

Spring Symposium 2006
Events Schedule

Wednesday, May 24th, 2006

Opening Session – 8:30 AM – McKenzie Theatre

Talks.....9 – 11:30 AM & 1 PM – 2 PM
Hoke 201 & 309

Panels.....10AM- Noon & 1 PM – 4 PM
Hoke Main Lounge

Poster Sessions: Loso Hall Lobby

Session I: 9:30- 10:30 AM

Session II: 11:00 AM- Noon

Session III: 12:30- 1:30 PM

Session IV: 2-3:00 PM

Performance Art..... 2-2:30 PM & 3- 4:30 PM
Schwarz Theatre

Reception.....4:30 PM
Loso Hall Lobby

8:30 AM – McKenzie Theatre – Loso Hall

Opening Session

Sadie Isley: President, Associated Students of
Eastern Oregon University
Master of Ceremonies

Dean Marilyn Levine
Eastern Oregon University
Opening Remarks and Welcome

Dr. John Thurber: Associate Professor of Mathematics
Eastern Oregon University
Coordinator, Spring Symposium

Poster Presentations: Loso Hall Lobby

SESSION I- 9:30-10:30 AM

Presenters Name: Michelle Taisacan

Title of Project: Angles, Triangles, and Parallel Lines

Faculty Sponsor: Michael Puls

In many Geometry courses, if we are allowed to assume that parallel lines exist, then we can show that the angle sum of a triangle will always equal to 180 degrees. The converse of this statement is also true, but the proof is never given in most geometry textbooks. The converse states: if the angle sum of a triangle is always 180 degrees, then parallel lines exist.

For a long time, the existence of parallel lines remained in question. How do we know that two seemingly parallel lines will never intersect? Infinity is not within our reach! For almost 2000 years it was believed that Euclid's Fifth Axiom (also known as the Parallel Postulate) could be proven using Euclid's first four axioms, but no such proof existed. To show that no such proof existed, we must run headlong into the vast sea of Non-Euclidean geometries, where the angle sum of a triangle may very well be greater, or less than, but never equal to our well-known 180 degrees. But this will take a whole term! The purpose of this presentation, then, is to prove that parallel lines exist on the condition that a triangle always has an angle sum of 180 degrees.

Presenters Name: Amanda Potter

Title of Project: Magic Squares

Faculty Sponsor: Michael Puls

Magic squares have been around for centuries. The unique 3 x 3 magic square using the numbers 1 through 9 is known as the *Lo-Shu*. It is said to have been brought to man by a turtle from the river Lo in the days of the legendary Emperor Yü of China around 2000 BC and represents a state of harmony and cosmic equilibrium in their culture.

In the 9th century, Arab astrologers used magic squares in calculating horoscopes. By 1300 AD, magic squares had spread to the West. An engraving by the German artist Albrecht Dürer included a magic square. The artist embedded the date, 1514, in the form of two consecutive numbers in the bottom row. Since the concept of a magic square is so easily understood, magic squares have been particularly attractive to puzzlers and amateur mathematicians. Even Benjamin Franklin dabbled with magic squares, and an 8 x 8 magic square with some very interesting properties is attributed to him.

There is only one 3 x 3 magic square, not counting all of the rotations or reflections, and there are 880 4 x 4 magic squares. The number of normal magic squares increases dramatically as the size of the square increases. For example, there are over 13 million 5 x 5 magic squares.

Presenters Name: Heather Nyby, Jesse Brockey, and Tom Plucinak

Title of Project: Stereochemical Analysis of the Pyrrolizidine Alkaloids in *Macromeria viridiflora*.

Faculty Sponsor: Ronald Kelley

Previous studies of the pyrrolizidine alkaloids (PA's) in *Macromeria viridiflora*, a plant found in the southwestern region of the United States, have established the stereochemical orientation of the compound Lithosene. Similar compounds are commonly found in other species of the Forget-me-not family and have been shown to have protective properties against herbivory. Through experimental work a new compound was isolated possessing a partially known stereochemical orientation. According to previous work done this unknown compound is a probable stereoisomer of an unpublished compound derived from *Echium vulgare*. We will analyze the two isomers through NMR and polar metric studies to compare their structure.

Presenters Name: Ashley Jones, Danielle Kelley and Blake Acton

Title of Project: Determination of Pyrrolizidine Alkaloids in *Cacaliopsis nardosmia*

Faculty Sponsor: Ronald Kelley

As part of a continuing chemosystematic study of natural products from the plant family Asteraceae, pyrrolizidine alkaloids (PA's) are studied for their biological effects. Pyrrolizidine alkaloids, also known as senecio alkaloids, are potentially toxic secondary products and to be expected in relatives of the genus Senecio. Our investigation will focus on three different populations of *Cacaliopsis nardosmia*, located in Washington and Oregon. Preliminary GC-MS analysis of *C. nardosmia* has presented five different PA's. Using thin layer chromatography we will isolate the major PA's and elucidate their structure by means of NMR analysis. This is the first investigation into the PA content of this monotypic genus.

Presenters Name: Jonathan Cosgrove

Title of Project: Acute Effects of Ankle Plantar Flexor Muscle Fatigue on Running Economy and Mechanics

Faculty Sponsor: *Darren Dutto*

Previous research has illustrated that as a body system becomes fatigued other body systems display a compensatory effect (altered running mechanics). This compensation results in a sub-optimal running style resulting in a decrease in running economy, reflected in an increased energy demand. Volunteers performed an initial 4 min run at 6.7 mph while expired air and their running form were captured (using metabolic cart and video recorder respectively). Subjects then performed a fatiguing calf raise (plantar flexion) exercise until fatigue was achieved. Fatigue was assessed as the inability to continue the plantar flexion exercise and a minimum of 10 repetitions were performed. Following the fatiguing exercise a second bout of 4 min running at 6.7 mph was done. Plantarflexor fatigue increased the energy cost of running 7% and heart rate 8% despite being at the same speed.

Presenters Name: Rose Baumann

Title of Project: The Controversies With Prozac and Other Anti-Depressants Versus the Natural Anti-Depressants

Faculty Sponsor: *Ronald Kelley & Laura Mahrt*

Anti-depressants are an often-covered, controversial subject in the pharmaceutical industry. I have narrowed my study to two universal treatments used for depression. First is Prozac, a commonly prescribed pharmaceutical anti-depressant drug. And second is the naturopathic treatment, St. John's Wort. I am interested in researching these two treatments and their chemical related active ingredients. One of Prozac's active ingredients includes serotonin and other stimulants. Versus hypericin and hyperforin the active agents in herb extract St. John's Wort.

Presenters Name: Alex Ashby-Andrew

Title of Project: Puppet Design for *Coyote Tales*

Faculty Sponsor: *April Curtis*

Coyote is a Native American Trickster whose energy and creativity embodies what is best in the instinctive and wild universe. His adventures are humorous and fantastical, but also contain important lessons for humankind.

The Eastern Oregon University Theatre Program presented 10 tales of Coyote in a black-light theatre format with music and song, drumming and puppetry in the fall of 2005. Using the references and words of the elders of Confederated tribes of the Umatilla in Mission, Oregon, 18 students researched, designed and built 23 puppets for *Coyote Tales* using pictographs, animals paintings and drawings for inspiration.

For my part of the project, I researched, designed and built the character of Magpie and also designed and constructed the Native American costumes for the show. We built Magpie from chickenwire, foam, wire, pvc pipe, a glue and muslin base, and black light paint after doing preliminary drawings. We visited Tmasklikt Museum in Mission to get native designs to cover the animal. Painting the animal with blacklight paint was a challenge but as you can see in the photographs, it worked well.

The drawings and photographs as well as the costumes that are displayed in my poster presentation were all made by EOU students.

SESSION II- 11 AM- Noon

Presenters Name: Tracy Johnston

Title of Project: Theatre Box Office Manual

Faculty Sponsor: *Ted Atkinson*

My senior project was creating an office manual for the Eastern Oregon University Box Office. This manual explains; daily tasks, the computer program, how to work with the season ticket holders, safe information, phone etiquette, office hours, ordering supplies, complimentary tickets, production reports, code of conduct, contact information, and a timeline. My project was to help organize the new office, which includes the new Wintix computer program I set up. I wanted to leave the Theatre Program with a gift after working with them for the past two years.

During my presentation I will explain in more detail what my project entailed. I will also talk about the struggles I had with my project and how I worked with and around them, as well as the positive experiences I had.

Presenters Name: Jack Galliano

Title of Project: Pollution Control

Faculty Sponsor: *Colleen and Jeff Johnson*

My presentation will address environmental control legislation and efforts by the American government and environmentalist movements over the past three decades. I will include a number of different things into the presentation, including theoretical foundations for several different arguments and current standards of pollution control. These theories include both Hobbes' social contract theory and Hardin's tragedy of the commons theory. The two primary systems of control in this country are 1) command and control legislation, or regulation through public policy, and 2) tradeable pollution permits programs, or the marketable transactions of permits to pollute. A brief outline of the history of the environmentalist movement in America will be necessary to outline the presentation, so a timeline will be presented in which people can see how the systems of environmental regulation have developed in this country. Finally, I will use Ernest Mayr and Noam Chomsky to demonstrate the fragile nature of our existence and illustrate theories on the demise of the human species. Naturally, other philosophical questions are presented – in this case, an argument for existentialism will be made and will relate this

to environmental effects that we have, and to practices of the American government and how it affects us.

Presenters Name: Julia Deutsch, Matthew Bechaver, Arianne Tiwari, Alison McKay, Amy Servid, Michael Kesckes, James Stafford, and Robert Eady

Title of Project: Inner-Sphere Redox Reactions of Cytochrome *c'*

Faculty Sponsor: *Colin Andrew*

Cytochrome *c'* is an iron-containing protein molecule of unknown biological function found in certain types of bacteria. The iron is part of a “heme”: a plate-like structure that has a top and bottom face. The top face of the heme (known as the “distal” face) has the potential to bind gas molecules such as oxygen (O₂). In contrast to hemoglobin in blood, which binds and releases O₂, cytochrome *c'* undergoes irreversible oxidation with O₂ to form an inactive oxidized (Fe³⁺) state. In this study, the rate at which cytochrome *c'* reacts with O₂ has been measured using the technique of time-resolved UV-visible absorption spectroscopy. Our results shed light on the molecular reaction mechanism, as well as the reason for the different O₂ reactivities of cytochrome *c'* and hemoglobin.

Presenters Name: Anna Dawe

Title of Project: The What and How of Authentic Assessment

Faculty Sponsor: *Raeshelle Meyer*

Research and teachers have said that authentic assessment is much more valuable to the teacher than norm-referenced testing. The reasons for authentic assessment being more valuable are based on the six principles of authentic assessment. However, the majority of teachers still rely on standardized tests to tell them the information they need to know to help their students succeed. There are many reasons for this. There are also many authentic assessment tools one can easily implement in their classroom to help them evaluate their students in their natural environment. With a little help, we can all be “kidwatchers.”

Presenters Name: Erika Crans

Title of Project: English Speakers of Other Languages; Rural Education

Faculty Sponsor: *Raeshelle Meyer*

The purpose of this brief study was to determine what kind of ESL programs are being run at local rural Oregon and Idaho Schools and see if they are following what research says is good practice. Research suggests ideas of what constitutes good practice for helping ESL students meet their needs and the results of the investigation shows that all schools visited are making good efforts to meet the needs of ESL students. Although different schools run different programs, the efforts made at each school are showing good results from their programs.

Presenters Name: Melanie Bruck, Kristy Headings, and Caleb Jones

Title of Project: Pyrrolizidine Alkaloids in *Heliotropium greggii*

Faculty Sponsor: Ronald Kelley

Pyrrolizidine alkaloids (PAs) are potentially toxic secondary natural products found in the plant family Boraginaceae. *Heliotropium greggii*, a taxon of southwestern North America, is the focus of this investigation. As *Heliotropium greggii* belongs to the family Boraginaceae, it may be presumed that PAs should be present. Other investigated *Heliotropium* species have been found to contain large quantities and great varieties of PAs. This study of intact PA structures will look at one *Heliotropium* population from Brewster Co., Texas. Preliminary chromatographic evidence indicates two main series of PAs, unsaturated heliospathine derivatives and saturated turneforcifine derivatives, the ratios of which ween to differ from previous publications. Further research is in progress to confirm and investigate these initial findings.

Presenters Name: Tara Boethin

Title of Project: Nonlethal Screening Method for Detection of Bacterial Kidney Disease in Pacific Salmon

Faculty Sponsor: Anna Cavinato

This is a poster presentation of an ongoing project sponsored by the Oregon Sea Grant to see if we can develop a nonlethal method of determining whether or not salmon have Bacterial Kidney Disease (BKD). Currently there is no nonlethal method for detection of BKD. The method being developed uses nearinfrared spectroscopy which is then correlated to other detections of BKD such as the ELISA test and visual examination. The nonlethal method will be used in hopes of determining infected fish with BKD before external signs are present.

Presenters Name: Ihsane Bikri

Title of Project: Wheelchair Access at Airports

Faculty Sponsor: David Allen

The MCM is a unique international contest where students participate as team members rather than as individuals. At the end of the four-day contest period, teams produce a substantial technical report addressing the contest problem. The problem chosen by our team concerns optimal wheelchair allocation by airlines. Airlines must make wheelchairs and escorts available for both arriving and departing passengers who need assistance. Issues include scheduling the movement of wheelchairs throughout the day and both long and short-term costs. Our solution to this problem centers on the queuing aspects of the problem. In our simulation, the total cost is a function of the expected waiting cost and the expected service cost per hour. Based on our model and simulation, we determine how many wheelchairs (servers) we should use at any given time by using the passenger arrival rate as a guide so we can minimize the total cost.

SESSION III- 12:30-1:30 PM

Presenters Name: Meaghan Hammers

Title of Project: Detecting Deep Muscle Bruising in Salmon by Near Infrared Spectroscopy

Faculty Sponsor: Anna Cavinato

Bruising is an important quality in salmon due to that fact that it reduces their market value. Bruising is difficult to detect before a fish is filleted. We report a new noninvasive measurement technique based on visible and short wavelength near infrared spectroscopy. Bruise detection is based on distinct absorbance bands from deoxyhemoglobin, the primary pigment in blood. In this study spectra were acquired noninvasively through the skin and scales in diffuse reflectance mode. Digital images of bruised and nonbruised regions of fish were captured after the fish samples were filleted for reference purposes. Spectra were analyzed using Principal Component Analysis (PCA) and Soft Independent Modeling of Class Analogy (SIMCA). Preliminary results indicate that it is possible to differentiate bruised from non bruised samples and that ultimately visible and SW-NIR could be used to control the bruise defect of fish products during processing, thereby improving product consistency and quality.

Presenters Name: Kelsi Johnson

Title of Project: Restoration of *Potentilla recta* Infested Rangelands to Improve Wildlife Forage Quality

Faculty Sponsor: Ronald Kelley

Invasive species are a huge threat to many ecosystems through out the Northwest. In 2002, a study in Northeastern Oregon was designed to evaluate the effects of prescribed burns, herbicide sprays, and seeding with native grasses in order to control the invasive plant species, *Potentilla recta*. This noxious weed reduced the native grasses which also decreased forage quality for wildlife. In 2005 a randomized block design experiment was used to determine the forage quality within the 2002 site. This would help us understand which treatment combination is the most beneficial to wildlife.

Seven restoration treatments were applied in two blocks. Ten samples plots were clipped per treatment and weighed for biomass. They were then broken into four plant categories and randomly selected for the experiment. These plants were oven-dried and ground to one millimeter particle size and run through three experiments, Acid Detergent Fiber Analysis, Nitrogen Analysis, and Dry Matter Analysis Results will provide information to help land managers improve forage quality for wildlife on invasive plant infested rangelands.

Presenters Name: Chelsea Martin

Title of Project: The Effects of Music in the Classroom

Faculty Sponsor: Carol Lauritzen

As a future teacher and a great lover of music, I wanted to learn how I could use music as a tool for learning in the elementary school classroom. Through much research, I found that music actually does affect learning, behavior and all around well-being. The poster will sum up the major impacts of music on learning. The poster will include: parts of the brain, the use of music across the curriculum, affects music has on the brain and learning, the positive aspects of music on learning, music and the subjects and ideas of how to use music in the classroom. I

will provide samples of music that will help exemplify types of music that would be useful in the classroom.

Presenters Name: Story Miller, Carli Morris, Bryan Grimshaw, and Jake Miller

Title of Project: North to Alaska: New Insights To Share With Local Schools

Faculty Sponsor: *Jay Van Tassell*

This presentation focuses on Phi Beta Rock's trip to Anchorage, Alaska where we presented a poster at the 2006 Geological Society of America meeting. Our GSA poster describes an EOU Historical Geology laboratory exercise that demonstrates how physical and biological stratigraphy can be used to decipher the changing environments and geologic history of the western margin of the Cretaceous Interior Seaway near Mesa Verde, Colorado. We will also show the highlights of our trips to Matanuska Glacier, the Pacific Tsunami Warning Center, Denali National Park, and other sites in the Anchorage area. A PowerPoint presentation regarding the geologic history of the Wallowa Mountains will be included as well. This display was presented to the seventh and eighth grade class at Pine-Eagle as part of the club's new program: Bringing Geology to Local Schools. Phi Beta Rock's main goal is to get local students of all ages interested in Geology.

Presenters Name: Megan Neuharth

Title of Project: The Fundamentals of the Rubik's Cube

Faculty Sponsor: *Michael Puls*

This presentation will include a brief history outline of the creator of the Rubik's Cube, Erno Rubik of Budapest, Hungary. It will explore the interior makeup of the Rubik's Cube and I will have a disassembled Rubik's Cube at my presentation. The presentation will also include a few definitions on Mathematical Groups, and I will have a display of a set of group permutations that are related to the Cube and how it can be manipulated. Then I will have some solution strategies for the Cube that will be supported by some pictures of the cube. The presentation will also show how the solutions to the cube are related to group theory. Finally, if my hands are free, I will be manipulating a Rubik's Cube and solving it during the presentation, as well as having another Cube available for others to try their skills at solving the Rubik's Cube.

Presenters Name: Hannah Rich and Mariah Blackburn

Title of Project: Sink or Swim: Are Special Education Reading Programs Meeting The Needs of Students with Developmental Disabilities.

Faculty Sponsor: *Kerri Wenger*

Reading is proven to be challenging for teachers and learners, yet for those with developmental disabilities it can be an even bigger struggle. This problem is met with the question; "Are students with developmental disabilities provided with the sufficient training to conquer reading?" This presentation will address this question.

Local area teachers were interviewed about strategies and curriculum implemented in their Special Education Reading Programs, as well as their effectiveness. Results from

standardized testing were researched and compared to areas of weakness provided by interviewed teachers. National standards and efforts were also analyzed. Come learn what parents and teachers can do to make a difference in helping students with developmental disabilities learn to read.

Presenters Name: James Stafford and Emily Booth

Title of Project: Dextromethorphan Modulation of Context-dependent Cocaine Tolerance

Faculty Sponsor: *R.H. Ettinger*

The environment in which drugs are taken is rich with cues that are potent stimuli, eliciting powerful physiological responses. It is very likely that when an addict leaves rehab and goes back to the places where they took drug previously the environmental cues induce the physiological cravings for the drug. Eventually this can lead to relapse back to their drug habit. This theory has been tested in lab and one way to look at this contextual control over drug effects is by demonstrating that certain behaviors can be controlled through these drug contexts. The present study looks at the ability of environmental cues to elicit tolerance to the analgesic effect of cocaine. While we have found that the analgesic properties of cocaine can be powerfully controlled by context we have also found we can pharmacologically block the contextual control of cocaine. This has implications for drug addiction therapy.

SESSION IV- 2-3:00 PM

Presenters Name: Jessica Larson and Heidi Chamberlain

Title of Project: Characterization of a Modern Turtle Killsite for Comparison With Paleo-Killsites

Faculty Sponsor: *Joe Corsini*

Chrysemys picta, or the painted turtle are a native species and one of the most common turtles to North America. Turtles are often used as indicator species as well, meaning that studying the turtles' health will give information about the health of the environment in which they live. We will create a poster that will compare the spatial distribution and shell orientation of *Chrysemys picta* at a killsite found in a pond located in northwestern Nebraska to the same of turtles from a paleo-kill site of turtles from the oligocene (about thirty million years ago) found in Nebraska. By observing these features, we are finding evidence as to why the turtles, both ancient and recent, died (for example, lesions on turtle shells) and why they are distributed the way they are around the killsites.

Presenters Name: Amanda Justesen

Title of Project: Rapid Near Infrared Spectroscopic Method for the Detection of Spoilage in Rainbow Trout Fillet

Faculty Sponsor: *Anna Cavinato*

This study investigated the feasibility of using short-wavelength near-infrared (SW-NIR: 600-1100nm) spectroscopy to detect the onset of spoilage in smoked rainbow trout. Spectra were acquired on the flesh side of intact trout fillets stored in sealed packages at

room temperature and then opened prior to measurement. Spectra were obtained and microbiological analysis performed in 24 hour intervals over 10 days. Principal component analysis (PCA) models were developed to predict the onset and degree of spoilage. PCA results showed clear segregation between the samples analyzed each day, indicating that onset of spoilage could be detected with this method. These results indicate that SW-NIR in combination with multivariate statistical methods can be used to detect and monitor the spoilage process in rainbow trout products and accurately monitor quality in muscle foods.

Presenters Name: Travis Millsap

Title of Project: Mechanics of Hopping After Plantar Flexor Fatigue

Faculty Sponsor: *Darren Dutto*

The purpose of this study is to determine if fatiguing a specific muscle group changes the mechanics of an exercise task. Physically active college students were recruited to participate. Testing consisted of hopping for 45 sec both before and after a fatiguing bout of exercise on the ankle extensor muscles (consisting of standing and seated calf raises). Five hops from the 30 seconds time mark were analyzed using video. Hip, knee and ankle angles and angular velocity, joint range of motion, and joint stiffness were determined. The data was analyzed using repeated measures ANOVA ($\alpha = 0.05$). Preliminary results indicate that the knee motion increased with fatigue while ankle and hip motion remained unchanged. Though ankle movement remained unchanged, ankle stiffness increased with fatigue.

Presenters Name: Matt Richardson

Title of Project: Enigma

Faculty Sponsor: *Michael Puls*

This presentation will focus on the Enigma code from World War II. Time and explanation will be devoted to three topics. First, you will receive an introductory explanation of the Enigma machine itself. This complex electrical device efficiently enciphered and decrypted the best-known code in history. It was arguably the most coveted and sought after piece of technology involved in WWII. The presentation will include a simplified, working model of the Enigma that will enhance your understanding of the original Enigma machine and of the code itself. After acquiring a basic understanding of the machine, you will receive a brief explanation of the mathematical complexity of the code. Finally, and most importantly, you will be introduced to the methods used to attack and, eventually, break the Enigma.

Presenters Name: Michelle Zevely

Title of Project: Educator Attitudes on the Impacts of Statewide Assessments For Students with Disabilities

Faculty Sponsor: *Virginia Kelly*

Since it's passage in 2001, the No Child Left Behind Act has had both positive and negative effects on schools. Possibly the most dramatic is the requirement that by the

2013-14 school year, all students, including those with disabilities, will meet reach proficiency level on standardized grade-level statewide assessments. This poster presentation will display the survey results of general education teachers, special education teachers and building administrator's from a rural Eastern Oregon school district on their attitudes toward the inclusion of students with disabilities in statewide assessments, their attitudes on whether or not more instructional time is given to tested subjects than non-tested subjects on statewide assessments and their attitude on the best measure of Adequate Yearly Progress for student's with disabilities.

Presenters Name: Kristina Powell

Title of Project: Gauss and His Fundamental Theorem of Algebra

Faculty Sponsor: *Michael Puls*

This presentation offers a brief history of the fundamental theorem of algebra. I will discuss the many different people that attempted to prove the fundamental theorem and who actually proved it in the end. There were a number of early attempts that were later proved to have gaps in them, and were not complete.

Carl Gauss was the first mathematician who was recognized as responsible for proving the fundamental theorem of algebra. There was a person before him that had a legitimate proof, but was not recognized. I plan on giving a taste of what Gauss' first theorem entailed and then giving a more modern proof to show how things have cleaned up over time.

I will also discuss how the fundamental theorem of algebra led to the discovery of complex numbers. The first proofs of the fundamental theorem were proved using topology and algebra; there were no complex numbers. When Gauss had discovered complex numbers, he used them in his fourth and final proof of the fundamental theorem of algebra. It made the proof much shorter and cleaner.

Presenters Name: Diana Radford

Title of Project: Implicit and Explicit Attitudes Towards Homosexuality

Faculty Sponsor: *Jeremy Heider*

Research has demonstrated two types of attitudes: implicit and explicit. Explicit attitudes can be consciously expressed, and can be measured using traditional questionnaires. Implicit attitudes are based on non-conscious underlying associations, and can be measured using computer measures such as the Implicit Association Test. This is accomplished by evaluating the time it takes to group two stimuli together. Some associations can be made quicker than others, depending on previous exposure to pairings of those stimuli. For instance, most people are likely to pair homosexuality with negativity faster than they would pair heterosexuality with negativity. These associations are deeply engrained and are more difficult to change than explicit attitudes. In my research I was able to demonstrate that it is possible to change explicit attitudes toward homosexuals by providing new information, while also showing that implicit attitudes are more difficult to change with that same small amount of information.

Presenters Name: Emmy Albrecht

Title of Project: Cooperative Learning: The Effects on Social Sciences Achievement of Low Performing Third Grade Students in a Rural Setting

Faculty Sponsor: Virginia Kelly

Research has indicated that cooperative learning increases academic achievement; however, few studies have investigated its effects on the social sciences achievement of low performing elementary students in a rural setting. This study investigated the effects of cooperative learning on achievement by comparing the social sciences achievement levels of two groups of low performing third grade students. One group of students received cooperative learning methods of instruction while the other group of low performing third grade students did not. Although results for achievement, as measured by an individual performance task and unit test were inconclusive, results indicated higher achievement with cooperative learning based on in-class assignments ($t = 3.32$, $df = 18$, $p < .05$, one-tailed test) and final unit grades ($t = 1.75$, $df = 18$, $p < .05$ one-tailed test). Additionally, the effect sizes for cooperative learning on assignments and final grades were large. Cooperative learning may be one tool educators can use to increase achievement of low performing students in rural settings.

Talks: Hoke 201 & 309

SESSION I- 9-10:00 AM

HOKE 201

Presenters Name: Jessie Zimmerer

Title of Project: Selling Oppression: Women, Pornography and Social Consciousness

Faculty Sponsor: Jeff Johnson

It is estimated that Americans spend close to \$10 billion in the adult pornography industry each year, but commodifying the bodies and interests of over half the country's population exacts a social cost that is far more difficult to measure. The commodification of women's bodies in the sex industry, particularly through mainstream pornography, perpetuates the social, political, and economic oppression of women in American culture. The purpose of this research is to explore: the social attitudes and beliefs that pornographic images "sell" as one of the largest commodification industries in the country; the role that widely distributed pornographic images have in perpetuating a social consciousness that condones the physical subordination of women as a class; and the ways in which the promotion of physical and sexual violence against women leads to repression of their political and socio-economic interests. This presentation will analyze and compare arguments from leading feminist scholars like Catherine MacKinnon and Margaret Radin, which examine the intersections between social attitudes, physical subordination, and political oppression, and opponents of these arguments like Laura Kipnis and Martha Nussbaum, who explore pornography as a means for improving conditions for women in America.

Presenters Name: Melissa Maag
Title of Project: EOU Sexual Assault Policy
Faculty Sponsor: *Marianne Weaver*

The purpose of my presentation is to provide our campus community with important information regarding the Eastern Oregon University Sexual Assault Policy, Sexual Harassment Policy, Consensual Relationship Policy, as well as the Student Code of Conduct. It is also my hope to inform students of the support that is available for victims of Sexual Assault. I will be making available information regarding the Sexual Assault Response Team (SART) based on Eastern Oregon University's campus as well as the Union County Sexual Response Team (UC-SART). By being better informed of the policies regarding these issues we can help keep our campus safe and recognize those who are going above and beyond by being advocates.

Presenters Name: Lauren Moore
Title of Project: From Thick to Thin: The Cyclical and Deleterious Nature of the Commodification of Beauty
Faculty Sponsor: *Jeff Johnson*

From the Victorian corset to the 21st century breast augmentation, there is no denying the commodification of beauty. For years, society has invested more than is necessary towards the pursuit of physical perfection. The consequences of such are a loss of personhood. Procedures such as the face-lift, breast augmentation, liposuction, and face transplant give a prospective patient the opportunity to re-invent him or herself. However, the concern is where to draw the line, as the pursuit of beauty leads towards the inevitable designer body.

I intend to discuss the causes of such an obsessive pursuit towards physical perfection along with the disastrous consequences to personhood. It is clear that commodification of beauty exists, however the future implications of such are unclear. With the help of current studies in female insecurity, I hope to unearth the cause and effect of a society obsessed with beauty. In a fifteen-minute presentation I will orally and visually explain the philosophical theory kept by author Virginia Blum in which the "other woman complex" explains this inhumane desire for perfection. This psychological complex includes a woman's need to compete with other woman, the cause of which being society, i.e. television, magazines, and generations of stereotype.

HOKE 309

Presenters Name: Danielle Wieder and Kimberly Walker
Title of Project: Implementing Phonics Into an Existing Canned Program
Faculty Sponsor: *Raeshelle Meyer*

This presentation will look at an existing reading program in an elementary school. We will look at how the program was conducted prior to implementing a phonics program and how it is conducted after implementing the phonics program. We will then determine

whether or not the implementation of the phonics program improved the students' state reading test scores by comparing the Idaho Reading Indicator (IRI) scores of the students prior to implementing a phonics program into the reading program and after the implementation of a phonics program.

Presenters Name: Levi Hug

Title of Project: The Mystery of Capital: Property Rights in Developing Nations

Faculty Sponsor: Colleen Johnson

Recently, I traveled to the Third World nations of Rwanda, Uganda, and Kenya, and the former communist nation of Russia. Globalization, modernization, and transformation are the sounds ringing in the developing world today. The world is changing at an increasingly fast rate; the future is accelerating. Never before has the wealth that 20% of the world enjoys been more visible to those who don't have it. Poor people around the world see and hear of the luxurious lifestyles of thriving capitalistic societies through their TV sets, computers, and cinemas. Through their TV screens developing nations see a better life; a life of comfort and security, a life filled with societal and personal freedoms. The Peruvian economist Hernando de Soto argues in his book *The Mystery of Capital: Why Capitalism Succeeds in the West and Fails Everywhere Else*, that the fulfillment of the desires of impoverished nations is rooted in what the West has spent the last two centuries developing: property rights. A formal legal property system, argues de Soto, is the foundation of a thriving capitalistic society.

Presenters Name: Linda Blomberg

Title of Project: The Differences and Similarities Between Adolescent Same- and Cross-Sex Friendships.

Faculty Sponsor: Rosemary Powers

My hypothesis is that there exists a correlation not only between gender and measures of friendship but between friendship composition and these measures as well. Through the coding of my nominal variables into numerical values, I will transform my qualitative findings into quantitative data, which I will use to test my hypothesis.

My research examines same- and cross-sex friendships in four works of fiction written for the adolescent audience randomly selected from a list composed by the American Library Association. Through content analysis I am examining interactions between three friendship styles: female-female; male-male; and female-male. I examine each of these three models through specific measures of friendship including meanings or descriptors of friendship, activities in which friends participate, and topics discussed between friends.

SESSION II- 10:30-11:30 AM

HOKE 201

Presenters Name: Anna Bacon

Title of Project: Patent Law: A Case Study in the Commodification of Information
Faculty Sponsor: *Jeff Johnson*

This presentation comes out of my work in the Philosophy, Politics, and Economics capstone class: “Commodification.” I will briefly discuss the dominant theories and criticisms of intellectual property to illustrate the disconnect between theory objective and the real outcome of granting intellectual property rights. I will show how the disconnect between objective and result supports the conclusion that new theory must control intellectual property law and establish a greater relative position of the public domain. For the purposes of this presentation I will emphasize patent law: the most problematic area of intellectual property law, as it deals with issues that can affect life or death. The expansion of patents to genes, organisms, and sequences of DNA has large implications for the existence of an intellectual commons, and the relative position of authors and users, supporting a necessary establishment of the intellectual commons.

Presenters Name: Tausha Krohn
Title of Project: Gangs in Schools: Strategies for Early Prevention
Faculty Sponsor: *Raeshelle Meyer*

During my research I looked at two local communities and the efforts being done to prevent gang activity within the schools. I will provide an overview of what gangs consist of and recommendations of what elementary schools can do to prevent gangs and violent behavior from infiltrating the school system.

Presenters Name: Hiromi Beppu
Title of Project: How to Prepare Pre-Service Teachers to Enact and Infuse Multiculturalism in the Classroom
Faculty Sponsor: *Lee Ann McNerney*

The United States is one of the most diverse countries in the world. As we move further into the 21st century, the population will become increasingly more diverse. Consequently, teachers in the 21st century are expected to meet the needs of this diverse population. Interestingly, most pre-service teachers and educators throughout the United States are overwhelmingly European American, middle-class, English-speaking, and female. Unfortunately, many pre-service teachers feel insecure about teaching students from diverse backgrounds. Effective instructional strategies for all students in the classroom must be evolved from the cultures of students and their families, not from the teacher’s culture.

The purpose of this presentation is to prepare teachers to enact and infuse multiculturalism in the classroom. We discuss the need to prepare teachers for diversity, the role of teachers in diverse classroom and effective classroom applications in the classroom with diversity.

HOKE 309

Presenters Name: Benson Orrukem

Title of Project: The Commodification of Managed Care

Faculty Sponsor: Jeff Johnson

The research that I did was about the commodification of health care system. My presentation reflected cost/benefit analysis of it being co modified. I used for and against arguments of commodification of health care to carefully justify the cost and benefit analysis of managed care. In addition, I incorporated some of recent news and articles about managed care.

The presentation will starts with the capitalistic and economic view of health care and how did it contributed to the birth of managed care. I got into the business view of how to change the health care business from regular health care provider to a profit maximizing health care provider. I inserted some of the business tactics that were exercised during the transformation of health care, and some of the business tactics were: cutting expenses, demand for efficiency, promotion for attracting investments and capital, promoting quality bases treatments re-evaluate relationship with suppliers and health insurance providers.

The second part of my presentation I will explain some of the effects of a commodified health care. For example, some of the arguments like: Expensive prescriptions/treatments, unfair and biased towards lower income people, unaccounted and unmeasured aspects in hospitals, and last section which was about the morality of should health care whether it should be a right or privileges.

Presenters Name: Sheilla Tmarsel

Title of Project: The Commodification of Child Care

Faculty Sponsor: Jeff Johnson

My research examines the opportunities presented with the commodification of childcare, a brief background of childcare, political, and economical questions involved, as well as some of the issues that thus far have been largely overlooked.

In the first section, I stated a brief background of childcare in the United States, government provisions (for instance, the government also helps women who are single parents as well as low-income families), and how it is related to equal opportunity for women.

In the second section, I presented my views on how childcare is now a product of commodification and how it is efficient for families, as well as the whole society.

Lastly, I deliberately present my personal view on how childcare is important to families and the economy.

Presenters Name: Amber Fischer and Kim McDowall

Title of Project: The Benefits of Literacy Programs for Pre-Kindergarten Students: An Investigation and Comparison of the Literacy Elements in Preschool and Daycare.

Faculty Sponsor: Kerri Wenger

This study investigates and compares the literacy programs in a local preschool and daycare. The purpose of this research was to gain a better understanding of the literacy knowledge that children have when they enter public schools. During our

observations, we specifically looked for book availability, frequency of structured reading, print-rich environment, and the interactions of children with books. For the purpose of this investigation, we interviewed, observed, and interacted with both the staff and children at the facilities. Our presentation includes specific examples of what we observed, along with photographs and interviews that highlight our findings.

SESSION III- 1-2 PM

HOKE 201

Presenters Name: Stephen Kalb

Title of Project: Degenerates

Faculty Sponsor: *Colleen Johnson*

Genetic engineering is nothing new to the world. Combining the best plants and animals together to form better offspring has been practiced for thousands of years. The science to genetically modify humans, however, is a new development; it requires a new discussion on the moral and ethical implications of human genetic engineering. Questions of the value of the individual compared to the collective good creates a debate that cannot be strictly positive. In the United States in particular, the issue of gene ownership raises passions on both sides of the debate. The pharmaceutical industry spends billions of dollars every year to unlock the meaning of the human genetic code. Does the fruits of that research belong to people, who all share the genes, or is it the property of the researcher? This raises a number of public policy considerations, balancing incentive for innovation with the public good. The commodification of the human genetic code goes beyond patent issues and into the realm of what legally and morally constitutes a person.

Presenters Name: Jennifer Colton

Title of Project: The Detective in Letters

Faculty Sponsor: *Mark Shadle*

Critics claim that the epistolary novel peaked in the eighteenth century before dying off almost completely, but the formats, characteristics, and tones of the genre appear throughout the nineteenth and twentieth centuries. The detective novel, especially the “whodunit” subgenre, is usually narrated by a supporting character, such as a sidekick, who tells the story of the case to the reader. While many modern detective novels follow the same epistolary pattern, this research centers around three of the most famous: Sir Arthur Conan Doyle’s Sherlock Holmes, Rex Stout’s Nero Wolfe and Edgar Allan Poe’s C. Auguste Dupin, and their sidekicks/assistants as their scribes and letter-writers: Watson, Archie Goodwin, and Dupin’s narrator. The presentation will touch on the history of the epistolary novel, its characteristics and how the classic detective stories compare with those characteristics.

Presenters Name: Kevin Lair

Title of Project: The Mushrooms of GROWISER: An Investigation of Fruiting Body Mushrooms.

Faculty Sponsor: *Karen Antell*

Grande Ronde Overlook Wildflower Institute Serving Ecological Restoration (GROWISER) is a native plant preserve located five miles north of Summerville. It is home to over 2600 plants of the once endangered Mountain Lady's Slipper (*Cypripedium montanum*). This particular orchid requires the presence of mycorrhizal fungus in order to germinate. In Spring and Fall 2005 I initiated a survey of fruiting body mushrooms on the preserve, with special emphasis on identifying fungi growing near *C. montanum*. I collected and photographed 43 species of fruiting body mushrooms, and located one group of fungi (the *Cortinarius cinnamoneus* group) occurring next to the Mountain Lady's Slipper.

Presenters Name: Zac Dowling

Title of Project: Privatization of Prison

Faculty Sponsor: *Colleen Johnson*

In this presentation I will discuss the current role of private prisons in the United States. Ultimately I conclude that the United States should continue to expand the role of privatization within minimum and medium security prisons. I examine the different arguments, both positive and negative, regarding the private prison system. The works of Alfred Aman Jr, David Shichor, and David Torres are used to develop these arguments. While there are many social concerns regarding the privatization of prisons, the economic benefit of private prisons, in my opinion, far outweighs the negative social implications.

Panel Presentations- Hoke Main Lounge

SESSION I- 10-10:50 AM

Presenters Name: Tina Phillips, Kari Pack, and Anne Spurrier

Title of Project: Issues of Counseling Hispanic Elementary Students

Faculty Sponsor: *Jill Gibian*

As my future career goal, I plan on working with Hispanic students to help them adjust to their new environment in school and community life I am interested in exploring the different issues that come with being a school counselor. The issues that I plan to present on include: Challenges that school counselors face in working with Hispanic Elementary and Jr. High students (language cultural issues), specific trends that are more common among Hispanic students in comparison to Anglo students (drop out rates, gang involvement and pregnancy) and parent involvement in the schools amongst the Hispanic community. I also plan to discuss the perspective of the Hispanic parents about their experiences in dealing with the school system in regards to involvement with their

children in the schools. I am participating in a panel with Anne Spurrier and Kari Pack who are also presenting topics related to Hispanic culture.

SESSION II- 11-11:50 AM

Presenters Name: Anne Spurrier, Suzanne Roberts, Anne Henrickson and Tanner Young

Title of Project: Haven from Hunger

Faculty Sponsor: *Bill Grigsby*

The Haven from Hunger project is a multi-faceted undertaking that has involved many groups of students and community members. With its roots in the Sociology/Anthropology department, the Haven from Hunger project, recently featured at EOU's Food, Education and Development Symposium, has helped to bridge a divide between the resources at the university and the needs of the community around it.

This session will bring together representatives from various Haven from Hunger projects to discuss their individual involvement in such projects as a cookbook, community garden and educational initiatives such as mentorship programs. This session will take the form of a discussion, and all are welcome to share their experience as a participant in the local food chain.

SESSION III- 1-1:50 PM

Presenters Name: Tina Phillips, Liberty Merrill and Anne Spurrier

Title of Project: Liberal Studies at Eastern Oregon University

Faculty Sponsor: *Mary Koza*

This session will offer symposium attendees the opportunity to learn about the interesting and diverse projects initiated through this non-traditional degree option. Facilitated by Mary Koza, who will offer an overview of the program guidelines and requirements, this will be an open-discussion where liberal study students will discuss the challenges and rewards of a liberal studies degree.

SESSION IV- 2-2:50 PM

Presenters Name: Tina Phillips, Kari Pack, Anne Spurrier and Jolene Baumunk

Title of Project: International Studies

Faculty Sponsor: *Jill Gibian*

In addition to the number of international students who study in La Grande, the many Eastern students who travel abroad provide the university with a wonderful opportunity to share their reflections of travel, culture, and academia. Please join us for this session where students who have studied abroad are invited to share their recent experiences of a different world. This session will feature the work of students from Eastern's Spanish

Department, and include discussion of a variety of countries, including Chile, Ecuador and Mexico.

This session will take the form of an open discussion, and all are welcome to share their thoughts on international study and work.

SESSION V- 3-3:50 PM

Presenters Name: Oksil Yang, Scott Betcher, Farruh Madaminov, Muhiba Rabejanova and Faud Aliyev

Title of Project: The Commodification of Sex

Faculty Sponsor: *Jeff Johnson*

This year's PPE Capstone course focused on a fascinating area of feminist legal scholarship – commodification. The use of market mechanisms to transact exchanges of the most personal and intimate aspects of our lives is morally and legally problematic. Perhaps nothing in our culture is more personal and intimate than sexual behavior. This panel will examine a number of issues related to the sale of sexual services. At what might be considered the wholesale level, sex slavery and trafficking will be examined, and as would be expected normatively condemned. At the more retail level, however, a range of moral and legal perspectives, from complete legalization to full market inalienability, are defended with respect to prostitution.

Performance Art: Schwarz Theatre

PERFORMANCE I- 2-2:30 PM

Presenters Names: Tristan Stufflebeam, Chris Abbot, Allison Bassett, Sarah Bomberger, Kiel Fauske, Devin Frasier, Jack Galliano, J.J. Hill, Amanda Hughs, Amanda Myers, Caitlin O'Brien, Katherine Olson, Seth Olson, Whitney Richard, Nick Romriell, Jennifer Sasser, Fune Tautala, Adam Tracy, Kyle Troutman, Jessica Waite

Title of Project: Selections from Urinetown

Faculty Sponsor: *Kenn Wheeler*

The cast of "Urinetown, the Musical" will present several selections from their upcoming production. This will be interspersed with dialog that will help the audience understand the story. As students of both Music and Theatre, this production gives us the opportunity to demonstrate the skills that we have been learning in our program courses. Musical Theatre demands quality singing, dancing and acting and this presentation will display all three to the campus community. Also, we believe very strongly in the value of the work that we are doing and appreciate the opportunity we have to share it with the Spring Symposium audience.

PERFORMANCE II- 3-4:30 PM

Presenters Names: Brian Wallis and Jordon Wallis

Title of Project: The Adventures of Billy and Betty in Fairyland

Faculty Sponsor: April Curtis

"The Adventures of Billy and Betty in Fairyland" is a farcical look at the society of children's fantasy entertainment, while also examining the moralistic structure of common sense. The play follows the story of young Billy and Betty, a pair of mad daydreamers, who stumble into a land of fantasy clichés and find that what they dreamed is not what Fairyland is really like. The goal of this project is to do a staged reading of the play with minimalist sets and costume and some elements of the music and lighting in place. The actors, selected from the student body, will read from the script while following stage directions read out loud. Viewers should be aware that the show contains some objectionable language, implied sexual deviancy, and children in peril. The recommended age is 13 or older. This play is for everyone who has always wanted to see the "real" side of fairytales.

Symposium Planning Committee

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Dr. Robert Davis
Dr. Mary Koza
Dr. Frederick Pratter
Mr. Ted Atkinson
Dr. Gregory Monahan
Dr. Barbara Schultz
Ms. Kris Olson

The Symposium Planning Committee thanks the following for their valuable contributions of time and energy to this event:

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Mr. Gary Moses
Ms. Karyl Kramer
Mr. Gibb Pollard
Ms. Sadie Isley
Ms. Max Moffit
Ms. Vivian Petersen

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