Excellence Showcase.

Founded in 1897, Phi Kappa Phi (PKP) is the nation's oldest, largest and most selective all-discipline honor society. PKP inducts approximately 30,000 students, faculty, professional staff and alumni each year. The Society has over 300 chapters ranging from Maine to the Philippines and from Alaska to Puerto Rico. Membership is by invitation only to the top 10 percent of seniors and graduate students and 7.5 percent of juniors.

Faculty, professional staff and alumni who have achieved scholarly distinction also qualify. WOU's chapter was founded in 1979 and held the first initiation on May 9, 1980. For over 30 years, Phi Kappa Phi - with the support of its members, as well as faculty and staff across campus - has sponsored academic excellence on campus, celebrating our students' outstanding research and creative endeavors.

CO-SPONSOR OF THE 2016 ACADEMIC EXCELLENCE SHOWCASE SHOWCASE



## A message from the Western Oregon University Program for Undergraduate Research Experiences

The Program for Undergraduate Research Experiences (PURE) began in 2004, when a group of faculty formed a task force to examine the state of undergraduate scholarship at Western Oregon University. We were impressed by what we saw happening across the campus. We recognized that the research experience takes many forms - academic papers, exhibits, posters, laboratory investigations, performances, and service learning projects, to name just a few.

The PURE task force identified numerous ways to help facilitate and enhance undergraduate research experiences at WOU. One recommendation—to facilitate greater participation by the entire campus in celebrating our students' accomplishments—resulted in Academic Excellence Day.

The Honor Society of Phi Kappa Phi, which had organized an Academic Excellence event for a number of years, partnered with PURE to sponsor the annual Academic Excellence Showcase. With our combined resources and planning committee, we developed a campus-wide event that has become a hallmark of the outstanding undergraduate experience offered at WOU. Again this year, the campus community has responded enthusiastically to the call for participation, as evidenced by this impressive Proceedings volume. The Faculty Senate has encouraged faculty to cancel classes so students may attend and present at the showcase.

Nearly 100 faculty and staff members from across campus have volunteered their time and energy to serve as session chairs and faculty sponsors. As a result of their efforts, more than 400 students are scheduled to present at this year's showcase. We are very proud of their success and are honored to be a part of the showcase. We hope you will join us in attending as many sessions as possible and congratulating students on their outstanding scholarship.

CO-SPONSOR OF THE 2016 ACADEMIC EXCELLENCE SHOWCASE SHOWCASE



**Maurice Challenge Committee:** Daryl Thomas, chair; Bob Hautala and Patricia Flatt, faculty members; Tyler McAfee, Amanda Short, Kaylah Stevens, Ruby Tidwell, and Natalie Wallace, student members; Linda Stonecipher and Tommy Love, staff members.



## Natural Sciences & Mathematics Student Recognition Night

This is a celebration event to recognize the accomplishments of our students in the area of Natural Science and Mathematics.

5:30 p.m., WUC Willamette Room

## WOU Percussion Ensemble with visiting artists from the University of Texas Rio Grande Valley

Members of the WOU Percussion Ensemble present a concert with special guests Dr. Mark Ramirez and student musicians from the University of Texas Rio Grande Valley. Program will feature collaborations between students as a means of crossing cultural boundaries and celebrating our shared percussive and musical heritage.

7:30 p.m., Smith Recital Hall

Far left: Undergraduate students Maria Vargas and Sylvia Garcia won for their project, a network named L.E.A.D., (Learning, Engaging, Achieving, Diversifying). Honorable mention: Nathaniel Dunaway, for his entry: Student Short Film Festival, and Jessica Yarely Flores, for Positively Impacting the Lives of Others. (2104). Alfred Maurice with challenge winner Joshua Salvador, who won for his project *Food Waste and Food Insecurities*. (2015)

# ANTHROPOLOGY

## ANTHROPOLOGY SYMPOSIUM

Session chairs: Robin Smith and Isidore Lobnibe  
Werner University Center (WUC) Willamette Room

### PRESENTATIONS

1 to 1:30 p.m., WUC Willamette Room

**Jeanne Kate McCaslin**

***Impacts of Language Shift among Young Mexican-Americans: Navigating Two Linguistic Worlds in Polk County, Oregon***

In the United States, most people live in two linguistic worlds. Among Latino Immigrants, Spanish may be spoken at home with English dominating the majority of their outside domains. What challenges do young Latinos face in their daily lives as they attempt to navigate two worlds and maintain a clear sense of cultural identity? In this proposed research project I investigate Spanish language shift among young Oregonians with Mexican heritage, focusing on second generations. Since language and culture are intimately linked, emphasis will be placed on the connections between them in order to understand how this shift impacts cultural identity and influences cultural practices. Drawing on oral interviews and participant observation, factors influencing language shift among young Mexican Americans will be analyzed to contribute to current debates on language and culture.

Faculty sponsor: Isidore Lobnibe

1:30 to 2 p.m., WUC Willamette Room

**Jessica Mylan**

***Between Tourism and Habitat Protection: Understanding Ecotourism in Costa Rica***

During the summer of 2016 I plan to attend a School for Field Studies field school in Costa Rica. The focus of this program is to allow students to develop their own research. Research will address issues Costa Rica is currently dealing with in their efforts to maintain stable sustainability while enduring increasing urban development due partly to ecotourism. During my field research I will explore the effects of ecotourism on the conservation efforts established in Costa Rica, focusing specifically on the social, economic, and environmental impacts of integrated waste management in Monteverde, Costa Rica. Within this broader research category, I will look at tourists and their interactions as they engage with the environment. I plan to utilize structured interviews and participant observation. I seek to discover what they know about conservation, the importance of recycling and protecting the natural habitat they are visiting, and their behaviors associated with the environment. My research will align with the overall goals of the program as I hope to use the data collected to improve waste management efforts in the Monteverde region in Costa Rica.

Faculty sponsor: Isidore Lobnibe

2 to 2:30 p.m., WUC Willamette Room

**Zairet Solis**

***Puerto Rico: Increasing Emigration and Language Dynamics in the Educational System***

In the past 30 years, the United States has received an influx of Puerto Rican immigrants; last year, Puerto Rican populations in the U.S. were 56 percent higher than in the 1980s. With many problems plaguing Puerto Rico, have new waves of emigration affected the way that Puerto Ricans perceive language and education? How are educational, socioeconomic,

and demographic factors shaping migration of young adults to the United States? My proposed research seeks to address this question by investigating how cultural identity, language, and education influence students' decisions to stay or leave their native land. By asking both students and faculty of the University of Puerto Rico in Rio Piedras, my aim is to understand why vast numbers of Puerto Ricans are leaving their homeland. Data will be collected through participant observation and oral interviews with students and professors on their views about how cultural identity, language and the education system are affecting the ongoing migrations of Puerto Ricans.

Faculty sponsor: Isidore Lobnibe

### BREAK

2:45 to 3:15 p.m., WUC Willamette Room

**Aiden Fischer**

***The Influence of Hops in Independence and Polk County: A Museum Story***

During my internship at The Heritage Museum of Independence, I learned how to best collect, preserve and display artifacts and documents that best represent daily life after 1840 in Independence and Polk County. I also became aware of the spirited and varied history that makes Independence unique. Today I will share the story of how hops, the bittering additive in beer, earned the small town of Independence the title "Hop Capital of the World." Highlights of this story include a diverse but segregated workforce, natural disasters, a weakening economy, and a resilient community. Several historic festivals had originally celebrated the end of the hop harvests in migrant camps. Now, Independence celebrates its culture and history with the Hop and Heritage Festival. Small museums contribute to community solidarity through the use of artifacts and documents to narrate local stories so they are not forgotten. Every community has a story to tell. I invite you to visit the Heritage Museum of Independence and hope the intriguing stores of Independence and Polk County have inspired you to learn more about your own hometown.

Faculty sponsor: Robin Smith

3:15 to 3:45 p.m., WUC Willamette Room

**Joshua L. Henderson**

***Digital Technology and a New Era for Archaeology: Cooper's Ferry, Idaho***

The field of archaeology has a longstanding set of traditional research methods. I argue in favor of implementing a new series of digital and three dimensional (3D) methods that will not only change how archaeology is conducted, but will open the door to invaluable new information that was previously inaccessible. This project draws on my experience at the 2015 Cooper's Ferry field school conducted by Oregon State University. OSU is on the cutting edge of these new digital technologies, as they aim to discover new information about Western Stemmed Tradition peoples that thrived in the Great Basin around 13,000 years ago. The responsibility of our discipline is to tell the whole story of these early Americans. I argue that this can only be done with the use of digital and 3D technologies, as this will expose new information and further preserve the integrity of the sites and collections we study.

Faculty sponsor: Robin Smith

## ART

ART & VISUAL COMMUNICATION DESIGN STUDENT PORTFOLIO  
PRESENTATIONS

Session chairs: Jen Bracy and Jodie Garrison  
Campbell Hall (CH) 101

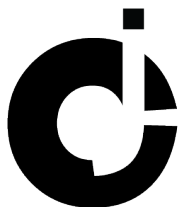
### PRESENTATIONS

11:15 to 11:30 a.m., CH 101

**Jeff Collet**

***Add Your Light to the Sum of Light***

Faculty sponsor: Jennifer Bracy



11:30 to 11:45 a.m., CH 101

**Kaylyn Hill**

***Portfolio***

Faculty sponsor: Jennifer Bracy



11:45 to 12 p.m., CH 101

**Rose Winslow**

***Portfolio***

Faculty sponsor: Jennifer Bracy



### BREAK

12:30 to 12:45 p.m., CH 101

**Julianne Belden**

***Studio Art Portfolio Presentation***

Faculty sponsor: Jodie Garrison



12:45 to 1 p.m., CH 101

**Jennifer Hagle**

***Studio Art Portfolio Presentation***

Faculty sponsor: Jodie Garrison



1 to 1:15 p.m., CH 101

**Anna Olivia Funk**

***Studio Art Portfolio Presentation***

Faculty sponsor: Jodie Garrison



## BEHAVIORAL SCIENCES

BEHAVIORAL SCIENCES POSTER SESSION I

Session chair: Jaime M. Cloud

Werner University Center (WUC) Pacific Room

### POSTERS

8:30 to 10:30 a.m., WUC Pacific Room

**Karis J. Alston**

***Age in Relation to Endorsement of the Honeymoon Effect***

The current study sought to investigate whether perceptions of the honeymoon effect are consistent with the findings pertaining to it. The present study also sought to determine if perceptions of the honeymoon effect are intensified with advances in age. It was predicted that participants who read the vignette of the couple in a relationship for a shorter period of time would perceive the couple as being happier than participants who read the vignette of the couple in a relationship for a longer period of time. It was further hypothesized that younger participants (18 to 20) would perceive couples in both vignettes as being happier than would older participants (25+). An equal number of participants in each age group were randomly assigned to either the shorter or longer relationship vignette and asked to rate the perceived happiness of the fictitious couple. Data will be evaluated using a 2x2 Analysis of Variance. Inferences of the forthcoming results as well as directions for future study will be discussed.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Madeline Bode**

***Sex Differences in the Effect of Co-Witness Information and Suggestibility***

In past court cases there has been a strong reliance on eyewitness testimony. However, in recent years it has been shown that eyewitness testimony is not always reliable. Memory is malleable and can be affected in many different ways, one of which is by exposure to information from other witnesses, or co-witness information. The current study aimed to examine the effect that gender has on recall and suggestibility from co-witness information. It was predicted that females would have higher recall accuracy than males, that exposure to incorrect co-witness information would reduce accuracy of recall, and that knowing what co-witnesses remembered from an event would affect females' accuracy of recall more strongly than males'. This study used a between-subjects design where participants were instructed to watch a video of a crime and complete a questionnaire about the video. One version of the questionnaire only had the questions. The other had additional information about the answers of other supposed participants in a column next to the questions. Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Crystal De Leon**

***Dogs and Mood Changes***

It has been theorized that having a dog can change an individuals' mood. The link between dogs and mood is important because mood is the state of one's emotions and feelings, which can influence how individuals cope with stress, interact with others, make decisions, and function. The aim of this study was to measure the effect dogs have on mood based on gender



and it was predicted that, between men and women, a picture of a dog would have a stronger influence on women's mood than men's. It was also predicted that a picture of dog would be more effective on mood than a picture of flowers. Men and women were presented with a picture of a dog or a picture of flowers. Both genders were asked to fill out an emotions survey based on their feelings after viewing the picture. There were no significant findings that mood is influenced due to a picture of a dog nor due to a picture of flowers.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Emily Fleming**

***The Effect of Extramarital Affairs and Attractiveness on Spouse Likability***

The current study sought to examine attractiveness of those involved in extramarital affairs with perceived likability to predict that (1) men will be seen less likable when they are involved in an affair with a woman who is less attractive than their wife (2) spouses involved in an affair will be seen as less likable when involved with someone who is more attractive than their spouse rather someone who is less attractive. Participants were presented with a story of a married couple where either the husband or wife was cheating with someone less or more attractive than their own spouse. All participants were asked after reading the story to rate their perceived likability of the spouse who was involved in the affair. Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Samantha Valeria Garcia**

***Attractiveness Levels Between Same Race Targets***

Attractiveness levels in a partner could be due to familiarity of the person's race. As a result, studies have shown those who are of a certain race, are attracted to people of the same race because of their similarities in appearances, cultures, and social standards. I examined two different predictions involving same-race and gender attractiveness levels. White and Latino(a) participants were randomly assigned to rate the attractiveness of a White or Latino(a) model of the opposite sex on a Likert scale of 1-10. The data of this study will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Bethany K.F. Jensen**

***The Influence of Mood Upon Social Perception***

It was hypothesized that moods manipulated (positive, negative, or neutral) would be congruent with perception. Participants included 24 females and 11 male university students ( $M=24$ ,  $SD=7.23$ ). Participants were randomly assigned to 1 of 3 mood manipulations. Subsequently, participants via questionnaire evaluated perception of positive, negative, and neutral behaviors. There were differences in perception of positive ( $M=16.46$ ;  $SD=5.28$ ), negative ( $M=12.62$ ;  $SD=5.85$ ), and neutral behaviors ( $M=14.04$ ;  $SD=4.31$ ). There was a significant interaction between perception of behaviors and mood manipulation, mixed  $F(4, 58)=3.048$ ,  $p=.024$ ,  $\eta^2=.174$ . The results provide support for the theory that positive and neutral moods can affect social perception.

Faculty sponsor: Chehalis Strapp

8:30 to 10:30 a.m., WUC Pacific Room

**Nan Liao**

***The Influence of Tempo Speed Changes and Music Context on Learning and Recall***

This study examined how changes in tempo speed affected arousal and how these changes in both tempo and arousal affected context-dependent memory. It was hypothesized that participants exposed to music with the same tempo speeds in both the learning and recall stages of the experiment would have better recall performance than those exposed to music with different tempo speeds during the two stages of the experiment. It was also hypothesized that participants exposed to music with faster tempos would report higher levels of arousal, which would then be associated with higher levels of recall performance. The hypotheses were not supported by the results, but there still were slight differences in the results. The mean of arousal self-evaluation was slightly higher in the slower tempo condition than in the faster tempo condition, and the mean of recall performance in the first recall task was slightly higher in the slower tempo condition than in the faster tempo condition. Future research could combine more than one element of music to examine the effect on learning and recall.

Faculty sponsor: Ethan McMahan

8:30 to 10:30 a.m., WUC Pacific Room

**Kayla Robertson**

***The Effects of Media Images and Gender on Self-Esteem***

This current study utilized the social comparison theory as a way to broaden understanding on how media images of ideal body types affect levels of self-esteem in men and women. It was predicted that (1) women would report having lower levels of self-esteem than men, (2) media images would have a negative impact on levels of self-esteem, and (3) media images would negatively impact self-esteem in women stronger than in men. Participants placed in the treatment condition were shown an image of the same sex, which was prorated to be attractive. In contrast, participants placed in the control group were asked to view an image prorated to be neutral, regardless of sex. Finally, both groups were asked to complete a self-esteem survey. Data collected from this study will be analyzed using a 2x2 Analysis of Variance and conclusions from these findings will be discussed in the future.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Amanda Schmaltz**

***The Effects of Tattoos on Perceived Competence in Traditional and Non-Traditional Students***

The purpose of the current study was to integrate prior research on tattoo perceptions with research on the general shift occurring in current workplaces to allow tattoos in the workplace. This shift is thought to be caused by a difference in ages, so perceptions of tattoos will be studied in both traditional and non-traditional college students. The specific examination of this study was how traditional and non-traditional students perceive competence due to the presence or lack of tattoos. It was predicted that the interaction between tattoos and student status will show that non-traditional students will report a lower level of perceived intelligence than traditional students on the image with tattoos. Traditional and non-traditional students were presented with an image of a male, either with or without tattoos and were then asked to rate the image based on their competence. Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud



8:30 to 10:30 a.m., WUC Pacific Room

**Madalyn Taylor**

***Self-Esteem in Response to Feedback Type and Word Recall***

The current study examined the effects of feedback type and self-esteem on the type of words recalled. It was predicted that (1) participants would recall more positive words after receiving favorable feedback than unfavorable feedback, (2) feedback type would affect the number of positive words high self-esteem participants recalled more so than the number of positive words low self-esteem participants recalled, (3) participants would recall more negative words after receiving unfavorable feedback than favorable feedback, and (4) feedback type would affect the number of negative words low self-esteem participants recalled more so than the number of negative words high self-esteem participants recalled. Participants completed a self-esteem scale, followed by a 5-question logic test where they were given either positive or negative feedback regardless of their actual score. They were told to memorize a list of 40 words (20 positive, 20 negative) for one minute, and write down as many words they could recall. Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Sadie Trump**

***Sex Differences in Response to Age-Gap Relationships and Perceived Happiness***

The current study sought to examine how happiness is perceived in romantic relationships with a large age-gap. It was hypothesized that individuals in romantic relationship with a large age-gap would be perceived as less happy than individuals without an age difference. Also, men would perceive age-gap couples as significantly less happy than non age-gap couples. Female participants' would perceive the couple to be happier than male participants. Participants, both men and women, were randomly assigned to one of two groups. Both groups saw five pictures, one saw five pictures of similarly aged couples, and the other saw five pictures of couples with a large age-gap. Participants' then rated these pictures on a 1-7 Likert-type scale according to happiness. A 2x2 Analysis of Variance will be used to analyze data obtained from this study. Future directions of the findings and the implications accompanying them will be discussed.

Faculty sponsor: Jaime Cloud

8:30 to 10:30 a.m., WUC Pacific Room

**Kameron Wolfer**

***Anticipation is Reality: How Task Anxiety Affects Test Performance***

The present study challenged the idea that poor test performance is caused by a lack of comprehension or test preparation. Robert Merton's theory of the Self-Fulfilling Prophecy and previous research studies explain that students who worried about their test performance prior to or while taking a test often performed badly on it. The study predictions were that (1) high levels of test anxiety will negatively affect test performance, (2) male participants will report lower anxiety levels than female participants, and (3) males will perform better than females in a high anxiety testing condition while females in the low anxiety testing condition will outperform all other participants on average. College students (male and female) took the same timed scrambled word test online after the researcher manipulated their perception of its difficulty (easy vs. hard) in order to change their anxiety levels (high vs. low). Participants reported their anxiety levels via an online survey after they completed the test.

Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud

## BEHAVIORAL SCIENCES

BEHAVIORAL SCIENCES POSTER SESSION II

Session chair: Jaime M. Cloud

Werner University Center (WUC) Pacific Room

### POSTERS

1:30 to 3:30 p.m., WUC Pacific Room

**Brittany Barnes**

***How Tattoos Affect an Individual's Perceived Level of Success Between Men and Women***

Studies of how people with tattoos are perceived have focused mainly on appropriateness and attractiveness. This present study is testing the hypothesis that people with tattoos are perceived to be less successful, with women being more negatively perceived. Participants are being instructed to rate pictures of other people on areas involved with success levels. The pictures are all either male or female, and are either people with tattoos or without tattoos. I anticipate that the people who do not have tattoos to be rated significantly higher on these success areas, and for women with tattoos to be rated the least successful. This study is still currently collecting data, and the actual findings may not be the same as what I am anticipating.

Faculty sponsor: Jaime Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Brittany Cole**

***Student Perceptions of the Employability of Work versus Educational Experience and Traditional versus Non-Traditional Students***

Current research has yet to fully explore the perceptions of different individuals' employability. Therefore, the aim of the current study sought to examine the perceptions of potential employment based on different types of experience. It was hypothesized that individuals with non-traditional work experience would be perceived as most hireable compared to traditional educational experience, non-traditional educational experience, and traditional work experience. Participants were randomly assigned in a between-subjects design to view a combination of a cover letter that emphasized traditional or non-traditional experience, and a resume that emphasized work or educational experience. All participants were given an eleven-item hiring questionnaire rating the questions on a scale of 1=very unlikely to 4=very likely. Data will be evaluated with a 2x2 Analysis of Variance. Results, implications, and future recommendations will be discussed.

Faculty sponsor: Jaime Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Haylee Eveland**

***How do Scary Versus Neutral Stories Affect Memory in Men and Women?***

The current study examined memory and was interested in (1) examining if reading a scary versus a neutral story affects memory and (2) examining if gender plays a role in memory differences. Half the participants read a scary story and half read a neutral story. Participants were then asked to fill

out an eight question questionnaire. Seven of the questions had the same answer and only one question had a different answer. A 2x2 analysis of variance will be used to analyze data. Findings and ideas for future similar studies will also be explored.

Faculty sponsor: Jaime Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Mitchell Fessler**

***The Relationship Between Gender, Attractiveness, and Hireability***

The present study investigated the differences in male and female perceptions of attractive versus unattractive job applicants of the opposite sex. The participants were randomly assigned to one of four conditions, which consisted of either an attractive or unattractive male or female. An identical resume was attached to all of the photographs. It was predicted that participants would rate attractive members of the opposite sex as more employable. The second hypothesis expected men would rate attractive members of the opposite sex higher than women rated attractive members of the opposite sex. Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jamie Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Austin Gehrett**

***College Students Feelings Towards Having a Child***

The current study analyzed how college students responded to the idea of having a child under different scenarios. The hypotheses were that females would react more positively than males to having a child and that individuals would react more positively to having a child when thinking about healthy children as opposed to children with learning disabilities. Additionally, an interaction hypothesis was made which stated that female responses would be more negatively affected by thinking about children with learning disabilities than male responses. The experiment was set up for participants to view a video of parents interacting with their children. The children in the videos were either healthy or diagnosed with learning disabilities. Afterwards, participants rated how much they looked forward to parenthood. The data from this study will be analyzed with a 2x2 Analysis of Variance, and the findings and their potential implications will be discussed.

Faculty sponsor: Jaime Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Audrey Klampe**

***The Effects of Weight on Employment Discrimination***

It was hypothesized that an obese individual would be less likely to be hired for a job than a normal weight individual. Undergraduate students were (Female=21; M=24, SD=8) randomly assigned to normal weight or obese weight conditions. Likelihood of hiring and work ethic were measured. No significant differences were found in hiring rate for normal weight individuals (M=6.07, SD=.799) and overweight individual (M=6.13, SD=.64) conditions;  $t(28) = -252$ , n.s.,  $r^2 = 1.0$ , or in work ethic scores for normal weight individual (M=4.07, SD=.703) and overweight individual (M=3.73, SD=.21) conditions;  $t(28) = 1.21$ , n.s.,  $r^2 = .05$ . These data suggest weight is not enough to play a role within work ethic or likeness of hiring.

Faculty sponsor: Jamie Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Jonathan M. McCully**

***The Opportunistic Function of Self-Esteem: Tuning Self-Esteem to Social Conflict***

The aim of the current study was to examine whether levels of self-esteem (SE) affected how people perceived social conflict. Based upon the sociometer theory of SE and evidence found within social judgment and decision-making, I predicted that (1) low trait SE individuals will view social conflict more negatively than high trait SE individuals, and (2) individuals with lowered state SE will view social conflict more negatively than raised state SE. Additionally, the magnitude of change in perceived negativity of the target social conflict will be greater for low trait SE individuals than for high trait SE individuals. Participants were first given the Rosenberg (1965) SE inventory. This was followed by either an easy or hard test with positive or negative feedback respectively—intended to raise or lower state SE. Participants then viewed a film clip showing social conflict, and were given a one-item questionnaire assessing their perceived negativity of the target social conflict. A 2 x 2 Analysis of Variance will be conducted, and implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Jessica S. Murfin and Cruz M. Bryan**

***Effects of Immersive Natural Environmental Simulations on Affect and Meaning***

The purpose of this study was to investigate the effect of nature on psychological well-being using a novel methodological approach involving immersive simulations of natural and built environments. The effects of these environments on connectedness to nature, self-reported affective state, implicit indicators of affective state, and meaning in life were examined. A 2 (environment type: natural versus built) x 2 (simulation type: standard photo versus equirectangular photo) x 2 (audio: with versus without audio) between-subjects design was utilized. Participants first completed pre-test assessments on their own prior to completing the laboratory portion of the study. In the laboratory, participants completed an assigned simulation and post-test assessment. Measures included the Connectedness to Nature Scale, Positive and Negative Affective Schedule, polygon test, Implicit Positive and Negative Affect Test, and the Meaning in Life Questionnaire. While data collection is ongoing, initial results indicate higher connectedness to nature in natural environment simulations versus built environmental simulations.

Faculty sponsor: Ethan McMahan

1:30 to 3:30 p.m., WUC Pacific Room

**Matthew Pearson**

***Effects of Peppermint on the Memory of Men and Women***

This study examined articles of research dealing with essential oils and the effect they have on cognitive performance. Peppermint was seen to have benefits on performance, during cognitive tasks dealing memory. This study incorporated previous research to predict that peppermint scent would yield higher scores on a memory recall test than no scent, at base level testing, women would score higher than men on memory recall, and that women who received the peppermint treatment would yield higher scores than men that received peppermint treatment. Men and women were assigned to either the control group or the treatment group and given one minute to memorize twenty three-letter words. After a brief pause they were asked to write down as many words as they could recall.

Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaimie Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Morgan Perkey**

***The Effects of Video Game Genre on Gender Stereotypes***

Video game genre and how it impacts gender stereotypes has not been heavily researched, as past studies have primarily focused on video games and self-esteem, gender roles, and how gamers interact with each other. The current study aimed to understand how genre and the gender of a player would affect other's perceptions using a between subjects design. It was predicted that female players would be rated more likely to play traditionally feminine or casual games. Forty participants were recruited, randomly assigned to one of two groups, read a personality description of a player, male or female, and then rated how likely the player would enjoy each of six games (Animal Crossing, Legend of Zelda: Majora's Mask, Fire Emblem: Awakening, Monster Hunter, Professor Layton, & Mario Kart) on a 6-point Likert-type scale (1=very unlikely; 6=very likely). Results indicated that the female player was rated significantly more likely to play the traditionally feminine games than the male player,  $t(38)=3.31$ ,  $p=.002$ , two-tailed,  $r^2=.22$ . The hypothesis was supported and relates to past research in that women are perceived differently than men within the gaming community.

Faculty sponsor: Ethan McMahan

1:30 to 3:30 p.m., WUC Pacific Room

**Fabiola Regla Ramos**

***Chewing Gum and Test Performance***

Previous findings on the effects of chewing gum and test performance demonstrate that test performance was higher for individuals who chewed gum while taking a test. The purpose of the present study was to further examine whether chewing gum would have an effect on test performance of men versus women. I predicted that participants who chewed gum would have better test performances, particularly for women, compared to those who did not chew gum. Participants were randomly assigned to chew or not to chew gum while reading a list of 20 words and then asked to write as many words as they can remember. Data will be analyzed using a 2x2 Analysis of Variance. Implications of the acquired data, in addition to future directions, will be discussed.

Faculty sponsor: Jaime Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Rebecca Stempel**

***The Effects of Cell Phone Presence on Task Performance***

It was hypothesized that cell phone presence would lead to lower performance scores compared to performance in the absence of a cell phone. Forty university students (Female=30; Mage=23.5, SD=7.07) were randomly assigned to complete Part B of the Trail Making Test (Reitan, 1958) with or without a cell phone present. Contrary to predictions, there was no difference in performance with ( $M=13.9$ ,  $SD=5.40$ ) or without a cell phone present ( $M=15.9$ ,  $SD=5.37$ ); independent samples  $t(38)=1.18$ ,  $n.s.$ , one-tail,  $r^2=.04$ . This suggests that the mere presence of a cell phone is not enough to inhibit task performance. Additional stimuli (e.g., notifications) may be necessary to diminish attention.

Faculty sponsor: Chehalis Strapp

1:30 to 3:30 p.m., WUC Pacific Room

**Marilee Thornton**

***Predicted Marriage Longevity Based on Age***

The current study sought to discover whether there was a correlation between age of marriage and predicted marriage longevity. Specifically, to predict that (1) when given a passage about either an older or younger married couple, participants would predict a shorter marriage longevity for the younger couple and (2) women would predict a longer marriage longevity across both age groups compared to men. Participants were placed into one of two groups by selecting a piece of paper from a bag. Participants were then assigned a passage to read. In the passage for Group A the listed couple was 19 years old. Conversely, the couple in Group B was 32 years old. Upon completing the assigned reading passage, all participants were asked how long they predicted the marriage to last. Data will be analyzed using a 2x2 Analysis of Variance. Implications of the obtained findings and future directions will be discussed.

Faculty sponsor: Jaime Cloud

1:30 to 3:30 p.m., WUC Pacific Room

**Marsha M. Warren, Danica J. Drapela, Cierra I. Henderson, Isabel R. Dryden, Ashley N. Flores, Kyla N. Bredimus, Kimberly A. Lanning and Tashawna Wright**

***Exploring Alumni Stories through Qualitative Research***

This presentation describes a project designed to connect current psychology undergraduates with alumni from the same program. Purposive sampling was used to recruit diverse alumni following different career paths (i.e., graduate school or straight to work), representing alumni who identified as first generation, nontraditional, Latina/Latino or as a student of color. Semi-structured interviews were conducted to understand alumni career paths and gather information about decision-making, barriers, supports, and advice for current psychology majors. Interviews were audio-taped and are currently being transcribed. Some alumni agreed to participate in an "alumni profile," which highlighted specific alumni by name, shared details of individual's specific story, and were made publicly available. The current presentation will share the experiences of the undergraduate researchers exploring qualitative research, learning about career options available after graduation, and benefits for current students.

Faculty sponsor: Chehalis Strapp

## BEHAVIORAL SCIENCES

BEHAVIORAL SCIENCES SYMPOSIUM

Session chair: Jaime M. Cloud

Werner University Center (WUC) Santiam Room

### PRESENTATIONS

9 to 9:15 a.m., WUC Santiam Room

**Xavier Rubio, Cyntia Rodriguez and Edgar Guerrero**

Faculty sponsor: Stephanie Hoover

***Latino Adolescents' Experiences Of Culturally Accommodated Group Therapy Viewed Through The Final Session***

The purpose of the study is to understand Latino adolescents' experience of group therapy. This study contrasts Latino adolescents in culturally accommodated and standard therapy. This study examines the content of the final group therapy session of culturally-accommodated CBT (A-CBT)

and standard CBT (S-CBT) for substance use. Transcripts from 10 different 90-minute group sessions were analyzed with consensual qualitative research. The average adolescent (N=70) was a 15 year-old Mexican-American male who spoke Spanish at home and preferred English. The presentation will describe initial analysis and results.

9:15 to 9:30 a.m., WUC Santiam Room

**Cassie Karn, Morgan Perkey and Shannon Deyden**

***An Investigation of the Effects of a Forming Activity on Group Performance: A Test of the Group Maturation Threshold Hypothesis***

The group maturation threshold (GMT) hypothesis posits that until groups reach a certain maturation threshold, initial levels of cohesion and trust, in the absence of other mitigating factors (e.g., positive norms, knowledge of group members' expertise), may harm group performance. We tested this hypothesis by manipulating the randomness of group members' interactions during a forming activity. Participants (N=600) in 200, three-person groups completed two intellectual, problem-solving scenarios in which participants imagined they were stranded in a wilderness with various items. Participants rank ordered these items in terms of their importance for the group's survival both individually and as a group. Prior to completing the problem-solving scenarios, group development was manipulated via a forming activity. In the forming conditions, participants became acquainted with other group members by answering questions about themselves either by taking prescribed turns or answering the questions in a randomly determined order. The results showed that forming randomness had indirect, negative effects on group performance; providing some support for the GMT hypothesis.

Faculty sponsor: David Foster

9:30 to 9:45 a.m., WUC Santiam Room

**Jessica S. Murfin**

***Talk This Way: Group Language Usage as an Indicator of Group Creativity***

This study examined whether language styles of group members could be used to develop an index of group creativity. Participants in 92 triads completed two problem-solving scenarios, rank ordering objects in order of importance for group survival. Language style was examined by analyzing the transcribed verbal content of the groups' discussions using Linguistic Inquiry and Word Count software. Independent coders assessed creativity by counting the number of times group members engaged in fluency, originality, integration or evaluation. Unique language patterns were associated with each type of creative behavior. Fluency was positively correlated with the use of prepositions, causal, tentative and exclusive language. Originality was positively correlated with second person pronouns, prepositions, causal and inhibitory language. Integration was positively correlated with big words, third person plural pronouns and inclusive language. Evaluation was positively correlated with big words, verbs, auxiliary verbs, exclusive language and negations. A creativity index, derived from groups' language usage profiles, significantly predicted group performance. Implications will be discussed.

Faculty sponsor: David Foster

**BREAK**

10 to 10:15 a.m., WUC Santiam Room

**Emily Trubits**

***Student Perceptions of Traditional and Non-Traditional Students***

Non-traditional students often have very different college experiences than their traditional counterparts, and increasing the knowledge and research on student perceptions of traditional and non-traditional, male and female students will help improve student experiences and student retention. It was hypothesized that students would perceive non-traditional students to have higher motivation levels than traditional students; more specifically, that non-traditional students would be perceived to have higher intrinsic motivation than traditional students. The participants were students conveniently sampled from a mid-sized Pacific Northwestern university, with demographic information forthcoming. Perceived academic motivation was measured using a modified version of the Academic Motivation Scale (AMS; Vallerand, et al., 1992), and student's perceived levels of moods of the student in the description were measured using the Positive and Negative Affect Scale (PANAS; Watson, et al., 1988). Results forthcoming.

Faculty sponsor: Debi Brannan

10:15 to 10:30 a.m., WUC Santiam Room

**Sarah Duhart and Emily Trubits**

***The Effects of Daily Work-Family-School Demands on Mood: A Mixed Methods Analysis of Non-traditional Students***

According to the National Center for Education Statistics (2013), 48 percent of all new and returning students are considered nontraditional. Consequently, there are a record number of students who are managing multiple roles. In this study we utilized mixed methods with the goal of understanding the influence of daily demands on moods. Moreover, we examined how social support might serve as a protective function for students. Initial qualitative data revealed that work and school demands involved lack of time and interference. Next, daily diary results suggested that on days when school demands were high, participants were more likely to report feeling distress ( $b = -.08$ ,  $p = .03$ ), scared ( $b = -.09$ ,  $p = .03$ ), and nervous ( $b = .11$ ,  $p = .001$ ). However, when work demands were high, participants reported higher levels of nervousness ( $b = -.08$ ,  $p = .01$ ) and loneliness ( $b = -.05$ ,  $p = .04$ ). Interestingly, received and perceived support did not moderate these models, thus suggesting that these demands are unique and prevailing.

Faculty sponsor: Debbie Brannan

10:30 to 11 a.m., WUC Santiam Room

**Haley Morris, Lilaah Jones, Audrey Drake, Amanda Navolynski, Kristen Case and Casey Stephens**

***Music Therapy***

With an increasingly aging society, there is a need for more non-pharmacological interventions to effectively care for individuals with dementia. For example, Ridder, Stige, Qvale and Gold (2013) reported that music therapy was associated with lower levels of agitation and a decrease in psychotropic medications. Our team developed the Music Therapy Project, which was inspired by the documentary *Alive Inside*, in an effort to engage older adults with dementia and improve their quality of life. We collaborated with three memory care communities within the Willamette Valley to bring music into the lives of those with dementia using a person-centered approach. This project led to positive interactions among our volunteers and people with dementia and could be replicated elsewhere. We will discuss what music therapy is, what previous studies have revealed, and our own experiences with music therapy.

Faculty sponsor: Rob Winningham



11 to 11:15 a.m., WUC Santiam Room

**Rachel Feldhaus and Jennifer Murphy**

***Making Meaning of a Grandparent Death: A Qualitative Dyadic Study***

The death of a grandparent reverberates across families. This dyadic qualitative study sought to understand the grief experiences surrounding the death of a grandparent from two family perspectives: the young adult grandchildren (AG) and their mothers (M). After receiving IRB approval, eight college students and their mothers were interviewed separately to investigate how the grandparent and parent relationship, and broader family relationships, have been influenced by this death. Preliminary results suggest: a) grandparent death was felt deeply by both M and AG, with different outcomes; b) grandparent death provided opportunities for AG and M to renegotiate their relationships and boundaries; c) for the AG, grandparent death motivated personal change and recognition of parental grief and coping styles. For many AG participants, recognition of parental vulnerabilities and need for support emerged; d) for mothers, grieving the death occurred concurrently with desire to support AG grief. Participants experienced shifts in personal identity indicative of their developmental status. Study findings help inform our understanding of intergenerational grief.

Faculty sponsor: Margaret Manoogian

11:15 to 11:30 a.m., WUC Santiam Room

**Whitney Scovell and Rachel Feldhaus**

***College Students' Response to the Death of a Loved One***

Of the many challenges that are faced by emerging adult college students, one of the least studied and understood is the impact of the death of a loved one. One dimension of importance is the nature of the relationship with the deceased individual. This multimethod study compares the effects of a peer and grandparent death on emerging adults (N=107), 74 students reported a grandparent death and 33 students reported a peer death as being the most significant death they had experienced in the last four years. Quantitative measures focused on Preoccupation, Closeness, Feelings about Loss (Negative, Positive and Guilt) and Positive Reappraisal. Qualitative data gathered from open-ended questions focused on the type of death and outcomes of grief. Qualitative analysis indicates that participants experienced distinctly different grieving processes depending on the type of death. Study results will help inform the ways support may be best offered for emerging adults experiencing grief and bereavement after the death of a loved one.

Faculty sponsors: Margaret. Manoogian, Eric Cooley, Tamina Toray

11:30 to 11:45 a.m., WUC Santiam Room

**Kellie Kleinke**

***The Effects of Violence in Video Games***

Electronics have become fundamental as well as popular in our society and due to that different devices have been created that allow people to play video games. The type of video game can affect your behaviors even if it is just an aspect of it. This study was conducted to examine the effects that violent video games have on aggressive behavior. The study included X students, X male, X female, who were randomly assigned to play either a violent, competitive videogame or a nonviolent, noncompetitive videogame. The design of the study is 2 games (Halo, Minecraft) X 2 competition (competitive, noncompetitive) X 2 Test (Pre, Post). Both before and after playing the videogame, the participants were asked to fill out the PANAS scale. The games, Halo 5 and Minecraft, were played using an Xbox one and a Sylvania television. Results forthcoming.

Faculty sponsor: Joel Alexander

11:45 to 12 p.m., WUC Santiam Room

**Abigail Demchak**

***Perceptions of Rape Based on the Sex of the Perpetrator and Victim***

This research study investigated the perceptions of rape based on the sex of the perpetrator and the victim. Hypotheses predicted that subjects will perceive rape incidents as more severe when the perpetrator is male compared to female and incidents involving female victims will be seen as more severe compared incidents involving male victims. A total of 40 subjects, ages 18 and older, participated in the study. Subjects were assigned to one of four conditions that involved a perpetrator and victim rape incident. The conditions are male perpetrator/female victim, male/male, female/male, and female/female. Subjects read a story regarding a rape incident that corresponded to the condition they were assigned and were then asked to rate their perception of the incident's severity. Next, subjects were asked to give the reason for their perception of severity: the sex of the perpetrator or the sex of the victim. This study is a 2 Sex (Male, Female) x 2 Sex (Male, Female) experiment with the independent variables being the sex of the perpetrator and sex of the victim, and the dependent variable being perceptions of severity. Results are forthcoming.

Faculty sponsor: Joel Alexander

## BIOLOGY

RESEARCH IN THE BIOLOGICAL SCIENCES

Session chairs: Kristin Latham and Jeff Snyder

Werner University Center (WUC) Pacific Room

### POSTERS

1:30 to 3:30 p.m., WUC Pacific Room

**Emma Signor**

***Invasive Characteristics of *Geranium robertianum****

Invasive plant species have become an environmental concern, as they can disrupt ecosystems if left unchecked. To help control the spread of invasive species, it's important to understand their anatomical and physiological traits, and how those traits give them an advantage over native species. We chose *Geranium robertianum*, an invasive plant that is found over a large portion of the Pacific Northwest. Collections from six populations were made in the summer and fall of 2015. Plants were grown in a greenhouse for three months before taking measurements. We found no significant difference in stomatal characteristics and specific leaf area, showing that there may be minimal genetic variation between the populations. Future studies will compare wild *G. robertianum* to this baseline data and its native competitors, to help determine which traits may increase the chances of a plant becoming invasive.

Faculty sponsor: Ava Howard

1:30 to 3:30 p.m., WUC Pacific Room

**Mariah McKechnie and Rachel Mendazona**

***Using Artificial Selection To Understand Directional Orientation Behavior in *Drosophila****

We are testing whether the model organism *Drosophila melanogaster* has an innate directional preference based on the Earth's magnetic field and whether this preference has genetic underpinnings. We have performed 15 generations of artificial selection for directional preference using a sequential Y-maze. In the maze, flies make 10 choices of whether to go north or south, and we then select the 20 percent most extreme flies for

breeding. We have bred both north-seeking and south-seeking populations using this method. Our preliminary results suggest that flies do not have a directional preference. We have begun performing multiple trials using the original population of flies, the 15th generation of north-selected flies, and the 15th generation of south-selected flies. Ultimately, this experiment will lead to a better understanding of the potential genetics of magnetic orientation and directional preference in *Drosophila*.

Faculty sponsor: Kristin Latham

1:30 to 3:30 p.m., WUC Pacific Room

**Stephanie Foster**

### ***The Effects of Drought Stress on Squash Plants***

With competition for water resources increasing drastically, it's paramount that stores are utilized sustainably. Understanding plant stress responses is crucial for strategic conservation. We measured the physiological effects of drought on *Cucurbita pepo* L. Honey Boat delicata squash, looking at specific leaf area, minimum transpiration, minimum conductance, water potential, stem and leaf growth, and overall biomass. Seedlings grew in greenhouse conditions with weekly fertilizer for seven weeks. Drought-treated plants received water once weekly, and controls thrice weekly. Individuals receiving drought treatment exhibited more negative water potential values in dark conditions, demonstrating that they were experiencing drought conditions. Other measures showed no significant difference between groups, indicating that *C. pepo* might have lost the majority of its drought response over time due to selective breeding. In the face of increasing water shortages, this practice may be more harmful than helpful, robbing this crop of its ability to survive in varying conditions.

Faculty sponsor: Ava Howard

1:30 to 3:30 p.m., WUC Pacific Room

**Jacob Higgins**

### ***Campus Tree Project: An Inventory of Western Oregon University's Grounds***

Western Oregon University (WOU), situated in the mid-Willamette Valley of western Oregon, provides the setting for an ongoing Campus Tree Project that involves inventorying and monitoring all the trees on WOU's grounds. Primary objectives of the project are to provide the campus's landscape maintenance personnel and members of the WOU community with information regarding the identity (scientific and common names) and maintenance needs of WOU's trees. Data are being collected by WOU students, staff, and faculty, along with community volunteers, for each campus tree. These data include location, species name, circumference, height, health, maintenance concerns (e.g., conflict with power lines) and specimen photographs, among others. Following field data collection, the information will be entered into a Microsoft Excel spreadsheet, and then displayed via a web-based mapping application using a Google Maps interface (i.e., a campus tree map).

Faculty sponsor: Bryan Dutton

1:30 to 3:30 p.m., WUC Pacific Room

**Jenesa Ross**

### ***Nutrient Deficiency Treatments in Agricultural Plant Species***

While symptoms of nutrient deficiency in agricultural plant species has been well studied, and ranges of symptoms for each deficiency have been defined, standardized deficiency solutions do not yet exist that provide an adequate balance of all but one essential nutrient. In preliminary experiments, the effects of test solutions (control, low-Nitrogen, low-Phosphorus,

and low-Potassium) were compared across corn and sunflower plants. Precipitate formed in some deficiency solutions, but visual symptoms of deficiency were still present in the plants. Leaf tissue analysis revealed other elements not targeted for manipulation, such as calcium, in greater proportions in control tissue compared to deficiency treated plant tissue. The purpose of this similar study is to investigate improved deficiency formulas which provide uniform and balanced nutrient concentrations.

Faculty sponsor: Ava Howard

1:30 to 3:30 p.m., WUC Pacific Room

**Victoria B. Fliehr**

### ***Nest/Egg Temperatures in Relation to Trumpeter Swan (*Cygnus buccinator*) Cygnet Survivorship in the Yellowstone Ecosystem***

Trumpeter Swans (*Cygnus buccinator*) were once widely distributed throughout North America. Population declines during the 19th and 20th Centuries were due to overhunting and habitat loss. By the 20th Century 70 swans were found in the Yellowstone Ecosystem. Although conservation efforts continued through the 20th Century cygnet survivorship in the Yellowstone Flock declined due to food limitation, weather, diseases, abnormalities, emaciation, predation, and parasites. Our objectives were to: (1) determine fertility rates for eggs in swan nests at Grays Lake National Wildlife Refuge (Yellowstone Ecosystem) and (2) quantify their nest/egg incubation temperatures. We placed four artificial eggs (with temperature data loggers) in four trumpeter nests during 2015 breeding season. Of these, we found differences among nests in average number of incubation recesses, average length of recesses, and average egg temperature fluctuation. We hypothesize these differences may significantly affect a cygnets' subsequent survival probability during the three-month post-hatch rearing season.

Faculty sponsor: Jeff Snyder

1:30 to 3:30 p.m., WUC Pacific Room

**Marie Vaughn**

### ***Effect of Street Lamps on Two Species of Urban Street Trees***

Different species and cultivars of trees may react differently to exposure to street lamps, and comparing these differences between species could help us understand which kinds of trees are better suited to living in an urban environment. For two different species, the three closest trees (less than six meters away) and the three furthest trees (more than 22 meters away) from a lamp were chosen, and their height and DBH (diameter of trunk at 1.3 m up from the ground) was measured, as well as photosynthetically active radiation from street lamps at night. Proximity to a light source did not cause statistically significant differences between trees, however, trees closer to lamps trended towards a larger DBH at similar heights. These species both appear to be well adapted to an urban environment. Further studies with more species under different lamp types are needed to allow for generalization of these results.

Faculty sponsor: Ava Howard

## **BIOLOGY**

RESEARCH IN THE BIOLOGICAL SCIENCES

Session chairs: Kristin Latham and Jeff Snyder

Werner University Center (WUC) Columbia Room

## **PRESENTATIONS**

4 to 4:15 p.m., WUC Columbia Room

**Stephanie Torrez and Natalie Wallace**

***Using Artificial Selection to Understand Orientation Behavior in *Drosophila****

The fruit fly, *Drosophila melanogaster*, is commonly used to understand the genetic mechanisms of behavior. We are testing whether *Drosophila* have a directional preference based on the Earth's magnetic field and whether this preference has genetic underpinnings. We have performed 15 generations of selection for directional preference using a sequential Y-maze and have bred north-selected and south-selected populations using this method. We have begun testing the original population of flies, the 15th generation of north-selected flies, and the 15th generation of south-selected flies to determine if the populations show behavioral differences. We have also performed runs of naïve flies through the maze while housed within a Faraday cage. A Faraday cage blocks any local interfering electric fields that may be altering the flies' choices within the maze. Ultimately, these experiments will lead to a better understanding of the potential genetics of magnetic orientation in *Drosophila*.

Faculty sponsor: Kristin Latham

4:15 to 4:30 p.m., WUC Columbia Room

**Parker Smith**

***Everyone Poops, But What's in it?***

A microbiome is the collection of microbes that live in or on a multicellular organism in commensal, mutual, or opportunistic relationships with their host. It represents a diverse ecosystem that is important to host development, health, and metabolism. The gut is where most of the microbiome diversity and density is found. Current research into the human gut microbiome shows that the four major bacterial phyla that are present in the human colon are: Firmicutes (64 percent), Bacteroidetes (23 percent), Proteobacteria (8 percent), and Actinobacteria (3 percent). My research is a preliminary study to develop a cost efficient and accurate method for comparing the gut microbiomes of terrestrial gastropods using a combination of metagenomic analysis and fluorescent microscopy. Samples of feces from the slug *Arion* sp. were used in a metagenomic analysis to establish a gut microbiome, demonstrating 85 percent Gammaproteobacteria and 15 percent Firmicutes. Fluorescently labeled oligonucleotide probes for Gammaproteobacteria were used to visualize the bacteria present in the feces of the land snail *Helix aspersa*. The methods from this study will be used in a gut microbiome comparison project with *H. aspersa* next year.

Faculty sponsor: Sarah Boomer

4:30 to 4:45 p.m., WUC Columbia Room

**Sarah Thompson and Connor Osterberg**

***Fruit Flies Eat More Than Fruit: the Toxic Effects of *Pseudomonas fluorescens****

*Drosophila melanogaster*, the fruit fly, is a model organism with genetic applications and an accelerated life cycle making it an ideal subject for developmental and immune system research. There has been little research investigating the lethal and non-lethal responses of flies infected with bacteria early in development. To further the knowledge on the early developmental responses of their immune system, this study examines flies that were exposed to wild type and mutant strains of typically encountered soil bacteria, *Pseudomonas fluorescens*. It was hypothesized that ingesting the bacteria would cause growth delays coupled with high mortality. Two days post hatching, larvae were fed either strain Pf-5, strain A506, Pf-5 extract or Pf-5 media in one dose. *D. melanogaster* were

then observed throughout the rest of development. Depending on the treatment, it was found that developmental delay and lethality were both observed. In further applications, this research could give insight to the innate immune response exhibited in humans to bacterial infections.

Faculty sponsors: Kristin Latham and Patricia Flatt

## BUSINESS AND ECONOMICS

BUSINESS AND ECONOMICS

Session chair: John Leadley

Werner University Center (WUC) Calapooia Room

### PRESENTATIONS

10 to 10:30 a.m., WUC Calapooia Room

**Olivia Funk, Tye Collier and Logan Krupp**

***Organizational Behavior Analysis: Barnes & Noble***

This organizational behavior analysis presentation examines and evaluates the organizational characteristics of Barnes & Noble, the nation's leading bookseller, in the light of the company's recent financial crisis. The conclusion is reached that Barnes & Noble's struggles are due partly to internal inefficiencies, the inability to adapt to changing market needs, and the lack of emphasis on a culture that values employee innovation. The presentation then utilizes Harvard business professor Dr. John Kotter's eight steps for creating change within an organization to outline specific recommendations for the company's future direction. By improving operational efficiency and reorganizing the company structure, using effective knowledge management to enhance internal communication, and taking steps to become a learning organization, Barnes & Noble can become a more financially successful and socially responsible company.

Faculty sponsor: Paul Disney

10:30 to 11 a.m., WUC Calapooia Room

**Khorben Boyer and Luke Schnee**

***The Effect of Health Insurance on Death Rates***

Does the percentage of the US population not covered by health insurance affect the death rate of the population? To answer this research question, our study uses regression analysis on cross-section data from all 50 states for the age-adjusted death rate, the percentage of the population that is uninsured, the percentage of the adult population that has graduated from high school, the percentage of adults who smoke, and the percentage of adults that are overweight or obese. The estimated effect of being uninsured, while having the expected positive sign, was not statistically significant. The other independent variables were all statistically and economically significant. We discuss the results of this analysis with respect to findings of previous research on this topic and suggest policy recommendations.

Faculty sponsor: John Leadley

11 to 11:30 a.m., WUC Calapooia Room

**Khorben Boyer**

***Econometrics: Ghosts of Economics' Past and Tidings of Good Cheer?***

Since its inception, econometrics as a field has held both promise and peril for strengthening the correspondence between economic theory and empirical data. Promise in helping to provide the grounds for economics' various laws, relations, and hypotheses as contrasted with peril from its historical research threads often intertwining with grand economic debates, controversies, and conflicting perspectives. In particular, this

presentation will provide a whirlwind tour of the questions, highlights, and developments that have most characterized the field proceeding from the early to mid 20th century to the present day along with some tentative conclusions concerning how far econometrics has come as a research program and whether its dynamic if chaotic past should be a cause for concern or an indication of yet unrealized potential.

Faculty sponsor: Frederick J. Oerther III

## CHEMISTRY

BIOCHEMISTRY AND FORENSIC SCIENCE

Session chair: Patricia Flatt

Werner University Center (WUC) Pacific Room

### POSTERS

11 a.m. to 1 p.m., WUC Pacific Room

**Courtney Richardson, Christopher Muller and Jennifer Sepull**

#### ***New Direction for Beating Methamphetamine Addiction***

This poster covers research on a possible vaccine as an alternative strategy to fighting the addiction to methamphetamine (MA) through hapten and formulation processes. The MA addiction problem is growing and the current behavioral treatment methods have been ineffective and can have high rates of relapse. A group of researchers have developed a new strategy to help fight against the addiction. This can then be coupled with the current behavioral therapies to be better equipped in battling the addiction. Their paper discusses the anti-MA immune response in mice which decreases the MA-induced locomotor activity. This in turn could lead to less dependence on the drug and an improved chance at recovery. In this poster review we will look at what MA is, what it does to the body, and previous treatment methods that have been explored. This will serve as background information to help explain why this possible vaccine is so important and revolutionary to further the medical field of research towards an effective way to combat the addiction way of life.

Faculty sponsor: Patricia Flatt

11 a.m. to 1 p.m., WUC Pacific Room

**Marvel Davis and Adam Bishop**

#### ***Lead Toxicity and Flint, Michigan***

In light of the recent events in Flint, Mich. this poster will review lead poisoning and its long term effects. We will be covering the multitude of sources of lead poisoning, the mechanisms by which lead causes damage, detection methods, treatment options, and limitations therein. The issues in Flint have highlighted the flaws in current acceptable detection procedures as well as brought to light the dangers of lead. Public concerns about clean drinking water have brought these issues to the forefront. This review hopes to highlight the dangers of lead and inform the public about recent research on the subject.

Faculty sponsor: Patricia Flatt

11 a.m. to 1 p.m., WUC Pacific Room

**Parker Smith and Hadeel Abozenadah**

#### ***The Design and use of Fluorescently Labeled Oligonucleotide Probes***

Since the first characterization of fluorescence by Sir Fredrick William Herschel in 1845, scientists having been looking for ways to include fluorescence in their toolkit. Fluorescence came to microscopy with the

development of the first fluorescent microscopes by Zeiss and Reichart at the turn of the 20th century. In the 1940's fluorescently tagged antibodies were developed and used to label proteins and cell structures, lighting the way for sub-cellular research. Another method that has been developed to label gene activity and specific rRNA sequences is the use of fluorescently labeled oligonucleotide probes. These probes are sequences of cDNA that are complimentary to sequences of mRNA or rRNA allowing for highly specific labeling. Our review poster covers is covering the design and use of fluorescently labeled oligonucleotide probes for the identification of microbes using species and phylum specific rRNA sequences as targets for the probes.

Faculty sponsor: Patricia Flatt

11 a.m. to 1 p.m., WUC Pacific Room

**Brian Hauenstein and Alex Kampstra**

#### ***The Unique Metabolism of Lisdexamfetamine (AKA Vyvanse)***

This poster reviews the metabolism of the prodrug form of d-amphetamine used for treatment of ADHD, lisdexamfetamine (AKA Vyvanse) and how it differs from the traditional amphetamine treatment of ADHD, Adderall. Lisdexamfetamine and Adderall both treat ADHD by providing amphetamine to the frontal lobe of the brain, mimicking neurotransmitters that are deficient in ADHD patients. The way in which Vyvanse delivers amphetamine to the brain differs from Adderall as Adderall is already in the amphetamine form and Vyvanse has a protecting cap that must be metabolically cleaved off to release amphetamine (making Vyvanse a prodrug). This property allows Vyvanse to have different biological activities from Adderall. The activity and metabolism of Vyvanse compared with Adderall will be the focal point of this poster.

Faculty sponsor: Patricia Flatt

11 a.m. to 1 p.m., WUC Pacific Room

**Christopher Modrich and Scott Bittner**

#### ***The Role of Chitinase in the Lethality of Pseudomonas Infection in Drosophila melanogaster.***

*Pseudomonas fluorescens* is a soil-dwelling, gram-negative bacterium that is part of a larger group of Pseudomonads, known for their effectiveness as biocontrol agents. Several *Pseudomonas* species, including *P. fluorescens*, have been shown to suppress plant disease. This function is thought to involve the diverse secondary metabolite production of this group. Several genes involved in insect toxicity have also been identified in *P. fluorescens*, but these do not completely account for toxicity. One gene we have identified as a potential source of toxicity is *chiC*, which codes for the enzyme chitinase. This enzyme is of particular interest here because of the key role of chitin regulation in insect development. Our group is interested in elucidating the mechanisms of *P. fluorescens* toxicity in *Drosophila melanogaster*, particularly in regard to the potential role of chitinase. To pursue this line of inquiry, we are in the process of isolating and cloning chitinase and chitin-binding protein genes from *P. fluorescens* PF-5 and *P. fluorescens* A506.

Faculty sponsor: Patricia Flatt



# CHEMISTRY

CHEMISTRY CAPSTONE SEMINARS

Session chair: Arlene Courtney

Natural Sciences (NS) 101

## PRESENTATIONS

10 to 10:45 a.m., NS 101

**Chris Muller**

### *Materials of Tomorrow*

Smart materials are compounds that respond to their environmental stimuli. While these materials have been known for sometime, only recently have they been useful enough to be seen in everyday life. Believe it or not, you have most likely seen or even been in contact with one or more of these materials. Shape-memory alloys, pH-sensors, Piezoelectric, thermoplastics, Chromogenic systems and Ferrofluids are examples of smart materials that will be covered in this seminar. Smart materials will soon be integrated into everyday life such as cellphones to paint to replacement body parts and drug delivery. This seminar will cover current use and research as well as future applications of smart materials.

Faculty sponsor: Arlene Courtney

10:45 to 11:30 a.m., NS 101

**MaryKate Miller**

### *Exploring Parkinson's Disease: New Areas of Research for Treatment and Prevention*

Parkinson's disease (PD) is a progressive neurodegenerative disorder that involves damage to dopaminergic neurons in the brain. The most notable symptoms include tremor, rigidity and bradykinesia (slowed movements). I will discuss the hallmarks of PD and the biochemistry of the disease in the brain. At present, there is no cure for PD and standard treatment options only reduce symptoms temporarily. Some commonly used pharmaceuticals cause unwanted side effects after prolonged use; finding new treatment options is a major focus of research dedicated to PD. This seminar is aimed at describing current treatments and exploring new research areas, which provide hope for new treatment and prevention options. The inspiration behind this seminar is to spread awareness about this disease and share what I have learned from my mother and her 13-year battle with Parkinson's; this seminar is dedicated to her.

Faculty sponsor: Arlene Courtney

11:30 to 12:15 p.m., NS 101

**Caitlin Castillo**

### *Blood, Brains, and Biomarkers: A New Test to Diagnose Traumatic Brain Injury*

Concussions, or mild traumatic brain injuries (mTBIs), are a common occurrence during any contact sport. The diagnosis of mTBI can be extremely difficult due to the range of symptoms and the lack of an objective diagnostic test. Recently, researchers have discovered several biomarkers that are associated with mTBI. Glial fibrillary acidic protein (GFAP) and ubiquitin C-terminal hydrolase isozyme 1 (UCH-L1) are released into the blood stream following an mTBI event. These proteins can be isolated using an ELISA assay and quantified using spectrophotometry. GFAP concentration is directly related to the severity of the concussion, whereas UCH-L1 does not show such a clear relationship. This seminar will explore the usefulness and implications of these biomarkers to diagnose TBI events.

Faculty sponsor: Arlene Courtney

## BREAK

1 to 1:45 p.m., NS 101

**Nicholas D. Noffsinger**

### *Battling Malaria: History, Diagnostics, and Treatment*

Malaria is a mosquito born disease caused by protozoan parasites from the *Plasmodium* genus. In 2015 there were an estimated 214 million cases of malaria with 400,000 deaths, most of which were children. While multiple species cause malaria, *Plasmodium falciparum* accounts for the most deaths globally. Treatments such as quinine that have been used since the 17th century are sadly becoming ineffective due to the evolution of parasite resistance. The life cycle of the parasite is extremely complex, making it difficult to identify an effective target for vaccine development. However, new research gives hope that one day we can eradicate Malaria. This seminar will discuss the history of malaria and new cutting edge therapies in development.

Faculty sponsor: Arlene Courtney

1:45 to 2:30 p.m., NS 101

**Alyssa Adams**

### *Aspartame: History, Popular Beverages, and Controversy*

Aspartame is an artificial sweetener much like high fructose corn syrup but is synthetically made compared to being derived from a natural occurring compound. Many diet beverages and foods contain this chemical since it is about 200 times sweeter than regular table sugar and contains very few calories. Some people with hereditary diseases cannot metabolize the phenylalanine resulting from the breakdown of the aspartame. This, and potential health risks, have caused widespread controversy regarding the FDA approval of aspartame. This seminar will describe how I have used High Performance Liquid Chromatography (HPLC) to quantify the amount of aspartame present in diet Coke and diet Dr. Pepper and to investigate how elevated temperatures can cause aspartame to become unstable and breakdown into potentially toxic chemicals. These findings will promote the labeling of actual amounts present in each drink, similar to how caffeine is labeled.

Faculty sponsor: Arlene Courtney

2:30 to 3:15 p.m., NS 101

**Marylyn Weatherly**

### *Finding Carl: Exploring Forensic Facial Reconstruction*

Forensic Facial reconstruction is a useful technique that can be helpful to identify a person when all that is left to investigators are skeletal remains. Facial reconstruction is a process that combines anthropology, chemistry, anatomy, and art to create an estimation of what the person looked like when they were alive. This seminar will explain how facial reconstruction is done and the different techniques that are used, and my personal experience with the process as I worked on a ceramic skull that came to be called Carl.

Faculty sponsor: Arlene Courtney

3:15 to 4 p.m., NS 101

**Meghan Kendell**

### *Forensic Entomology: Investigating Death using Insects*

Forensic entomology is the study and application of insects and other arthropods in criminal investigations. The concept of forensic entomology dates back to China in the 13th century; however, only in the last 30

years has forensic entomology been used as a source of evidence in criminal investigations. Insects, mostly flies and beetles, are attracted to a human body almost immediately after the body begins to decompose. By studying the types of insects found on the body and the stages in larval development, forensic scientists are able to determine the time of death, cause of death, and a change in position of the corpse. This seminar will discuss these applications of entomology in forensic investigation, as well as other applications, such as the detection of drugs and toxins within a decomposing body.

Faculty sponsor: Arlene Courtney

4 to 4:45 p.m., NS 101

**Adam Bishop**

***Antibiotic Resistance: Losing the Fight***

With the discovery of antibiotics in the early 1900's, we began what was supposed to be the end of all bacterial infections, or so we thought. What few could anticipate was the rapid development of antibiotic resistance, which in recent years has become a major public concern. Some believe that we are heading toward the end of the antibiotic era, throwing us back into the dark ages of medicine. This seminar will begin with some history demonstrating how far we have come in the fight against bacterial infections and will end with a discussion on how we can avoid losing our progress. Focusing on methicillin-resistant *Staphylococcus aureus* (MRSA), I will explain how antibiotics work, how bacteria can develop resistance, and what we can do to stop the spread of resistance. I will also cover the methods used to discover antibiotics and some novel techniques being developed that could be used to jump-start the discovery of new antibiotics.

Faculty sponsor: Arlene Courtney

4:45 to 5:30 p.m., NS 101

**Obed Lopez**

***Quantum Dots: A Bright Future Ahead***

Since their discovery in 1980 by Russian physicist Ekimov, Quantum Dots have been in constant advancement in many interesting fields of science. They have potential for many practical applications such as optical storage, LEDs, organic dyes, quantum computing, and solar power. Tunable emission peaks, long lasting fluorescence, and their ability to be conjugated with biomolecules such as proteins allow them to be ideal molecules for the application of bioimaging. The fluorescent properties of Quantum Dots can be applied in cancer therapy. By using Quantum Dots in live cell imaging, doctors can see malignant tumors, and healthy cells, glow before their eyes, facilitating the removal process and preventing the damage of healthy cells in the process. This seminar will explore the chemistry and physics behind these new and revolutionary semiconductor nanocrystals and their applications while also addressing some of the setbacks encountered in their development and use in the medical field.

Faculty sponsor: Arlene Courtney

## COMPUTER SCIENCE

COMPUTER SCIENCE AND INFORMATION SYSTEMS SENIOR CAPSTONE

Session chairs: Scot Morse and Mitch Fry

Instructional Technology Center (ITC) 211

### PRESENTATIONS

1:30 to 1:45 p.m., ITC 211

**Tyler Trinh, Aaron Duncan, Amelia Dieter and Kristian Sorensen**  
***The Social Network Framework***

For users who desire multiple, custom social networks the Social Network Framework is a content management system that will allow users to create custom networks. The framework will provide common social functions (profiles, feeds and friends). Unlike current social networks, our project will give the users options to customize, manage and create as many networks as they like. Users will be able to choose who may join and post to their network.

Faculty sponsor: Mitch Fry

1:45 to 2 p.m., ITC 211

**Lauren Ryan, Danielle Sikich, Howard Passmore and Jason Gersztyn**

***Incandescent Designs***

For those who want to display incredible light shows on their LED cube, the Incandescent Designs web application can be used to dynamically create an LED cube program according to their specifications, provides a simulator to preview their program on, and includes a forum for communication between LED cube enthusiasts. Also, the site will include a way for a user to view new and interesting articles regarding the site and LED cubes and/or panels in general. This application will offer customization based on color, pattern, speed, scale, etc. Unlike the current code available for download, our web app will allow the user the flexibility to program a custom light show without the need to edit source code themselves, thereby saving them a great deal of time and aggravation. We will also offer complex patterns that might otherwise be outside the scope of a given user's coding capabilities. Incandescent Designs will be an exciting new option for creating an ideal, custom lighting solution.

Faculty sponsor: Scot Morse

2 to 2:15 p.m., ITC 211

**Jared Staben, Justin Ross, Kyle Collins and Justin Karcher**  
***WolfRide Application***

WolfRide is Western Oregon University's free and reliable shuttle service for students. The WolfeRide application is a specialized web service built to work with various mobile devices. The application is designed to provide efficient and real-time information on the WolfRide vehicle, maintain an accurate queue of riders, and provide directions for the drivers. WolfRide is limited to WOU students with a valid WOU email. Administrators and drivers of the vehicles will have access to more features such as driving directions, and a continually updated queue. This system allows students to geo-locate their current position and enter their destination online, which will update the driver's queue providing for more efficient driver routes. This application will move the WolfRide system towards a more modern automated system.

Faculty sponsor: Mitch Fry

2:15 to 2:30 p.m., ITC 211

**Babattunde Idahor, Zachary Dial, Alex Orso and Robert Ringeling**  
***Atlas Strategy Card Game***

For fans of online strategy card games like Magic or Hearthstone; who want to play a new online card game, the Atlas Online Strategy Card Game is a web app game that will provide exciting gameplay and community features. The app supports individualized user accounts, user tracing, tracking and account management. This app contains social features like a chat box and friends list. This app provides news, blog posts, game change logs, and other updates from the game developers. The game allows players to select between modes such as deck building, battle versus AI, or battle versus another player. Gameplay will involve players selecting a card from their hand that will 'battle' their opponent's card. The winner of the round will take their opponent's card value as victory points. Cards can have a variety of special effects and games can have several victory conditions keeping the game fresh and fun. Unlike current popular competitors, our game will take full advantage of it's online environment to allow rapid updates and card changes to our user base, and social context for the game players.

Faculty sponsor: Mitch Fry

2:30 to 2:45 p.m., ITC 211

**Waleed Aboalsunoon, Tyler Clardy, Khalid Albrahim and Abdulrahman Buhmiel**

***Here! A Simple Student Attendance Tracking Solution***

Many universities in the United States are concerned with low attendance and an increasing dropout rate of new students. Universities can and do use roll call to combat this issue but in doing so they waste time and money. A typical roll call of a large class can require up to 10 minutes to complete and some even require ID check. This process can distract from the learning process in a big way. Tracking attendance would not only prove useful for schools and colleges but any activity or process that requires verification of attendance for pedagogical reasons, billing reasons, or verification needs. Implementing technology in addition to products the student already has a school can track student attendance without the painstaking process of roll call or a sign in sheet. To improve the attendance tracking system, we will need to create a semi-automated way to track attendance and ensure the validity of it. One approach is to use what everyone already has, a smart phone. Using their phone people can verify attendance with a mobile application or using a login portal from their computers, someone who wants to track attendance can give the group a code to enter into their application.

Faculty sponsor: Ted Beers

2:45 to 3 p.m., ITC 211

**Brittany Newman, James Marlette and Stacey Fisher**  
***Online WOU Tutoring System***

Our goal is to create a more efficient tutoring system than what is currently in place. We will accomplish this by implementing a web-based system that contains additional features that will aid both tutors and students. Ideally, it would be implemented within the current Moodle system. We believe that including an online whiteboard application and chat function will improve upon the current tutoring structure. It is our intent that this system enhances, not replaces, the current structure; however, it will replace the current Writing Center Moodle application, since we want to have a cohesive system in place. Additionally, we will implement a notification function consisting of email and optional text messaging so that both students and tutors will be reminded of appointments.

Faculty sponsor: Ted Beers

3 to 3:15 p.m., ITC 211

**Julia Angelo, Nathan Bickle, Mashari Alaraifi and Jonathan Sowerby**

***Grasshopper: A Student Planning Tool***

Faculty sponsor: Ted Beers

**BREAK**

3:45 to 4 p.m., ITC 211

**Sattam Alrashdi, Jonathan Yoshikawa, Sultan Alghanem, Faisa Aleidah and Mohammed Almozaini**

***X-change: Books That will Help Students to Find Cheap Books and Easily Also Students Can Make Money in This Website***

Faculty sponsor: Ted Beers

4 to 4:15 p.m., ITC 211

**Joseph Shin, Lyubov Bilobrovchuk and Ming Li**  
***Life Memory***

For families (parents, grandparents, relatives, etc) who want to record their memories of their family, the Life Memory Application is a life-long, family-oriented social network that will allow families to store "life events" of their own lives or the lives of other family members (ex. a child who is unable to enter the data themselves). Users will be able to keep track of past, current, and future events in their lives. The web application will keep track of life events of each user. Users will be able to communicate either directly to another user (direct message) or to the whole family (family chat). Unlike Facebook, our product will allow users to view events of their entire lives, rather than starting from the date at which the user signed up for the service. Our product will also solely focus on families and connecting related families (cousins, in-laws, removed, etc) and rather than integrating friends and/or acquaintances.

Faculty sponsor: Mitch Fry

4:15 to 4:30 p.m., ITC 211

**Shannon Haas, James Dearing, Rikki Swetsof and Matt Hofstetter**  
***OutdoorZ Web Application***

For anyone who is searching for adventure in an unfamiliar area or just bored with the status quo, the OutdoorZ application is an easy-to-use interactive web-based information system. OutdoorZ provides users with recommendations of nearby activities based on individual tastes. Users are able to provide valuable feedback and ratings while saving favorites to their profile. In addition, this app provides reliable directions to desired locations, as well as relevant feedback from real users. It utilizes publicly available data to provide the most accurate and up-to-date list of recreational activities so the user can spend their time making memories instead of plans. Unlike currently available applications, our product combines free and paid activities to provide the best possible experience to the user in an unbiased, ad-free format.

Faculty sponsor: Mitch Fry

4:30 to 4:45 p.m., ITC 211

**Ruby Tidwell, Lexie Widmer, Kevin Hutt and Gene Osborne**  
***WOU Schedule Maker***

For the student who wants help planning their term schedule, the "WOU Schedule Maker" is an online scheduling tool that combines the practicality of the Wolfweb registration system, the convenience of Google Calendar, and the pick-and-choose flexibility we all need to organize our

term. This system generates potential schedules based on students' course selections, the school's available courses/sections, maximum number of credit hours, students' availability, and course time conflicts. It also identifies potential routes the student might take to navigate around campus. Additionally, students will be able to add their chosen schedule to their Google calendars with the click of a button. Unlike other scheduling applications that require the student to manually enter the details of each event into their schedule, our product integrates the same information found in the Wolfweb registration system to provide an interactive and intelligent scheduling automation tool.

Faculty sponsor: Mitch Fry

4:45 to 5 p.m., ITC 211

**Nick Parr, Sam Wytoski, Kim Marberry and Christopher Howard**  
***Collection Companion***

For individual media collectors who are motivated to complete their collections in an efficient and effective manner. The Collection Companion is a friendly online solution that provides the ability to help archive media, with additional tools and resources to assist in completing their collections. With the ability to input records of media such as Books, CD's, Video Games and more for optimal organization, the Collection Companion will provide additional functions such as adding titles to a wishlist for later purchasing, statistics of titles owned by the Collection Companion community, tracking of media formats that titles are owned in, and a rating system for items both owned and unowned to help sort a Collector's media and wish list for prioritization. Unlike similar archiving software that neglects to take into account future purchases, as well as individuals rating criteria, Collection Companion does it's best to take in all aspects of a Collectors tastes in order to increase their efficiency in decision making and archiving activities.

Faculty sponsor: Mitch Fry

5 to 5:15 p.m., ITC 211

**Lauren Hiland, Jiaxin Wang, Matthew Stroud and Ray Gottsch**  
***Employers To Students***

Employers To Students is designed for employers who desire a different way to evaluate students as potential employees for their company and connect with them. Employers to Students will help recruiters connect with students who's skills peak their interest and connect with them for potential job opportunities. A recruiter can send a student an email on an email forum, and a student can reply to that email. Unlike current job finders, Employers to Students will give companies the ability to post projects that students can work on. This will allow students a glimpse into the type of work a company takes part in, and will enable the students to test if their personal skills and interests fit a specific company's needs.

Faculty sponsor: Scot Morse

## COMPUTER SCIENCE

COMPUTER SCIENCE, INFORMATION SYSTEMS AND M.S. IN MANAGEMENT AND  
INFORMATION SYSTEMS STUDENT PROJECTS

Session chairs: Scot Morse and Mitch Fry

Werner University Center (WUC) Pacific Room

### POSTERS

8:30 to 10:30 a.m. WOU Pacific Room.

**Alhanouf Almozaffar**

***Learning Management Systems (LMS) Comparison between Blackboard Learn and Moodle***

Advanced technology (internet, communication) provided many of the electronic systems to accomplish traditional works in various fields with a view to ease, shorten the time, and raise the effectiveness of the work done. The traditional view of learning over the Internet changed from just publishing of text content on the Internet to a comprehensive and dynamic learning environment. Here it emerged the need for a learning management system to serve the learning process, especially over Internet. One of the most important system is the Learning Management Systems (LMS), which contributed to the change of the traditional concept of learning in many countries; there is an increase in the number of universities and campus-based institutions that use these systems to support traditional learning process or as an alternative as it is in e-Learning and distance learning. In this paper, there is a brief overview of the Learning Management Systems, a comparison between two popular systems (Blackboard Learn and Moodle) in three categories including content tools, assessment and testing tools, and communication tools.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m. WOU Pacific Room.

**Cheri Freedman**

***Optimization of a Reporting***

This project focuses on the optimization of the process used to generate reports required for contractual compliance between multiple local child care referral agencies in Oregon and a division of the Department of Education for the State of Oregon. The project reviews the beginning process, the process analysis, and the solution selection. The project provides insight into the need for data processing improvements and some of the challenges that are typical of data integration involving multiple partners.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Majed Alshamrani**

***IPv6 Features and Transition Technology***

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Sheridan Bailey**

***Technical Documentation & Service Delivery: A Study of the Efficiency of Documented Technical Knowledge and Its Effects on Incident Management Troubleshooting in a Healthcare Organization***

This research project involves discovering if documentation aids troubleshooting during the Incident Management process. The goal is to show that technical documentation needs to be dynamic, well-organized, and utilized properly to make a change in efficiency. This has been done by analyzing incident data regarding 22 software applications that has documentation pertaining to incident resolutions. This data has been quantified and set against a timeline of documentation source implementations spanning across a time period of three years. Upon the conclusion of this analysis, it is clear that efficiency is effected when documentation is introduced, amassed, and reviewed even while incident quantity is increasing progressively. Through showing that documentation affects efficiency, this project emphasizes the importance of maintaining



strong documentation standards in regards to Incident Management troubleshooting, as defined by ITIL.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Claire Mears**

***Anomaly Detection in Vehicle Operation Using Machine Intelligence***

Everyone has seen how Hollywood portrays computers thinking for themselves but digressing from science fiction machine learning is on the horizon and can be used to save human life. In this paper the use of machine learning for anomaly detection in vehicles will be explored. Computers learning to adapt to changing patterns is not stuff of fantasy but used today in several different areas. This paper will propose bringing it into our daily lives to help us make travel a safer prospect. With the ability to inform a driver of a detected impairment they are able to make an informed decision to hopefully stop driving before they injure themselves or other travelers. With travel being one of the leading causes in death worldwide it is time to consider a technology outside of our usual tool set to reduce this danger.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Yulun Hu**

***VR Technology in Soccer Training***

Virtual reality technology is coming to our daily lives. It shows a variety of changes in study, work and entertainment. Training is always an important part in soccer games. The quality of training not only influences players' improvement, but also their performance in competition. This proposal focuses on how could VR technology help soccer players improve themselves. Also it discusses some problems in soccer training like injury and physical limit. VR technology could give soccer players a lot of benefits. Moreover, the improvement of players means a lot to the team/club.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Manogna Vadlamudi**

***Website development for WOU Student TextBook Exchange***

This project focuses on the development of a new website for the WOU students to exchange their books at low cost. Students could exchange used text books as well as professor's edition that are not available at any other stores. The current system doesn't reimburse students who give their used books to the system. So the proposed system focuses on developing a website that is user friendly and compensates students, motivating them to collaborate and use this system. Though there are chances to buy book from WOU bookstore they are very expensive. Furthermore, the proposed system also faces a challenge which we can while going through the paper. Also, the paper discusses about motivation behind the project, drawbacks for the existing system, pros and cons for the proposing system. By further reading we can know its competitors and promotions for the proposing system. There some software that we have used in this system to make the webpage more aesthetically pleasing. This proposing system uses Microsoft Azure and Microsoft Team Foundation Server. Using these type of software can make the storage of records flexible and at ease of cost.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Duanyun Mo**

***The Design & Solutions for the Web-Based Ordering and Menu System***

Nowadays, with the development of modern technologies, the restaurant industry also faces many changes. However, with three main applications which are popular used by today's restaurant market, neither restaurants' benefits and customers satisfactions is improved in an efficient way. Therefore, I want to find solutions for problems existing in those current applications and design a balanced and modified menu and order system for restaurant to improve their daily operations and offer customers with satisfactions. This paper will generally cover my research process, idea and steps about how I achieve my scheduled purpose and target.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Kefan Yu**

***Intelligent Control GPS Pet Collar***

There are some amazing data show that many dangerous factors threaten those little animals everyday. Fifteen percent of pet owners had lost a dog or a cat in the past five years and one in three pets will get lost during their lifetime, and also, over 6,000,000 dogs and cats were killed on United States roads last year. To save and protect these lovely little lives who may meet any dangerous in the future, I have created an intelligent control GPS pet collar. The aim of the product is to help pet owners get back their pets as soon as possible when they get lost and make them be attention grabbing enough when they go across the road at night.

Faculty sponsor: John Marsaglia

8:30 to 10:30 a.m., WUC Pacific Room

**Justin Ross**

***MileTrack***

MileTrack is an android app that was designed for individuals that drive for a living who need an easy and secure way to track mileage for reporting and tax purposes. MileTrack provide users several ways for users record vehicle mileage. Users will be able to manually enter starting and ending odometer reading. Additionally, users will be able to add mileage by pulling the starting and ending point on the their trip and allowing the application to find the mileage driven. The app will also generate a text output file that can be used to document all trips. Unlike other app MileTrack will store data on the device and will not require a monthly charge.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Lexie Widmer**

***Android Development: PCSAR App***

For Search and Rescue Members who would like to better manage their SAR volunteer commitment, the "PCSAR App" is a mobile application that holds member contact information, tracks member certifications and trainings, utilizes an inventory system for pack supplies, and provides a messaging system. Unlike the current system of using email list-serves to contact members and print-out pack lists this product will provide a complete dashboard of resources for an improved user experience.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Ming Li**

***Journaling***

For employees who want to write the journal or the work journal, the Journaling Application is a mobile-based application that will allow the user to record the work every day. The user can not only write down his/her thoughts and the things that happened every day, but also upload his/her work into the application and make some comments for the work. If the user wants to check the work in a specific day, he/she can use this application to search and get it. Unlike Everyday.me (The name of a Journaling Application), our product will allow users to upload the files and store them in the application.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Gene Osborne**

***Forensic Analysis of Cranial Trauma Application***

For forensic investigators, who want to know the cause of a cranial wound found on deceased human remains, the "Forensic Analysis of Cranial Trauma" or "FACT" is a forensic tool that allows users to take pictures of damaged human craniums belonging to deceased persons, and analyzes the images to determine possible classifications for perimortem injuries. It will also keep track of past images and their analysis for later reference. Unlike current methods of examining human cranial trauma that require highly trained experts and expensive equipment to be easily defended in court, this product will utilize applied mathematics and computer science to provide a service that anyone with a computer and mobile phone can access. Investigators will be able to store photos in galleries, so that they can be easily referenced in the future.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Shannon Haas**

***WOU Am I Android App***

For Western Oregon University students, faculty and staff who are in need of an interactive and useful quick reference for the WOU campus, the WOU Am I is an Android app that will help users get around campus more efficiently by using a map that displays floor plans of each building. The user can also get directions to any building on campus. As an added bonus, this app also provides quick access to a calendar that lists all the events happening at WOU so everyone has the opportunity to enjoy all that WOU offers.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Rikki Swetzof**

***Timystry Android Application***

For students who want to stay on top of assignments or who need assistance with organization and motivation, the Timystry Android Application is a time allocation and planning system that will help students stay organized and on top of their assignments or provide motivation and time management assistance to the unorganized student. This application will allow the student to enter in assignments, due dates, and time estimations, as well as hours of availability for homework. Reminders and time allotments will help the student visually understand when assignments need to be attended to. Color coding and notifications will remind students of looming deadlines. Unlike currently available applications, this

product will put everything in one place for the student and provide visual feedback and reminders for tasks.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Kyle Collins**

***Shift Away Mobile Application***

Shift Away is a mobile application that provides employees with an app that can allow them to give away their shifts to other coworkers. Shifts can be published to the app from employees while other coworkers will receive notifications that allow them to either accept the shift or ignore it. Profiles for employees will be created and they can browse various workplaces. Also available on this application is the ability for managers to take control of the work space profile and approve the transaction of shifts. This system will allow easy transactions of shifts, post notifications to employees eligible for the shift, and allow easy manager access to all shifts being posted throughout the workplace.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Christopher Howard**

***Digital Ocean Controller***

For on the go system administrators who need the ability to control their servers while traveling, the Digital Ocean Controller is the perfect mobile companion that gives full control over the virtual private servers in their Digital Ocean accounts. By combining the API controls in advanced ways the Digital Ocean Controller will allow for complete management, creation, and destruction of servers with in the administrators accounts on the Digital Ocean cloud. With the ability to instantly check status information for any given server, the Digital Ocean Controller gives the administrator the information he or she needs to make quick actions, as well as quick access to those actions directly on their phone. Unlike current mobile controllers that only offer simple API controls, the Digital Ocean Controller will allow for advanced one touch controls to be available, such as instant deployment and configuration of a servers, and advanced detailed information about individual droplets.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Kevin Hutt**

***VR Spider Simulator***

For the gamer who wants to be a spider, the "VR Spider Simulator" is a virtual reality game that allows the player to finally live out their lifelong dream of being a spider. Being a spider is not easy; you will have to catch food to eat in order to survive. This game will also feature randomly generated levels so the game is different every time you play. Unlike other spider simulator games, our game uses google cardboard and a handheld controller to create an immersive, first-person, virtual reality experience that will put you in the spider seat.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Justin Karcher**

***GuardMe***

For children and teens who need to travel point to point, safely. The Guard Me app is a personal safety companion that assists in safe traveling by creating timed check-in points. The app uses registered accounts to

privately send, messages and alerts that contain your geographical location to either guardians or friends in the circumstance that a check point was missed. It also is able to emit loud audible sirens at the user's discretion. Unlike current safe travel apps (Bugle, BSafe, ect..) that are marketed toward women and hikers. This app is designed with parental controls in mind that will allow guardians to override the app with designated check-in times for their child. Providing a safer travel experience and added security for children and teens.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

### **Robert Ringeling**

#### ***Periodic Table Battleship***

Periodic Table Battleship is an interactive game that will educate people on how particular elements combine and react with one another. It uses the ideas of battleship in exciting new ways that encourage the player to experiment with different combinations of elements placed on the board. The elements they place their ships on will provide the player with beneficial offensive abilities, as well as defensive abilities that will strengthen their ships hulls against enemy attacks. These abilities can be unleashed on the AI enemy which can be set to various difficulties. Unlike other varieties of battleship currently on the market, this version of Battleship will take the strategy of the game to a whole new level by providing constant new situations for the player to come back to and will encourage them to experiment with the elements provided to them. They will learn about chemistry while having fun doing it.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

### **Ruby Tidwell**

#### ***The Minimalist***

For people living or working in small or crowded environments who want to reduce clutter or create more space, The Minimalist is a smartphone application that will provide a suggested course of action (keep, toss, or donate) for any item a user needs help deciding what to do with based on their personal responses to simple, thoughtful questions. Unlike existing websites or apps offering general advice for reducing clutter or minimizing your things, this product provides a framework and actionable suggestions for specific items, thereby empowering and enabling users to move from advice and theory to action and results.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

### **Nick Parr**

#### ***Reef Test Reminder***

For saltwater hobbyists who regularly test water parameters, Reef Rest reminder is a mobile application that allows for input of digital and titration test results. Input data can be viewed via historical graph for reference and comparison. Custom defined reminders will alert its user appropriately to ensure tests are administered regularly. The application also provides a calculator for two-part supplement systems to give a precise measurement for calcium, alkalinity and magnesium when adjusting to desired parameters. A calculator for the safe addition of Granular Ferric Oxide, Lignite, or ROX Carbon by volume will also be included for those using media reactors. Unlike other applications used in the hobby, Reef Test Reminder allows automatic input conversion from individual test kit manufactures to most

commonly used measurements. Time paced titration tests will include color selection input and a stopwatch. Most importantly, Reef Test Reminder combines the essentials for stabilizing reef aquarium parameters.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

### **James Dearing**

#### ***ScriptDragon***

For screenwriters who need help generating ideas, ScriptDragon is a multi-platform app that provides creative inspiration in the form of various writing aids; such as notecards, character prompts, event prompts, and a generator for character and place names. Notecards can have any combination of: text, colors, associated plotlines, associated characters, and associated scenes. Character prompts will ask the user to describe particular aspects of characters, e.g. their childhood. Event prompts will ask how one or more characters react in a randomly chosen situation or location. The name suggester will randomly select names. For other people who need to do stuff based on a given screenplay, the app will generate reports based on criteria such as which characters are in a given scene. Screenplays and reports can be exported as plain text, PDFs, or other file types. Unlike currently available apps, our product is focused entirely on scripts (as opposed to being a more general-purpose management tool) and will run on phones as well as laptops.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

### **Kim Marberry**

#### ***Environmental Mapper***

For visually impaired people who need assistance in identifying obstacles in their environment, the "Environmental Mapper" is a specialized Phone Application that creates a detailed map of the user's current environment. It will map out the obstacles in the area. Using sensors built into the phone it will track their position indoors. It will also provide assistance with moving about their known area, alerting them to the amount of steps before a wall or furniture. Unlike the current mobility assistance applications that use GPS to track way-points to a location in a large area, which does not function well indoors, this system will give the user security in knowing that if their known environment changes they will not be injured by colliding with recently placed or moved objects.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

### **Tyler Trinh**

#### ***Lawn Pawn***

For teenagers and homeowners who desire help matching house and yard work with willing labor. The application is a social network that will assist homeowners in finding help for yard and house work. Homeowners may look through labor options by price, location, experience, and reviews. The application will allow teenagers to receive work offers and search through them according to pay, location, time, and reviews. After an offer is accepted, both the homeowner and worker will be notified of the job details by email. Unlike current work matchmaking sites, our product will focus on teenagers. They will be able to leave employment reviews. The application will allow homeowners to review completed services also.

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Joseph Shin**

***Augmented Overlay***

For Augmented Reality enthusiasts who want to try an alternative method of increasing productivity, the Augmented Overlay is an Android Augmented Reality application that displays content over markers that indicate where content should display. Users can choose what content they wish to have displayed over these markers, such as images, videos, or 3D objects generated by Unity. Unlike similar AR or VR projects such as Microsoft's HoloLens, my product will try to be useful in many ways, such as testing how an image may look on a surface. My product will also be highly economic due to only needing an Android device and AR support accessories such as Google Cardboard, both of which can be acquired for a total of under \$100 USD. In comparison, the HoloLens functions by projecting holograms which will result in a speculated price of a few thousand US dollars. Features: Displays content over AR markers; User can choose what content to display; Content that can be displayed are images, videos, and 3D objects; User can write a small note and have it displayed over an AR marker; Markerless AR may be implemented if possible (ex. display video on a blank LED TV).

Faculty sponsor: Mitch Fry

8:30 to 10:30 a.m., WUC Pacific Room

**Amelia Dieter**

***Fantasy Map App***

For readers, writers and map enthusiasts who want to have a better place to access their fantasy maps, the Fantasy Map app is an app that will allow people to access the maps they see in books they are reading right on their phones without the hassle of flipping back and forth to the map in the book itself. Unlike the current technology which is just flipping back to the start or sometimes end of the book to view the given map or Googling the map each time, our product will enable users to access the map they need at any time while in the middle of a gripping saga or just for fun!

Faculty sponsor: Mitch Fry

## COMPUTER SCIENCE

COMPUTER SCIENCE, INFORMATION SYSTEMS AND M.S. IN MANAGEMENT AND INFORMATION SYSTEMS STUDENT PROJECTS

Session chairs: Scot Morse and Mitch Fry

Werner University Center (WUC) Pacific Room

### POSTERS

11 a.m. to 1 p.m., WUC Pacific Room

**Matthew Stroud**

***Oregon Crime Codes***

For anyone who needs information about criminal laws in Oregon, Oregon Crime Codes is an Android application that provides ORS criminal definitions for every criminal law in Oregon. This app will provide this information in a presentable way for smartphones, which will allow users at any time to pull up any law they are interested about. Currently, ORS criminal definitions are not formatted for Android smartphones, and my app will fix this issue. A main feature will be that the information is always present, whether you are on the Internet or not. Unlike the basic information available online, there will be more rich functionality like the ability to search for Oregon law by ORS code or name, and the ability to save laws into custom lists.

Faculty sponsor: Scot Morse

11 a.m. to 1 p.m., WUC Pacific Room

**Lauren Hiland**

***Emergency!***

With the Emergency! application users can easily access emergency medical information and local emergency services information, in order to always have a safety back-up plan. The Emergency! application is an information system that will provide step by step first aid instructions and will keep its user updated with the closest emergency services information available. This application will display instructions on how to give first aid and will also include instructions on how to give CPR. This application will run continuously in the background on your device, tracking your location by GPS, and constantly updating the application with local emergency information. A separate page will store the users chosen personal emergency information.

Faculty sponsor: Scot Morse

11 a.m. to 1 p.m., WUC Pacific Room

**Sam Wytoski**

***Eve Market Tool***

For a player of Eve Online who knows that every aspect of the game is player verses player and are motivated to squeeze every bit of ISK (in game currency) out of the markets that they can, and are always looking for some new edge that can be obtained. The Eve Market Tool is a player friendly application that is here to provide comprehensive up to date information to help players optimize the market trading aspect of the game. Unlike the current system for accessing current prices in different markets within Eve Online, normally a player would need to have a character logged into the game at both locations. Having two characters online at once requires a player to have two accounts. Our software offers players access to current market trends and up to date information from all over the universe of Eve Online. When looking over the markets a player needs to not only know the prices in different locations but also the amounts of each product that is needed, this can be difficult, Eve Market Tool is here to help with the information needed to make a killing on the market.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Lyubov Bilobrovchuk**

***FMLA/OFLA Tracker***

For employees eligible for FMLA/OFLA who want to know more how the FMLA/OFLA works and keep track of days covered by the FMLA/OFLA, the FMLA/OFLA tracker is a mobile-based application that will explain more on what FMLA and OFLA are and how to apply them to a particular situation in their lives. In this app, users can define what they are eligible for by specifying different criteria (health problems, pregnancy, worked hours, and more). They can set a first day of starting using the FMLA/OFLA, number of hours used under FMLA/OFLA on a particular day, enter intermittent or reduced work schedule. The application will keep track of how many hours are used and left under the FMLA/OFLA. If employees are eligible for both FMLA and OFLA, the application will track both acts independently. Unlike the Fisher & Phillips FMLA Leave app, my product will cover OFLA.

Faculty sponsor: Mitch Fry



11 a.m. to 1 p.m., WUC Pacific Room

**Matthew Hofstetter**

***PokéList Mobile App***

For Pokémon enthusiasts who need a centralized app to keep track of their collection and wish for a strategic battle advantage, the PokéList is an Android app that will help users excel in all aspects of the Pokémon trading card game. PokéList gives users an "on-the-go" list of cards that they currently own, and can also provide optimal cards for battles. Users can store what cards they want and have in different lists, as well as add other users to their friends list. This app has all of the currently available Pokemon cards, as well as pictures. Users can update their current lists by selecting a card from the pre-loaded list, or manually searching for a certain one. Unlike currently available apps, PokéList has all of the cards pre-loaded, and allows users to communicate with each other, while still giving the optimal hand for a certain battle, given user constraints.

Faculty sponsor: Scot Morse

11 a.m. to 1 p.m., WUC Pacific Room

**Alex Orso**

***Virtual Garden Android App***

For casual mobile gamers who want to play a calming and interesting game the Virtual Garden game is an Android app that will provide a relaxing and Zen-like gaming experience to all users. The game will feature a persistent virtual garden that the player can grow a wide variety of animated plants and place aesthetically pleasing scenery. The player can water these plants and watch them grow. In addition to the controllable virtual flora there will be a variety of uncontrollable digital animals and creatures that will appear in the garden when certain criteria is met. A main feature of the game is growing beautiful plants and watching animals interact with these plants and each other automatically. Unlike similar games and apps my game will not demand constant attention or annoying in app purchases, and instead focus on providing the user with a free and calming experience to help reduce stress.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Jared Staben**

***SocialAggro***

For current users of social media who wish to be more connected with various social networks, the SocialAggro is a specialized application that provides instantaneously updated information from various social media outlets, with the ability to post, reply, sort, and filter through large amounts of information. Registered users will be able to add whichever social media accounts that they would like, allowing for them to monitor and receive information from whichever social site they choose.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Danielle Sikich**

***BabbleTunes***

For people interested in turning their speech into a song, BabbleTunes is a mobile application that will generate a song by pairing a user's speech input with selected background music. If a user talks for their voice recording the pitch of their voice will be changed, if the voice recording is short then the recording will be repeated to fill the background music, and the user will also be able to stop and play the song that was

generated. Basically, the user of this application will be able to generate songs from their speech input, and it will be useful as a source of fun and entertainment. Unlike current speech to song applications, my application can dynamically change based on the voice input. Current applications do not change based on the input.

Faculty sponsor: Scot Morse

11 a.m. to 1 p.m., WUC Pacific Room

**Aaron Duncan**

***ManifesTime Application***

ManifesTime is an android application developed for increasing the efficiency of tracking hours worked. The application can be used by companies of any size, especially for small businesses that rely partly or entirely on going out to their customers. Employers will be able to instantly know billable hours, employee hours worked, and create and edit a manifest for employees of the days expected work that can be updated whenever the need arises. Employees will clock in and out with ease, have up-to-date information on where to go and whom to service, what service to perform, and even have a map showing the quickest routes between customers.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Babatunde Idahor**

***EkiList***

For grocery shoppers who need to make a list of items they need to be purchased from the grocery store, the EkiList application is a mobile app that will help create, store, manage, and keep track of the items you need to get from the store. This will ensure that you don't forget to buy an essential item or product you need from the grocery store. This application will also store and keep track of items on your grocery list. It also encompass a GPS alert API that sends you a message as a reminder to your phone that you need an item on the list while driving pass a grocery store. You will be able to share your list with your spouse, friends and roommates before and after shopping. This application will save you time and stress looking for a sticker note or paper that you forgot at home or office. Unlike the way most people write their list on a piece of paper or try to commit it to memory, my mobile app will make it easy for a grocery shopper to shop with a new experience, ease and less disappointment.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Ray Gottsch**

***D&D Character Creator***

For D&D players who need to create new characters for the D&D 5th edition game, D&D Character Creator is a mobile application that allows players to load all the basic information from the D&D Players Handbook quickly and easily for character creation. An easy to use input system will allow the user to create a character and automatically calculate all the starting stats needed to play. The characters can then be saved or loaded from a basic text file on the phone for later use or editing. A quick and easy questionnaire will be available for less experienced players that will generate a starting character for them without having to know how the creation process works. Characters can also be viewed and played from the phone in a nice, clean format. The D&D character creator uses these features to help assist in the character creation process.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Jason Gersztyn**

***An Interactive Pothole Tracking Mobile App***

For individuals who want to report, avoid, or even correct potholes found on roadways, the Pothole Pal is an interactive mobile application that records the locations of potholes. Information is tracked in real-time as the car travels, using GPS tracking technology and an accelerometer. Each occurrence of a hazard will be pinged on a map and saved. This data will be displayed to the user in the form of an easy-to-read map. The app will be sure to not confuse dips and bumps with erratic driving. Unlike similar applications where potholes are reported manually, our product provides far more functionality and is practical for everyone. It encourages people to contribute, creating a safer, more efficient drive for all. Motorists will be able to locate potholes ahead of time. Governments will be able to see infrastructure issues and resolve them accordingly.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Howard Passmore**

***Community Communicator***

For people and cities who want a way to report and track infrastructure problems, Community Communicator is a smartphone application that will allow anyone to report infrastructure problems anywhere they encounter them. Any problem, whether it be small like a pothole or large like an abandoned building with still running electricity can be reported. Users will be able to submit exact coordinates of the issue, a picture of the issue, and any additional description. This will allow citizens and officials to have a better understanding of the issues around their city, find problem areas, and allow them to best plan a response. Unlike current infrastructure reporting apps, this product will support submission of any issue and will not be region locked, therefore allowing users to report and track any issue, anywhere, at any time.

Faculty sponsor: Scot Morse

11 a.m. to 1 p.m., WUC Pacific Room

**Zachary Dial**

***Travel Ravel***

For travelers who want to organize their vacation plans and the memories they make on them, Travel Ravel will provide all of this in one easy to use mobile application. Travel Ravel allows you to create, view, and edit an itinerary for your upcoming dream vacation. The itinerary will contain planned events and simple details about them, allowing the app to send you reminders, quickly give directions to the next event, and calculate how much you must save daily/monthly before the trip to cover all planned cost. In addition, Travel Ravel will organize your phone's photos and videos taken during a trip, allowing you to quickly look back and remember exactly when and where certain memories took place.

Faculty sponsor: Mitch Fry

11 a.m. to 1 p.m., WUC Pacific Room

**Lauren Ryan**

***Passages***

For mobile game enthusiasts, the Passages iPhone application will provide hours of entertainment in a beautiful and unique setting. Passages is a physics-based game designed around the concept of traversing wormholes. It contains multiple levels of dynamically created wormholes to travel, so the experience is constantly fresh and new. The levels will increase in difficulty as the game progresses by increasing speed, amount

of twists and curves, and the addition of obstacles to be avoided and items to be gathered. There will be two modes- the leveled play and a "constant" mode where you can choose the level of difficulty. The player will also be able to choose between color schemes so they may enjoy their optimal aesthetic experience. My iOS game will combine the challenge of a fun new physics-based game with multiple ways to play and beautiful, customizable wormhole visualizations.

Faculty sponsor: Scot Morse

## CRIMINAL JUSTICE

FORENSIC ANTHROPOLOGY

Session chair: Misty Weitzel

Werner University Center (WUC) Pacific Room

### POSTERS

11 a.m. to 1 p.m., WUC Pacific Room

**Chelsea Wiley, Zaire Solis and Maritsa Knight**

***Sex, Ancestral, and Pattern Type Variation of Fingerprint Minutiae***

The forensic anthropology field does not routinely examine fingerprints as a tool for creating a decedent's biological profile. In this study, we will assess 400 fingerprints from 80 students at Western Oregon University (40 females; 40 males) who fall within four ancestral groups (Caucasian, African-American, Hispanic, and Pacific Islander). Level 1 details include general fingerprint patterns of whorls, arches, and loops, while Level 2 details include all fingerprint minutiae such as islands, forks, and deltas. After gathering the fingerprints from volunteers, we will visually analyze Level 1 and Level 2 details found in the fingerprint, with an emphasis on Level 2 details. The collection of fingerprint data will be tabulated and analyzed to determine which details occur more frequently among each sex and ancestry. Examining fingerprint features from a diverse group will help determine if sex and ancestry can aid the forensic anthropologist in identifying a victim.

Faculty sponsor: Misty Weitzel

11 a.m. to 1 p.m., WUC Pacific Room

**Carmela Macedo, Julia Borovskiy and Daisy Romero**

***Cremation of Remains***

After attending this presentation, observers will be presented with the results of a study conducted to better understand the rate of decomposition through cremation by three different and readily available resources (wood, coal, and gasoline). This experiment's objective is to confirm the results of studies that have already been conducted by other members of the forensic community as well as provide insight into which substances burn at a faster rate. As of now, there is a lot of information about the process in which flesh and bone are cremated, but little information on which substances burn at a faster rate. Understanding the fuel as it is tied to the rate of human decomposition will aid the investigator in estimating time since death in cases of attempted cremation. Three domestic pig (*Sus scrofa domestica*) legs were used in this experiment with both flesh and bone intact (radius/ulna/femur/fibula/phalanx). After attending this presentation, observers will leave with new knowledge of which substance out of the three that were tested (wood, coal, and gasoline) cremate remains (in this case pig legs) at a faster rate.

Faculty sponsor: Misty Weitzel

11 a.m. to 1 p.m., WUC Pacific Room

**Martha Kools, Taylor Maddox and Carlos Sanchez**

***Identifying Sharp-Force Trauma - Serrated vs. Non-Serrated Blades***

The purpose of this study is to determine the accuracy of techniques devised to identify characteristics of knives used to inflict damage on bone. According to the FBI's Unified Crime Report, of the nearly 12,000 people murdered in 2014, over 1,500 were killed by sharp force trauma with cutting instruments. While much research has been dedicated towards understanding the different effects on bone caused by sharp and blunt force trauma, forensic anthropology is only beginning to differentiate between individual weapons. Currently, perimortem trauma associated with knives is understood to present as predominantly clean, linear puncture damage, rarely exhibiting radiating or concentric fractures; however, it has been observed that different types of knives create distinctive features. Thompson and Inglis (2009) found that fracture patterns from stab marks could indicate the use of either a serrated or non-serrated blade. To test this hypothesis, this study will measure stab wounds inflicted by a third party on the ribs of a domestic pig, and identify them as either serrated or non-serrated. An error rate will then be calculated to determine the overall precision of the technique.

Faculty sponsor: Misty Weitzel

11 a.m. to 1 p.m., WUC Pacific Room

**Stewart Patterson, Natalie Turner, Delaniae Rojas Aguilar and Jocelyn Chavez**

***Decomposition: An Entomological Approach***

This purpose of this project is to examine the process of decomposition and insect activity in the Willamette Valley, Ore. Over the course of two weeks, we will examine three different sets of remains of chickens (*Gallus gallus domesticus*). The first set of remains will be exposed above ground. The second set of remains will be above ground but will be covered with cloth as to simulate someone wearing clothing. The third set of remains will be buried roughly 10 cm below ground. Every other day insect activity and decomposition stages will be observed, with the exception of the third set of remains, which will be exhumed at the end of the project. Insect samples will also be taken for identification. Two temperature readings will be taken upon each examination of remains: a local reading of the weather from the nearest weather station and a temperature reading using a handheld thermostat. By collecting data from the remains, we hope to gain a better perspective of decomposition within the Willamette Valley region.

Faculty sponsor: Misty Weitzel

11 a.m. to 1 p.m., WUC Pacific Room

**Taylor Winder and Joe Jirges**

***Examining the Effects of Corrosive Substances on Human 3rd Molars***

The purpose of this research project is to examine the effects that the three corrosive substances (muriatic acid, sulfuric acid, and lye) have on human teeth. Three 3rd molars will be immersed in each corrosive substance, with the fourth 3rd molar being placed in tap water as a control. It is expected that the muriatic acid will cause the most damage out of the three corrosive substances on the 3rd molars, and that water will show no effect. Throughout this experiment occurring over the course of seven days, each 3rd molar's weight and appearance will be documented. Furthermore, photographs will be taken before and after the experiment is completed to see the full effects that each corrosive substance has on the tooth. This research project is important

to forensic cases in which humans bodies showed evidence of chemical modification. Understanding the specific effects each corrosive substance on human teeth is beneficial for future cases.

Faculty sponsor: Misty

## DANCE

ACADEMIC EXCELLENCE IN DANCE

Session chair: Amy McDonnell

Maple Hall (MH)

### PRESENTATIONS AND PERFORMANCES

10 to 10:15 a.m., Maple Hall

**Kristin Miller**

***World War II and Ballet***

World War II not only disturbed the every day routine of life as well as social and cultural growth and development, but the growth of many art forms. Ballet was beginning to flourish prior to the war, particularly in Europe. Despite setbacks and obstacles faced, World War II was a pivotal time period that changed people's pre-conceived views on ballet and fostered an enormous spread and growth of this previously confined art. Hardships and the negative repercussions of war as well as the many positive advancements in ballet associated with wartime will be discussed.

Faculty sponsor: Sharon Oberst

10:15 to 10:30 a.m., Maple Hall

**Jay Hall-Schnurpusch**

***BrainDance***

Faculty sponsor: Sharon Oberst

10:30 to 11 a.m., Maple Hall

**Carly Hill**

***Dance and the Body***

Faculty sponsor: Amy McDonnell

11 to 11:10 a.m., Maple Hall

**Elsa Hill, "Retta"**

***Modern 8 Revolution: A Kinesiological Analysis***

A modern dance turn (en dedans with battement to second and lateral tilt, followed by grande rond de jambe en l'air) from Darryl Thomas' Modern 8 dance class is demonstrated and described in terms of its movement phases with a detailed kinesiological analysis of the action phase. Dance technique tips, suggestions for injury prevention, and recommendations for physical conditioning/training are discussed. This was a final project for Kinesiology for Dancers, winter 2016.

Faculty sponsor: Marita Cardinal

11:10 a.m. to 11:10 a.m., Maple Hall

**Maya Zakhour**

***MindFull***

This dance artistically interprets what goes on in the mind through movement. A young student sleeps past her alarm and is late for a test. See what her thoughts look like in the daily life of a college student.

Faculty sponsor: Cynthia Garner

11:25 to 11:35 a.m., Maple Hall

**Kristie Lauren**

***Sacrament of a Soul***

My piece, *Sacrament of a Soul*, is based on the soul depleting dark attachments that follow the tainted of our world. These unseen negative energies influence, fuel, feed, and can entirely consume us in our times of pain and suffering. My dance tells the story of one such tragic soul who has submitted to these parasites of pain. In her we witness a life sacrificed for an eternity of aching emptiness.

Faculty sponsor: Cynthia Garner

11:35 to 11:45 a.m., Maple Hall

**Andrew De La Paz, Hayleyann Evers, Robin Evers, Michael Johnston, Madison Kelly, Alaina Meyer and Kristin Miller**

***Nanachi (Seven)***

Choreographed by guest artist Mark Santilliano in October 2015, *Nanachi (Seven)* was performed both at the American Dance Association conference held at the University of Wyoming in Laramie, Wyo. and again at the WOU 2016 Spring Dance Concert.

Faculty sponsor: Darryl Thomas

## DEAF STUDIES AND PROFESSIONAL STUDIES

Session Topics in American Sign Language, Interpreting, Deaf Education, and Mental Health

Session chair: Michael Olivier

Werner University Center (WUC) Santiam Room

### PRESENTATIONS

1 to 1:15 p.m., WUC Santiam Room

**MaryLynn Ahrensbach**

***Women in the Workforce***

Faculty sponsor: Dr. Cung Fan Ni, or Dr. Denise Thew-Hackett

1:15 to 1:30 p.m., WUC Santiam Room

**Sarah Turner**

***LGBTQ Documentary***

I created a documentary asking questions to lesbian, gay, bisexual, and queer individuals. It is a very candid documentary that is about nine minutes long. I will speak a little about LGBTQ history, diversity, and subgroups; and why I excluded transgender individuals.

Faculty sponsor: Denise Thew

1:30 to 1:45 p.m., WUC Santiam Room

**Elizabeth Mallery**

***Native POW'S - A Prison Without Walls - Diversity Awareness In Counseling***

A poem

Faculty sponsor: Chung-Fan Ni

1:45 to 2 p.m., WUC Santiam Room

**Ciara Meyer**

***Tran\*gender Considerations: Identity and Diagnosis***

This presentation explores the implications of a Gender Dysphonia (GD) diagnosis for a person who identifies as Trans\*gender. The information will

explore the way identity may overlap or conflict with a GD diagnosis. Additionally, the presentation aims to examine potential benefits and drawbacks of a diagnostic label for students, employees, and minors.

Faculty sponsor: Denise Thew-Hackett

2 to 2:15 p.m., WUC Santiam Room

**Jace Cookson**

***Native American: A Creative Piece***

Faculty sponsor: Chungfan Ni

2:15 to 2:30 p.m., WUC Santiam Room

**JennyLynn Dietrich**

***Ghana Service Learning Experience***

The presenter will share her and her teammates of nine students and two faculty members experiences of their travels to Ghana, Africa. The presentation will include several topics; first a description of their volunteer work at the University Practice Inclusive School in Winneba and the Cape Coast School for the Deaf and Blind. Secondly, the student will discuss what the team learned about the interpreter roles and expectations from their visit at the University of Education, Winneba. Lastly, the presenter will share her reflection of their culture and the welfare of the Ghanaian population.

Faculty sponsor: Erin Trine

### BREAK

2:45 to 3 p.m., WUC Santiam Room

**CherylN McCarry**

***Refugees and the Barriers in Resettlement***

This presentation will focus on refugees from the Middle East and the historical, political, sociological, and the economic barriers and how that may impact receiving vocational rehabilitation services as well as mental health counseling. Another focus will be how gender roles, attitudes, acculturation, and racism affect this population after resettlement and how to provide solutions to better serve this population.

Faculty sponsor: Denise Thew Hackett

3 to 3:15 p.m., WUC Santiam Room

**Jenna Beresheim**

***Preposterous Prepositions: Emotional Responses to 'of' Versus 'for' in Deafness-Centered Titles***

"What is your reaction when you read these two titles: Psychology for the Deaf versus Psychology of the Deaf? What connotations or gut feelings arise with the difference of one small word?" The question initially arose in a Deaf Mental Health class at Western Oregon University in 2016, with feelings on this grammatical difference mixed. Some students believed that the preposition 'of' created a distanced, clinical feel but was argued that it empowered the Deaf community. On the other hand, 'for' was believed to be more personal and connected, but a double-edged sword in the sense that it sounded as though it had been gifted down to a minority group. The purpose of this study was to give this originally simple discussion question the linguistic attention it deserved. The study itself took place through an online survey of 41 people over the period of a week. Participants ranged in age, ethnicity, culture, and audiological identity to ensure a wide spread of emotional response possibilities.

Faculty sponsor: Michael Olivier



3:15 to 3:30 p.m., WUC Santiam Room

**JennyLynn Dietrich**

***Communication Specialists, Who Are They?***

The student will provide an informative presentation on the four most important components of the roles and responsibilities of a communication specialist. Communication assessment, communication advocacy, interpreting and teaching are crucial tools when working with clients who are Deaf with mental health issues and language deprivation. The presentation will include a potential employment description, professional development plan and marketing benefits for future communication specialists and mental health facilities.

Faculty sponsor: Amanda Smith

3:30 to 3:45 p.m., WUC Santiam Room

**Cassie Owens and Darcie Chin**

***PT, SSP, and BC, Oh My!***

Reflecting on our experiences working with the DeafBlind community who were attending a DeafBlind retreat in Seabeck, Wash., we review our six months of training that included; practicing guiding, giving environmental information, and using Tactile American Sign Language (TASL). With this knowledge that we accumulated over the course of two terms, a group of 11 students went to the retreat to apply these skills to the DeafBlind community. We will discuss our personal experiences, as well as those within our group. We will expand on the unique features of the DeafBlind community and their language.

Faculty sponsor: CM Hall

## DEAF STUDIES AND PROFESSIONAL STUDIES

TOPICS IN AMERICAN SIGN LANGUAGE, INTERPRETING, DEAF EDUCATION, AND MENTAL HEALTH

Session chair: Michael Olivier

Werner University Center (WUC) Santiam Room

### POSTERS

4 to 5 p.m., WUC Santiam Room

**Lynne Murphy**

***Interpreter Roles in Education***

The roles of educational interpreters as mediators of communication have changed and may continue to change over time. Interpreters within the classroom balance language access with concept value and carry multiple roles throughout the school day. The philosophies of interpreters' roles have changed over the years as well, as displayed through many interpreting models. Maintaining a secure identity of one's own role, limits, and control options before entering the classroom is vital. Each individual is a human before she or he is an employee - interpreters are no exception to this. It is true that the communication and mediation that occurs during interpreting is not focused on the interpreter. However, interpreters may take into account that they are not invisible and there could be miscommunication without their presence. Interpreter roles within the educational setting were examined, compared, and contrasted using group studies, a personal interview, and professional research with the purpose of explaining how interpreters' roles have shifted over the years and how they impact the identity of professionals within the field today.

Faculty sponsor: Vicki Darden

4 to 5 p.m., WUC Santiam Room

**Karis Rook**

***The Importance of Deaf Bilingual Teaching: Utilizing both English and ASL with Deaf Students***

My presentation reflects on the history and current state of deaf/hard of hearing education as well as how it is impacting students. Exploring bilingual education in the classroom, it's importance, and the variety of forms it can take.

Faculty sponsor: Michael Olivier

4 to 5 p.m., WUC Santiam Room

**Ashley Cooper**

***Diversity in the Field***

Faculty sponsor: Vicki Darden

4 to 5 p.m., WUC Santiam Room

**Quinn Murphy**

***Social Identities: Perception of Negatives and Positives***

Faculty sponsor: Patrick Graham

4 to 5 p.m., WUC Santiam Room

**Quinn Murphy and Brenda Puhlman**

***Service Learning in Ghana***

This spring, a group of students from Western Oregon University traveled to Accra, Ghana, to work with Deaf students and the community in the area. This trip was ten days, and a lasting learning experiences for all of the students. Students worked in an inclusive school as well as a school for the Deaf in Cape Coast. Working with a diverse group of children, students from WOU had exposure to a variety of teaching philosophies and interpreting philosophies. This poster is an analysis and summary of cultural differences and the impact Ghana had on the students and vice versa.

Faculty sponsor: Patrick Graham

4 to 5 p.m., WUC Santiam Room

**Sierra Roan**

***Stigmas Individuals with a Criminal Background Face***

The purpose of this presentation is to show the stigmas that individuals with a criminal history face in their personal, as well as their vocational life. The study was conducted by asking individuals with a criminal background, as well as individuals who do not have a criminal background, "What is the first word that comes to your mind when you think of an individual who has been incarcerated". The poster will display what individual's response was.

Faculty sponsor: Denise Thew

4 to 5 p.m., WUC Santiam Room

**Tricia Desrosiers**

***Signed Language Interpreting in Healthcare Settings: Who is Qualified?***

The Americans with Disabilities Act (ADA) states that access to an interpreter is a deaf person's right, but without a national certification for signed language interpreters who work in health care settings that law is hardly enforced within the medical field and has caused a myriad of issues. Negative experiences with multiple communication breakdowns have resulted from family members and friends taking on the role of an interpreter; deaf persons simply not being provided an interpreter; medical facilities hiring unqualified interpreters; and controversial use of

video remote interpreters (VRI). The aforementioned causes of negative experience in health care scenarios, have also led to many deaf people being less inclined to seek medical care and routine appointments. Ultimately, the lack of access to qualified interpreters has affected the general health of the entire deaf community. This poster session will address the certification issues related to interpreting in healthcare settings; and the impacts that they have on both the interpreting community and the Deaf community. Included in the poster will also be recommendations as to what needs to be done to reach a solution.

Faculty sponsor: Vicki Darden

## EARTH AND PHYSICAL SCIENCE

APPLICATIONS OF GEOSPATIAL TECHNOLOGY

Session chairs: Melinda Shimizu and Philip Wade  
Werner University Center (WUC) Pacific Room

### POSTERS

1:30 to 3:30 p.m., WUC Pacific Room

**Courtney Donaca, Nathan Hartle, Lee Lindley, Will Edwards, Jennifer Menkel, Tyler Rummel, Ashley Thompson and Allison Yamnitsky**

#### ***Cartography Competition: Children's Reference Map of Africa***

Cartography is the art and science of making maps. While there is certainly room for creativity, there are well-defined standards that guide the process of creating a map. These standards direct and clarify the choices made in all aspects of map composition. Of chief concern for the map-maker is consideration of the intended map audience. Knowing this audience directs the entire process and the design choices made in executing a map. For this project, nine students in ES 340 are directed to create a reference map of Africa for kindergarten students. Their choices in map design are to reflect the needs of their audience and the results of their work are presented as an assemblage of nine different maps designed for the same purpose, but created by nine different map authors. The variety in maps presented demonstrates both the flexibility and rigidity in map standards. Finally, these nine maps are presented for evaluation by attendees of that Academic Excellence Showcase. Attendees will be able to vote for which of the maps they think is best. The top two selected maps will be presented to kindergarteners at Ash Creek elementary school for kindergarten students to select the best map of the group.

Faculty sponsor: Melinda Shimizu

1:30 to 3:30 p.m., WUC Pacific Room

**Derek Smith, Cody Knight, Charles Esping, Daniel Harper, Harry Hill, Salinda Brinson, Tom Konczol, Paul Rostad and Joe Placek**

#### ***Cartography Competition: Children's Reference Map of the United States***

Cartography is the art and science of making maps. While there is certainly room for creativity, there are well-defined standards that guide the process of creating a map. These standards direct and clarify the choices made in all aspects of map composition. Of chief concern for the mapmaker is consideration of the intended map audience. Knowing this audience directs the entire process and the design choices made in executing a map. For this project, nine students in ES 340 are directed to create a reference map of the U.S. for kindergarten students. Their choices in map design are to reflect the needs of their audience and the results of their work are

presented as an assemblage of nine different maps designed for the same purpose, but created by nine different map authors. The variety in maps presented demonstrates both the flexibility and rigidity in map standards. Finally, these nine maps are presented for evaluation by attendees of the Academic Excellence Showcase. Attendees will be able to vote for which of the maps they think is best. The top two selected maps will be presented to kindergarteners at Ash Creek elementary school for kindergarten students to select the best map of the group.

Faculty sponsor: Melinda Shimizu

1:30 to 3:30 p.m., WUC Pacific Room

**Hannah Anonson, Chadd Barbis, Jethna Korecki, Allison Kingsella, Ryan Johnson, Tommy Martin, Adam Dutton, David Elphic and Kaitlyn Hugmeyer**

#### ***Cartography Competition: Children's Reference Map of Europe***

Cartography is the art and science of making maps. While there is certainly room for creativity, there are well-defined standards that guide the process of creating a map. These standards direct and clarify the choices made in all aspects of map composition. Of chief concern for the mapmaker is consideration of the intended map audience. Knowing this audience directs the entire process and the design choices made in executing a map. For this project, nine students in ES 340 are directed to create a reference map of Europe for kindergarten students. Their choices in map design are to reflect the needs of their audience and the results of their work are presented as an assemblage of nine different maps designed for the same purpose, but created by nine different map authors. The variety in maps presented demonstrates both the flexibility and rigidity in map standards. Finally, these nine maps are presented for evaluation by attendees of the Academic Excellence Showcase. Attendees will be able to vote for which of the maps they think is best. The top two selected maps will be presented to kindergarteners at Ash Creek elementary school for kindergarten students to select the best map of the group.

Faculty sponsor: Melinda Shimizu

1:30 to 3:30 p.m., WUC Pacific Room

**Jason Gersztyn**

#### ***A Google Earth Tour Perspective on Modern Volcanic Eruptions and Earthquake Events***

Google Earth was initially released as a product called EarthViewer 3D in June 11, 2001. In the nearly 15 years since that time, besides getting a new name, Google Earth has become one of the most prolific and user-friendly geospatial tools available for viewing and analyzing spatial (space) and temporal (time) data. Additionally, the user-friendly interface and ability to display, map, and analyze data makes it an excellent tool for education and geoscience outreach. This project focuses on the latter with development of a Google Earth Tour of recent volcanic eruptions and earthquake events. The information for each event is presented in a slideshow that can be set to run automatically in the tour, or be navigated interactively by a user. Each event is presented at its location on Earth, giving viewers an appreciation of the spatial aspect of each eruption or earthquake. The slideshows included in the tour are compiled from the collective work of several terms of the Honors Science course GS202H. This project is a pilot study demonstrating a new venue for student presentation of information pertaining to geologic events.

Faculty sponsor: Melinda Shimizu and Philip Wade

## ENGLISH, WRITING AND LINGUISTICS

LITERATURE, LINGUISTICS AND WRITING

Session chairs: Uma Shrestha and Thomas Rand  
Werner University Center (WUC) Willamette Room

### PRESENTATIONS

9 to 9:15 a.m., WUC Willamette Room

**Katrina Penafior**

*Selection of Poems*

Faculty sponsor: Henry Hughes

9:15 to 9:30 a.m., WUC Willamette Room

**Frank Asay**

*Selection of Poems*

Faculty sponsor: Henry Hughes

9:30 to 9:45 a.m., WUC Willamette Room

**Jenna Beresheim**

*Junk Drawer*

Faculty sponsor: Henry Hughes

### BREAK

10 to 10:15 a.m., WUC Willamette Room

**Daniel Thom**

*Just a/the Presentation: Exploring the Connection Between Words And Grammar*

When asked about our intuitions about our own language, many native English speakers are unable to express the rules that govern their language choices. Even articulating basic language choices like the meaning difference between “an” and “the” is often difficult. These meaning variations can be incredibly hard to understand, especially for English language learners, as language usage and meaning rules seem completely arbitrary and disconnected at times. This presentation explores an empirical approach to analyzing language patterns using corpus linguistics methods to make sense of the connection between meaning and usage in language.

Faculty sponsor: Robert Troyer

10:15 to 10:30 a.m., WUC Willamette Room

**Rachel Gries**

*Max Norr: Writing Over Time*

A brief study of one college student’s fiction writing and how it changed over time, both grammatically and semantically.

Faculty sponsor: Robert Troyer

10:30 to 10:45 a.m., WUC Willamette Room

**Alissa McAlpine**

*Vocal Fry as a Marker of Modern Feminine Identity*

Vocal fry, the distinctly creaky voice quality that occurs in the lowest vocal registers, has recently become prevalent in modern speech. Over time its perception has shifted from one of masculine power and authority to its modern status as an identity marker among young urban women. This presentation examines two key schools of thought relating to the

sociolinguistic implications of vocal fry as it relates to gender representation and the construction of identity in the modern world. The first of these representations is the view of vocal fry as an attempt to establish oneself as an authority figure through the use of language, particularly in academic and professional settings. The second approach examines the common perceptions of vocal fry as a marker of young, inexperienced women and the highly negative connotations attributed thereto. These two approaches to the sociolinguistic study of vocal fry will be presented in comparison with one another to draw larger conclusions regarding the expression and perception of identity in relation to language production.

Faculty sponsor: Uma Shrestha

10:45 to 11 a.m., WUC Willamette Room

**Daniel Thom**

*A Recipe For Success: Understanding New Genres From the Inside Out*

Traditionally, the notion of genre has been restricted in scope to literary pieces categorized by style or subject matter – satire, tragedy, drama, and short stories, to name just a few. However, genre can be extended far beyond literature to include any socially or culturally accepted form of communication, whether that be spoken or written, and anything from a greeting card to a eulogy to a travel brochure can be considered its own genre. This presentation explores a common genre - food recipes - and analyzes it from the inside out, elucidating commonly overlooked genre conventions and demonstrating the pedagogical implications of genre theory in the classroom.

Faculty sponsor: Cornelia Paraskevas

11 to 11:15 a.m., WUC Willamette Room

**Meyer Prize for Excellence in Literature**

*Courtney Royer, The Pillowman: Setting the Stage*

Faculty sponsor: Gavin Keulks

## GEOGRAPHY

GEOGRAPHY: CLIMATE CHANGE

Session chair: Mark M. Van Steeter

Werner University Center (WUC) Pacific Room

### POSTERS

11 a.m. to 1 p.m., WUC Pacific Room

**Brandon Pike**

*The Effects of Dams on Climate Change*

Dams could play a massive role in anthropogenic climate change, and not necessarily for the better. The reservoirs behind dams are a growing source of global methane (CH<sub>4</sub>) emissions, leading a number of researchers to question the net benefits of hydroelectric dams in some locations in the fight against climate change. As organic material flows into reservoirs and decomposes, it produces CH<sub>4</sub> that eventually reaches the atmosphere. Globally, this accounts for at least 20 percent of human-caused methane emissions. This process is amplified in areas with large amounts of biomass, such as tropical and other lower-latitude areas where dams are being built at a quick rate. Though CH<sub>4</sub> does not last as long in the atmosphere as CO<sub>2</sub>, it has the potential to have an effect 25 times greater on climate change over a 100 year period due to its greater capacity to trap energy in the atmosphere. As we look for sources of clean and renewable energy to adapt to a changing climate, understanding the pros and cons of

dams is crucial. Continued research and improved measuring techniques are likely needed before a definitive conclusion can be reached regarding dams and their effects on climate change.

Faculty sponsor: Mark Van Steeter

11 a.m. to 1 p.m., WUC Pacific Room

**Ashley Thompson**

***Groundwater and Climate Change***

Groundwater accounts for one third of all freshwater withdrawals on earth. It is an important resource for a variety of human activities, including agriculture. Groundwater can be a renewable resource if withdrawals and seepage of water is equaled or exceeded by recharge. Anthropogenic climate change is altering key processes that affect groundwater, including precipitation patterns, evapotranspiration, vegetation, and sea level rise. Human activities related to water are also changing in response to a warmer climate, altering groundwater sources even more. There will be regional variability; certain areas at certain times will experience net increases or net losses in groundwater supplies as the many changes come into effect. This variability means that the ability to predict how certain aquifers will respond is limited, yet essential. A case study of the Cowichan Watershed in British Columbia illustrates these complexities.

Faculty sponsor: Mark Van Steeter

11 a.m. to 1 p.m., WUC Pacific Room

**Cameron Harris**

***Methane: The Arctic's Ticking Time Bomb***

The Arctic is one of many areas where methane is stored in the earth's crust. It resides in permafrost, gas deposits, and submarine clathrates where methane is trapped within the ocean floor. The release of methane gas is accelerating due to global warming. This is due to melting of the permafrost and the gas deposits exiting the surface and into our atmosphere. Positive feedbacks continue to push the acceleration of this cycle causing more methane gas to enter our atmosphere and contributing to greenhouse gas concentrations in the atmosphere. Methane traps more heat than carbon dioxide and is about 30 times more effective at doing so (Nyman 2014). With the increase of methane comes more heating of the earth, which in turn accounts for more methane being released. It is estimated that methane releases from Arctic permafrost and the clathrates have more than quadrupled since 2006, and are estimated to be between 40 and 50 times higher than the levels we experienced prior to then (Oskin 2013).

Faculty sponsor: Mark Van Steeter

11 a.m. to 1 p.m., WUC Pacific Room

**Elias Bedolla**

***The Decline of Salmon in the Pacific Northwest***

Global warming negatively impacts salmon populations in the Pacific Northwest. The poster will include examples from Northern California, Oregon, and Washington. Recent drought in California and hydrological changes throughout the Pacific Northwest are linked with the decline of Salmon. Impacts from irrigation withdrawal and rain/snow patterns will be discussed. The affect of Dams and management action/inaction on Salmon populations will also be addressed.

Faculty sponsor: Mark Van Steeter

11 a.m. to 1 p.m., WUC Pacific Room

**Kasey Sauvageau**

***Alternative Crops in Drought Conditions***

Global warming trends are predicting a hotter and dryer climate for the Pacific Northwest. These predictions mean that we need to prepare ourselves for the possibility of long term drought like conditions. Even in the face of drought, agriculture is still an important part of our survival. Practices of low-impact farming and the use of alternative drought-tolerant forage crops can save limited water resources. Less common varieties of crops we currently use have been proven effective and efficient in areas such as Australia where drought is an on-going issue. By introducing these lesser known varieties to our little corner of the world, I hope to persuade others to consider options that could be both cost effective and helpful to our environment.

Faculty sponsor: Mark Van Steeter

11 a.m. to 1 p.m., WUC Pacific Room

**Allison Yamnitsky**

***Climate Change and Water Security of Southeast Asia***

Nearly 1.3 billion people rely on seasonal meltwater from Himalayan Glaciers. They provide irrigation for agriculture, hydroelectricity, and basic drinking water for southeast Asia. Compounding water scarcity, the population of this region is growing rapidly. The objective of this work is to determine future implications of the unprecedented glacial melting and the impact on water security for over a billion people. Using remote sensing technology such as climate recovery satellites and looking at total water usage, predictions of future challenges can be made. Many regions of southeast Asia are extremely vulnerable to changes in meltwater. Political instability and poor infrastructure make this region vulnerable to catastrophic consequences given water shortages.

Faculty sponsor: Mark Van Steeter

## HEALTH AND EXERCISE SCIENCE

HEALTH AND EXERCISE SCIENCE POSTER SESSION

Session chairs: Daryl Thomas, Janet Roberts and Amy Hammermeister  
Werner University Center (WUC) Pacific Room

### POSTERS

1:30 to 3:30 p.m., WUC Pacific Room

**Matthew C. Turner and Rowan Cheney**

***An Innovative Shrug Apparatus: Is the ISA More Effective in Upper Trapezius Development than Traditional Dumbbell Shrugs?***

In this study we tested the use of an innovative shrug apparatus (ISA). We hypothesized that the ISA would be able to isolate and effectively activate the upper trapezius muscles more than traditional dumbbell shrugs. Electromyography (EMG) in conjunction with the BIOPAC MP150 system and EL503 electrodes was used to measure the activation of the middle deltoids, upper, and lower trapezius muscles. The peak-to-peak amplitudes were measured, recorded, and compared by calculated means for four trials. Two trials tested the ISA and the other two trials tested the dumbbells. This experiment supports the hypothesis. Further studies are required.

Faculty sponsor: Brian Caster



1:30 to 3:30 p.m., WUC Pacific Room

**Daniel Wolf, Katherine Leino, Camille Hobson-Lopez and Adam Johnson**

***Landing Accommodation to Minimalist Footwear***

The purpose of this study was to investigate whether minimalist footwear could be beneficial in areas other than running. The study included four participants whom performed twelve repetitions of landing for both footwear conditions. The first condition was a self selected athletic footwear and the second condition was the Carson minimalist footwear. On average, the minimalist footwear condition caused participants to exert less force upon landing than the self-selected footwear condition. A T-test was conducted on the participants' averages and found a significant difference between conditions. This information allows us to conclude the shoes change the movement strategies of users.

Faculty sponsor: Brian Caster

1:30 to 3:30 p.m., WUC Pacific Room

**Alexander Yett and Zeke Wilson**

***Comparison Between Bilateral Postural Stability and Athlete Single Leg Testing Using the Biodex Stability System***

Comparison Between Bilateral Stability and Athlete Single Leg Testing Using the Biodex Stability System. These two separate tests have very similar protocols yet yield somewhat different information. This study examines the two different protocols, and why the use of different settings is necessary for two nearly identical tests and whether or not it shows a difference in test scores.

Faculty sponsor: Brian Caster

1:30 to 3:30 p.m., WUC Pacific Room

**Jamie Kahn and Andrew Johnson**

***Effects of Kinesio Tape on Ankle Stability: Does the Number of Pieces of Kinesio Tape Have Varying Effects on Ankle Stability?***

Manufacturers claim KTape can be used to provide added stability. This study aimed to determine the effects of Kinesio tape on ankle stability and to discover whether the number of pieces of Kinesio tape used has an effect on ankle stability. Seven subjects participated in three trials: one, two, and three pieces of KTape applied to participants' ankles. Subjects' range of motion and overall ankle stability were measured. At the end of each trial, participants completed a survey. Results suggest the number of pieces of KTape applied has varying effects on range of motion impacting ankle stability.

Faculty sponsor: Brian Caster

1:30 to 3:30 p.m., WUC Pacific Room

**Sam Naffziger and Zach Holloway**

***How the Correct Track Spike can Improve Performance***

The study examines different track spike performances during an 800 meter race. Twenty Western Oregon University track athletes (12 male, 8 female) completed a survey on 800 meter spike preference. 13/20 preferred a spike designed for 800 meters. Six preferred a spike designed for longer distances, and one preferred a spike designed for shorter distances. A video analyses was performed on four athletes during an 800 meter race. Each athlete raced three 800's wearing a different spike in each (sprint, mid-distance, long-distance). All four athletes showed similar results in all three spikes. The mid-distance spike proved to be most effective.

Faculty sponsor: Brain Caster

## HEALTH AND EXERCISE SCIENCE

HEALTH AND EXERCISE SCIENCE SYMPOSIUM

Session chairs: Daryl Thomas, Janet Roberts and Amy Hammermeister  
Health and Wellness Center (HWC) 203

### PRESENTATIONS

9 to 9:30 a.m., HWC 203

**Sophia Damiani, Stephanie Foster and Sarah Niles**

***The Effects of Income During Childhood on Post-childhood Obesity***

Studies indicate that poverty, or more generally, low income has a profound impact on the incidence of being overweight and obese in post-childhood periods. The correlation between income and obesity is evident as early as one-year-old and continues to show its impact into adolescence and adulthood. Children of low income status are more likely to be overweight or obese and continue through life with steeper rates of obesity than their higher socioeconomic status counterparts. Certain studies indicate, however, that these developments could possibly be prevented if factors associated with poverty, such as noise, crowding, and exposure to violence, were controlled.

Faculty sponsor: Amy Hammermeister-Jordan

9:30 to 10 a.m., HWC 203

**Molly Viles, Kimberly Davis and Christiana Colasurdo**

***Sexting Among Adolescents***

With a constant growth in technology, sexting has become more common among adolescents. The purpose of this presentation is to define sexting, cover it's possible motives, discuss it's prevalence, and talk about potential intervention strategies. Our goal is to give the audience a deeper understanding of what sexting is and why it is relevant in the world of young people.

Faculty sponsor: Amy Hammermeister-Jordan

10 to 10:30 a.m., HWC 203

**Ashley Baxter**

***±3,4-Methylenedioxymethamphetamine: Treating PTSD In The Modern World***

Post-traumatic stress disorder (PTSD) is a serious condition that afflicts millions of individuals in the United States. Its complexity has resulted in physicians struggling to effectively implement and maintain treatment. Emerging studies suggest that ±3,4-Methylenedioxymethamphetamine (MDMA), or "ecstasy", may prove beneficial in treating PTSD in combination with conventional psychotherapy. By acting on the 5-HT transporter in the brain, MDMA has been found to have positive effects on brain activity; encouraging neuroplasticity through the accumulation of brain-derived neurotrophic factor (BDNF). Integrating psychoactive drugs into polytrauma therapy will broaden our understanding of the components involved in maintaining wellness in the human psyche.

Faculty sponsor: Warren Allen

10:30 to 11 a.m., HWC 203

**Greg Harrison**

***Fitness Program for College Aged Female***

Overview of the development and implementation of a fitness program in EXS 485 for a college age female. The client was a former high school athlete but is currently inactive. Her goals were to become more active,

increase strength, increase cardiovascular endurance, lower body fat percentage, enjoy exercise, and learn about living a more healthful lifestyle. Through the program she was able to gain knowledge of weight lifting techniques, improve her VO2max, and gain confidence in her abilities.

Faculty sponsor: Tom Kelly

## HISTORY

HISTORY SENIOR THESIS PRESENTATIONS

Session chair: Patricia Goldsworthy-Bishop

Werner University Center (WUC) Columbia Room

### PRESENTATIONS

9 to 9:15 a.m., WUC Columbia Room

**Michelle Smail**

#### ***From Suffolk to Nanking: A Walking Tour of the Natural History of Destruction***

W. G. Sebald (1944-2001) is one of Germany's best known modern writers, and his creative nonfiction works challenge traditional divisions of history and fiction. Sebald is known for his use of uncaptioned black and white illustrations in narratives that examine memory, unintentional legacy, history, and genocide, creating a signature that pushes the reader to see the past in new lights. His most historical work, *The Rings of Saturn*, was published in Germany in 1995 and is set in Suffolk, England in the year 1992. The narrator takes a physical walk around Suffolk, recounting ways in which destruction touched various locations in England, but the narrator's memory is often sparked into recalling many instances of destruction throughout the globe and across the centuries, including the 19th century Taiping Rebellion in China, the 20th century Rape of Nanking, and the Holocaust in Croatia. In weaving centuries of international history into a travel narrative, Sebald becomes an advocate for social justice through the observance of history as it was and as it lives, empowering history in the process.

Faculty sponsor: David Doellinger

9:15 to 9:30 a.m., WUC Columbia Room

**Isaac Keister**

#### ***Sex, Drugs and Power: Westmoreland's Vietnam***

From the Battle for the Ia-Drang Valley in 1965 to the final withdrawal from the American Embassy in Saigon in 1975, the helicopter was an integral part of American forces strategy in the Vietnam War. The focus of this study is to view the helicopter as a tool of military strategy, more than a piece of hardware. My thesis is that the helicopter enabled the search-and-destroy war waged by American forces against the North Vietnamese forces.

Integral to understanding this strategy which the helicopter was vital to, is General Westmoreland's autobiographical memoirs on the Vietnam War, *A Soldier Reports*, in which Westmoreland defends his command of the American Army in Southeast Asia. General Westmoreland's perspective is vital to understanding the strategy of Vietnam, and the broader nature of the war itself. This presentation will outline Westmoreland's defense of his strategy, and explore how air-mobility played a role in his approach to fighting the War.

Faculty sponsor: John Rector

9:30 to 9:45 a.m., WUC Columbia Room

**Allan Chet Emmons**

#### ***The Trial of Nicolae Ceausescu***

My thesis is that nationalism, as employed by the Romanian government under Nicolae Ceausescu, led to the violence of the 1989 Revolution. While many Eastern European nations had revolutions in 1989, Romania's revolution was the only one that reached high levels of violence as perpetrated by Ceausescu's government. The primary source this talk examines is the transcript of Ceausescu's trial after his capture. The trial took place on December 25, 1989 in a military base near Bucharest, Romania. Ceausescu and his wife, Elena, were captured while attempting to flee the country after the military defected to the revolutionaries on December 22. The revolution's leaders decided to put them both on trial and to have them executed to demoralize military officials who remained loyal to the Ceausescus. The verdict of the trial was already decided before the trial began and the Ceausescus were executed less than ten minutes after the verdict was handed down. The trial exposes some of Ceausescu's nationalist motivations during the revolution, as he believed the protesters and revolutionaries were agents of the Soviet Union.

Faculty sponsor: David Doellinger

### BREAK

10:15 to 10:30 a.m., WUC Columbia Room

**Jennifer Hight**

#### ***The Nuremberg Laws and the Foundation of Nazi Scientific Experimentation 1941-45***

On September 15, 1935 the Nazi party announced a new series of laws codes that legally cemented the principles of Nazi ideology: The Nuremberg Laws. Written by Bernhard Loesener and Dr. Wilhelm Stuckart, the Nuremberg Laws were composed of many parts and my presentation will focus on two specific sub-articles. One, the "Reich Citizenship Law" revoked the status of Jews as legal citizens and created the framework the Nazis would use to persecute by defining what it meant to be German or Jewish; later the laws were expanded by the Nazis to label minorities as non-German citizens. The "Laws of the Protection of Hereditary Health" stated that anyone the Nazis deemed as carrying inheritable diseases would be forced to undergo sterilization. Together, these laws established a foundation for scientific human experimentation that the Nazi doctors performed on inmates in concentration camps from 1941 to 1945. This presentation examines the legal foundation of that experimentation.

Faculty sponsor: John Rector

10:30 to 10:45 a.m., WUC Columbia Room

**Emily Walley**

#### ***St. Edmund's Talking Head***

The talking severed head is a phenomenon that appears in two staggeringly different genres of medieval writing: Celtic folklore and writings concerning saints, known as hagiography. This strange shared motif has sometimes been interpreted by scholars as an indicator of the influence of folklore on hagiographic writings. Written in the late 10th century by French monk Abbo of Fleury, *The Martyrdom of St. Edmund* tells the story of Edmund, a king of East Anglia who was decapitated by Viking invaders. After this decapitation episode, Abbo writes that Edmund's head retained its powers of speech, calling out directions to his friends until it was finally found between the paws of a wolf that was acting as the head's guardian. While Edmund's decapitation story is commonly used as an example of

the influence of folklore, scholars debate the use of this method of identifying elements of folklore in other genres of writing. Regardless of this debate, it can be demonstrated that the talking severed head in both hagiography and Celtic folklore often fills the same role: to provide continued guardianship over those remaining in the world of the living.

Faculty sponsor: Elizabeth Swedo

10:45 to 11 a.m., WUC Columbia Room

### **Benjamin Lesh**

#### ***The Assertion of English Royal Authority in the American Colonies: Sir Edmund Andros and the Dominion of New England***

English monarchs in the 17th century utilized a wide variety of tools to assert their authority and control over the English colonies in North America. The king's primary tools in this effort was trade policy, as well as more direct seizures of power. The most direct attempt at royal rule of the colonies came with the establishment of the Dominion of New England in 1686, which encompassed most of the colonies in New England. King James II appointed Sir Edmund Andros, the proprietary governor of New York, to govern this new region. Andros' governmental commission was first written in 1686 and then reissued with an expanded region of control in 1688. Andros' commission provides a clear illustration of the extent of the king's efforts to assert his authority in the American colonies by providing an explanation of Andros' powers and authority over the Dominion of New England, as well as elaborating on the Andros' role as the primary agent of the king's will in the colonies. The Dominion of New England illustrates the confluence of all the primary factors behind the push for centralized colonial rule after the English Civil War, including economics and political ideals.

Faculty sponsor: Elizabeth Swedo

11 to 11:15 a.m., WUC Columbia Room

### **Daniel Correa**

#### ***Declassified CIA Report: Argentine Government Illegally Facilitating Escape Routes for Former Nazis***

This presentation will examine the "Illegal Immigration of Nazis from Germany to Argentina" document. This document is a correspondence by unknown author(s) involved in the now defunct Office of Strategic Services of the United States. Accessible through the CIA archives as part of the Nazi War Crimes Disclosure Act, the report was written on Jan. 22, 1946. The document contains information about the known whereabouts of secret Argentinian contacts located in Europe. It alleges that Carlos Werner Schulz, an Argentinian citizen of German birth, was forging passports and recruiting former Nazis for the Argentinian Army. The document also alleges that the Argentinian Legation in Denmark was tasked with purchasing Nazis and was compensated by the Argentine government for each former Nazi delivered to Argentina. It shows that former Nazis and Nazi sympathizers were acting as contacts in Europe to help facilitate the escape of Nazis wanted by the Allied forces. Furthermore, the document shows that government officials in Argentina were also acting as contacts, incriminating Argentinian President Juan Peron.

Faculty sponsor: John Rector

11:15 to 11:30 a.m., WUC Columbia Room

### **Emma Foster**

#### ***The Book of Kells: Celtic Art, Christian Motif***

Intricate knot work, humans represented as animals, letters twisting and

winding into heads, and decorative plants all featured in a distinctly Celtic form are the artist components of the illuminated manuscript – *Book of Kells*. The art between the pages of four Christian gospels in the *Book of Kells* attest to the blending of Celtic and Christian symbols, a feature that becomes prominent in Irish Christianity. Dating from the year 800 CE, this book is famous not only because of its ornately decorated pages, but also because it has long been associated as a book of St. Columille, one of the Twelve Apostles of Ireland. This presentation analyzes the ways in which Celtic images feature so distinctively on Christian motifs by focusing specifically on the pages displaying the Chi Rho, the arrest of Christ, and the images of the four Evangelist. For scholars concentrating on the Irish conversion process, from its pagan roots to Christianity, *The Book of Kells* is an invaluable source because it shows that by the 9th century there was a synthesis of Christian beliefs and Irish culture.

Faculty sponsor: Elizabeth Swedo

## **HONORS GENERAL SCIENCE**

EXPLORING ENERGY RESOURCES THROUGH STUDENT CREATED VIDEO

DOCUMENTARIES

Session chairs: Philip Wade and Arlene Courtney

Natural Sciences (NS) 101

### **PRESENTATIONS**

8 to 8:15 a.m., NS 101

#### **Carter Craig, AJ Holmberg and Madison Adrian** ***Sun Cars, The Vehicles of Tomorrow***

This documentary film will examine the potential that solar powered vehicles have to become a valid alternative to fossil fuel vehicles. It will begin by examining the history of the solar vehicle and how it has evolved from the first blueprints of the idea until now. The film will also describe possible applications for this technology, whether it be for everyday consumers (cars, trucks, etc.) or specialized equipment like tractors, cranes, and cargo vehicles. Along with these applications we will examine the reasons it has not become of greater utility in the United States along with the rest of the world. The film will delve into the changes needed in order to see a vast increase in the production and usage of solar powered vehicles in alternative to fossil fuels in the near as well as the distant future.

Faculty sponsor: Philip Wade

8:15 to 8:30 a.m., NS 101

#### **Bryce Poehlitz and Janel Chandler**

#### ***Solar Flair: Gathering Power from the Sun***

Solar panels use silicon to absorb photons from sunlight and converts them into electrical energy. First observed in 1839, this process of harnessing solar power is a popular alternative energy source since it is cleaner than nuclear energy or energy from fossil fuels. Growth of the solar industry was slow at first due to the high cost of installation, however, solar panels have since become more popular around the world through government subsidies and other programs. Solar panels are effective at converting electrical energy because they can store the excess energy that they produced and use it when there is less sunlight than normal. The potential that solar energy holds as an energy source can open doors to an overall cleaner environment.

Faculty sponsor: Philip Wade and Arlene Courtney

8:30 to 8:45 a.m., NS 101

Matthew Miller, Mikaela Mendoza and Lauren Hebing

***Blow Me Away***

Wind energy is an environmentally friendly alternative to fossil fuels with a history dating back to 1887. The costs of wind turbines used to generate the electrical energy can be large but with progress that can be improved. The clean energy produced is much more affordable and has a more stable price than fossil fuels due to the constant availability of wind. Wind turbines are simple machines that use motion caused by wind to generate electrical energy. Many considerations go into where one can build these generators, such as weather, landscape, and accessibility. In addition to facts about the history, use, and benefits of wind turbines we will be producing a demonstration on how wind turbines work.

Faculty sponsor: Philip Wade

8:45 to 9 a.m., NS 101

**Jethna Korecki, Hevin Robertson and Kathryn Wilson*****Hydrogen Fuel Cells: From NASA to Now***

In a world searching for more efficient energy sources, one of the most promising prospects is hydrogen fuel cells. Fuel cells work by converting chemical energy into electrical energy. This occurs through a multi-step process where hydrogen electrons are stripped and combined with oxygen which forms water and produces energy. Hydrogen fuel cells have been in use since 1958, when NASA began utilizing them in the space program. The potential of fuel cells as an energy source has enticed more commercial interest in recent years, especially with car manufacturers such as Honda, Toyota, and BMW. Though there are different types of hydrogen fuel cells, this documentary will focus on the specific type that scientists believe is the most promising for vehicular use: the Proton Exchange Membrane Fuel Cell. Research about this technology is still ongoing: there are mixed reports on the environmental effects of hydrogen fuel cells as well as the overall efficiency. This documentary will examine the current applications of fuel cells and their future potential.

Faculty sponsors: Philip Wade and Arlene Courtney

9 to 9:15 a.m., NS 101

**Grace Knapp, Sara Madden and Natalie Legras*****Building a Greener Future***

As environmental issues become even more relevant to current and upcoming generations, new methods of producing energy are being explored. The housing sector contributes to a large portion of energy waste. This documentary will compare an experimental kit including a sustainable house, called "Power House," to Western Oregon University's LEED platinum certified resident Ackerman Hall. Ackerman Hall features sustainable and environmentally friendly technologies such as rainwater collection, thermal water heating, automatic lights and outlets, and recycled building materials. The focus of the documentary will be on solar heating, thermal water heating and cooling, environmentally friendly buildings and sustainable living. Experiments done with the "Power House" kit will concentrate on illustrating solar water heating, greenhouse plant growth, and increases and decreases in building temperatures.

Faculty sponsor: Philip Wade and Arlene Courtney

9:15 to 9:30 a.m., NS 101

**Brianna Williford, Malena Langlie and Julie Wallace*****Lighting Up The Future***

In the modern world a question lingers, "how does electricity get from a power plant, to the home?" The documentary presented by Team Tourmaline will provide a brief overview of the history and development of power grids. Later there will be several interviews with a few experts on the topic. These individuals will offer a better understanding of electrical transmission and energy loss specifically in the Pacific Northwest region. They will also contribute their ideas to what may be emerging for the future of power grids. Our experts include men that work, or have worked, within the electrical transmission industry and with complex electrical circuits both on a micro and macro level. Specific topics that will be discussed are: the process from electrical generation at the power plant, power transmission over long distances, and finally how it gets into the home and through the breaker box. The history and debate between direct and alternate current will also be touched on. The final point will be some alternative options for energy and electricity generation that could impact the near future.

Faculty sponsor: Philip Wade

9:30 to 9:45 a.m., NS 101

**Kristine Eck, Amanda Clarke and Christina Sekafetz*****Biodiesel, Biohydrogen, and Bioalcohol: Consumption May Vary***

As environmental issues continue to push their way into the forefront of daily lives, how will the current and upcoming generations address the drastic depletion of energy resources? One option for rehabilitating the harmful mindset associated with energy consumption is renewable energy. Biofuel, also known as agrofuel, is a renewable energy resource derived from biomass and biowaste and is most commonly used as fuel for combustion engines. Biofuel is preferred over gasoline because it has the potential to reduce harmful greenhouse gases associated with fossil fuels. Unlike fossil fuels, biofuels are not limited in availability. There are several types of biofuel; the first generation biofuels are made from a variety of sugars, oils, and starches while the second generation uses feedstock for a "greener" approach. Looking at biodiesel, biohydrogen, and bioalcohol, this documentary will focus primarily on the future of biofuel, various ways it can be made, and how it could benefit people around the world.

Faculty sponsor: Philip Wade

## INTERNATIONAL EDUCATION AND SERVICES COMMITTEE

STUDY ABROAD: ENCOUNTERS AND PERSPECTIVES

Session chair: Karen Haberman

Werner University Center (WUC) Ochoco Room

**PRESENTATIONS**

8:30 to 8:45 a.m., WUC Ochoco Room

**Joleen Braasch*****Destroying Ennui: My Study Abroad Experience***

Throughout my first three years of college I focused only on completing my required schooling and moving into the career I had tediously planned. Then, in the summer of my fourth year, I went to London. The experience completely changed my perception. I decided to actually enjoy my college years, rather than just going through the motions and letting all the days blur together. In London, I embraced each day with the people around me.



My love for literature was strengthened as we explored the cities, cathedrals, and incredible views that inspired great writers. In turn, I adopted a more adventurous spirit and gained an appetite for creative writing. When I came back to Western this new outlook came with me and I dipped my pen into the ink of the opportunities in the people and places around me.

Faculty sponsor: Karen Haberman

8:45 to 9 a.m., WUC Ochoco Room

**Courtney K Thomas**

***Death and Culture***

This presentation is a discussion on the differing views of death between the United States and the United Kingdom, as well as the important influences of death and related entities on local culture, architecture, and literature within the United Kingdom. Furthermore, this presentation will address the ways in which my study abroad experience helped me to come to these realizations that death is an important influence in academia and the arts.

Faculty sponsor: Dr. Karen Haberman

9 to 9:15 a.m., WUC Ochoco Room

**Abby Elliott**

Faculty sponsor: Karen Haberman

***Living Like a Peruvian: Adventures Abroad***

For me, studying abroad was an opportunity to learn about people, language, culture, the world, and myself. I learned lessons in the most unexpected situations and in surprising quantities. Through stories of travels and daily experiences, I will discuss the ideas of culture shock, building relationships, living abroad, and the differences in cultures, education and safety. I will also describe my personal growth and learning that came out of my semester in Peru.

9:15 to 9:30 a.m., WUC Ochoco Room

**Megan Cabison**

***Student Perspective on Study Abroad***

The purpose of my presentation is to examine the trials and tribulations of studying abroad. It gives listeners a true perspective of what it is like to be an American student studying in a foreign country. I not only focus on the amazing benefits that come with study abroad but also present the reality of what traveling the world is really like. I will share my constant battle with the European toilet, my travels to 14 different countries in three months, homesickness, financial fears, and how I completely changed as a person both mentally and physically. This is my story of studying abroad, my journey, and the road I took to becoming who I am today.

Faculty sponsor: Karen Haberman

**MATHEMATICS**

MATHEMATICS SENIOR PROJECT PRESENTATIONS

Session chair: Matthew Nabity

Math and Nursing Building (MNB) 104

**PRESENTATIONS**

9 to 9:15 a.m., MNB 104

**Mackenzie Koll**

***Regular Stars, Polygons, and Musical Scales***

Edge scales are musical scales constructed from the edges and vertices of a

regular polygon. Regular polygons are polygons that have specific structure that can be constructed from regular stars. We will discuss this structure using elements of rational trigonometry and discuss regular stars of order  $n$ . A star of order 6 will be used to construct a regular hexagon and motivate the construction of an edge scale. Similar constructions can be used to make other types of musical scales such as stellation scales.

Faculty sponsor: Matthew Nabity

9:15 to 9:30 a.m., MNB 104

**Amanda Evola**

***Examining Ramsey Numbers***

This paper explores the work of Frank P. Ramsey who founded Ramsey's Theorem and is centered on the fact that complete disorder is impossible. The goal is to dig into Ramsey's Theory by examining various Ramsey Numbers and bounds. Through this examination of Ramsey Numbers we will begin to see how we can reach structures arbitrarily large and be able to guarantee substructure through the proof of Ramsey's Theorem.

Faculty sponsor: Breeann Flesch

9:30 to 9:45 a.m., MNB 104

**Anthony Dominquez**

***Separability and the Cantor Set***

The Cantor Set is a famous set in point-set topology. There is a wide variety of types of Cantor Sets. However, we will only cover the ternary, or standard Cantor Set. In this talk, we will define and discuss what it means for a set to be separable and prove that the Cantor Set satisfies this definition.

Faculty sponsor: Matthew Nabity

9:45 to 10 a.m., MNB 104

**Sally Peck**

***Algorithmic Variants of QR***

One of the fundamental computations in numerical linear algebra is the QR factorization. A QR factorization decomposes a matrix into the product of an orthogonal matrix and an upper triangular matrix. The algorithms that compute these decompositions can often be costly, and at times, do not perform well for particular matrices. We investigate different methods of computing a QR factorization on a tall and skinny matrix, that is a matrix with more rows than columns. We discuss algorithmic variants and the move to a new family of algorithms based on tiles.

Faculty sponsor: Matthew Nabity

10 to 10:15 a.m., MNB 104

**Svetlana Dyachenko**

***Equations for Bacteria Growth***

Bacteria growth is really important in our life. Some bacteria cells help us overcome different diseases, while others bring those diseases to us. We have learned to produce medicine with help of bacteria growth, like insulin, to help those who are ill. Modeling bacteria growth is an important part of understanding it. Consider a situation of bacteria doubling every half an hour starting with one cell, how much time will it take to fill all the oceans on Earth? Questions like this are answered by developing mathematical models of bacteria growth. We examine modeling bacteria growth using differential equations. Our focus is on model construction and building realistic models that match empirical data.

Faculty sponsor: Matthew Nabity

**BREAK**

10:30 to 10:45 a.m., MNB 104

**Tyler McAfee**

***Commuting Pairs in Finite Non-Abelian Groups***

The study of the probability that two group elements commute dates back to 1968 with the work of Paul Erdos and Paul Turan. Since then, much has been deduced about these probabilities, including its bound of  $5/8$ . During this talk, we will look at the associated probabilities of finite non-abelian groups and how to calculate such probabilities using several methods. When calculating specific probabilities, we will look at the conjugacy classes associated with these groups which will reveal the relationship that conjugacy has to commutativity. Next, we will explore the probabilities associated with Dihedral groups and how to calculate probabilities with specific denominators as well as specific numerators. We will also look at the group of  $GL(2, \mathbb{Z}_p)$  matrices and deducing the probability that two of these matrices commute. Finally, we will wrap up with looking into some further research on this topic including some of the bounds associated with Dihedral groups.

Faculty sponsor: Mike Ward

10:45 to 11 a.m., MNB 104

**Kayla Vincent**

***Food Webs as Interval Competition Graphs***

A food web is defined as an acyclic graph where vertices represent different species and there is a directed edge from species  $x$  to species  $y$  if species  $x$  preys on species  $y$ . Food webs are important in Biology because they model the flow of energy in an ecosystem. A competition graph has the same vertex set as a food web, but now two vertices are adjacent if they prey on a common species in the food web. Most of these competition graphs are interval graphs. Interval graphs are graphs where vertices can be represented as intervals of the real number line such that vertices are adjacent if and only if their intervals overlap. In this talk, we will explain these structures and their relationships with real examples from biology.

Faculty sponsor: Breeann Flesch

11 to 11:15 a.m., MNB 104

**Brett Hegge**

***Manipulatives to Theory in Knot Theory***

Knot Theory is the study of simple closed curves in three dimensions. Complicated structures can be analyzed using three basic moves and knots can be shown to be equivalent. We discuss ways of using physical manipulation to get middle school students interested in mathematics. We also, explore the basic mathematical postulates and theoretical foundation of Link/Knot Theory.

Faculty sponsor: Matthew Nabity

11:15 to 11:30 a.m., MNB 104

**Robert Siewell**

***Zero-Sum Games***

Gaming is a pastime for most of the population and is something that is very easy to relate to for students. It is a rich mathematical environment where students can explore and learn algebra and probability. Today we will examine several lessons set in the gaming environment of zero-sum games. We are going to look at the algebra and probability behind them as a way to show some of the real world applications of mathematics;

as well as show where it can be used and integrated into a high school mathematics curriculum.

Faculty sponsor: Matthew Ciancetta

11:30 to 11:45 a.m., MNB 104

**Kaylee Church**

***Spiraling Insects***

The logarithmic spiral, also known as the growth spiral, is an interesting form in mathematics that happens to be very applicable to the natural world. We explore the structure of this curve, and how this spiral can be used to model the flight pattern of a moth. Specifically, we investigate assumptions used to construct a model for insect flight. Analysis of these underlying assumptions gives insight into possible improvements to the model and limitations of specific models.

Faculty sponsor: Mathew Nabity

11:45 a.m. to 12 p.m., MNB 104

**Anny Sheie**

***Research Based Best Practices for Teaching Mathematics and Improving Math Attitudes***

Mathematics education is at risk in this country. Not only are we falling behind in international math tests, but our citizens have negative math attitudes and are even math phobic. In this presentation, we investigate solutions to this problem through research and propose best teaching practices.

Faculty sponsor: Breeann Flesch

**MUSIC**

EXCELLENCE IN ETHNOMUSICOLOGY FIELDWORK

Session chair: Diane Baxter

Smith Hall (SH) 122

**PRESENTATIONS**

1 to 1:30 p.m., SH 122

**Various students**

Faculty sponsor: Diane Baxter

**MUSIC**

MUSIC DEPARTMENT HONORS RECITAL

Session chair: Ike Nail

Smith Hall (SH) 121

**PERFORMANCES**

11 to 12:30 p.m., SH 121

**Various students**

Faculty sponsor: Ike Nail

## NURSING EDUCATION (OHSU)

### NURSES IN HEALTHCARE DELIVERY SYSTEMS: PROCESS IMPROVEMENT PROJECTS

Session chairs: Angie Docherty and Patti Warkentin  
Werner University Center (WUC) Pacific Room

#### POSTERS

1:30 to 3:30 p.m., WUC Pacific Room

**Amanda McDonald**

#### *Immunization Rate Improvement among the Sweet Home Schools*

The Linn County Public Health Department collects information regarding the annual school immunization rates and coordinates with the Linn County school districts to maintain immunization rates that protect the community from vaccine-preventable diseases. As of January 2015, Foster Elementary had 91 percent of their students fully vaccinated and Holley Elementary had 85 percent of their students fully vaccinated. In order to avoid any outbreaks, school immunization rates should be about 90 percent or higher. The aim of this project was to improve the immunization rates among the elementary schools in Sweet Home with the efforts of the Linn County Public Health Department and the Sweet Home School District, to increase the attendance to the free school based immunization clinic that is held twice a year at the Sweet Home Junior High School, and to determine effective interventions that are specific to Sweet Home that will help improve the annual immunization rates among the schools.

Faculty sponsor: Angela Docherty

1:30 to 3:30 p.m., WUC Pacific Room

**Audrey Drake and Michael Kolbas**

#### *Using a Points of Health Resource Map for the Medicaid Population: A Pilot Study*

Medicaid recipients experience a greater health burden of chronic illness. Therefore, we designed a neighborhood-centric intervention to promote chronic disease self-management and empower providers to advocate for lifestyle changes. We designed a physical map designating the health-promoting resources of one neighborhood. The map illustrated opportunities for exercise, nutrition, stress relief, and group support. The design and production was accomplished through a collaborative process with community partners to identify relevant local resources. Our project garnered enthusiastic support from community members and health care providers. Our assessment also identified numerous resource gaps. Upon completion, we handed our map off to our community partners for future evaluation of health impacts. The completion of the resource map project proved the feasibility of such an endeavor and created a platform from which to gauge the effectiveness of neighborhood-centric health-promoting projects. Partnerships created with community members built a foundation for continued community-based health promotion efforts.

Faculty sponsor: Angela Docherty

1:30 to 3:30 p.m., WUC Pacific Room

#### **Tamara Mumej, Amanda Dahl and Berenice Rhoads-Ortiz** *Improving Mental Health Outcomes for Hispanic Mothers: Integrating a Perinatal Loss Support Curriculum*

The purpose of this project was to create a culturally and linguistically appropriate, evidence based learning curriculum on perinatal loss support for the Hispanic community. This project was developed to address unmet mental health needs and integrate a continuum of care focusing

on early intervention and maternal mental health within the Hispanic community. Current research is limited, but specifies a need for further exploration as maternal mental health is a leading complication during pregnancy. Implementation has the potential to lead to a stronger community connection and health delivery system. The perinatal loss curriculum, covering etiology of perinatal loss, coping strategies, grieving processes and expectations of subsequent pregnancies, was piloted in January 2016 within the Hope for Mothers support group established through Samaritan Health Services. The service is ongoing.

Faculty sponsor: Angie Docherty

1:30 to 3:30 p.m., WUC Pacific Room

**Erin Apodaca and Laura Maxwell**

#### *Applying the EFQM Excellence Model for Practice Improvement at Salem Free Clinics*

There are issues that almost all free medical clinics face in relation to providing quality healthcare to the ever-changing demographics of the population they serve. The European Foundation for Quality Management Excellence Model (EFQM) was utilized as a systematic approach to identifying underlying principles for achieving sustainable excellence. Assessing current levels of care provided at free medical clinics and comparing those to national standards is the initial step in creating new and innovative ways to enhance service delivery. This framework for process improvement highlights strategies to accomplish change by using small-steps improvements to facilitate the modification of processes to fit the growing needs of the patients they serve as well as meet the needs of relevant stakeholders in the organization.

Faculty sponsor: Angie Docherty

1:30 to 3:30 p.m., WUC Pacific Room

**Gina Umble, Maura Hander and Kaitlyn Braun**

#### *Integration of Free Medical and Dental Services*

There is a high prevalence of diabetes and hypertension in Linn County, Oregon and many of these cases are undiagnosed. Health screenings are an important way to identify these individuals and prevent the complications that occur when these diseases are left untreated. The aim of this performance improvement project was to identify previously unknown cases of diabetes and hypertension in the Greater Albany Area. Research revealed that health screenings in the dental setting, paired with follow-up by a health navigator, is an evidence based method for identifying chronic disease. In November 2015 Albany InReach Services and the Boys and Girls Club of Albany implemented blood pressure and capillary blood glucose screenings of all adult patients who attend their free dental health clinics. Albany InReach Services dedicated a health navigator to follow-up with clients whose screening results were indicative of diabetes or hypertension.

Faculty sponsor: Angie Docherty

1:30 to 3:30 p.m., WUC Pacific Room

**Kristal Nease and Meghan Wuichet**

#### *An Alternative Approach to Screen Time Management in Elementary Age Children*

According to the American Academy of Pediatrics, children devote an average of seven hours and 38 minutes daily to screen time, mostly comprised of 'entertainment media' such as viewing television, watching movies, and playing video games. Excessive screen time usage in this population correlates with negative sleep effects, increased obesity,

decreased physical activity, impaired cognitive/behavioral development, and lower academic performance. Research shows that school children in lower socioeconomic and Hispanic populations engage in even higher amounts of screen time and children from these populations have greater access to television, video games, and other entertainment media. Our research addresses the need to increase health literacy among elementary age students and parents regarding the effects of excessive screen time. This research led our team to develop a developmentally appropriate evidence-based tool which promotes healthy screen time activities for children ages 5 to 11 years in the Gervais School District.

Faculty sponsor: Angela Docherty

## PHILOSOPHY AND RELIGIOUS STUDIES

PHILOSOPHY SENIOR TUTORIAL PRESENTATIONS

Session chair: Susan Daniel

Werner University Center (WUC) Calapooia Room

### PRESENTATIONS

1 to 1:30 p.m., WUC Calapooia Room

**Brandt van Soolen**

***Senior Philosophy Thesis Presentation: Democracy and the Problem of Distributive Justice***

In *A Theory of Justice*, John Rawls delivers a persuasive clarification of the problem of distributive justice in a democratic society. According to Rawls, the actions necessary to reduce inequalities in the distribution of property "never seem to have been seriously entertained." Rawls' identification of the deficiencies in democratic institutions lead to questions about the appropriate function of government in insuring economic fairness as a *proviso* of liberty. Therefore, the pressing question implicit in the problem of distributive justice presents itself as: Does the government have a compulsory responsibility in insuring economic fairness for its citizens? If so, is this a consequence of respecting the value of liberty? Furthermore, how should property be distributed, and are there other values applicable in evaluating justice from a philosophical point of view? It is my intention to explain, clarify, and answer the preceding questions surrounding problems of distributive justice. This will culminate in my contention that the pressing questions of distributive justice are best answered through an analysis of the writings of Rawls.

Faculty sponsor: Susan Daniel

1:30 to 2 p.m., WUC Calapooia Room

**Ryan Ehrenfelt**

***Senior Philosophy Thesis Presentation: Justice For One Or for All?***

Faculty sponsor: Susan Daniel

2 to 2:30 p.m., WUC Calapooia Room

**Kaitlyn Hugmeyer**

***Senior Philosophy Thesis Presentation: A Pragmatic Critique of Skepticism***

Calling on Peirce and James, I will discuss the concept of practical consequences, as well as discuss the empiricist attitude of the method of pragmatism. I intend to show that I agree with James, while making the point that some fundamental philosophical concepts are not useful in this way. After an explanation of skepticism, I will attempt to critique skepticism

through the eyes of a pragmatist. I will then put the concept of skepticism through this filter of practical consequences to determine if there is a pragmatic use to the concept.

Faculty sponsor: Susan Daniel

### BREAK

2:45 to 3:15 p.m., WUC Calapooia Room

**Jacob Foland**

***Senior Philosophy Thesis Presentation***

Faculty sponsor: Susan Daniel

3:15 to 3:45 p.m., WUC Calapooia Room

**Omar Alvarado**

***Senior Philosophy Thesis Presentation***

Faculty sponsor: Susan Daniel

## POLITICS, POLICY AND ADMINISTRATION

MINI-ENVIRONMENTAL FILM SERIES

Session chair: Mark Henkels

Werner University Center (WUC) Ochoco Room

### GROUP PRESENTATIONS

10 to 11 a.m., WUC Ochoco Room

Faculty sponsor: Mark Henkels

**Jeffery Clinton**

***The Redevelopment of Independence***

**Klarissa Gaskell**

***The Rainforest***

**Rustin Gray**

***Environmental Cost of Eating Meat***

**David McCall**

***Canadian Oil Sands***

**Emily Pahlke**

***Nestle and Environmental Values in Cascade Locks, OR***

**Allison Yamnitsky**

***Environmental Effects of the Keystone XL Pipeline Expansion***

## POLITICS, POLICY AND ADMINISTRATION

POLITICAL SCIENCE

Session chair: Eliot Dickinson

Werner University Center (WUC) Pacific Room

### POSTERS



11 a.m. to 1 p.m., WUC Pacific Room

### **Taylor Classen**

#### ***U.S. Involvement in the Vietnam War***

This project examines the foreign policy theories that guided United States involvement in the Vietnam War. The goal is to determine what policy theories were used in determining whether the U.S. should get involved and then to determine if those theories were effective and successful. This has been done by examining the policy of containment, commitment, and the domino theory. Upon study of these policies, one can infer that they were, in fact, used to defend the U.S. involvement in Vietnam, but they were not successful. The research done in this project shows that these lines of thinking are faulty ways of looking at foreign policy, and this project shows that U.S. action in the Vietnam War was unsuccessful because it was based on poor policy from the start.

Faculty sponsor: Eliot Dickinson

11 a.m. to 1 p.m., WUC Pacific Room

### **James M. Masnov**

#### ***John Stuart Mill: Classical Liberal and Progressive***

The modern political world could stand to learn a thing or two from John Stuart Mill. His ability to confront ideas and issues head on and understand that answers may be found in a variety of different schools of thought would be useful and a benefit to the problems of today. John Stuart Mill clearly never saw a contradiction between group advocacy/activism and the ever-important value of individual rights. This is because Mill was capable of championing classical liberalism and progressivism simultaneously; confident in the understanding that they are not opposing values.

Faculty sponsor: Eliot Dickinson

11 a.m. to 1 p.m., WUC Pacific Room

### **Jeffery Clinton**

#### ***Outdated Relics: The Federalist Papers and the Constitution***

Faculty sponsor: Eliot Dickinson

11 a.m. to 1 p.m., WUC Pacific Room

### **Jesse J. Thompson**

#### ***The Traditionalistic Culture: Suppressing Political Participation***

In 2016, the U.S. will elect a new president. The most important components of this electoral process are the citizens and their right to participate. Daniel Elazar, author of *American Federalism: A View From the States* (1966), presented a political culture theory that addresses many characteristics of states, including political participation, which puts states into one of three categories: moralistic culture, individualistic culture, and traditionalistic culture. Based on Elazar's definition of political culture, this study examines whether or not states with a traditionalistic culture are predisposed to pass legislation that aims to suppress the political participation of citizens both in the process of registering to vote and the act of voting. In determining if predisposition exists, former and current legislation that attempts to suppress voters from participating was analyzed and compared. After establishing how each element influences voter participation, a predisposition was found to exist. The implication is that states with a dominant traditionalistic culture will continue to attempt to pass legislation that suppresses voters.

Faculty sponsor: Eliot Dickinson

11 a.m. to 1 p.m., WUC Pacific Room

### **Marguerite Mannheimer**

#### ***Karl Marx***

Faculty sponsor: Eliot Dickinson

11 a.m. to 1 p.m., WUC Pacific Room

### **Rebekah Degner**

#### ***Civic Engagement: How Not To Do It***

What was once the essence of survival and united people to demand change has fallen on hard times. Civic engagement in this country is declining drastically because the average American cannot afford to spend time or money being involved. The repercussions of this growing disconnect can be seen in the rise of individualistic thinking that divides and pits neighbor verse neighbor. This project was a first attempt at creating a program to better the community. The knowledge gained from this experience will help other prepare to be successful in their community because it was learned from a first hand account.

Faculty sponsor: Eliot Dickinson

## **SOCIOLOGY**

RESEARCH AND PRAXIS IN SOCIOLOGY

Session chair: Dean Braa

Bellamy Hall (HSS) 235

### **PRESENTATIONS**

8:30 to 8:45 a.m., HSS 235

#### **Kevin Alejandrez**

#### ***The State of Homelessness in the Monmouth-Independence Community***

What does homelessness look like in the small Monmouth-Independence community? Using in depth interviews in the Monmouth-Independence community (Polk County, Ore.), I worked to create an inclusive description of homelessness in a small community. Various community members were interviewed over a six month period. Findings include youth fleeing toxic homes, migrant families in transition, and victims of domestic violence. The visible homeless comprise a sector of the homeless population and reside along the Willamette River.

Faculty sponsor: Dean Braa

8:45 to 9 a.m., HSS 235

#### **Jennifer Murphy**

#### ***Aging in Rural Oregon: A Case Study of Tiller, Oregon***

Experiences of aging in Tiller, Ore. are impacted by economic issues with the declining timber industry. Historical and oral data was obtained through interviews of eight women and five men with a mean age of 63, and through archival research. Preliminary findings suggest independence and autonomy are important aspects in their identification with the rural area. Social networks, community ties, autonomy, identity are suggested as characteristics respondents identify as important for coping with aging in the community. The knowledge gained regarding aging in a rural community will provide insight in how to help rural communities in dealing with their aging populations.

Faculty sponsor: Dean Braa

9 to 9:15 a.m., HSS 235

**Maurice Alfaro*****Housing for the Homeless***

This research focuses on the development of housing for the homeless and why it is very difficult for the homeless to find housing. Housing policy will be examined and evaluated in light of the paucity of public housing for the homeless. Recommendations will be part of the analysis.

Faculty sponsor: Dean Braa

9:15 to 9:30 a.m., HSS 235

**Mariela Lopez-Cruz*****Immigrant Domestic Workers***

Domestic workers in the U.S. (maids, house cleaners, care providers) have historically suffered poor treatment. Today most domestic workers are immigrant women. In this study, I investigate the work experience of immigrant women from Mexico. Participant observation and interviews with five self-employed house cleaners and five commercially employed house cleaners, found that domestic workers experience a lack of dignity and most experienced discrimination. A quantitative analysis of questionnaire data from 133 Western Oregon University Students looked at attitudes and beliefs directed at domestic workers. Knowing the worker's racial identity or whether or not she owned a small business, did not affect student attitudes.

Faculty sponsor: Peter Callero

9:30 to 9:45 a.m., HSS 235

**Marisol Cisneros*****Sacrifice for Knowledge: Success Factors Contributing to Latino High School Student Completion of High School Degree After Dropping Out***

Why do Latino students drop out of high school and the return to graduate? An extensive literature addresses Latino high school dropout rate. However, few studies address the return of Latino students to alternative educational programs. This research analyzes factors that contribute to this return. Methodology includes participant observation, student interviews, and program evaluation. The results indicate that dropout rates are due to insufficient support for Latino students. The return path to degree completion is difficult. Respondents who return to complete degrees provide key insights into policy creation and examples of resilience.

Faculty sponsor: Maureen Dolan

**BREAK**

10 to 10:15 a.m., HSS 235

**Jacob Schuette*****Physically Disabled Students on a College Campus***

How do physically disabled students evaluate their college experience? How do able bodied students perceive their physically disabled peers? To answer these questions, I collected qualitative data from eight physically disabled students and quantitative questionnaire results from 105 able bodied students. Results indicate that physically disabled students find casual everyday interactions to be unproblematic. However, physically disabled students do face exclusion in some social settings. Able bodied students express mixed attitudes toward their physically disabled peers. The research indicates that able bodied students generally lack a fundamental understanding of physically disabled people.

Faculty sponsor: Peter Callero

10:15 to 10:30 a.m., HSS 235

**Rolando Guevara*****Complexities of Police Perception: Portland Police***

This research sought to examine a dual perspective of community-police perceptions in a low income and diverse neighborhood in Portland, Oregon. Two police officers were interviewed and 36 community members responded to a questionnaire. Five police ride-alongs with Portland Police were used to help analyze the complexities of police perceptions of the community. My findings suggest that variables such as social media, personal experience, and education contributed to negative perceptions by community members and police officers.

Faculty sponsor: Maureen Dolan

10:30 to 11 a.m., HSS 235

**Madison Pengra-Watanabe*****The Role of Educational Policy in a Juvenile Justice Alternative Program: G.A.P. Case Study-Program Evaluation***

The study examined how the Guaranteed Attendance Program, an alternative to detention for youth, incorporated education. Research indicated that schools create and control juvenile delinquency. Education is especially important for juvenile delinquents, as it aids in reducing recidivism among youth. A qualitative research method was used, which included 12 semi-structured interviews with youth and staff, two focus groups with the youth, as well as five months of participant observation. Research found that the G.A.P. did not value education. Also, the youth understood the importance of education, but had no intention of pursuing higher education.

Faculty sponsor: Maureen Dolan

11 to 11:15 a.m., HSS 235

**Maira Garcia*****The Role of Dual Language and English as a Second Language: Programs as Policy and Pedagogy***

Why does our educational system continue funding the ESL program for Latino language minority students when it has been unsuccessful in aiding academic success? We propose the implementation of a dual language program as an alternative to the current ESL programs found in high schools today. A qualitative study was conducted in Amity High School and North Salem High School where both ESL programs were analyzed as well as North High School's dual language program. The dual language program demonstrated that Latino students had a much greater chance of being academically successful than students from both ESL programs.

Faculty sponsor: Maureen Dolan

11:15 to 11:30 a.m., HSS 235

**Paige Ceglie*****Exploring Asexual Identity***

The purpose of this study is to explore "asexuality" as an identity, and not merely as an absence of sexuality. Analyses of in-depth interviews with three people who identify as asexual found similarities in how people come to an asexual identity through seeing the norm of being sexual, and not feeling the same way or fitting in. Questionnaire responses from 138 students were used to explore if knowing an asexual person was linked to a response from individuals that aligned with how asexuals view their own identity. Results were found to be significant in two of five questions.

Faculty sponsor: Peter Callero

11:30 to 11:45 a.m., HSS 235

**Kevin Alejandre**

***Latina@s in the LGBTQ+ Community***

What is it like to be a Latin@ in the LGBTQ+ community? Being a part of such a complex intersectionality creates unique challenges and perspectives for such individuals. Using an extensive literature review, we work to explain the challenges of such an unexplored intersectionality as well as the developing positive trends. Latin@s in the LGBTQ+ community more commonly live in collectivist micro-communities where their personal beliefs and expressions are suppressed for the “betterment” of the “whole” and where being “macho” is expected. Despite such obstacles, there are people and organizations working together to empower Latin@s who are LGBTQ+.

Faculty sponsor: CM Hall

11:45 to Noon, HSS 235

**Lucero Alvarez**

***Latin@s and Intersectionality in the LGBTQ+ Community***

The purpose of the presentation is to look at the intersectionality between being Latin@ and being part of the LGBTQ+ community. I will discuss some of the obstacles that Latin@s in the LGBTQ community confront, such as machismo and the fact that most Latinos belong to a collectivist culture, which may or may not serve as an obstacle. I looked at various articles that explained the intersectionality between Latin@s and the LGBTQ+ community. Organizations that support Latin@s in the larger LGBTQ+ community are identified. An examination of how pop culture and celebrities support Latin@s in the LGBTQ+ community was also conducted.

Faculty sponsor: CM Hall

## TEACHER EDUCATION

TEACHER EDUCATION PRESENTATIONS

Session chairs: Alicia Wenzel and Melanie Landon-Hayes  
Education (ED) 217

### POSTERS

5 to 6 p.m., ED 217

**Peter Larson**

***Looking at the World Through the Lens of Sociology: a High School Story***

The field of sociology can give students answers about issues in their lives, their families, and their communities. Too often, social studies classrooms only look at the world through the lens of history. But what if we used sociology? This poster presentation looks at a sociology course designed to address a multitude of areas in the world from economics to criminology to sports. This course is created to fulfill Oregon Department of Education standards in Social Studies and 21st Century Skills.

Faculty sponsor: Alicia Wenzel

5 to 6 p.m., ED 217

**Elizabeth Turner**

***Engaging High School Students Through a Social Studies Elective on the Social Justice of Food***

This poster presentation provides a standard-based, high-interest social studies elective course designed to engage high school students with thought-provoking content relevant to their lives in and out of school.

Teachers face the challenges of selecting engaging topics aligned to standards, and helping students acquire the knowledge, skills, and dispositions necessary for daily life. This curriculum serves as a model of ways to address these challenges. Focusing on a commonly discussed social issue, the social justice of food, this course provides students meaningful opportunities to develop critical thinking skills while engaging with relevant subject matter.

Faculty sponsor: Alicia Wenzel

5 to 6 p.m., ED 217

**Danielle Potter**

***Integrating Multiple Content Areas to Engage and Extend a New Approach to Technical Theater for High School Students***

This project integrates Oregon State Standards from History, English, Mathematics and Science aligned with Theater Arts standards to support student learning in theater design and creation at the high school level. Specifically, this presentation highlights English and History standards connected to Dramaturgy for a research based unit driven by an assigned script and author. The purpose of this curriculum is to provide students with an opportunity to gain required knowledge in a way that is unique, driven by creativity, and expands students understanding of theater opportunities.

Faculty sponsor: Alicia Wenzel

5 to 6 p.m., ED 217

**Shane Grimm**

***Curriculum for Over-crowded Physical Education Classes***

Large or overcrowded classes seem inevitable in today's physical education (PE) classes. Thus, it is wise to begin exploring ways teachers can do more with less, as it relates to equipment, but also continue to deliver meaningful instruction to students in over-crowded classes. The curriculum presented will provide strategies that will help combat the issues related to over-crowded classes which include decreased specific instruction time, decreased opportunities for feedback and overall management of the classroom. Additionally, this project will provide PE teachers with grouping strategies designed for over-crowded classes and reasoning as to why it will positively impact student learning and engagement.

Faculty sponsor: Alicia Wenzel

5 to 6 p.m., ED 217

**Mackenna Handeland**

***Using Young Adult Literature and Self-Discovery Practices to Develop Perspectives and Identity Through an Integrated Language Arts Curriculum***

The purpose of this curriculum development project is to create and describe a course designed to help new high school students gain a deeper understanding of their own perspective by recognizing their personality traits, learning styles, and inter-personal nuances while reading coming-of-age stories in an independent novel project. By reading novels with characters facing adversity and personal growth opportunities, and connecting those concepts to their own experiences and self-knowledge, students will find this course relevant to their personal growth as a student and young adult. This will promote affect and encourage students to take ownership of their education.

Faculty sponsor: Alicia Wenzel

5 to 6 p.m., ED 217

**Jesse Skoubo*****The Use of Current Events in the Secondary Economics Classroom: A Social Science Curriculum to Increase Engagement, Relevance & Achievement***

The goal of this project is to integrate news and real-world events into economics classwork to capitalize on students' everyday involvement in technology and media with Problem Based Learning strategies. Integrating news and economics this curriculum will help students learn economic concepts in a way that is already familiar, and reflects how applicable the concepts are as well as how they are relevant to their lives outside of school. The combination of these two content areas into a single course with PBL will enhance rigor and relevance in an interesting, engaging manner.

Faculty sponsor: Alicia Wenzel

5 to 6 p.m., ED 217

**Justin Hoagland*****Inquiry-based Curriculum for the General High School Science Education Classroom: An Approach for Helping Fully Engage and Increase the Success Rate of Students with an Individual Education Plan***

The following curriculum project was designed to bring a more inquiry-based Biology curriculum to the general education classroom. The curriculum is built around the Next Generation Science Standards. The curriculum includes educational strategies to increase the engagement of students who have an IEP, which will help increase their success in science. Another important aspect of this project is to show proper techniques to utilize inquiry-based learning, which can reduce comprehension when implemented incorrectly. This project is unique in that inquiry-based learning has not fully been established correctly in some science classrooms. Most research indicates that many of the secondary science teachers use inquiry-based learning incorrectly. The hope of this project is to highlight benefits of proper use of inquiry-based learning for students with IEPs. Additionally, this project provides general education teachers with a model for using inquiry-based learning in a science classroom and an explanation as to how inquiry-based engagement of their IEP students can help students achieve greater success in the mainstream classrooms.

Faculty sponsor: Alicia Wenzel

5 to 6 p.m., ED 217

**Jack Davis*****The Application of Technology in a Classroom Setting***

The purpose of this project is to look for good methods to integrate technology into classroom instruction as a means of boosting both student engagement and learning. The curriculum for this unit is developed for a high school American Literature class. It uses a series of texts, technologies, and websites to have students recreate characters and interactions from a literary text into a modern format with a different means of communication. Students will come to develop a deeper understanding of characters and conflicts through this process. Additionally, motivation will be initiated through authentic and familiar technological tools.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**Jordan Collins*****Reading Motivation and Engagement in a High School English Language Arts Classroom***

Students entering high school and college are expected to have the skills needed to read many forms of complex texts to contribute to an increasingly complex society. The lack of reading motivation and engagement observed in our high schools today is creating a concern that these students will not be able to keep up with the complexity of today's texts. This curriculum project examines strategies educators can use to improve their skills and motivation by giving students a sense of autonomy over their education and providing a series of supports to ensure success at every step of the reading process.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**Max Perry*****Critical Literacy Strategies in the Secondary Language Arts Classroom***

This project examines the use of Critical Media Literacy in the secondary Language Arts classroom. Critical literacy is a skillset that helps students deconstruct complex texts to discern the hidden messages within. In order for our democracy to be effective, America must have an informed populace that cannot be easily manipulated by corporate media sources. This project details strategies for critical literacy, the role of technology in critical literacy, and issues facing educators teaching critical literacy. The culmination of the research herein is a collection of lesson plans detailing how to use critical literacy to deconstruct media messages in order to understand the subtext.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**Ian Mulligan*****Investigating Visual Literacy - Photography, Graphic Novels, and Technology***

The purpose of this curriculum project is to explore the impact of visual literacy upon this generation of students. Specifically, this curriculum project will speak to the emergence of technology in the classroom, and how technology can be used to benefit student literacy rates. It will also discuss the increasing usage and importance of graphic novels and photographs as a medium for learning. This project also intends to define visual literacy and the impact of visual literacy insofar as its benefits for students. The pedagogical implications of visual literacy in a social studies classroom will also be evaluated.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**David Holcomb*****Student Engagement in Social Studies: How Authentic, Relevant Lessons Improve Critical Thinking and Student Motivation***

This curriculum project examines the need for improving student engagement and motivation in social studies classrooms. Often students struggle to connect the content to their lives; therefore, students' are apathetic towards social studies – resulting in disengagement. By teaching students the process of historical inquiry and discipline-specific literacy skills, social studies teachers can help students' understand processes related to history. Utilizing differentiated strategies, a variety of texts, and guided learning will teach students the necessary skills required for historical inquiry



and the construction of meaning. Students can develop a greater interest in the content as well as enhance their learning experience.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**Janet Costello-Plummer**

***Developing Resiliency in Students***

Risk factors such as poverty, living in neighborhoods with crime, drugs, and gangs, food instability, and discrimination place students at a higher risk for school failure, dropping out, and the development of behavioral and mental problems. Despite these adversities, teachers are capable of influencing students to overcome such obstacles by creating meaningful relationships with them, using teaching strategies that support growth and learning, and engaging in professional development that connects current education and psychology theories to mental health issues. By implementing this curriculum unit into a classroom, teachers will empower students to live a healthful life and thrive academically.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**Kye Johnson**

***Effective Use of Modern and Personal Media in the Classroom***

This curriculum project is intended to engage students in social sciences content using both modern and personal media devices. This project asks students to choose and research two historical figures from US history. Multiple sources are then used to engage in debate and deliberation with classmates' chosen figures. The navigating tool of the unit will be Twitter, in which students will disseminate classroom information and formulate historical interpretations while focusing on debate in a civic manner.

Faculty sponsor: Heitho Reuter

Students will utilize research, analytic and debate skills throughout the unit. Additionally they will have chance to use personal media as an educational tool.

5 to 6 p.m., ED 217

**Doug Miles**

***Theater as the Bridge: Prosody and Theater Methods that Increase Reading Comprehension and Student Engagement***

This project examines the use of theater-based instructional strategies as a means of increasing prosody, student engagement, and reading comprehension. Teachers need to assess automaticity through not just reading rate, as it is commonly been done, but through prosody as well to create a fluent reader. To understand what they read, students must be able to focus their complete cognitive capacity on developing the meaning of the text. Prosody takes the form of oral reading with expression that helps students develop meaning while they read. The collection of research in this project details how theater-based strategies can accomplish this.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**Christopher Tasner**

***Anxiety and Mathematics Performance***

High school mathematics can be particularly stressful for students due to high-stakes testing, a lack of available resources, and a societal view that only a gifted few can be successful. Research has shown that the traditional model for mathematics not only discourages student engagement but deters students from considering careers in the field. Teachers face the

dilemma of lowering student anxiety while maintaining high expectations for growth and learning. This project explores how mathematics curriculum and teaching practices could be adapted to reduce anxiety and improve student disposition toward the subject without compromising the learning objectives or outcomes.

Faculty sponsor: Heitho Reuter

5 to 6 p.m., ED 217

**Esther Shephard**

***Refocusing Students on Study Habits: Seeking Achievement beyond Mathematics Exams***

As many educators now utilize proficiency-based grading, student achievement is heavily measured according to assessment results. However, achievement in high school mathematics classrooms is seen through other lenses as well. This curriculum project explores multiple factors influencing overall student achievement through study habits. Actions to meet this purpose include the use of metacognitive strategies, motivation, and collaboration. The proposed unit covers Common Core State Standards for trigonometry, and it incorporates planning for teaching students about growth mind-set, neuroplasticity, collaboration, reflection, goal setting, learner-centered tasks, using Interactive Notebooks, and boosting study habits and achievement therein.

Faculty sponsor: Heitho Reuter

6 to 7 p.m., ED 217

**Helen Gish**

***Beyond the Lecture: Using Texts to Engage Students in the Secondary Social Studies Classroom***

Traditionally, social studies teachers have relied on lecture as their primary instructional method, but research shows students need more opportunities to construct their own learning and develop literacy and reasoning skills. In keeping with Common Core standards for social studies, this proposed curriculum uses primary sources to teach about the Great Depression. These authentic sources consider a range of diverse experiences including that of African Americans, Latinos, and the urban and rural poor. Students will develop metacognition through the use of graphic organizers, text marking, and cooperative learning, supporting both reading comprehension and text-based reasoning resulting in student-directed learning.

Faculty sponsor: Heitho Reuter

6 to 7 p.m., ED 217

**Jennifer Morgan**

***Model of Flipped Instruction***

This poster presentation will demonstrate the research for a flipped model of instruction in a secondary mathematics classroom. In a flipped classroom students spend time outside of class watching lecture videos and taking notes. Then students spend time in class collaborating with their peers and practicing the concepts. When a flipped classroom is implemented the teacher-student contact time is better used for deepening student understanding and achieving higher level thinking. The lesson plans proposed cover one area within the Common Core State Standards which includes surface area and volume of three dimensional shapes, as well as, real world applications for surface area and volume.

Faculty sponsor: Heitho Reuter

6 to 7 p.m., ED 217

**Alexandra Greaves*****Supporting Critical Thinkers Through Literacy: Using Literacy in Social Studies Classrooms to Support Higher-Level and Critical Thinking***

The purpose of this project is to examine the use of literature in social studies classes in an effort to teach students to be critical thinkers. The curriculum for this unit is developed for a high school United States history class. The curriculum uses a variety of literature sources, including primary sources, graphic novels, political cartoons, short video clips, and a documentary, to study the emergence of the U.S. as a world power during the Progressive Era, Imperial Era, and World War I. Through the use of varied literature examples, students will develop skills to identify voice, opinion, and bias.

Faculty sponsor: Heitho Reuter

6 to 7 p.m., ED 217

**Amelia Hess*****Teaching Writing with Mentor Texts: Moving Beyond the Five-Paragraph Essay***

This action research project examines the teaching of the five-paragraph essay in English Language Arts classrooms and alternatives to teaching writing through use of mentor texts. This project examines the origins of the five-paragraph essay; why the five-paragraph essay is taught in many classrooms today; why the five-paragraph essay is inauthentic; and explores alternatives to teaching writing. The alternative method explored in this project is the mentor-text approach. Students become apprentices as the teacher helps them study features of the target genre they are being asked to write in using well-written, real-world examples of writing, referred to as mentor texts.

Faculty sponsor: Heitho Reuter

6 to 7 p.m., ED 217

**Jeffery Anderson*****Homework in the Health Classroom***

My poster will outline the curriculum project I have done with supporting research on why and how to set up a high school health class without the use of homework. The learning unit will specifically outline how best to structure their teaching without the use of homework as a supplement for grading and memorization. Topics addressed in this project reflect the challenges and possible solutions for teaching in a low income school district where the time, resources, and motivation for doing extracurricular work will be low in the student population.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Kathryn Thomas*****Incorporating Literacy-based Extracurricular Activities into the Regular Curriculum***

This presentation is two-fold. First, it will address the importance of incorporating literacy-based extracurricular activities into the regular curriculum. Secondly, it will offer solutions to the obstacles that teachers face when trying to accomplish this. There is evidence that supports the claim that adding EAs to the student learning experience increases student success; however, literacy-based EAs are labor intensive and do not generate the same publicity or revenue as other EAs. If this effort was better supported by an increase in teacher preparation time, and the flexibility to incorporate the subject matter, then more teachers could offer these programs.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Kyle Brayton*****Transitioning Writing to the Real World: Digital Writing in the Secondary Language Arts Classroom and its Effects on College Readiness***

The neglect of digital writing in education limits student success. In secondary language arts classrooms specifically, writing digitally is a skill necessary to be proficient in college, as well as a life skill that transcends the classroom into students' daily interaction with smartphones, tablets, computers, and the internet. The extensive research presented in this project will condense a scope of information that includes—but is not limited to—defining digital writing, strategic application of technology in language arts curriculum, and the range of results with regards to student success in reading and writing in relation to college and career readiness.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Megan Smith*****Moving Theatre Back to the Middle: Infusing Literacy and Theatre Arts***

Research has long shown involvement in the arts benefits students from all backgrounds, especially minority and poverty students. So how can theatre educators move their subject from the margins to the middle? The infusion of literacy and theatre arts has long existed, but theatre educators need to place emphasis and focus on teaching literacy purposefully in their curriculum. Especially digital literacy. As our global economy moves towards a more digital savvy age, we must prepare the youth of today to be competitive. By incorporating digital literacy into theatre, educators move their subject back to the middle.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Corey Christensen*****Implementing Current Events into a Social Studies Curriculum***

There is resounding praise for incorporating current event into the social studies curriculum, but far too many classrooms go without utilizing these resources. The purpose of this project is to create a unit of mini lessons that teach students how to analyze the credibility of information, see real world examples of social science in action and connect the skills and content taught in a social science classroom back to their personal lives. This unit is designed to be easily implemented into any social science curriculum.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Joseph Hatfield*****Using Graphic Novels in the History Curriculum***

Through the use of biographical and historical graphic novels, students can gain a different awareness of historical concepts and ideas, thus meeting the needs of differing styles of learning as well as presenting the ideas in a format many students are familiar with. This presentation focuses on a unit of teaching the Holocaust using Art Spiegelman's *Maus*, leading students in analysis of the work with an additional element of studying the graphical elements.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Tyler Garries**

***Paideia: Feasibility and Practice in Larger Schools***

The Paideia method of teaching emphasizes discussion and the democratic process. It has seen a fair amount of success in smaller school settings with most Paideia schools boasting a graduation rate of over 80 percent, it may be time for larger school districts to think about implementing a Paideia curriculum in order to achieve higher graduation rates. This presentation explores the feasibility of implementing a Paideia program in larger school districts in order to achieve a higher level of rigor and graduation rates among the student body.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Benjamin Ark**

***Echnology in the Classroom: Engagement in the Digital Age***

In today's society, we no longer have to work with purely displayed question and response in the classroom. Using technology effectively can have a positive impact on the participation of a student. Some systems allow for interactive usage where students can ask question anonymously thus increasing engagement. Technological engagement in a positive environment can enable a student to retain more information and find an interest outside of the usual classroom experience.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Elijah Neves**

***Total Immersion in the Spanish Classroom***

How to teach a foreign language has been a question that has challenged and inspired educators for many years. Total immersion seeks to answer this question, and provides a natural learning environment. The total immersion classroom is an atmosphere in which students participate in a micro-immersion community, mimicking the larger scale immersion found in a study abroad program. Because the effectiveness of being immersed in a language is so compelling, creating a space where students are actively engaged in the target language for the entire class period could prove to be beneficial to their acquisition.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Elizabeth Struxness**

***Integrating Writing into the Mathematics Classroom***

With a greater emphasis being placed on improving student writing, writing should be incorporated into all subjects, including mathematics. Curriculum presented will be based on the Connected Math Program and will incorporate writing into each lesson, answering the question of how we can support students' writing skills in the mathematics classroom. Also shared in the presentation will be the Common Core State Standards addressed and lesson plans for each unit.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Kaylee Oakes**

***Integration of Digital Tools in the Language Arts Classroom***

With the increase in media and digital tools, this means our classrooms are significantly changing as well. Language arts classrooms and research

supports that teachers should all be using digital tools such as social media, digital literacies, and critical literacies within their curriculum to better suit the academic needs of the students. The proposed curriculum easily integrates different modes of digital tools into lessons for students. Students would be using digital tools to communicate, create, and produce writing projects and literacies. With the digital tool infused curriculum, teachers can better prepare students with real-world writing opportunities and higher engagement.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Christopher Hartman**

***The Effects of Dynamic Geometry Software on Secondary Students***

There has been a call for mathematics teachers to integrate technology into their classroom. This call has been answered by Dynamic geometry software (DGS). DGS is software that allows the user to create and manipulate geometric constructions. DGS was developed with the aim to improve the educational experience of students. The main attributes of DGS is its ability to be manipulated by the user with relative ease, speeding up the construction aspect of geometry. We will examine current research into the effects of using DGS in the classroom and a sample lesson with DGS.

Faculty sponsor: Melanie Landon-Hays

6 to 7 p.m., ED 217

**Torah Skelton**

***Communicative Competence, Academic Language, and ELD***

High-school-aged English Language Learners with a score of four on the Oregon ELPA often demonstrate a high level of fluency in colloquial language, but may continue to be placed in ELD classes due to difficulties with usage of academic language in content area courses. The purpose of this study is to examine manners in which students' communicative competence can be developed to reach high levels of academic language usage. The implementation of conversational strategies used in ELA courses is linked with real-world and high-interest topics. This becomes an authentic application of academic language within the curriculum.

Faculty sponsor: Heitho Reuter

## TEACHER EDUCATION

### TEACHER EDUCATION PRESENTATIONS

Session chairs: Zig Derochowski, Alicia and Melanie Landon-Hays  
Education (ED) 204/205

### PRESENTATIONS

5 to 5:15 p.m., ED 204 / 205

**Brian Daigle**

***Developing an Online Learning Object Repository for Outdoor School***

Outdoor education can be a valuable learning experience, and researchers have found that it can provide a number of benefits beyond just adding variety to student activities. Northwest Regional Educational School District's (NWRES) Outdoor School program (ODS) provides the opportunity for schools in the district to send their 5th or 6th graders to a multi-day science camp where they study natural sciences in a natural environment. Although this program has been around for over 50 years

and has created a wide range of educational materials, instructors and staff working for this program may still have difficulty finding and accessing the teaching materials they need to best perform their jobs. Perhaps the biggest barrier facing staff in this program is the lack of a well organized and maintained database of materials. To address this need, this project seeks to build an online repository to provide greater organization and access to the resources that instructors and staff need. This repository will house not only their existing resources but also provide a place to archive materials developed in the future.

Faculty sponsors: Mary Bucy and Greg Zobel

5:15 to 5:30 p.m., ED 204 / 205

**Jenn Kepka**

***Open Source, Open Classroom: Collaborating to Identify Trends in OS Education***

The work of a dozen graduate student educators in a Winter 2016 online course focused on Open Source technology demonstrated both trends in use of Free and Open Source technology as well as trends in the ways that students/educators can use the philosophy of Free/Open Source Software to increase classroom access and conversation. The resulting portfolio of work and analysis, available at <http://opensourcewou.wordpress.com>, showcases the best student work and illustrates the growth that students experienced through hands-on FOSS experience. This presentation will include a summary of the work and highlight the trends demonstrated, providing important take-away tips for educators and students considering using FOSS in their courses. This includes a discussion of the ways that FOSS is now less attractive to students (in terms of competitive cost) while it should be more attractive (in terms of intangible cost) to all educators.

Faculty sponsors: Mary Bucy and Gregory Zobel

5:30 to 5:45 p.m., ED 204 / 205

**Carlee Nelson**

***Geogebra: Dynamic Math Worksheets for the K-12 Classroom***

Geogebra is an open source math software that is meant for teaching and learning about various branches of mathematics: algebra, statistics, geometry, and calculus. The software allows for both teachers and students to interact with objects in order to understand and engage with the subject matter. I will present three worksheets that are focused on slope-intercept form, integer addition, and angle classification.

Faculty sponsors: Mary Bucy and Greg Zobel

5:45 to 6 p.m., ED 204 / 205

**Amanda Bustos**

***Outdoor Experience: A Week Long Journey into the Outdoors***

Bringing technology into the classroom can be a struggle for some schools and some teachers. Bringing learning outdoors can also be a struggle, sometimes more so due to rules, forms, and prior experiences. However, the ability to integrate both technology and outdoor education into the same experience can provide a solid introduction in the ways that both tools for learning can enhance a student's experience. The opportunity to shape programming for outdoor learning while honing in on some 21st century technology has come about with multiple audiences looking to get students connected with their environment and with the global network.

Faculty sponsors: Mary Bucy and Greg Zobel

6 to 6:15 p.m., ED 204 / 205

**Tamara Mitchell**

***Building Interactive Educational Presentations Online & Developing Professional Portfolios with Open Source Tools***

Open Source Software is effective alternative for facilitating an interactive experience within online/hybrid courses and a free alternative for students seeking to develop portfolios that evaluate and document academic progress and professional value. Using ISTE and Quality Matters Standards as guideposts, a site with interactive features was developed with WordPress, Pencil, Inkscape, Gimp, and F/OSS software. Websites like these are useful for careers in education, computer science, business, science, medicine, and nonprofit fields. Interactive tools displayed in the project are useful for maintaining student interest and augmenting student performance.

Faculty sponsors: Mary Bucy and Greg Zobel

6:15 to 6:30 p.m., ED 204 / 205

**Jody R Becker**

***FREE Software; Apache Open Office***

Apache Open Office (AOO) is not just a product, it's an open source project, and it's free for anyone to use. Open source software is a viable alternative to expensive document editing software. Apache Open Office has the same features as popular, and expensive software programs. This free, open source software program is able to produce documents in a number of formats, including word, excel, power point, and pdf. By using Apache Open Office as an alternative to other costly document editing programs, students, educators, and industry will save money and produce the same quality documents for free.

Faculty sponsors: Greg Zobel and Mary Bucy

6:30 to 6:45 p.m., ED 204 / 205

**Kara Olsen-Becerra**

***You're Gonna Love Writing***

*You're Gonna Love Writing* was written for my oral daybook defense in Ed. 374 (Teaching Writing in the Elementary Classroom). I used the tune of Taylor Swift's song *Mean* to write a song conveying a teacher's words of encouragement to her students about their potential to become great illustrators and writers. I look forward to sharing this song with my future students.

Faculty sponsor: Jennifer Schulze

6:45 to 7 p.m., ED 204 / 205

**Mike Royer**

***Learned Helplessness Diminishes Students' Motivation and Academic Achievement: Implications to Teachers***

Learned helplessness is derived from an individual's attributions toward anticipated outcomes and their causations. One's perceived sustained controllability, or lack thereof, could result in changes regarding feelings of helplessness. Learned helplessness diminishes motivation and academic achievement in students. Identifying common phenomena early in student lives helps in addressing learned helplessness before it becomes habitual. Included in the research are implications to teachers.

Faculty sponsor: Xiaopeng Gong



7 to 7:15 p.m., ED 204 / 205

**Julie Cooper**

***Active Learning Promotes Information Retention***

When we look at how students are being taught nowadays, we see teachers changing from a traditional lecture style to a more active learning approach. Active learners refer to students who are involved in their own learning process through various methods of hands on activities. Active learning emphasizes on engaging students in different activities (e.g., reading, discussing, and writing) and developing students skills, attitudes and values. Research shows indications of positive outcomes when implementing an active learning style for students, it will help them retain more information in long-term memory.

Faculty sponsor: Xiaopeng Gong

7:15 to 7:30 p.m., ED 204 / 205

**Sara Schneider**

***Self-Regulation Among Students with Autism Spectrum Disorders***

This literature review examines research studies focused on self-regulation among children with Autism Spectrum Disorders (ASD). The importance of self-regulation for school success and positive peer relations is described. Differences in brain development between children with ASD and typically developing children are analyzed, along with deficits in sensory-processing, and resulting deficits in self-regulation and corresponding behavior. Finally, studies that have presented possible interventions and strategies for self-regulation among children with ASD are compared.

Faculty sponsor: Xiaopeng Gong

7:30 to 7:45 p.m., ED 204 / 205

**Kaitlin Hodgin**

***Elementary Mathematics Instructional Leader Portfolio***

The portfolio represents an overview of the elementary mathematical content knowledge and the pedagogical approaches necessary to be an Elementary Mathematics Instructional Leader (EMIL). The content knowledge represents a deep understanding of the K-8 Common Core State Standards for mathematics. The pedagogical approaches discussed in this portfolio demonstrate AMTE (Association of Mathematics Teacher Educators) standards for elementary math specialists. The combination of these two emphases creates a well rounded math specialist that can guide teachers in improving their math instruction. This comprehensive portfolio is a representation of the coursework of the EMIL program and the applied practice of learning.

Faculty sponsor: Rachel Harrington

7:45 to 8 p.m., ED 204 / 205

**Lisa Stone**

***Masters of Science in Education: Curriculum and Instruction and Elementary Mathematics Instructional Leader Specialization Professional Portfolio***

This portfolio gives an overview of the mathematical content knowledge and pedagogical understanding of the work that is done as an Elementary Mathematics Instructional Leader (EMIL). The mathematical content knowledge spans across the K-8 Common Core State Standards (CCSS) for mathematics. The pedagogical understanding expressed in the portfolio demonstrate understanding of the Association of Mathematics Teacher Educators' (AMTE) standards for Elementary Math Specialists (EMS). The

portfolio is a comprehensive look through the course work of the EMIL program and the application in practice through the work of a math specialist.

Faculty sponsor: Rachel Harrington

## THEATRE

THEATRE HISTORY PRESENTATIONS

Session chair: Michael Phillips

Rice Auditorium (RA) 113

### PRESENTATIONS

1 to 1:45 p.m., RA 113

**Sarah Cotter**

***The Life of Kitty Clive***

An examination of the life and career of eighteenth century actress Catherine 'Kitty' Clive emphasizing not only her many theatrical abilities, but also her socially progressive action on behalf of women and theatrical professionals with special reference to her publication *The Case of Mrs. Clive Submitted to the Public*.

Faculty sponsor: Michael Phillips

1 to 1:45 p.m., RA 113

**Elise Barberis**

***The Door Slam Heard Around the World: Reactions to A Doll House and Their Societal Implications***

Henrik Ibsen, oft credited as the "father of realism", is perhaps best remembered for his masterpiece, *A Doll House*, a play known just as well for its plot as the incredible response it elicited upon its premiere in Copenhagen in 1879. The play's unprecedented ending prompted a complete uproar, eventually leading to the play's—along with playwright's—banishment from a number of European nations, including Ibsen's homeland, Norway (Adams). Nineteenth century Europe's vehement reaction to *A Doll House* is significant in more than its magnitude alone, however. In analyzing the reasoning behind the outrage over *A Doll House*, one can glean valuable clues regarding European societal and social standards at that time. Through the analysis of 1879-1880 newspaper reviews, an image of nineteenth century Europe's morals can be sketched. By utilizing newspaper reviews from The Royal Theatre's 1879 premiere of *A Doll House*, nineteenth century Europe's perception of women's rights, marriage, and children can be both identified and better understood.

Faculty sponsor: Michael Phillips

1 to 1:45 p.m., RA 113

**Declan Hertel**

***We're So Dead: French Theatre During the Reign of Terror***

A brief analysis of how the French theatre changed during the Reign of Terror.

Faculty sponsor: Michael Phillips

1 to 1:45 p.m., RA 113

**Burke De Boer**

***Out of the Fatherland***

From the end of the 18th century throughout the 19th century, a number of Germans immigrated to Russia. This migration significantly impacted Russian culture, and the exchange of ideas led to changes in theatre practices around the world.

Faculty sponsor: Michael Phillips

**BREAK**

2 to 2:45 p.m., RA 113

**Samantha Dunaway**

***The Influence of Charles Darwin***

In 1859, Charles Darwin published *On the Origin of Species*, a book that suggested universal common descent among all species. This idea had a major impact on the way humankind was viewed, the idea of free will versus destiny, and society as a whole. Theatre reflected this new way of thinking during the 19th century.

Faculty sponsor: Michael Phillips

2 to 2:45 p.m., RA 113

**Erin Freeman**

***The Imaginary Invalid and Stock Characters***

A study of Moliere's use of stock characters in the play *The Imaginary Invalid*.

Faculty sponsor: Michael Phillips

2 to 2:45 p.m., RA 113

**Jeff Presler**

***Religion, Science, and Realism***

The decline of religion and the rise of scientific inquiry throughout the nineteenth-century promoted a more humanistic and moral perspective which is reflected in theatrical realism.

Faculty sponsor: Michael Phillips

2 to 2:45 p.m., RA 113

**Stephen Nielson**

***Keats and Sorrow: An Analysis of the Grotesque in the Works of John Keats***

Why does the poetry of John Keats resonate with so many? His application of the Romantic Grotesque; a sort of Yinyang-esque philosophy of the balance of nature and beauty with death and the horrid, holds us captive as his poetry effortlessly blends the two halves. His use of the grotesque sets him apart from other writers of the time, and makes him a legend in higher esteem than even Byron.

Faculty sponsor: Michael Phillips

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# pure insights



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



Academic Excellence Showcase 2016 Program guide


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Instructional Technology Center (ITC 211)											COMPUTER SCIENCE														
Maple Hall (MH)				DANCE																					
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Smith Hall (SH 122)											MUSIC														
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Columbia Room		HISTORY								*								BIOLOGY							
Ochoco Room		INT. ED & SERVICES		PPA								%													
Pacific Room		BEHAVIORAL SCIENCES/COMPUTER SCIENCE			CHEMISTRY/COMPUTER SCIENCE/CRIMINAL JUSTICE/GEOGRAPHY/PPA						BEHAVIORAL SCIENCES/BIOLOGY/EARTH & PHYS. SCIENCE/HEALTH/EX/SCI/NURSING ED.														
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A.M. ————— P.M.

 PRESENTATIONS/  
PERFORMANCES

 POSTER SESSIONS

 TEA/COFFEE BREAK  
(WERNER UNIVERSITY CENTER,  
FIRST FLOOR)

 SPECIAL EVENTS

- # Phi Kappa Phi First Year Writing Award
- ^ Health and Exercise Science Outstanding Student Award Reception
- \* "I can be...anything?"
- % Alfred Maurice Undergraduate Initiative: \$5,000 Award Presentation
- @ Natural Sciences & Mathematics Student Recognition Night
- ~ WOU Percussion Ensemble with visiting artists