Tuesday
December
09
5-7 pm
Riverview Ballroom
University Center

Campus URSCA from all areas of study is represented through undergraduate posters, short films, art exhibits, PowerPoints, and interactive displays in a content-rich event, with over 240 student presenters!
Fall Gala

December 9, 2014
Riverview Ballroom, University Center
5:00 – 7:00 p.m.

The Fall Gala is an annual showcase event to celebrate the research, scholarly and creative activities of UWRF undergraduates. Campus URSCA from all areas of study is represented through undergraduate posters, short films, art exhibits, PowerPoints, and interactive displays in a content-rich event, with over 240 student participants. We hope you enjoy this opportunity to learn more about the hands-on research activities that are taking place every day on our campus. The Fall Gala is sponsored by the student group Society for Undergraduate Research, Scholarly and Creative Activities (SURSCA), with additional support from the UWRF Office of Alumni Relations.

Program Details:
- URSCA projects are listed alphabetically by students’ last names.
- Faculty mentors are listed with their students’ projects as well as alphabetically in a comprehensive appendix.
URSCA Projects

Ahlers, Logan
Poster

Lake Okabena Water Quality Assessment

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Nutrient pollution, partially responsible for blue-green algal blooms in Lake Okabena, has been a large issue facing the Okabena-Ocheda Watershed District for years. One issue is finding where the nutrient pollution is entering the water system. The different lake inputs were divided into sub watersheds, then sampling and phosphorus concentration testing was used to determine where the phosphorus was entering the water. Once the watershed district received the data, it began efforts to clean up Lake Okabena.

Ahlers, Logan
Poster

Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties

Research Collaborator(s): Anton Yelk, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Alves Chaves, Joicy
Poster

Connecting Cultures
Research Collaborator(s): Grady Nelson, Tia Crotty, Kevin Judd, April O'Connor, Nathalia Perieiera Silva, and Allison Waterhouse

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent two class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Amaral, Amanda**  
Poster  

*Culture Shock: Brazil and America*

Research Collaborator(s): Helen Zuelke, Casey Maus, Ben LaMere, Dalton Miller, and Lucas Silva

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This project is one of a number from the COMS 213 course where International Students and US students came together to discuss similarities and differences in their cultures.

**Anderson, Peter**  
Poster  

*Comparison of Brazilian Culture to American Culture*

Research Collaborator(s): Danelle Nadeau, Malachi Becker, Leah Germain, Leonardo Lazzaron Cenatti, Aurelio Luciano Costa, and Daniel Buchner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This presentation is one of many presentations prepared as a joint project by the COMS 213 students and the ELT students at UWRF. Students spent 3 hours
together in class discussing similarities and differences in their cultures, and then spent two class hours creating the poster together. Students will speak not only about the differences among their cultures, but also about the benefits of working together on this project.

**Angell, Jenn**  
Artwork (3D - Ceramic)

*Sculptural Anatomy*

Faculty Mentor(s): Randy Johnston, Art

Ceramic sculptures inspired by anatomy and biological processes.

**Appleton, Aubrey**  
Poster

*Assessment of corticosterone and protein corrected corticosterone levels between serum and plasma in turkeys*

Research Collaborator(s): Grant Stoddard, Amanda Munger  
Faculty Mentor(s): Dr. Kurt Vogel, Animal and Food Science

There were three objectives in this study. The first was to evaluate levels of corticosterone between serum and plasma from turkeys. Second was to compare the estimated protein content between serum and plasma by refractometry. Lastly, the impact of correction for estimated total protein content on the occurrence of differences in corticosterone concentrations between serum and plasma was assessed. This study is relevant because animal welfare is becoming an increasing concern among producers and consumers in the meat industry. It is important to reduce or eliminate stress during pre-slaughter handling to prevent negative impacts on meat quality and animal well-being. Increased stress levels can elevate corticosterone and other biochemical welfare markers and reduce meat quality. In this study, blood samples were tested using a commercially available ELISA kit to calculate corticosterone concentrations, and a refractometer to estimate protein content. Results revealed no significant difference (P > 0.05) between serum and plasma among corticosterone concentration or estimated protein content. There was, however, a significant difference between trials (P < 0.05) due to variation in factors, which may have included; time of day, time of year, and
separate ELISA kits. Due to small sample size and variation between trials, additional investigation should be pursued on a larger population of turkeys.

Arnold, Tyler
Poster

*Demand for Money Function*

Research Collaborator(s): John Novotny, Eric Smith, Clinton Lagrander

Faculty Mentor(s): Dr. John Walker, Economics

This project examines whether or not there is a stable and non-zero relationship between money and economic activity from 1980-2008. The monetary aggregates used were M1, MZM, and Divisia M4. The results suggest that there is a significant relationship between money demand and the variables real GDP and opportunity cost.

Arnoldussen, Brent
Poster

*Floating Vegetative Island*

Research Collaborator(s): Owen Schmitz, Connor MacKinnon

Faculty Mentor(s): Dr. Joel Peterson, Agricultural Engineering Technology and Dr. Joseph Shakal, Agricultural Engineering Technology

We were to design, build and install a vegetated floating island structure at the University of Wisconsin-River Fall’s Mann Valley Lab Farm. These structures effectively convert pollutants stored in the retention ponds to biomass vegetation, which can be harvested, composted, and returned to the soil. The biomass vegetation thus prevents the pollutant nutrients from leaching into the soil, thereby improving the sustainability of UWRF.

Auchterlonie, Hollie
Poster

*Land Cover Map of Duluth, Minnesota*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences
A map of The City of Duluth, Minnesota that highlights the land uses within and surrounding the city’s boundaries. Created using data from the National Land Cover Database, National Elevation Dataset, and United States Census Bureau TIGER database.

Azasu, Samuel  
Short Film  

*United Way St. Croix Valley Annual Fundraising Campaign Video*

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts

Charitable giving campaign video produced with promoting non-profit social agencies and services in St. Croix Valley Wisconsin.

Bakuto, Jalane  
Poster  

*Two Cultures; One World*

Research Collaborator(s): Lauren Janssen, Haley Elsenpeter, Mayara Diehl Rodrigues, Tadeu de Azevedo Rodrigues, James Beckman, and Eric Braaten

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Ballman, Stacy  
Poster  

*Duas Culturas Que Caminham Juntas*
Research Collaborator(s): Vanessa Maione, Larissa Jahnel Rodrigues de Oliveira, Denner Nogueira Guimaraes, Dee Subasic, and Tarrin Halvorson

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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**Barichello, Luana**

*Poster*

**Crossing Cultures in the Classroom**

Research Collaborator(s): Lindsey Pluger, Flavia Miyabe, Christine O’Toole, Lacy Knutson, Elizabeth Larson, and Ebitimi Nagberi

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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**Barton, Sam**

*Poster*

**Genotyping Arabidopsis for Plant Immune Research**

Faculty Mentor(s): Dr. Kim Mogen, Biology

Arabidopsis is commonly used as a model organism in plant biology and the study of plant microbe interactions. One of the key advantages of Arabidopsis is the large selection of genetic resources available such as T-DNA insertion lines. T-DNA knock-out mutants can be used to determine the function of a
gene along with the gene’s role in larger networks, such as plant immune signaling. Members of the calmodulin-binding protein60 (CBP60) gene family are known to be regulators of immune defense genes; cbp60a is a negative regulator, while cbp60g and sard1 are positive regulators. CBP60a and CBP60g bind calmodulin (CAM) and this interaction is required for their respective negative and positive regulatory functions. Calmodulin-like proteins (CML), CML46 and CML47 are genes that are co-expressed with CBP60g and are negative regulators of defense against bacteria. In order to study the possible genetic interactions between CBP60s and CMLs higher order mutant combinations must be identified. In order to isolate desired mutant combinations F2 plants need to be genotyped using PCR methodology.

Barton, Sam
Poster

*Synthesis of Naphthyridine Azaquinolone*

Faculty Mentor(s): Dr. Karl Peterson, Chemistry

Cancer and genetic diseases, specifically hereditary neurological diseases such as Huntington’s disease, can be caused by mutations in DNA. Mutations can occur during the DNA replication and repair processes. Some DNA sequences are more prone to these mutations. An example of this is CAG repeat sequences. CAG repeat sequences hinder normal DNA replication. The molecule naphthyridine azaquinolone (NA), specifically binds to CAG repeat sequences. Studying NA’s effect on CAG instability would give us not only greater understanding of Huntington’s disease and other neurological diseases, but could provide insight for possible treatments in the future.

Becker, Malachi
Poster

*Comparison of Brazilian Culture to American Culture*

Research Collaborator(s): Danelle Nadeau, Peter Anderson, Leah Germain, Leonardo Lazzaron Cenatti, Aurelio Luciano Costa, and Daniel Buchner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English
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**Beckman, James**
Poster

*Two Cultures; One World*

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**Bergs, David**
Map

*Bayfield, Wisconsin*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

Topography is an important aspect of the geographic description of a spatial area. While it is most important in more mountainous regions of countries, knowing the changes in elevations of local areas that promote hiking can be very useful. In this case, we analyze the quite steep elevation change around Bayfield, Wisconsin, on the shore of Lake Superior. The map itself includes a small portion of two islands of the Apostle Islands National Lakeshore as a sort of comparison between the elevations of the islands and the mainland of Wisconsin.
Beth, Kevin
Poster

*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*

Research Collaborator(s): Anton Yelk, Logan Ahlers, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Bethke, Emily
Poster

*Response of Amphicarpaea bracteata (L.), the Dakota Pea, to Plant Growth Regulators and Photoperiod*

Faculty Mentor(s): Dr. Sonja Maki, Plant and Earth Science

Amphicarpaea bracteata (L.) is an edible annual woodland legume native to North America. It is known by several common names including Dakota Pea, Hog Peanut, and Pea Vine. The plant is capable of producing several distinct classes of seed sizes which aid in the species survival. In this study, the plant response to growth regulators was assessed under both long- and short-day lengths. Plants were treated with 100 or 200 ppm prohexadione-Ca (a gibberellin biosynthesis inhibitor). Prohexadione-Ca reduced plant height in both long and short days. Interestingly, plants grown under short day conditions produced one-seeded aerial pods, in contrast to the three-seeded aerial pods produced by plants grown under long days. This research provides some basic plant growth regulator responses in a wild legume which can be used for teaching phenotypic plasticity of wild crop relatives in a laboratory setting. In the future, results from this research could be used in gene
expression studies to understand the basis for how a single plant species can produce different classes of seeds.

**Bina, Lauren**

*Artwork (3D - Fiberglass and Photograph)*

*The Monolith Project*

Research Collaborator(s): Carson Giblette

Faculty Mentor(s): Brett Kallusky, Art

Our most recent body of work focuses on testing our subject in regards to natural occurrences. We have thrown our subject out into the waves of the Great Lakes, buried it in the sand of the Indiana Dunes, dropped it in the middle of a northern Wisconsin lake, and continue to test our subject based off of the environment surrounding ourselves. While the subject is being tested within nature, we document the results photographically and within a field log. This allows gauge the impact that the subject has taken with each test. We plan to continue testing our subject throughout the country using natural occurrences as the basis for our testing. As we continue testing our subject, we will be able to gain more information about the lifecycle of our subject in comparison to our own timelines.

**Bohry, Dieimes**

*Poster*

*Petal and other floral organ variation in flowers of heliopsis (Heliopsis helianthoides) and rose (Rosa hybrida) based on floral position*

Faculty Mentor(s): Dr. David C. Zlesak, Plant and Earth Science and Dr. Arunendu Chatterjee, Mathematics

Many plant species produce flowers over an extended period of the growing season. They are able to continue to flower over time by producing secondary and tertiary flowering branches off of the original, or primary, stem. Sometimes secondary and tertiary flowers are often not as attractive as primary blooms. Our objective was to learn if variation in floral quality may be due to variable floral morphology across bloom positions. We surveyed 2 rose and 10 heliopsis genotypes for number of floral organs across their primary, secondary, and tertiary blooms. We learned that in some heliopsis there is variation between
the number and percent ray flowers versus the less attractive disk flowers between primary, secondary, and tertiary flowers. In our two roses we learned that there was no differences in petal number or percent petals across flower positions. However, across flower positions one rose cultivar had significant variation for stamen number and the other significant variation for pistil number. This research points to the possibility of selecting and breeding heliopsis and roses having the desirable trait of greater uniformity across flowers.

**Borges, Erica**
Poster

*Making Muenster Style Cheese*

Research Collaborator(s): Priscila Farias and Samara Vieira

Faculty Mentor(s): Michelle Farner, Animal and Food Science

We have a project in Dairy Manufacturing class to make a cheese, so we did one following the Muenster style but adding our own different ingredient to make it unique.

**Borges Ferreira, Erika**
Poster

*Making a Jalapeño Muenster Cheese Style.*

Faculty Mentor(s): Michelle Farner, Animal and Food Science

It is a well-known fact that the dairy industry assiduously contributes to the economy. At present, an increasing demand worldwide is being noticed and the industry is globalizing, therefore expanding and increasing the power of the global dairy trade. The US is top one in cheese production. Moreover, the top states for cheese production are Wisconsin, California, Idaho, New York and New Mexico.

Having these intrinsic concepts, the objective of our project is to elucidate how to make a cheese, as cheese making involves a number of main stages that are common to most types of cheese, by doing Jalapeño Muenster Cheese Style. Jalapeño Muenster Cheese is smooth, pale yellow in color with an orange rind and a spicy flavor, because of the excellent melting properties it is used in grilled dishes, pizza and cheeseburgers and served as an appetizer for snacking.
Borges Ferreira, Erika
Poster

*Making Muenster-Style Cheese*

Research Collaborator(s): Priscilla Silva Farias, Samara De Vasconcelos Vieira

Faculty Mentor(s): Michelle Farner, Animal and Food Science

Muenster is an American imitation of the French Munster cheese. It is made from pasteurized whole cow's milk. It has a smooth, moist and soft texture, a pale yellow color, which results from the vegetable coloring during the cheese making. The taste varies from mild and bland to sharp like Jack cheese. The purpose of this project was to produce a different type of muenster-style cheese, by adding basil to create a different taste.

Braaten, Eric
Poster

*Two Cultures; One World*

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Broeske, Nicky
Poster

*Yield Optimization: A Comparative Study of Traditional vs. Advanced Grain Production*

Faculty Mentor(s): Dr. Bill Anderson, Plant and Earth Science
As the world’s population increases and the amount of overall arable land decreases, agricultural production will have to intensify every acre in order to continue feeding the world. Intensification of agriculture has contributed substantially to the tremendous increases in food production over the past 50 years (Matson et. al. 1997). This study focused on the potential economic and agronomic benefits of intensification.

**Brookshaw, Constance**  
Poster  
*The Baby Boomer Generation: Their Impact on the Future of Online Health Care Marketing*  
Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Dr. Grace Coggio, Communication Studies and Theatre Arts  
The intention of this research project was to explore and define the baby boomer generation, define the Internet and discuss how seniors are using the Internet for their healthcare needs. There was also a thorough review of how healthcare organizations currently market on the Internet and how that marketing effort will need to change as the baby boomer generation continue to age.

**Brown, Greg**  
Poster  
*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*  
Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson  
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**Buchner, Daniel**  
Poster  

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Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English  

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**Burkhow, Sadie**  
Poster  

*Computational Investigation of A Nitration Reaction that Deviates from the Expected Directing Effects of Typical Electrophilic Aromatic Substitution Reactions*  
Faculty Mentor(s): Dr. Stacey A. Stoffregen, Chemistry and Dr. Karl P. Peterson, Chemistry  

Electrophilic aromatic substitution of benzene and its derivatives has been heavily studied and the mechanism is believed to be well understood. However, several studies involving nitration on multi-substituted benzene rings, 2,3,4-trimethoxybenzaldehyde in particular, have shown that the incoming nitro functional group does not go where the established directing affects would place the new group. A detailed computational analysis was done to help elucidate the mechanism leading to these unexpected results. The charge distribution on the arene that was calculated using Hartree Fock 6-31G(HF/6-31G) was inconsistent with an electrophilic aromatic substitution mechanism, suggesting that a different mechanism is responsible for the
unexpected nitro positioning. The relative energies were examined using HF/6-31G, for the reaction intermediates and products, which also appear to be inconsistent with the expected electrophilic aromatic substitution mechanism. The relative energies were calculated with B3LYP/6-31++G(d,p) for the same structures. Observations of substitutions occurring at positions unexpected for electrophilic aromatic substitution on other substrates have recently been reported. Those studies provide support for a single electron transfer mechanism. We are currently exploring whether the nitration of 2,3,4-trimethoxybenzaldehyde is better explained by this mechanism.

Cheever, Emily
Artwork (2D - Photography)

*Queens' Country*

Faculty Mentor(s): Brett Kallusky, Art

I studied in England for 3 months, taking an anthropological look at small town living. I also was looking for the connections to my previous project that explored what draws us to our home towns.

Chen, Nina
Poster

*Surviving in the United States vs. China*

Research Collaborator(s): Paige Gurtner, Brady Murphy, Karina Clausen, Phillip Middlemiss, and Tu Jing (Visiting Professor – CSIS)

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Chous, Julia
Poster

**Effects of Coping Strategies on Time Constraint**

Faculty Mentor(s): Dr. Melanie Ayres, Psychology

The goal of this research was to determine if there is a relationship between perceptions of time constraint, real time constraint, and coping styles. It was predicted that participants with high real time constraint and low perceived time constraints are more likely to utilize engagement coping strategies. Students from a general psychology class at a public Midwestern University completed a survey that measured perceived time constraint, real time constraint, and coping strategies using the Coping Strategies Inventory. A one-way ANOVA showed no significance between levels of time constraint and coping strategies. Although no significance was found, there was a positive correlation between those who scored low on perceived time constraint while high on real time constraint and engagement coping.

Clausen, Karina
Poster

**Surviving in the United States vs. China**

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Connelly, Ryan
Poster

**Where Enron Went Wrong**

Research Collaborator(s): Lucas Johnson
Conway, Tanner
Poster

Watering Effects on the Growth and Health of Cucurbita maxima

Faculty Mentor(s): Dr. Brian Smith, Plant and Earth Science

Abstract: This experiment tested the effects of two forms of watering on the species Cucurbita maxima. The two watering methods used were overhead watering from a traditional sprinkler and drip irrigation. The testing was conducted over two plots which were both nine hundred square feet with a soil type of clay loam. This testing was done to see what type of watering would have the greatest effect on overall health, growth, and vigor of the plant. Testing was conducted using these systems from the time period of June until harvest in mid-October. The results showed that both systems had their pros and cons. There was not a superior method. The best form of watering may depend on one’s soil type. Watering pumpkins on a clay loam soil with small particle size results in an increasing concern for soil compaction. The results based on vegetative growth and fruit growth and overall size, would suggest a rejection of the hypothesis that drip irrigation would be superior to overhead watering in clay loam. Overhead watering resulted in the highest fruit growth and dispersion through the soil profile.

Cooper, Mariah
Poster

Maximizing Seed Bomb Efficiency

Research Collaborator(s): Maggie White, Mollie McArthur

Faculty Mentor(s): Dr. Kim Mogen, Biology

A new product from Plantables LLC is throwable seed bombs - clay balls enriched with native plant seeds. We determined seedling success with different planting substrates and with pre-plant temperature treatments to find the most efficient way to use seed bombs to increase native plant species. Substrates included rock, potting soil (control), mulch, sod, and crushed leaves.
Results showed that garden potting soil produced the second highest seedling quantity and highest plant diversity. In our second experiment, seed bombs were exposed to -20°C, room temperature, or 50°C for one week prior to planting. The seed bombs that were placed in the freezer prior to planting produced the best results. Results show that seed bombs are a good product for its targeted area – the Western/Midwestern regions of America. For maximum efficiency, consumers should plant their seed bombs in garden soil in the Western/Midwestern regions of America.

**Corcoran, Charlie**  
Poster – Faculty Project

*Accuracy of Zillow’s Home Value Estimate*

Research Collaborator(s): Dr. Charlie Corcoran, Accounting and Finance; Jack (Liu) Fei

This paper compares Zillow.com's home estimate values (Zestimates) with actual sale prices of 2,005 single-family residential properties in two markets in November, 2013. A Zillow “four-star” market in suburban St. Paul, MN, and a Zillow “one-star” market in suburban St. Louis, MO, are analyzed in terms of Zestimate accuracy between these two markets, as well as within specific price ranges. In aggregate, for both markets and within all price ranges, the mean difference (or mean error) between Zestimates and sale prices is 24.8%. Comparing the two markets, Zestimate accuracy is significantly better in the four-star market compared with the one-star market, with a mean error of 17.15% and 30.48%, respectively. However, with the possible exception of the middle market price range, $203,000 to $253,000, mean error rates are so large as to render doubt about the usefulness of Zestimates, regardless of the market’s star rating. Differences are usually overestimates, with subsequent sale prices below Zestimate values.

**Cota, Adry**  
Artwork (3D - Metal)

*Materialization and Manifestation of Reality*

Faculty Mentor(s): Asako Nakauchi, Art

We all have the ability to materialize our own reality. Our own surroundings our distributed by the brain we control. This sculpture is about two beings
materializing at the same place, creating one being. I want to manifest the idea of controlling ones surroundings as well as their inner self.

**Couto Salib, Natalia**

*Poster*

**The influence of Curing and Washing on Sweet Potato post harvest quality**

Research Collaborator(s): Elcio Hissagy Samecima Junior, Beatriz Ferreira Mendonca

Faculty Mentor(s): Dr. Veronica Justen, Plant and Earth Science

Sweet potato (*Ipomoea batatas* [L.] Lam.) is a root which contains significant amounts of fiber, beta carotene, and vitamin C, especially in varieties with high colored roots (Bandenbenger et al). This root can be stored for a long period of time when properly cured and held in good conditions, but some characteristics need to be preserved like total dissolved solids and resistance. Also, the moisture content which is a method that can evaluate the deterioration and viability of vegetables is an important characteristic to determine the storage time of sweet potato. The cultivars evaluated were ‘Centennials’, ‘Bonita’, ‘Georgia Jets’, ‘Beauregard’ and ‘Convington’. The objective of this study was to determine the root moisture content, total dissolved solids and resistance in sweet potato, in order to select the best curing and washing treatment to maintain postharvest quality. The statistical data were submitted to ANOVA. The experimental results demonstrated that an ANOVA for moisture indicate significant differences for moisture for variety, days and the variety: curing interaction at P<0.001. Separating the interaction by individual varieties showed no significant differences based on curing. The single variables of variety and days did show significant differences. Also, ANOVA determined that for total dissolved solids the significance only existed at P<0.001 for variety, days and the variety by day interaction. However, it did not have difference between the treatments for resistance in those cultivars of sweet potato. These results suggest that during 45 days of storage is important to maintain the moisture content and total dissolved solids in satisfactory conditions to keep the postharvest quality of those cultivars of sweet potato.

**Crotty, Tia**

*Poster*

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Research Collaborator(s): Grady Nelson, Joicy Alves Chaves, Kevin Judd, April O’Connor, Nathalia Perieiera Silva, and Allison Waterhouse

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent two class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Currier, Danielle
Poster

Frac Sand in Western Wisconsin

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Western Wisconsin frac sand is sought after for the process of hydraulic fracturing in the petroleum industry due to its maturity, shape, size, and chemical composition. The Van Oser rock unit member in the Jordan Formation throughout Wisconsin is famous for it’s high quality sand. It’s location within rolling hills of the landscape makes it ideal for mining.

Czaplewski, Chloe
PowerPoint presentation

Meat and Patriarchy

Faculty Mentor(s): Dr. Greta Gaard, English; Steven Phalen, Communication Studies and Theatre Arts; Dr. Grace Coggio, Communication Studies and Theatre Arts

The United States is a meat-eating culture. It is also a society fundamentally built upon patriarchy. The interconnectedness of these two is no coincidence. Meat-eating reifies the idea it is a ‘man’s world’ because meat is masculine. We kill and eat the flesh of other animals to show we are dominant and superior over another animal. This directly correlates to the fact that males (in our society) are dominant and superior over females. Gender plays a critical role in
the United States’ meat eating. It is critical to look through this idea from various different lenses to ensure the ability to fully grasp it.

**Czech, Anthony**  
Artwork (3D - Metal)

*Bunpenppo*

Faculty Mentor(s): Asako Nakauchi, Art

A mixture between a bunny, penguin, and a hippo.

**Damião de Oliveira, Magregor**  
Poster

*Making Muenster-Style Cheese*

Research Collaborator(s): Mariana Scoqui Guimaraes, Katrina Nunes  
Faculty Mentor(s): Michelle Farner, Animal and Food Science

The goal of the project is show the steps and procedures in the manufacturing of muenster-style cheese and sensorial evaluation between smoked and non-smoked Muenster style cheese.

**Davig, Grace**  
Poster

*Northern Peak of Mount McKinley*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

This map is a 3D rendering of the Northern Peak of Mount McKinley in Denali National Park. To make the map, I used a digital elevation model and Natural Scene Designer

**De Azevedo Rodrigues, Tadeu**  
Poster

*Two Cultures; One World*
Research Collaborator(s): Lauren Janssen, Jalane Bakuto, Haley Elsenpeter, Mayara Diehl Rodrigues, James Beckman, and Eric Braaten

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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De Oliveira, Clemen
Poster

_The ability of Pasteuria spp. bacteria to suppress nematodes from genus Pratylenchus spp._

Faculty Mentor(s): Dr. Veronica Justen, Plant and Earth Science

The ability of Pasteuria spp. bacteria to suppress nematodes has made them promising for biological control. However, the ability of the bacteria to infect nematodes can be species-specific nematodes. The purpose of this research was to quantify the density of endospores from the Pasteuria spp in eight different nematode species from the genus Pratylenchus (P. penetrans GR, P. penetrans WI, P. zeae, P. hex, P. agilis, P. scrib, P. penetrans PS, P. brachyurus) that can be found in Minnesota and Wisconsin fields.

De Vasconcelos Vieira, Samara
Poster

_Making Muenster-Style Cheese_

Research Collaborator(s): Erika Borges Ferreira, Priscilla Silva Farias

Faculty Mentor(s): Michelle Farner, Animal and Food Science

Muenster is an American imitation of the French Munster cheese. It is made from pasteurized whole cow's milk. It has a smooth, moist and soft texture, a pale yellow color, which results from the vegetable coloring during the cheese making. The taste varies from mild and bland to sharp like Jack cheese. The
purpose of this project was to produce a different type of muenster-style cheese, by adding basil to create a different taste.

Denzer, Steven
Poster

*Phillips Curve*

Research Collaborator(s): Jack Liu, Maggie Peterson, Jonna Sterzinger

Faculty Mentor(s): Dr. John Walker, Economics

This research examined the stability of Phillips Curve. Based on Traditional Phillips Curve model and New-Keynesian Phillips Curve model, we employed multiple linear regressions using 1965-2013 quarterly economic data, and concluded that the relationship between inflation and employment is not always stable and both lagged inflation and forward looking inflation would explain the current inflation, and thus making Phillips Curve unstable over time.

Devaud, Atalita
Poster

*Seasoning Mozzarella*

Faculty Mentor(s): Michelle Farner, Animal and Food Science

The mozzarella has seasonings added to it. The flavor and texture had their traits changed.

Dhawan, Evangeline
PowerPoint presentation

*A Senior Seminar Presentation: Rousseau's General Will in the Post Revolutionary Constitutions of the Former USSR and the People’s Republic of China.*

Faculty Mentor(s): Dr. Davida Alperin, Political Science and Dr. Sergio Valverde, Political Science

Rousseau, the third and final contributor to classical social contract theory, introduced the concept of the general will. The general will is traditionally associated with western liberal democracy, and has not been studied within the context of Marxist-socialist theory. This project examines Rousseau’s
Concept of the general will in socialist constitutions, in an attempt to displace the common assumption that Marxist thought is rooted purely in dictatorship and despotic authority.

Diehl Rodrigues, Mayara
Poster

_Two Cultures; One World_

Research Collaborator(s): Lauren Janssen, Jalane Bakuto, Haley Elsenpeter, Tadeu de Azevedo Rodrigues, James Beckman, and Eric Braaten

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Doheny, Maisey
Artwork (3D - Steel, Glass)

_Sunflowers_

Faculty Mentor(s): Eoin Breadon, Art

The juxtaposition of sculpted glass and steel are used to create life-sized sunflower sculptures as an installation piece in an interactive space. They represent human interaction and the figurative quality of non-human life in nature.

Dolan, Mikayla
Poster

_Effects of corn silage inclusion in the diet of dairy calves on intestinal colon development_

Faculty Mentor(s): Dr. Sylvia Kehoe, Animal and Food Science
Description: It has been shown that mammals with high fiber diets have an increased level of butyric acid as well as some other short chain fatty acids which may enhance cellular development. There is considerable interest to promote healthy cellular development of the colon in order to possibly reduce cancers and other metabolic diseases that have been increasing in the human populations. Calves are born as monogastrics before they develop into ruminants. Their colon is structurally similar to monogastric animals such as humans, making them a great research model on this topic. This project aimed to discover whether or not a high fiber feed, such as corn silage, has an effect on colonic development and additionally, determining the extent of that effect. Three groups of calves were fed a diet of either 100% calf starter (C) (CONTROL), 60% calf starter and 40% corn silage (CC), or 100% corn silage (CS). After eight weeks the calves were sacrificed and three colon tissue samples were taken per calf. The health of the colon tissue was then determined by measuring the length and width of the villi.

**Elles, Kristina**  
Poster  

*Companies Hardly Compare*  
Faculty Mentor(s): Dr. June Li, Accounting and Finance and Dr. Dawn Hukai, Accounting and Finance

Poster describing an independent study I conducted where I visited and compared four different companies. Specifically focusing on the role of accountants.

**Elsenpeter, Haley**  
Poster  

*Two Cultures; One World*  
Research Collaborator(s): Lauren Janssen, Jalane Bakuto, Mayara Diehl Rodrigues, Tadeu de Azevedo Rodrigues, James Beckman, and Eric Braaten  
Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Farias, Priscila**  
*Poster*  
*Making Muenster Style Cheese*  
Research Collaborator(s): Samara Vieira and Erica Borges  
Faculty Mentor(s): Michelle Farner, Animal and Food Science  
We have a project in Dairy Manufacturing class to make a cheese, so we did one following the Muenster style but adding our own different ingredient to make it unique.

**Farnell, Shane**  
*Poster*  
*Mass Balance Analysis of Nutrients in Two Shallow Reservoirs of the Kinnickinnic River in River Falls, Wisconsin*  
Faculty Mentor(s): Dr. Jill Coleman Wasik, Plant and Earth Science  
Reservoirs created by small dams may act as sinks or sources for nutrients transported through stream systems. This complicates watershed modeling efforts due to the difficulty in accurately predicting nutrient exports from these landscapes. Nitrogen and phosphorus species were monitored above and below two small reservoirs in the city of River Falls, Wisconsin from May to August 2014 to calculate a mass balance for total nitrogen and phosphorus flux through the system, and assess whether changing hydrologic conditions altered the source/sink functions of these systems. Dissolved oxygen, pH, conductivity, and temperature were also measured at these sites at the time of sample collection. Total phosphorus, total nitrogen, and total suspended solids were determined on raw water samples. Separate aliquots of sample were filtered to 0.45 µm and analyzed for nitrate, phosphate, and ammonia. Point measurements of flow and discharge were conducted using a flow meter at low flows and a continuous drip of Rhodamine WT dye at high flows. Point measurements were correlated with the continuous flow and discharge record from a USGS gage located 5 miles downstream. Total nutrients and dissolved
phosphate concentrations varied directly with flow and discharge. Nitrate concentrations varied inversely with flow and discharge. Conductivity and pH levels increased steadily at all sites. Dissolved oxygen and temperature levels peaked at the start of August. Temperatures were noticeably higher for the outlets of the reservoirs compared to the other sites. Total suspended solid concentrations increased greatly during high flow events, and increases were greatest at the reservoir outlets. These data suggests that the small dams and their reservoirs impact water quality and nutrient flux in stream systems and their impacts vary according to season and hydrologic conditions.

**Farnell, Shane**  
*Poster*

*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

**Fei, Jack**  
*Poster – Faculty Project*

*Accuracy of Zillow’s Home Value Estimate*

Research Collaborator(s): Dr. Charlie Corcoran, Accounting and Finance; Jack (Lui) Fei

This paper compares Zillow.com's home estimate values (Zestimates) with actual sale prices of 2,005 single-family residential properties in two markets in November, 2013. A Zillow “four-star” market in suburban St. Paul, MN, and a Zillow “one-star” market in suburban St. Louis, MO, are analyzed in terms of
Zestimate accuracy between these two markets, as well as within specific price ranges. In aggregate, for both markets and within all prices ranges, the mean difference (or mean error) between Zestimates and sale prices is 24.8%. Comparing the two markets, Zestimate accuracy is significantly better in the four-star market compared with the one-star market, with a mean error of 17.15% and 30.48%, respectively. However, with the possible exception of the middle market price range, $203,000 to $253,000, mean error rates are so large as to render doubt about the usefulness of Zestimates, regardless of the market’s star rating. Differences are usually overestimates, with subsequent sale prices below Zestimate values.

Ferreira Mendonca, Beatriz
Poster

*The influence of Curing and Washing on Sweet Potato post harvest quality*

Research Collaborator(s): Natalia Couto Salib, Elcio Hissagy Samecima Junior

Faculty Mentor(s): Dr. Veronica Justen, Plant and Earth Science

Sweet potato (Ipomoea batatas [L.] Lam.) is a root which contains significant amounts of fiber, beta carotene, and vitamin C, especially in varieties with high colored roots (Bandenbenger et al). This root can be stored for a long period of time when properly cured and held in good conditions, but some characteristics need to be preserved like total dissolved solids and resistance. Also, the moisture content which is a method that can evaluate the deterioration and viability of vegetables is an important characteristic to determine the storage time of sweet potato. The cultivars evaluated were ‘Centennials’, ‘Bonita’, ‘Georgia Jets’, ‘Beauregard’ and ‘Convington’. The objective of this study was to determine the root moisture content, total dissolved solids and resistance in sweet potato, in order to select the best curing and washing treatment to maintain postharvest quality. The statistical data were submitted to ANOVA. The experimental results demonstrated that an ANOVA for moisture indicate significant differences for moisture for variety, days and the variety: curing interaction at P<0.001. Separating the interaction by individual varieties showed no significant differences based on curing. The single variables of variety and days did show significant differences. Also, ANOVA determined that for total dissolved solids the significance only existed at P<0.001 for variety, days and the variety by day interaction. However, it did not have difference between the treatments for resistance in those cultivars of
sweet potato. These results suggest that during 45 days of storage is important to maintain the moisture content and total dissolved solids in satisfactory conditions to keep the postharvest quality of those cultivars of sweet potato.

**Filo, Jake**

*Poster*

*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

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**Fitzenberger, Jared**

*Poster*

*The Power of a Flower - Can Niger Thistle Improve Honey Bee Health? A Pilot Study!*

Research Collaborator(s): Kara Mallizzio

Faculty Mentor(s): Dr. Brad Mogen, Biology and Dr. Kim Mogen, Biology

Honey bees and native pollinators are under threat from various sources – parasitic mites, pesticides, viral, fungal, and bacterial pathogens, and poor nutrition due to habitat loss (1). Overwintering losses average 30%, with some beekeepers losing much more. Having a healthy, robust population of bees going into the winter seems to be important for overwintering success. We were curious if niger thistle might be grown in Wisconsin as a late season bee
forage crop to supplement goldenrod and lessen the dearth of bloom that occurs in the fall.

Niger thistle (Guizotia abyssinica) is commonly grown in Africa and India and the seed used for human food and edible oil (2). Killed seed is imported into the US for bird seed, where it is a particular favorite of finches. The plant is a short day, branching annual with an indeterminant growth habit. It is a member of the sunflower family and not a true thistle. Its bright yellow flowers require cross pollination. Niger has been evaluated as a specialty grain/oil crop in the midwest, but has not found favor with growers (3). An early maturing selection, EarlyBird 50, adapted to the northern plains states (4), is suggested to have value as a bee forage.

Franca e Souza, Fernanda
Poster

Seasoned Mozzarella

Faculty Mentor(s): Michelle Farner, Animal and Food Science

The mozzarella had seasonings added to it. The flavor and texture had their traits changed.

Fraser, Kristen
Poster

Patient compliance in dysphagia management: what thickening method is most palatable?

Faculty Mentor(s): Dr. Sharyl Samargia, Communicative Disorders

Dysphagia is a swallowing disorder that can occur across the lifespan. Dysphagia affects 15 million Americans yearly. Aspiration, food and liquid entering the trachea, is a common symptom of dysphagia. Aspiration can lead to respiratory illness, pneumonia and even death. Over half of the patients diagnosed with dysphagia will develop aspiration pneumonia. A common method to avoid aspiration and aspiration pneumonia is to have the patient drink thickened liquids. Thickened liquids have a slower flow rate which allows patients the time to initiate a swallow response. Therapeutic viscosities are referred to as either “nectar-like” (51-350 centipoise) or “honey-like” (351-1750 centipoise). Currently, there are products available to thicken liquids including: 1) cornstarch based thickeners 2) xanthan-based thickeners and 3)
beverages that are pre-thickened and sold “ready to pour”. However, cornstarch thickeners do not maintain consistency over time and do not completely dissolve. Therefore, negatively impacting patient compliance and satisfaction. Xanthan thickeners and pre-thickened beverages do maintain consistency over time and have smoother texture, however they are less accessible and more expensive for the patient. These shortcomings lead to poor patient compliance increasing the risk of aspiration and aspiration pneumonia. Prior to this investigation, a research study was conducted to identify the viscosity of a variety of ready to drink beverages found on supermarket shelves. The results indicated 32/33 beverages tested met the centipoise requirement for nectar-like liquid, which led investigators to create a study to assess the palatability between current products and these naturally nectar-like liquids. Purpose: The purpose of this study was to investigate the most palatable option for thickening liquids to increase patient compliance.

Methods: One hundred and thirty-five healthy adults between the ages of 50-80 years (mean = 61.2 ±7.22) participated in a blind taste test at the MN State Fair. The participants were asked to taste twelve nectar-like beverages in random order, and complete a palatability and potential compliance survey. Three categories of beverages: 1) dairy 2) fruit juice 3) coffee were chosen. Each category included 4 beverages: 1) thickened with cornstarch 2) thickened with xanthan 3) pre-thickened and 4) naturally thick. Results: The results revealed statistically significant differences in overall palatability across the thickening methods that were tested. Conclusion: These results will provide valuable information that could potentially increase compliance in patients with dysphagia.

French, Amanda
Poster

Frac Sand Reclamation: Soil Physical Characteristics

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Bedrock sand mining in Wisconsin has exploded and more than 100 permitted sand mines now exist. It is well-known that intense sand mining can negatively impact soil physical, chemical and biological properties. A total of 30 sites, 10 at each bench mark, were selected across two major soil types. Soil particle size, soil bulk density, aggregate stability, and soil carbon flux were measured. The AG silty had a high carbon flux because of the many organisms like the corn plants and the macro organisms that feed off of them. The percent of stable aggregates was not that different for the three sites, though the AG benchmark was lower because of constant disturbance. For all three sites the bulk density
for the 6cm is lower than the 20cm because the soil within the top 6cm could be influenced by rainfall. This research will help provide an understanding of the effects of mining as well as guide reclamation practices and decisions.

Gabbey, Stephanie
Poster

Resiliency in Siblings of Children with Developmental Disabilities and Typically Developing Children

Faculty Mentor(s): Dr. Sharyl Samargia, Communicative Disorders

Past research has shown, parents of children with developmental disabilities are more resilient and exhibit greater patience, tolerance, and sensitivity compared to parents of typically developing children. Considering the evidence regarding parents, one could speculate siblings of children with developmental disabilities may also have greater resiliency. However, no known literature exists regarding the resiliency of siblings of children with developmental disabilities. Purpose: The purpose of this study was to compare the resiliency between siblings of children with developmental disabilities to siblings of typically developing children. Methods: Potential subjects were recruited through a mass email and flyer distribution to all families within a community school district. Thirty-two families initially responded, twenty-five of those participated. Children 9-17 years of age (mean age =135.6 months ± 27.82 months) were placed into two groups 1) siblings of typically developing children (n=21, mean age =138.28 months ±28.045 months) and 2) siblings of children with developmental disabilities (n=4, mean age = 121.5 months ±25.160 months). Each participant was given the Resiliency Scales for Children and Adolescents: A Profile of Personal Strengths in their home environment under the supervision of a parent/caregiver. This measure has three subtests: sense of mastery, sense of relatedness and sense of emotional reactivity. Results: An analysis of variance indicated no significant differences between the groups across all subtests (p>0.05). Upon visual inspection of the data, a confidence interval (CI) comparison showed two children within group 2 received scores that were outside of the 95% CI for group 1 indicating a trend toward significance suggesting siblings of children with developmental disabilities could have different resiliency levels. However, the low sample size and small effect size of this study prevented sufficient power to detect and identify differences. Conclusion: This study provided pilot data for future research in understanding the differences in resiliency in these populations. A follow up study is currently being designed to acquire a larger sample size to continue this investigation.
Gardner, Olivia
Poster

*Tri-Cultural View*

Research Collaborator(s): Emily Van Grinsven, Heather Sosnoski, Robert Kueppers, Gabriela Mota Negueira, and Koyuki Suwahara

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Garutti, Matheus
Poster

*Asiago Cheese*

Faculty Mentor(s): Michelle Farner, Animal and Food Science

The aim in this project was to try, based on a standard cheese receipt, to make our own cheese, however with the purpose of maintaining the main characteristics of the chosen cheese.

Gelhaye, Julian
Artwork (3D - Glass, Steel, Wood)

*Pushed To Fit*

Faculty Mentor(s): Eoin Breadon, Art

I am working on a set of large vessels ranging from Cylinders to square, triangular, and hexagonal. To produce these large glass pieces I am constructing steel blow molds to help shape the glass into the desired shapes. Eventually the final 4 pieces will be displayed together along with a wooden block that has a star shaped cut out.

The glass pieces will represent children as individuals and vessels to be filled with knowledge. The star shape will represent the way that parents, teachers
and society in general want children to all be the same, stars to all fit the same mold.

**Germain, Leah**

*Poster*

*Comparison of Brazilian Culture to American Culture*

Research Collaborator(s): Danelle Nadeau, Malachi Becker, Peter Anderson, Leonardo Lazzaron Cenatti, Aurelio Luciano Costa, and Daniel Buchner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This presentation is one of many presentations prepared as a joint project by the COMS 213 students and the ELT students at UWRF. Students spent 3 hours together in class discussing similarities and differences in their cultures, and then spent 2 class hours creating the poster together. Students will speak not only about the differences among their cultures, but also about the benefits of working together on this project.

**Gerstenzang, Drew**

*Short Film (Music Video)*

*Signal Ready*

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts

This is a music video that comically explores the dangers of temptation and the reliance of machines while using the song "Signal Ready" by Devo.

**Getty, Samuel**

*Poster*

*Assessment of the behavior of feedlot cattle with exposure to rubber covered slatted concrete floor surfaces or bare slatted concrete floor surfaces during the transition between laying and standing*

Faculty Mentor(s): Dr. Kurt Vogel, Animal and Food Science and Dana Wagner
In the cattle industry, the importance of an animal’s traction, comfort, and the ease of management present in the animal’s housing is becoming a common goal to producers due to the public’s increasing interest in animal welfare and increasing production needs. There has been experiments done with solid concrete, plastic, rubber, and slatted concrete surfaces, yet their effectiveness is variable. However, concrete, slatted-floor (SF) confinement buildings provide for containment of manure nutrients and enable judicious distribution of manure nutrients. A disadvantage of SF buildings is that feedlot cattle often display swollen knees and hocks due to the hard surface they are forced to walk and stand on. The key is to establish a flooring surface that is easily manageable without having a negative influence on the joints of the animal. For this experiment, Four pens of four cattle each were observed, two pens contained SF and two pens contained RS. The time it took for the animal to lay down, and the time it took for it to stand up. If the animal slipped or struggled to stand or lay down, the occurrence was noted. We were looking for significant time differences in the two flooring surfaces, however, when we ran the data, all of the p-values were above 0.05. This means that none of our data was significant. More research is going to need to be done in this field however because we have such a small sample size, this experiment should be viewed as a pilot. With a bigger sample size, the data might have come back significant.

Giblette, Carson
Artwork (3D - Fiberglass and Photograph)

The Monolith Project

Research Collaborator(s): Lauren Bina

Faculty Mentor(s): Brett Kallusky, Art

Our most recent body of work focuses on testing our subject in regards to natural occurrences. We have thrown our subject out into the waves of the Great Lakes, buried it in the sand of the Indiana Dunes, dropped it in the middle of a northern Wisconsin lake, and continue to test our subject based off of the environment surrounding ourselves. While the subject is being tested within nature, we document the results photographically and within a field log. This allows gauge the impact that the subject has taken with each test. We plan to continue testing our subject throughout the country using natural occurrences as the basis for our testing. As we continue testing our subject, we will be able to gain more information about the lifecycle of our subject in comparison to our own timelines.
Gieser, Taylor
Poster

Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

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Gomes, Ronaldo
Poster

Morphological Characterization of Table Cassava (Manihot esculenta Crantz) Accessions as a Preliminary Genotype’s selection in the Region of Chapadinha- MA, Brazil.

Faculty Mentor(s): Dr. Bill Anderson, Plant and Earth Science and Maria da Cruz Moura, Agronomy (UFMA/Brazil)

The cultivation of table cassava in the microregion of Chapadinha presents a very low productivity 7.4 t/ha compared to the Brazilian average 13.3 t/ha. The poor regional performance of this crop is due the usage of not adapted varieties. It has been observed that the morphological characterization enables to differentiate access into a species, besides to indicate the genetic diversity between genotypes. Thus this work was carried out to characterize ten genotypes of table cassava in Chapadinha as a preliminary way to select them for the region. The experiment was conducted in the village of Vila União, using randomized block design with four replications and ten treatments or genotypes. The treatments were distributed in the plots in spacing of 1.20 x0.5 meters with 6 utile plants per plot. The plants were characterized at the age of 8 months by 25 morphological descriptors proposed by the Embrapa Cassava
and Fruits. It was concluded that there was predominance of conic cylindrical (50%) for the format of tuberous roots as well as vertical position of roots (60%). There was predominance of sessile roots (40%) white pulp of roots (50%), and absence of constriction in roots (80%). Also there was predominance of straight growth of stalk habit (50%), and cylindrical and compact plant kinds, both with frequency of (40%). It was observed frequency of green color (50%) and dark green (60%) for adult leaves and branches respectively. Light green (60%) was predominate color for apical bud, and for petiole it was observed predominance of the color green-reddish (30%). The genotypes Rampa, Rosa and Gema de Ovo presented characteristics of roots such as cylindrical format, absence of constriction and easy peeling besides of compact format of plant, which become them an excellent option for cultivation and consumption in the region.

Grzybowski, Samantha
Poster

*Land Cover Change of Wisconsin*

Faculty Mentor(s): Dr. Charles Rader, Geography and Mapping Sciences

This project investigates land cover change in Wisconsin from 1832-2006. To do this, I used Robert Finley’s historic land cover map (1976) and land cover data from the United States Geological Survey (2006). Analysis and mapping were conducted using Geographic Information Systems (GIS) software, where calculations were made to show the amount and spatial distribution of land cover change.

Gurtner, Paige
Poster

*Surviving in the United States vs. China*

Research Collaborator(s): Brady Murphy, Nina Chen, Karina Clausen, Phillip Middlemiss, and Tu Jing (Visiting Professor – CSIS)

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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**Haire, Sharon**  
Poster

*Yosemite National Park*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

I will present a shaded relief map of a section of Yosemite National Park showing the natural land cover within the main visitor area.

**Halvorson, Tarrin**  
Poster

*Duas Culturas Que Caminham Juntas*

Research Collaborator(s): Vanessa Maione, Larissa Jahnel Rodrigues de Oliveira, Denner Nogueira Guimaraes, Dee Subasic, and Stacy Ballman

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Hankes, Nathan**  
Poster

*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento
Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Hankes, Nathan
Poster

*Retracing Ansel Adams' Footsteps: Using Natural Scene Designer 5 to Recreate Iconic Photography*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

Natural Scene Designer 5 software converts digital elevation model (DEM) data into three dimensional geographic models. This project attempted to recreate Ansel Adams' iconic Snake River photograph using DEM data of the Grand Tetons Mountain Range in order to assess the software's range and limitations.

Harman, Taylor
Poster

*Effects of Chronic Stress on Nicotine-Seeking Behavior and Reinstatement*

Research Collaborator(s): Hannah Klimek, Amanda Janke

Faculty Mentor(s): Dr. James Cortright, Psychology

Drug addiction is a major public health and serious economic concern in the United States costing taxpayers billions of dollars annually. Experimental evidence shows that exposure to stress is not only a factor in the development of addiction; but also a trigger for drug relapse, or reinstatement. As tobacco use has been linked to a number of cancers and represents the leading cause of preventable death in the United States, elucidation of the effects of stress on nicotine-seeking behavior and relapse is critical. A critical role of chronic stress in the compulsion to seek tobacco and other nicotine delivering products has
long been suspected. Although many studies have provided compelling evidence for a role of chronic stress in the enhanced sensitivity to cocaine-seeking behavior and relapse, few have assessed the contribution of chronic stress on nicotine-seeking behavior. In fact, stress induced cross-sensitization to nicotine remains controversial. Additionally, there have been no studies investigating the effects of chronic stress on nicotine-seeking relapse, or reinstatement. Thus, these experiments will assess the ability of repeated exposure to variable stress to augment nicotine-seeking behavior and relapse in an animal model of drug addiction. As data collection is underway, we hypothesize that exposure to chronic variable stress will lead to the facilitation of nicotine self-administration, increases in break points, resistance to nicotine self-administration extinction, and enhancements in nicotine-primed reinstatement, or relapse. The results of these experiments have important implications regarding the design of effective and lasting smoking cessation interventions in humans.

**Harmston, Moriah**

*Poster*

*The Use of Cognates in Bilingual Speakers*

Research Collaborator(s): Kristina Marchetti, Graduate Student (Communicative Disorders)

Faculty Mentor(s): Dr. Naomi Hashimoto, Communicative Disorders

This study examined the effects of cognates in neurologically intact English-Spanish bilinguals. Participants named pictures in English in the following conditions: strong (piano/piano), weak (jardín/garden), and non-cognates (butterfly-mariposa). A picture word interference (PWI) paradigm was used to track the pattern of effects of cognates on picture naming.

**Haugen, Rebecca**

*Poster*

*Potential Drugs for Attenuating Doxorubicin-Induced Heart Failure*

Faculty Mentor(s): Cheng-Chen Huang, Biology Dept.

Doxorubicin is a DNA intercalating drug used to treat various cancers including Hodgkin’s lymphoma. Its most serious side effect is severe heart damage leading to heart failure. The zebrafish, when treated with aristolochic acid (AA),
is an established model for heart failure in humans. Our goal is to determine whether any of the compounds being tested to rescue AA-induced heart failure in zebrafish embryos could also rescue Doxorubicin-induced heart failure. The compounds with the most promising results from the AA experiments were A-11, NS-398, MEK-I, C-25, and one Chinese herbal extract, CH18. Previous data using 80 µM and 100 µM Doxorubicin suggested that NS-398 and C-25 show the most promise in attenuating doxorubicin-induced heart failure. Our most recent data uses 90 µM Doxorubicin with 10 µM of each tested chemical. Preliminary results with the 90 µM concentration demonstrate the same pattern of rescue, with additional toxicity observed in embryos treated with A-11. Further experiments may help us to better understand the mechanism of doxorubicin toxicity in order to treat it more effectively, and also raise awareness of potentially fatal pharmacological interactions.

Hazard, Kelly

Poster

*When You Look In The Mirror: The Impact the Internet Has on Women's Body Images*

Faculty Mentor(s): Dr. Grace Coggio, Communication Studies and Theatre Arts and Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts

My research is based on how body images of women are portrayed within online media. Articles relating to body image from two different websites were analyzed to find common themes throughout. The findings from these two websites were then compared to Social Judgment Theory in which individuals perceive information as true or false based on their frame of reference.

Hinz, Olivia

Magazine

*The Movement Magazine: Gutai Art Collective*

Faculty Mentor(s): Dr. Lissa Schneider-Rebozo, English

This magazine explores the Gutai Group, a collective of Japanese artists active in the mid-20th century. Their goal was produce avant-garde work without rules or limitations. The group is most widely known for their provocative performance art pieces such as Atsuko Tanaka’s Electric Dress or the 1955 Open Air Exhibit.
Hissagy Samecima Junior, Elcio

Poster

*The influence of Curing and Washing on Sweet Potato post harvest quality*

Research Collaborator(s): Natalia Couto Salib, Beatriz Ferreira Mendonca

Faculty Mentor(s): Dr. Veronica Justen, Plant and Earth Science

Sweet potato (Ipomoea batatas [L.] Lam.) is a root which contains significant amounts of fiber, beta carotene, and vitamin C, especially in varieties with high colored roots (Bandenbenger et al). This root can be stored for a long period of time when properly cured and held in good conditions, but some characteristics need to be preserved like total dissolved solids and resistance. Also, the moisture content which is a method that can evaluate the deterioration and viability of vegetables is an important characteristic to determine the storage time of sweet potato. The cultivars evaluated were ‘Centennials’, ‘Bonita’, ‘Georgia Jets’, ‘Beauregard’ and ‘Convington’. The objective of this study was to determine the root moisture content, total dissolved solids and resistance in sweet potato, in order to select the best curing and washing treatment to maintain postharvest quality. The statistical data were submitted to ANOVA. The experimental results demonstrated that an ANOVA for moisture indicate significant differences for moisture for variety, days and the variety: curing interaction at P<0.001. Separating the interaction by individual varieties showed no significant differences based on curing. The single variables of variety and days did show significant differences. Also, ANOVA determined that for total dissolved solids the significance only existed at P<0.001 for variety, days and the variety by day interaction. However, it did not have difference between the treatments for resistance in those cultivars of sweet potato. These results suggest that during 45 days of storage is important to maintain the moisture content and total dissolved solids in satisfactory conditions to keep the postharvest quality of those cultivars of sweet potato.

Hotchkiss, Harley

Artwork (3D - Glass)

*Horus*

Faculty Mentor(s): Eoin Breadon, Art
Solid sculpted head and blown sculpted torso.

Huber, Dustin
Poster

*Equine Arena Drag*

Research Collaborator(s): Lucas Martin, Blake Kerkow

Faculty Mentor(s): Dr. Dean Olson, Agricultural Engineering Technology; Dr. Joel Peterson, Agricultural Engineering Technology; Dr. Joseph Shakal, Agricultural Engineering Technology

The Equine Arena Drag team designed, and manufactured a Equine Drag that is currently being used daily at the universities lab farm. The team applied and received a falcon project grant to help fund the project materials. The team completed the manufacturing of this drag last spring and would like to present the work they did.

Jahnel Rodrigues de Oliveira, Larissa
Poster

*Duas Culturas Que Caminham Juntas*

Research Collaborator(s): Vanessa Maione, Denner Nogueira Guimaraes, Dee Subasic, Tarrin Halvorson, and Stacy Ballman

Faculty Mentor(s): Diane Jacobson, English and Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Janke, Amanda
Poster

*Effects of Chronic Stress on Nicotine-Seeking Behavior and Reinstatement*
Drug addiction is a major public health and serious economic concern in the United States costing taxpayers billions of dollars annually. Experimental evidence shows that exposure to stress is not only a factor in the development of addiction; but also a trigger for drug relapse, or reinstatement. As tobacco use has been linked to a number of cancers and represents the leading cause of preventable death in the United States, elucidation of the effects of stress on nicotine-seeking behavior and relapse is critical. A critical role of chronic stress in the compulsion to seek tobacco and other nicotine delivering products has long been suspected. Although many studies have provided compelling evidence for a role of chronic stress in the enhanced sensitivity to cocaine-seeking behavior and relapse, few have assessed the contribution of chronic stress on nicotine-seeking behavior. In fact, stress induced cross-sensitization to nicotine remains controversial. Additionally, there have been no studies investigating the effects of chronic stress on nicotine-seeking relapse, or reinstatement. Thus, these experiments will assess the ability of repeated exposure to variable stress to augment nicotine-seeking behavior and relapse in an animal model of drug addiction. As data collection is underway, we hypothesize that exposure to chronic variable stress will lead to the facilitation of nicotine self-administration, increases in break points, resistance to nicotine self-administration extinction, and enhancements in nicotine-primed reinstatement, or relapse. The results of these experiments have important implications regarding the design of effective and lasting smoking cessation interventions in humans.

Janssen, Lauren
Poster

*Two Cultures; One World*

Research Collaborator(s): Jalane Bakuto, Haley Elsenpeter, Mayara Diehl Rodrigues, Tadeu de Azevedo Rodrigues, James Beckman, and Eric Braaten

Faculty Mentor(s): Diane Jacobson, English and Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts

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**Jensen, Nicholas**  
Demonstration

*A 3D Interactive IceCube Display*

Research Collaborator(s): Laura Moon

Faculty Mentor(s): Dr. James Madsen, Physics and Dr. Mark-David Hosale (York University, Toronto, Canada)

We have made a large model of the IceCube detector using nearly 5000 colored LEDs. The immersive display plays neutrino events as seen the IceCube detector at the South Pole. It gives the public a chance to visualize the intangible.

**Jing, Tu**  
Poster

*Surviving in the United States vs. China*

Research Collaborator(s): Paige Gurtner, Nina Chen, Karina Clausen, Phillip Middlemiss, Murphy Brady, and Tu Jing (Visiting Professor, CSIS)

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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**Johann, Vanessa Cristina**  
Poster

*Making Provolone-Style Cheese*

Research Collaborator(s): Nathalia Sousa Araujo
Faculty Mentor(s): Michelle Farner, Animal and Food Science

Milk and milk products have a huge nutritional and economical importance in worldwide. Cheese is one of the most important and popular derived products of milk. Provolone is an Italian cheese made from cow's milk and is a "pulled" cheese, like mozzarella. Aiming to complement the study of the processing of cheese the project goal is making a style provolone cheese.

Johnson, Aaron
Poster

*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Johnson, Emily
PowerPoint presentation

*Prologue-UWRF Literature and Art Magazine*

Faculty Mentor(s): Dr. Joseph Rein, English

As a part of the Pilot Service Learning Grant which the group was accepted into, I wish to represent Prologue as a scholarly and creative activity and present my work in association to Prologue at this event. I plan to have available past copies of the magazine and describe the process of putting Prologue together from start to finish. I will also discuss my experiences with the group as the chief editor/president of the organization.
Johnson, Katie
Artwork (3D - Ceramic, Metal, Plaster)

Earth Hands

Faculty Mentor(s): Randy Johnston, Art; Asako Nakauchi, Art; Jeannine Kitzhaber, Art; Heather Delisle, Art

As I once previously traveled southwest Germany, I stepped into the Black Forest as an endeavor. With this, I opened an interactive door to the spirit of meditation and soul revival within the quiet woods. Tranquil waters and botanical textures provided an inviting extension from the earth offering an invitation to a space for reflection. Feel to interact with this fountain.

I am a mixed media artist and mainly work with clay, paper, wood, metal and other materials. I enjoy the challenge of working with multiple materials and the problem solving I experience as I create my works.

Johnson, Katie
Artwork (2D - Painting on Wood)

Seven Members

Faculty Mentor(s): Randy Johnston, Art; Asako Nakauchi, Art; Jeannine Kitzhaber, Art; Heather Delisle, Art

This painting explores means of repeating multiples in order to create an illustrated curiosity. The relationship between feeling weighed down and being weightless is visually intermingled as well. I chose to represent these objects as I find their personal elements of design fascinating.

Johnson, Katie
Artwork (3D - Ceramic, Mixed Media)

The faces

Faculty Mentor(s): Randy Johnston, Art; Asako Nakauchi, Art; Jeannine Kitzhaber, Art; Heather Delisle, Art

A small collection of masks provoking curiosity of their existence. These masks represent myself in various stages of minds.
In this project, I was exploring representation and reasoning of materials, patterns, and shapes within the face of each mask.
Johnson, Lucas
Poster

Where Enron Went Wrong

Research Collaborator(s): Ryan Connelly

Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance

An analysis of the critical errors of Enron’s accounting staff and their auditors at Arthur Andersen.

Jorgensen, Henrik
Artwork (3D - Glass)

Dead Train

Faculty Mentor(s): Eoin Breadon, Art

Cast Glass, Wood

Judd, Kevin
Poster

Connecting Cultures

Research Collaborator(s): Grady Nelson, Joicy Alves Chaves, Tia Crotty, April O'Connor, Nathalia Perieiera Silva, and Allison Waterhouse

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Kahlow, Michael
Poster and Demonstration – Faculty Project

Bruker Avance III 400 MHz NMR
Research Collaborator(s): Dr. Michael Kahlow, Chemistry; Dr. Karl Peterson, Chemistry; Dr. Stacey Stoffregen, Chemistry; Dr. David Rusterholz, Chemistry

In the winter of 2013, the UWRF Chemistry Department received permission from the UWRF Administration to acquire a new 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer. The new instrument replaces a 200 MHz instrument that, while functioning adequately, was 19 years into a 15 year life expectancy. Additionally, many of the more advanced NMR experiments were difficult or impossible to perform on the old instrument.

The new Bruker Avance III 400 MHz spectrometer provides user friendly access to a wide range of simple and advanced NMR experiments. This poster examines the molecule, N-methyl-2-(4’-bromophenyl)morpholine, using some of the more common NMR experiments. Labeled structures identifying the different types or hydrogen atoms and carbon atoms are provided below. Setting up the experiments took minutes and data acquisition took a couple of hours. Acquiring the same spectra on the old instrument would have been impossible.

The UWRF Chemistry Department would like to thank the UWRF Administration for their support of our program. The instrument will help us to continue to meet our program goal of providing our students with hands-on experience with modern chemical instrumentation.

Kane, Hannah
Artwork (2D - Glass)

Woman in Gown

Faculty Mentor(s): Eoin Breadon, Art

"Woman in Gown" is the second in a series of a hot glass drawings that represent female forms and are intended to capture the heat and movement of glass blowing processes on paper.

Kassera, Dustin
Poster

Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties
Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

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Kent, Jake
PowerPoint presentation

Through Our Ancestors' Eyes.

Faculty Mentor(s): Dr. Greta Gaard, English

“Through Our Ancestors’ Eyes” is a look at three world religions as they pertain to contemporary America. In exploring Christianity, Buddhism, and Paganism through a Queer studies lens, the threads of cultural, spiritual, and sexual identities come together to paint a progressive picture of faith and human studies. Utilizing the scholarship of Colin R. Johnson, Judith Butler, John D’Emilio, and Eve Sedgwick in Queer studies along with personal interviews conducted for the purpose of this paper; “Through Our Ancestors’ Eyes” binds together religion with their messages for the public in a modern and down to earth approach that highlights the importance of sociological and GLBT studies together, not separate from, these paths of faith.

Kerkow, Blake
Poster

Equine Arena Drag

Research Collaborator(s): Lucas Martin, Dustin Huber

Faculty Mentor(s): Dr. Dean Olson, Agricultural Engineering Technology; Dr. Joel Peterson, Agricultural Engineering Technology; Dr. Joseph Shakal, Agricultural Engineering Technology
The Equine Arena Drag team designed, and manufactured a Equine Drag that is currently being used daily at the university's lab farm. The team applied and received a falcon project grant to help fund the project materials. The team completed the manufacturing of this drag last spring and would like to present the work they did.

**Kerr, Elliot**

Short Film

*A Knocking On the Mirror*

Faculty Mentor(s): Erik Johnson, Communication studies and Theater Arts

A short horror film about a possessed mirror that takes over a member of a family when they move into their new home.

**Kerr, Rob**

Poster

*Bathymetry*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

World Bathymetry (water depth) map with an uncommon representation of depth, deeper is lighter, providing a unique visual perspective.

**Kerr, Rob**

Poster

*Visdalen*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

Topographic Map of Visdalen, Norway
Kiley, Maddie
Poster

*Typical English Pronunciation Errors of Mandarin and Korean First Language Speakers*

Research Collaborator(s): Amara Treuenfels

Faculty Mentor(s): Dr. Douglas Margolis, English

This research will use speech samples previously collected by Dr. Margolis in Taiwan and Korea during the summer of 2013 and approved by UWRF’s Institutional Review Board for the Protection of Human Subjects (IRB). This phase of the project entails analysis and quantification of pronunciation and grammatical errors within the speech samples. There are two groups of speech samples, one from 11 Korean students and the other from 11 Taiwanese students. Each student contributed three speech samples for a total of 66 speech samples.

Klimek, Hannah
Poster

*Effects of Chronic Stress on Nicotine-Seeking Behavior and Reinstatement*

Research Collaborator(s): Taylor Harman, Amanda Janke

Faculty Mentor(s): Dr. James Cortright, Psychology

Drug addiction is a major public health and serious economic concern in the United States costing taxpayers billions of dollars annually. Experimental evidence shows that exposure to stress is not only a factor in the development of addiction; but also a trigger for drug relapse, or reinstatement. As tobacco use has been linked to a number of cancers and represents the leading cause of preventable death in the United States, elucidation of the effects of stress on nicotine-seeking behavior and relapse is critical. A critical role of chronic stress in the compulsion to seek tobacco and other nicotine delivering products has long been suspected. Although many studies have provided compelling evidence for a role of chronic stress in the enhanced sensitivity to cocaine-seeking behavior and relapse, few have assessed the contribution of chronic stress on nicotine-seeking behavior. In fact, stress induced cross-sensitization to nicotine remains controversial. Additionally, there have been no studies investigating the effects of chronic stress on nicotine-seeking relapse, or
reinstatement. Thus, these experiments will assess the ability of repeated exposure to variable stress to augment nicotine-seeking behavior and relapse in an animal model of drug addiction. As data collection is underway, we hypothesize that exposure to chronic variable stress will lead to the facilitation of nicotine self-administration, increases in break points, resistance to nicotine self-administration extinction, and enhancements in nicotine-primed reinstatement, or relapse. The results of these experiments have important implications regarding the design of effective and lasting smoking cessation interventions in humans.

**Knopf, Elizabeth**
Poster

*Cross Cultural Interactions: United States and Japan*

Research Collaborator(s): Mikaela Moening, Shannon McNamara, Madeline Shields, Ichiko Mori, Lucas Schmidt, and Mizuki Watanabe

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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**Knutson, Lacy**
Poster

*Crossing Cultures in the Classroom*

Research Collaborator(s): Lindsey Pluger, Luana Barichello, Flavia Miyabe, Christine O’Toole, Elizabeth Larson, and Ebitimi Nagberi

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures,
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**Kolell, Kelsey**

Poster

*Undergraduate IceCube and Neutron Monitor Research at UWRF*

Research Collaborator(s): Laura Lusardi, Nicholas Jensen, Thamyres Lana Gehlen, Samuel Gardner (UW-Waukesah), and Kyle Lueckfeld (Northeast Wisconsin Technical College)

Faculty Mentor(s): Dr. James Madsen, Physics and Dr. Surujhdeo Seunarine, Physics

IceCube is a cubic kilometer neutrino telescope situated between 1450 and 2450 meters below the surface at the South Pole. It is designed to detect neutrinos, nearly massless subatomic particles that are extremely abundant but rarely interact. IceCube is focused on seeing high energy neutrinos, which can help us understand where cosmic rays come from and learn more about gamma ray bursts and supernovae, the identity of dark matter, and the ability of neutrinos to oscillate, or change type. IceCube is a tool for exploration. It has already changed the way we think of the Universe with its recent discovery of extraterrestrial high-energy neutrinos. The sensitive components of the detector, Digital Optical Modules (DOMs), are embedded in the ultra-transparent ice on 86 vertical strings. There are over 5,160 DOMs in the ice and an additional 344 on IceTop, a cosmic ray detector on the surface of the ice. An independent, but complementary, neutron monitor experiment is also situated at the South Pole. Neutron monitors are sensitive to neutrons produced in the atmosphere as secondary particles in cosmic ray interactions. We describe the projects that were done by undergraduates at the University of Wisconsin-River Falls in Summer 2104: a study of the properties of the ice in the refrozen IceCube holes, determination of the orientation of CDOMs, and an upgrade of the neutron monitor software for two neutron monitors at UWRF.

**Krause, Leah**

Poster

*The Importance of Getting Involved on Campus and the Communication Tactics that Student Life at UWRF Does to Get the Campus Involved*
It is well known that being involved on campus makes for a better experience in college life. Within the first week of college there are all kinds of people telling students how important it is to get involved with the campus. Getting involved is a great way to feel integrated in the campus and really feel a sense of belonging to the university.

Depending on the size of the school and the overall mission, student involvement can vary. Overall, campuses across the country work on retaining students and getting them involved in the campus life. Students should be able to get away from home and make a new home for themselves at a new institution. Making a new home for themselves can only happen if the student gets involved and engaged in different programs the campus has to offer. According to Gregg Heinselman, Associate Vice Chancellor for Student Affairs at UW-River Falls, it is shown that the more engaged a student is the better a student will do in academics and the more persistent they will be in everything they do at their institution and then overall it will lead to the student getting a degree at that institution.

UWRF works really hard on focusing on keeping students engaged and involved in the campus. The overall goal for Student Affairs at UW-River Falls is making the student feel connected to this campus. The student should feel connected to something bigger than themselves, and once they feel that it will overall help them stay at the institution. According to Heinselman, there is a lot of work that goes behind what sort of programs UW-River Falls offers. Since River Falls is located thirty minutes from the cities, but also near rural areas, it is important to reach both kinds of students. Sometimes that can be a challenge, but there is a lot that goes into creating things for students of all types of backgrounds to do. There are many students that are involved in more than 1 organization. This keeps students busy but also very integrated into the campus environment. One of the overall goals that Heinselman talked about was thinking about what these students will do upon graduation in the communities they reside in. Many students will take skills they learned in their organizations and use them in different groups within their community. The thing that Heinselman looks at on a daily basis comes a lot from the programs that Student Life puts at UW-River Falls.
Kueppers, Robert
Poster

*Tri-Cultural View*

Research Collaborator(s): Emily Van Grinsven, Heather Sosnoski, Gabriela Mota Negueira, Koyuki Suwahara, and Olivia Gardner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Kumra, Ajay
Poster

*The Search for a Caffeine Remedy: Caffeine Analogues and Antagonists*

Faculty Mentor(s): Dr. Cheng-Chen Huang, Biology

Caffeine is a highly popular stimulant used by many to start their day. It is a known central nervous system stimulant that may increase concentration and physical performance. Caffeine is widely used in many drinks and foods, however, scientific journals have suggested the toxicity of caffeine both adults and developing embryos. While the mechanism behind how caffeine stimulates the nervous system is well understood, the molecular mechanism and progression to caffeine toxicity through over consumption is not. The goal of this project is to further characterize the progression of caffeine toxicity and overdose by using zebra fish embryos which are great for teratology due to their genomic similarity to humans as well as other research advantages. Zebra fish embryos develop outside of their mother in an easily controlled environment and their transparent eggs are easily viewed through a dissecting microscope. Research will also include surveying compounds that could possibly act as caffeine antagonists; we will also be testing the effectiveness of four different caffeine antagonists, SK0521, SK0522, CS-06, and TB-1.
Caffeine toxicity in adult humans is characterized by the over stimulation of the central nervous system and include symptoms such as shaking hands, irregular heart beat or headaches after consuming too much caffeine. In both zebra fish and human embryos, caffeine toxicity symptoms are observed through uncontrolled twitching, reduction in size, and severe curvature of the spine. To study the progression of caffeine toxicity, we will treat embryos with 5mM caffeine in a petri dish and record their behavior and body curvature at 30 minutes, 2 hours, and 4 hours post treatment. Embryos are monitored for twitching and a curvature in the spine that is greater than 90 degrees. The experiment will be repeated on embryos in ages ranging from 16 hours post fertilization (hpf) to 48 hpf to observe age related sensitivity and continuity. The amount of caffeine induced twitching was highly dependent on the age of the embryo since caffeine may effect undeveloped motor-neuronal structures more severely. SK0521 and SK0522 showed a reduction in twitching behavior at all three time points when treating embryos 16 hours post fertilization. In 20 hpf and 30 hpf old embryos, SK0522 reduced twitching after 2 hours and 4 hours, respectively. CS-06 and TB-1 showed rescue on virtually all groups of embryos that were older than 16 hpf. Embryos treated with these two drugs showed no signs of body curvature. This suggests that CS-06 and TB-1 could possibly inhibit the effects of caffeine in embryos. This can be significant to those who consume caffeine during pregnancy.

Lagrander, Clinton
Poster

*Demand for Money Function*

Research Collaborator(s): Tyler Arnold, Eric Smith, John Novotny

Faculty Mentor(s): Dr. John Walker, Economics

This project examines whether or not there is a stable and non-zero relationship between money and economic activity from 1980-2008. The monetary aggregates used were M1, MZM, and Divisia M4. The results suggest that there is a significant relationship between money demand and the variables real GDP and opportunity cost.

LaMere, Ben
Poster

*Culture Shock: Brazil and America*
Research Collaborator(s): Helen Zuelke, Casey Maus, Dalton Miller, Amanda Amaral, and Lucas Silva

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This project is one of a number from the COMS 213 course where International Students and US students came together to discuss similarities and differences in their cultures.

Larson, Elizabeth
Poster

_Crossing Cultures in the Classroom_

Research Collaborator(s): Lindsey Pluger, Luana Barichello, Flavia Miyabe, Christine O’Toole, Lacy Knutson, and Ebitimi Nagberi

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Lazzaron Cenatti, Leonardo
Poster

_Comparison of Brazilian Culture to American Culture_

Research Collaborator(s): Danelle Nadeau, Malachi Becker, Peter Anderson, Leah Germain, Aurelio Luciano Costa, and Daniel Buchner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This presentation is one of many presentations prepared as a joint project by the COMS 213 students and the ELT students at UWRF. Students spent 3 hours together in class discussing similarities and differences in their cultures, and then spent 2 class hours creating the poster together. Students will speak not
only about the differences among their cultures, but also about the benefits of working together on this project.

Leite, Danillo
Poster

*Ploidy characterization of Ligustrum leucanthum (S.Moore) P.S.Green seedlings treated with trifluralin and selected landscape rose cultivars (Rosa hybrida L.)*

Faculty Mentor(s): Dr. David C. Zlesak, Plant and Earth Science

The ploidy, or number of sets of chromosomes, can vary among members of a plant species. Polyploidy can impact: heterosis or hybrid vigor as well as plant fertility and tissue sizes. Polyploidy can occur in multiple ways such as using spindle fiber inhibitors during mitosis. Those inhibitors will not allow the plant cell to divide into two daughter cells, resulting in one cell with double the sets of chromosomes. Later through mitosis, this doubled cell will undergo replication and result in daughter cells perpetuating the elevated chromosome number. In order to characterize ploidy conversion of a plant all three layers of dividing cells in the growing point must be characterized with different techniques for each layer. For this study we characterized layer I of privet seedlings treated with trifluralin and layer III of rose cultivars. We identified an increase in guard cell length of doubled privet as well as less branching and darker foliage. For the roses we identified different ploidy levels in the seven cultivars. This study was successful in characterizing rose and privet germplasm for ploidy and to teach the techniques necessary for ploidy determination.

Leonard, Bryan
Poster

*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science
Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Leonhart, Aleandra
Poster and Videos

*Road to Nationals*

Research Collaborator(s): Mikayla Mack, Hannah Symbal, Elizabeth Kieffer, Carissa Beeksma

Faculty Mentor(s): Janie Huot, Coach of the IHSA Western Show Team

UWRF IHSA Western Show Team travels to IHSA Semi Finals in Canyon, TX and Nationals in Harrisburg, PA

Liend, Jeremiah
Poster

*Mapping Cultural Access In Minnesota.*

Faculty Mentor(s): Robin Murray, Communication Studies and Theatre Arts

This project attempts to identify and quantify access to the fine arts while seeking out barriers and bridges towards cultural parity. Using Minnesota based arts organizations, this study hopes to expand our understanding of how we consume the fine arts, and integrates geography and economics as tools with which we can quantify our successes and failures.

Liu, Jack
Poster

*Phillips Curve*

Research Collaborator(s): Maggie Peterson, Jonna Sterzinger, Steven Denzer

Faculty Mentor(s): Dr. John Walker, Economics
This research examined the stability of Phillips Curve. Based on Traditional Phillips Curve model and New-Keynesian Phillips Curve model, we employed multiple linear regressions using 1965-2013 quarterly economic data, and concluded that the relationship between inflation and employment is not always stable and both lagged inflation and forward looking inflation would explain the current inflation, and thus making Phillips Curve unstable over time.

Loden, Bonnie
Poster

**Answering the Call for 100 Days**

Faculty Mentor(s): Dr. Kurt Leichtle, History and Philosophy

In the spring of 1864, the progress of the Civil War was paused, awaiting more Union troops, when five states of the old Northwest Territory offered 85,000 recruits for service for the term of 100 days. The timing was crucial for the addition of troops; General Grant needed to gather men for the push to Richmond and thousands of soldiers were at the end of their service, with no inclination to reenlist. Governor John Brough of Ohio provided the impetus for the gathering of these extra troops when he reformed his state militia into the Ohio National Guard, and then offered these men up for Federal service for 100 days. Not only did the men of Ohio, Illinois, Indiana, Wisconsin, and Iowa respond with a sense of patriotic duty, the women of these states acted to free the men from their work duties, enabling them to enlist without worry of losing their jobs. This project analyzes and assesses the impact that the One Hundred Days Men had on the outcome of the Civil War. The research shows that the One Hundred Days men acted with patriotism and bravery, and even with the short term of service, their enlistments allowed Grant to move experienced troops from the rear to the front lines. With the combination of crucial timing and the numbers enlisted, these men and women made a decisive difference in the length of the Civil War.

Longen, Sarah
Artwork (3D - Glass)

**Peace of Mind**

Faculty Mentor(s): Eoin Breadon, Art

Display of a comforting bond between two abstract glass figures
Lowell, Crysta
Poster

*Intervention Aimed at Reducing College Students Perceptions and Alcohol Consumption*

Faculty Mentor(s): Dr. Melanie Ayres, Psychology

Many adverse health, educational, and social consequences result from heavy binge drinking (Wechsler et al., 2003). Research has attempted to understand why college students show higher rates of heavy binge drinking than their same-age peers who do not attend college. The social norm theory describes the behaviors as a result of incorrect perceptions of the behaviors of other members within the social groups (Fournier, Hall, Ricke, & Storey, 2013). The theory indicates that the alcohol use norm among college students caused students to overestimate the amount of alcohol consumption of other students, which will lead to a greater use in an effort to conform to the existing norm. This leads to the speculation that decreasing the amount of college alcohol use and misperceptions may be a result of educating college students about the actual college alcohol use norms. Media is a major source for distributing information about the acceptable behaviors within various environments. Therefore, media may play a large role in the development of social norms and individual’s perceptions.

This study will examine whether an alcohol intervention will decrease college students’ alcohol misperceptions. Further we will assess whether the results depend on media exposure. Participants will complete an online questionnaire assessing their alcohol use, perceptions of the typical students alcohol use, and their level of media exposure to movies with content of college alcohol use. Following the initial survey, participants are randomly assigned to the intervention or control group. Over the course of one week, those in the intervention group will receive three emails with facts about alcohol use on campus while the control group will receive facts about college life. Participants will then complete a final online questionnaire that will assess the change perceptions of the other student’s consumption and participant’s consumption after the intervention.

We will compare pre-and post-tests for the intervention and control group using repeated measures ANOVA. We expect the intervention group will decrease their misperceptions and alcohol use. Further we expect an interaction such that those with low media exposure will be more likely to show this decrease. The study has IRB approval and data collection has begun.
The success of the intervention will provide evidence for the theory of social norms and research suggesting media plays an important role in our attitudes and behaviors concerning alcohol.

**Luciano Costa, Aurelio**
Poster

*Comparison of Brazilian Culture to American Culture*

Research Collaborator(s): Danelle Nadeau, Malachi Becker, Peter Anderson, Leah Germain, Leonardo Lazzaron Cenatti, and Daniel Buchner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This presentation is one of many presentations prepared as a joint project by the COMS 213 students and the ELT students at UWRF. Students spent 3 hours together in class discussing similarities and differences in their cultures, and then spent 2 class hours creating the poster together. Students will speak not only about the differences among their cultures, but also about the benefits of working together on this project.

**Lusardi, Laura**
Poster

*Undergraduate IceCube and Neutron Monitor Research at UWRF*

Research Collaborator(s): Kelsey Kolell, Nicholas Jensen, Thamyres Lana Gehlen, Samuel Gardner (UW-Waukesah), and Kyle Lueckfeld (Northeast Wisconsin Technical College)

Faculty Mentor(s): Dr. James Madsen, Physics and Dr. Surujhdeo Seunarine, Physics

IceCube is a cubic kilometer neutrino telescope situated between 1450 and 2450 meters below the surface at the South Pole. It is designed to detect neutrinos, nearly massless subatomic particles that are extremely abundant but rarely interact. IceCube is focused on seeing high energy neutrinos, which can help us understand where cosmic rays come from and learn more about gamma ray bursts and supernovae, the identity of dark matter, and the ability of neutrinos to oscillate, or change type. IceCube is a tool for exploration. It has
already changed the way we think of the Universe with its recent discovery of extraterrestrial high-energy neutrinos. The sensitive components of the detector, Digital Optical Modules (DOMs), are embedded in the ultra-transparent ice on 86 vertical strings. There are over 5,160 DOMs in the ice and an additional 344 on IceTop, a cosmic ray detector on the surface of the ice. An independent, but complementary, neutron monitor experiment is also situated at the South Pole. Neutron monitors are sensitive to neutrons produced in the atmosphere as secondary particles in cosmic ray interactions. We describe the projects that were done by undergraduates at the University of Wisconsin-River Falls in Summer 2104: a study of the properties of the ice in the refrozen IceCube holes, determination of the orientation of CDOMs, and an upgrade of the neutron monitor software for two neutron monitors at UWRF.

**MacKinnon, Connor**

*Poster*

**Floating Vegetative Island**

Research Collaborator(s): Owen Schmitz, Brent Arnoldussen, Connor MacKinnon

Faculty Mentor(s): Dr. Joel Peterson, Agricultural Engineering Technology; Dr. Joseph Shakal, Agricultural Engineering Technology

We were to design, build and install a vegetated floating island structure at the University of Wisconsin-River Fall’s Mann Valley Lab Farm. These structures effectively convert pollutants stored in the retention ponds to biomass vegetation, which can be harvested, composted, and returned to the soil. The biomass vegetation thus prevents the pollutant nutrients from leaching into the soil, thereby improving the sustainability of UWRF.

**MacQuarrie, Alan**

*Poster*

**Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties**

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson
Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Maione, Vanessa
Poster

_Duas Culturas Que Caminham Juntas_

Research Collaborator(s): Larissa Jahnel Rodrigues de Oliveira, Denner Nogueira Guimaraes, Dee Subasic, Tarrin Halvorson, and Stacy Ballman

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Malchow, Peter
Poster

_Morphological Studies of Annealed Gold Films_

Research Collaborator(s): Peter Malchow, Zachary Highland

Faculty Mentor(s): Dr. Lowell McCann, Physics; Dr. Philip Adams, Physics (Louisiana State University); Dr. Jayne Garno, Chemistry (Louisiana State University) Dr. Lowell McCann in the Department of Physics.

Under the proper annealing conditions, thin films of gold will change their morphology on surfaces. In particular, the gold can segregate into small islands when the substrate is heated to high temperatures. The goal of this project was to determine if there was a relationship between the thickness of an unannealed gold film and the island structure of the annealed films. We found
that island formation was suppressed in films with initial thickness less than 10 nm.

**Mallizzio, Kara**  
Poster

*The Power of a Flower - Can Niger Thistle Improve Honey Bee Health? A Pilot Study!*

Research Collaborator(s): Jared Fitzenberger

Faculty Mentor(s): Dr. Brad Mogen, Biology and Dr. Kim Mogen, Biology

Honey bees and native pollinators are under threat from various sources – parasitic mites, pesticides, viral, fungal, and bacterial pathogens, and poor nutrition due to habitat loss (1). Overwintering losses average 30%, with some beekeepers losing much more. Having a healthy, robust population of bees going into the winter seems to be important for overwintering success. We were curious if niger thistle might be grown in Wisconsin as a late season bee forage crop to supplement goldenrod and lessen the dearth of bloom that occurs in the fall.

Niger thistle (Guizotia abyssinica) is commonly grown in Africa and India and the seed used for human food and edible oil (2). Killed seed is imported into the US for bird seed, where it is a particular favorite of finches. The plant is a short day, branching annual with an indeterminant growth habit. It is a member of the sunflower family and not a true thistle. Its bright yellow flowers require cross pollination. Niger has been evaluated as a specialty grain/oil crop in the midwest, but has not found favor with growers (3). An early maturing selection, EarlyBird 50, adapted to the northern plains states (4), is suggested to have value as a bee forage.

**Mamadjonova, Saida**  
Poster

*The Black-White Male Earnings Gap*

Research Collaborator(s): Tyler Paulsen, Alexandra Williams, Dan Norlin
We examined the Black-White male earnings gap for the periods between 2003 to 2012 looking at different variables and their impact on the wage of both black and white workers. We decided to focus specifically on education and experience to formulate our main hypotheses.

**Marhoun, Bailey**  
Artwork (3D - Glass)

*Fingerprints*

Faculty Mentor(s): Eoin Breadon, Art

Based on genetic mapping and the unique quality of fingerprints, I've started a sculptural project using glass fingers, each one with a different person's fingerprint.

**Mark, Cole**  
Poster

*The effects of feeding Holstein calves 0%, 1%, and 2% nucleotides*

Faculty Mentor(s): Dr. Sylvia Kehoe, Animal and Food Science

When calves get “scours,” or diarrhea, it is usually caused by damage to the lining of the intestine. To regenerate this damaged tissue, nucleotides must be present. However, these nucleotides are not naturally found in milk or calf feed. This means that the calf’s body must generate the nucleotides while its immune system is already compromised which can often lead to elevated stress levels and increased severity of scours. Furthermore, nearly 80% of all dairy calves are affected by scours during the post-natal period. These incidents of scours strongly contributes to the 7% morbidity rate of dairy heifers in America, costing agricultural producers millions of dollars every year (USDA, 2007). Furthermore, young calves are at a critical stage of their life from a financial stand point. Young stock are extremely expensive to raise on a daily bases and provide no income until they reach the milking string. Thus, it is critical to grow calves at the fastest possible rate and for the calves to have an efficient rate of gain.
Martin, Lucas
Poster

**Equine Arena Drag**

Research Collaborator(s): Blake Kerkow, Dustin Huber  
Faculty Mentor(s): Dr. Dean Olson, Agricultural Engineering Technology; Dr. Joel Peterson, Agricultural Engineering Technology; Dr. Joseph Shakal, Agricultural Engineering Technology

The Equine Arena Drag team designed, and manufactured a Equine Drag that is currently being used daily at the universities lab farm. The team applied and received a falcon project grant to help fund the project materials. The team completed the manufacturing of this drag last spring and would like to present the work they did.

Mathern, Whitney
PowerPoint presentation

**Combining English education with outdoor education**

Faculty Mentor(s): Conan Kmiecik, English

This research investigation was a result of interest in combining English as a second language (ESL) instruction with outdoor education. The purpose of this exploration was to determine in what ways an outdoor-focused English activity could benefit ESL learners. The focus for the outdoor education component was the hobby letterboxing, a popular pastime—which many enthusiasts enjoy across the country—that combines exploration, problem solving and art in a treasure-hunt activity. The English component involves students creating clues for classmates, reading and comprehending the clues, and completing explicit language activities. The investigation has been theoretical, based on my major field of study, TESOL, as well as my experiences in my minor field of study, Outdoor Education, and experiences working with ESL learners. In theory, an outdoor activity such as letterboxing breaks up the routine of the ESL classroom, lowering students affective filter and allowing organic, spontaneous production of English. In addition, this activity provides students with an opportunity to explore the terrain and ecology of the target language environment resulting in schema development.
Matz, Risa
Poster

*Foster Care Awareness Campaign*

Faculty Mentor(s): Dan Paulus, Art

There are many teenagers in need of permanent placements or some sort or mentor support before the “age out” of foster care. If more people were aware of this concern, there would be more people willing to help. A set of posters were created to spread awareness about this need specifically targeting the adults who would be ideal candidates for foster parents.

Maus, Casey
Poster

*Culture Shock: Brazil and America*

Research Collaborator(s): Helen Zuelke, Ben LaMere, Dalton Miller, Amanda Amaral, and Lucas Silva

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This project is one of a number from the COMS 213 course where International Students and US students came together to discuss similarities and differences in their cultures.

McArthur, Mollie
Poster

*Maximizing Seed Bomb Efficiency*

Research Collaborator(s): Mariah Cooper, Maggie White

Faculty Mentor(s): Dr. Kim Mogen, Biology

A new product from Plantables LLC is throwable seed bombs - clay balls enriched with native plant seeds. We determined seedling success with different planting substrates and with pre-plant temperature treatments to find the most efficient way to use seed bombs to increase native plant species. Substrates included rock, potting soil (control), mulch, sod, and crushed leaves. Results showed that garden potting soil produced the second highest seedling
quantity and highest plant diversity. In our second experiment, seed bombs were exposed to -20°C, room temperature, or 50°C for one week prior to planting. The seed bombs that were placed in the freezer prior to planting produced the best results. Results show that seed bombs are a good product for its targeted area – the Western/Midwestern regions of America. For maximum efficiency, consumers should plant their seed bombs in garden soil in the Western/Midwestern regions of America.

McCabe, Rachel
Artwork (3D - Glass and Steel)

Contrive

Faculty Mentor(s): Eoin Breadon, Art and Asako Nakauchi, Art

I have created a centerpiece that can be viewed from all angles of the room. The round base allows the viewer to feel more invited to see the whole piece in each of these brilliant angles. Each colorful sphere is made in the same manner; however, each has their own personality shown through from the reactions of the colors. The layering of the colors allows each to have their unique collaboration with each other.

McCabe, Rachel
Artwork (3D - Glass, Earthenware, Steel)

Flux

Faculty Mentor(s): Eoin Breadon, Art and Asako Nakauchi, Art

I have created a working water fountain. From the beginning I knew I wanted to incorporate glass because there is such a ringing quality to it when the water hits it. I started by making organic leaf like forms with flowers on them. I made these forms to mimic a bowl as well so that they could catch the water and overflow it to the next one. I then created a larger bowl for the bottom of the fountain to catch the water so that the flow could continue. I made ten slabs of clay and dried them in various ways so that they would stay flat in the process. I needed them flat so that I could eventually glue them on my wooden frame. When the slabs were finally done baking I glued them onto my frame and filled in the cracks with quikrete. I then painted a dark green onto the surface of the slabs. I knew I wanted it a dark color because when I see glass against a dark background it allows each of the variations in color and shape to pop. I then welded cradles for each of the leaf like structures so that they would be at
angles that would flow from one to another. In the end I created a trickling fountain that can create a calming atmosphere as well as new views of glass.

**McCutcheon, Tina (Bergstrom)**  
*Poster*

*What Difficulties are International Students Coming across When Trying to Communicate with University of Wisconsin-River Falls Students and Staff?*

Faculty Mentor(s): Dr. Grace Coggio, Communication Studies and Theatre Arts

I will be presenting on the communication difficulties that international students at the University of Wisconsin-River Falls are coming across. I will be coming up with some possible solutions to improve the campus, as well as accommodating the incoming international students. I feel that our campus is becoming very diverse and I thought it would be interesting to gather data from international students on campus to see what communication difficulties they are coming across. I hope to broaden the public's horizon on this topic and possibly bring change to campus to help connect international students and domestic students, as well as staff. My presentation will consist of a poster and I may provide some props.

**McDaniels, Andrea**  
*Poster*

*Cell Phone Habits Amongst College-Aged Students: How is Technology Affecting Our Lives?*

Faculty Mentor(s): Dr. Grace Coggio, Communication Studies and Theatre Arts

This research involves the study of communication and cell phone habits amongst college-aged students at the University of Wisconsin-River Falls. As technology is growing, our way of communicating is changing, especially as college students. The goal of this research is to gain a deeper understanding of young adults cell phone habits, how cell phones are becoming an extension of our identity, and how this is all affecting the various areas of ones life from health, productivity, and family-friend relationships. During this research I conducted an ethnography at the center of campus in the University Center to see how students interact with one another, or if they interact at all. This
reveals how college students are connecting either face-to-face or on their phones. I also surveyed 54 college students to reveal their cell phone habits and how much time they are spending on their cell phones in hopes to have them rethink their actions and make some changes to the way society is making us gravitate towards technology use everyday. I began my research from analyzing backgrounds of other credible sources that have done similar research, along with the information they have found. I will gather my evidence between the ethnography and survey compare and contrast the two, and tie it all in with the research I have found to gain a deeper understanding of what college students cell phone habits are, and how it is effecting our lives, and the habits that have derived.

McLeod, Jacob
Poster

The effects of feeding substituting or including Corn Silage into the diets of dairy calves on duodenal health.

Faculty Mentor(s): Dr. Sylvia Kehoe, Animal and Food Science

Because of the high price of calf starter farmers have been substituting feeds without knowing the effect that it has on the gastrointestinal tract of their animals. These substitutions could cause decreased feed efficiency and rates of gain which lower the profitability of the animals. One of the more common substitutes due to the price is corn silage. In the experiment, sections of the duodenum were collected from nine sacrificed dairy calves. Calves were fed three different treatments: calf starter, 50:50 mixture of calf starter and corn silage, and completely corn silage. Three calves were placed on each diet; unfortunately one calf’s duodenum section was not preserved well enough and could not be used leaving only two calves that received the mixture diet in the results. The objective of the project was to determine whether these different diets had effects on the length and width of the duodenal villi and the depth of the crypts. It has already been found that longer, wider villi along with deeper crypts provide better absorption due to a larger surface area (Masanetz et al., 2010). The experiment found that t corn silage diets produced significantly longer villi than calf starter/corn silage mix (P<.01) and tended to produce longer villi than calf starter (P=.0904). Corn silage produced significantly longer crypt depths than the mix (P=0.019). There was no significant difference in villi width between any of the three treatments. The villi length of the calves fed the mixture was significantly shorter than both other treatments (P<0.01). Also the crypt depths of the calves given the mixture were significantly shallower than the calves given the calf starter or corn silage (P<0.01). There was no
difference in crypt depth between the calf starter fed and corn silage fed calves. Based on these findings it would appear that feeding either calf starter or corn silage will have very similar effects on the villi development in the duodenum, but feeding a mixture of the two produces a smaller surface area for absorption in the duodenum.

**McNamara, Shannon**

*Poster*

**Cross Cultural Interactions: United States and Japan**

Research Collaborator(s): Mikaela Moening, Madeline Shields, Elizabeth Knopf, Ichiko Mori, Lucas Schmidt, and Mizuki Watanabe

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Middlemiss, Phillip**

*Poster*

**Surviving in the United States vs. China**

Research Collaborator(s): Paige Gurtner, Brady Murphy, Nina Chen, Karina Clausen, and Tu Jing (Visiting Professor – CSIS)

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Miller, Dalton
Poster

*Culture Shock: Brazil and America*

Research Collaborator(s): Helen Zuelke, Casey Maus, Ben LaMere, Amanda Amaral, and Lucas Silva

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This project is one of a number from the COMS 213 course where International Students and US students came together to discuss similarities and differences in their cultures.

Miyabe, Flavia
Poster

*Crossing Cultures in the Classroom*

Research Collaborator(s): Lindsey Pluger, Luana Barichello, Christine O’Toole, Lacy Knutson, Elizabeth Larson, and Ebitimi Nagberi

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Moening, Mikaela
Poster

*Cross Cultural Interactions: United States and Japan*

Research Collaborator(s): Shannon McNamara, Madeline Shields, Elizabeth Knopf, Ichiko Mori, Lucas Schmidt, and Mizuki Watanabe

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English
This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Moon, Laura
Demonstration

*A 3D Interactive IceCube Display*

Research Collaborator(s): Nicholas Jensen

Faculty Mentor(s): Dr. James Madsen, Physics and Dr. Mark-David Hosale (York University, Toronto, Canada)

We have made a large model of the IceCube detector using nearly 5000 colored LEDs. The immersive display plays neutrino events as seen the IceCube detector at the South Pole. It gives the public a chance to visualize the intangible.

Mori, Ichiko
Poster

*Cross Cultural Interactions: United States and Japan*

Research Collaborator(s): Mikaela Moening, Shannon McNamara, Madeline Shields, Elizabeth Knopf, Lucas Schmidt, and Mizuki Watanabe

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**Mota Negueira, Gabriela**  
*Poster*

*Tri-Cultural View*

Research Collaborator(s): Emily Van Grinsven, Heather Sosnoski, Robert Kueppers, Koyuki Suwahara, and Olivia Gardner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Munger, Amanda**  
*Poster*

*Assessment of corticosterone and protein corrected corticosterone levels between serum and plasma in turkeys*

Research Collaborator(s): Grant Stoddard, Aubrey Appleton

Faculty Mentor(s): Dr. Kurt Vogel, Animal and Food Science

There were three objectives in this study. The first was to evaluate levels of corticosterone between serum and plasma from turkeys. Second was to compare the estimated protein content between serum and plasma by refractometry. Lastly, the impact of correction for estimated total protein content on the occurrence of differences in corticosterone concentrations between serum and plasma was assessed. This study is relevant because animal welfare is becoming an increasing concern among producers and consumers in the meat industry. It is important to reduce or eliminate stress during pre-slaughter handling to prevent negative impacts on meat quality and animal well-being. Increased stress levels can elevate corticosterone and other biochemical welfare markers and reduce meat quality. In this study, blood samples were tested using a commercially available ELISA kit to calculate corticosterone concentrations, and a refractometer to estimate protein content. Results revealed no significant difference (P > 0.05) between serum
and plasma among corticosterone concentration or estimated protein content. There was, however, a significant difference between trials (P < 0.05) due to variation in factors, which may have included; time of day, time of year, and separate ELISA kits. Due to small sample size and variation between trials, additional investigation should be pursued on a larger population of turkeys.

Murphy, Brady
Poster

*Surviving in the United States vs. China*

Research Collaborator(s): Paige Gurtner, Nina Chen, Karina Clausen, Phillip Middlemiss, and Tu Jing (Visiting Professor – CSIS)

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Murphy, Molly
Poster

*Preliminary Audit Plan for Aitkin County*

Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance

This project entails the Minnesota's Aitkin County financial statements for the past two years. This will include the first seven steps of an Auditing Plan. The goal of this project is to show the financial statements and discuss the events of the county in an easy way to see and understand. After completing the preliminary Audit Plan for Aitkin County, I understood what auditors needed to know before going to the county and reviewing information from third parties.

Nadeau, Danelle
Paper

*Audit Plan for Nike, Inc.*
Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance

The paper presents a theoretical plan for completing an audit of the financial statements of Nike, Inc.

Nadeau, Danelle
Poster

*Comparison of Brazilian Culture to American Culture*

Research Collaborator(s): Malachi Becker, Peter Anderson, Leah Germain, Leonardo Lazzaron Cenatti, Aurelio Luciano Costa, and Daniel Buchner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This presentation is one of many presentations prepared as a joint project by the COMS 213 students and the ELT students at UWRF. Students spent 3 hours together in class discussing similarities and differences in their cultures, and then spent 2 class hours creating the poster together. Students will speak not only about the differences among their cultures, but also about the benefits of working together on this project.

Nagberi, Ebitimi
Poster

*Crossing Cultures in the Classroom*

Research Collaborator(s): Lindsey Pluger, Luana Barichello, Flavia Miyabe, Christine O’Toole, Lacy Knutson, and Elizabeth Larson

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.
Nascimento Santos, Fernando
Poster

*Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties*

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Nelson, Gradon
Poster

*Connecting Cultures*

Research Collaborator(s): Joicy Alves Chaves, Tia Crotty, Kevin Judd, April O'Connor, and Nathalia Perieiera Silva

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Nelson, Connor
Short Film

*Kinnic Falls Alcohol & Drug Abuse Services Inc. Video Project*
Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts

This Summer Scholars grant project added value to Kinnic Falls Alcohol & Drug Abuse Services Inc.'s marketing plan and enhanced their online presence as well as fostering new relationships with in the community and enhancing UWRF's perception as supportive contributors.

Nishida Maximo da Cruz, Tatiana
Poster

Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Nogueira Guimaraes, Denner
Poster

Duas Culturas Que Caminham Juntas

Research Collaborator(s): Vanessa Maione, Larissa Jahnel Rodrigues de Oliveira, Dee Subasic, Tarrin Halvorson, and Stacy Ballman

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures,
but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Norlin, Dan**  
Poster  

*The Black-White Male Earnings Gap*  
Research Collaborator(s): Saida Mamadjonova, Tyler Paulsen, Alexandra Williams  
Faculty Mentor(s): Dr. John Walker, Economics  

We examined the Black-White male earnings gap for the periods between 2003 to 2012 looking at different variables and their impact on the wage of both black and white workers. We decided to focus specifically on education and experience to formulate our main hypotheses.

**Novotny, John**  
Poster  

*Demand for Money Function*  
Research Collaborator(s): Tyler Arnold, Eric Smith, Clinton Lagrander  
Faculty Mentor(s): Dr. John Walker, Economics  

This project examines whether or not there is a stable and non-zero relationship between money and economic activity from 1980-2008. The monetary aggregates used were M1, MZM, and Divisia M4. The results suggest that there is a significant relationship between money demand and the variables real GDP and opportunity cost.

**Nunes, Katrina**  
Poster  

*Making Muenster-Style Cheese*  
Research Collaborator(s): Mariana Scoqui Guimaraes, Magregor Damião de Oliveira  
Faculty Mentor(s): Michelle Farner, Animal and Food Science
The goal of the project is to show the steps and procedures in the manufacturing of muenster-style cheese and sensorial evaluation between smoked and non-smoked Muenster style cheese.

**O'Brien, Nicholas**  
Posters

*Shaded Relief Contour Map of Lassen Volcanic National Park*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

A shaded relief contour map of Lassen Volcanic National park created by using digital elevation model (DEM) data obtained from the United States Geological Survey.

**O'Connor, April**  
Poster

*Connecting Cultures*

Research Collaborator(s): Grady Nelson, Joicy Alves Chaves, Tia Crotty, Kevin Judd, Nathalia Perieiera Silva, and Allison Waterhouse

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Osoba, Sikiru**  
PowerPoint presentation

*Foreign Direct Investment and the Nigerian Oil and Gas Industry*

Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance

This research is set in response of the Oil and gas companies, the Nigerian government and the international community. Nigeria is used as a case study.
because since there is discovery of crude oil within its territories, it has experienced one of the largest volumes of oil production in Africa. This research therefore explores the oil and gas industry under the auspices of foreign direct investment and how the investment has change the economy, environment and populace of those who play host to these foreign investors.

O'Toole, Christine
Poster

*Crossing Cultures in the Classroom*

Research Collaborator(s): Lindsey Pluger, Luana Barichello, Flavia Miyabe, Lacy Knutson, Elizabeth Larson, and Ebitimi Nagberi

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Pachniak, Elliot
Demonstration and poster

*Functional Robotics*

Faculty Mentor(s): Dr. Earl Blodgett, Physics

I designed, programmed, and assembled a functional robot using the EVO3 robotics kit. I will talk about the procedure behind my research, the difficulties I encountered, and discuss where this research could go in the future.

Palmquist, Alexis
PowerPoint

*Food (In)Justice*

Faculty Mentor(s): Dr. Greta Gaard, English
My presentations describes our current food crisis and the effects that it has on us as a species as well as on other animal species and the earth. This crisis stems from a colonialist worldview that is part of our Euro-Western culture. I provide images, quotations, and will also have a laptop set up with open links to websites documenting my research.

Patterson, Molly
Poster

Making Asiago Style Cheese

Faculty Mentor(s): Michelle Farner, Animal and Food Science

The purpose of this project was to successfully produce an Asiago style cheese. Asiago is produced on the Asiago plateau in Italy from unpasteurized cow's milk. There are two types of Asiago which are determined by age. Asiago Pressato is a fresh cheese with a smooth texture and Asiago d'allevio is an aged cheese with a crumbly texture. The ingredients used to make this cheese include: pasteurized whole cow milk, starter cultures, lipase, and rennet. The equipment used in the processing of this cheese are: HTST pasteurization system and a 900 pound "OO" cheese vat. This cheese was made using the following process: add starter, add lipase, add rennet, stop stirring for coagulation, cut curd, cook curd, stir, drain, salt, hoop, press, brine, package, and age.

Paulsen, Tyler
Poster

The Black-White Male Earnings Gap

Research Collaborator(s): Alexandra Williams, Dan Norlin, Saida Mamadjonova

Faculty Mentor(s): Dr. John Walker, Economics

We examined the Black-White male earnings gap for the periods between 2003 to 2012 looking at different variables and their impact on the wage of both black and white workers. We decided to focus specifically on education and experience to formulate our main hypotheses.
Perieiera Silva, Nathalia
Poster

*Connecting Cultures*

Research Collaborator(s): Grady Nelson, Joicy Alves Chaves, Tia Crotty, Kevin Judd, April O'Connor, and Allison Waterhouse

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Pessoa, Lindomar
Poster

*Modeling intestinal epithelial lining with the CaCo2 cell line in 3D scaffold cultures.*

Collaborative Research Project

Faculty Mentor(s): Dr. Timothy Lyden, Biology

In this presentation we report on efforts to model human gastrointestinal epithelial tissue using the CaCo2 adenocarcinoma cell line and 3D culture methods developed in the TCIC at UWRF. This project is one in a series of studies which employ epithelial cancer cell lines to produce “artificial tissues” using a unique decellularized extra-cellular matrix. In studies with Hela (cervical carcinoma), MCF7 (breast adenocarcinoma), BeWo and JEG3 (choriocarcinoma) cell lines we have consistently noted that cancer cell lines, when grown in a tissue-like 3D context tend to establish relatively normal differentiated epithelial layers with complex cellular interactions and “normal-appearing” secondary structural features. In this study, we examined CaCo2 cells in a similar manner using the same decellularized extra-cellular matrix materials as our 3D scaffolds. The resulting structures again display extensive and complex epithelial layers which eventually encase the entire scaffold surface. These cells display clear boundaries and a rather tall, almost columnar, appearance in regions of highest cell density while areas with fewer
cells present a fairly squamous population. Further SEM and sectioning studies are now ongoing to confirm our initial observations and to define the fine structural details of this new cancer-derived artificial tissue.

**Peterson, Erik**

*Poster*

*In vitro pollen germination assays: Comparing the new “Box Method” with the standard hanging drop method*

Research Collaborator(s): Megan Melcher, Elizabeth Chatt

Faculty Mentor(s): Dr. David C. Zlesak, Plant and Earth Science

Assessing male fertility is useful in plant breeding and other endeavors. The hanging drop pollination method is the standard technique used for pollen fertility analysis, but has many drawbacks including fragility in terms of transport, lack of time efficiency and overall is a cumbersome project to erect. In this study, a newly developed method known as the “Box Method” was utilized to assess male fertility in streptocarpus (Streptocarpus sp.) and tobacco (Nicotiana alata). The method was first used to determine the gender of dioecious Rosa setigera plants. The two methods were analyzed and compared. The Box Method involves having coverslips with 20µl nutrient solution (1.5% sucrose & 40ppm boric acid) drops facing upward instead of hanging. The coverslips were placed on a moist paper towel base within a box that is larger and easier to access. Three different sized polystyrene boxes were used and compared with the hanging drop method. The percent pollen germination and length of the pollen tubes in regard to streptocarpus was indistinguishable between the two methods. In tobacco, there were minor differences in percent germination and pollen tube length, which may be due to the large number of pollen grains analyzed. The results obtained point to the Box Method as a suitable alternative to the hanging drop pollination method to characterize fertility differences between pollen treatments.

**Peterson, Karl**

*Poster and Demonstration – Faculty Project*

*Bruker Avance III 400 MHz NMR*

Research Collaborator(s): Dr. Michael Kahlow, Chemistry; Dr. Karl Peterson, Chemistry; Dr. Stacey Stoffregen, Chemistry; Dr. David Rusterholz, Chemistry
In the winter of 2013, the UWRF Chemistry Department received permission from the UWRF Administration to acquire a new 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer. The new instrument replaces a 200 MHz instrument that, while functioning adequately, was 19 years into a 15 year life expectancy. Additionally, many of the more advanced NMR experiments were difficult or impossible to perform on the old instrument.

The new Bruker Avance III 400 MHz spectrometer provides user friendly access to a wide range of simple and advanced NMR experiments. This poster examines the molecule, N-methyl-2-(4’-bromophenyl)morpholine, using some of the more common NMR experiments. Labeled structures identifying the different types or hydrogen atoms and carbon atoms are provided below. Setting up the experiments took minutes and data acquisition took a couple of hours. Acquiring the same spectra on the old instrument would have been impossible.

The UWRF Chemistry Department would like to thank the UWRF Administration for their support of our program. The instrument will help us to continue to meet our program goal of providing our students with hands-on experience with modern chemical instrumentation.

**Peterson, Maggie**

**Poster**

*Phillips Curve*

Research Collaborator(s): Jack Liu, Jonna Sterzinger, Steven Denzer
Faculty Mentor(s): Dr. John Walker, Economics

This research examined the stability of Phillips Curve. Based on Traditional Phillips Curve model and New-Keynesian Phillips Curve model, we employed multiple linear regressions using 1965-2013 quarterly economic data, and concluded that the relationship between inflation and employment is not always stable and both lagged inflation and forward looking inflation would explain the current inflation, and thus making Phillips Curve unstable over time.

**Pluger, Lindsay**

**Poster**

*Crossing Cultures in the Classroom*
Research Collaborator(s): Luana Barichello, Flavia Miyabe, Christine O'Toole, Lacy Knutson, Elizabeth Larson, and Ebitimi Nagberi

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Prue, Ann Marie
Poster

Quantifying the Effects of Temperature and Precipitation on Soil Moisture Drydown Rates Using PBO H2O Data

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Ann Marie Prue 1, Peter Shellito 2, Eric E. Small 2
1 University of Wisconsin-River Falls Plant and Earth Science Department/Geology
2 University of Colorado at Boulder Department of Geological Sciences

Surface soil moisture affects latent and sensible heat fluxes, as well as setting the top boundary condition for water redistribution within the soil column. The fluctuations in surface soil moisture have been described in numerous modeling studies, but characterization based on measurements is lacking. We use a new soil moisture dataset based on reflected GPS signals to provide some constraints on rates of surface soil drying after a rain event. The soil moisture time series used in this study are derived from GPS data collected at NSF’s EarthScope Plate Boundary Observatory (PBO) sites. The University of Colorado Boulder’s PBO H2O project estimates daily near-surface soil moisture (approximately 0-5 cm) from the interference pattern between the direct and ground-reflected GPS signals. The sensing footprint is ~1000 m², and thus intermediate in scale between in situ and remotely sensed observations. Twelve sites from this network of more than 100 were used in this study. To characterize the rate of soil drying, we fit exponential curves to daily soil moisture observations following ten isolated rainfall events at each site. Event sizes varied from 5 to 40 mm and were followed by 17 days without rain. The
decay model fits the data quite well, with r² values exceeding 0.85 in nearly all cases. For 95% of the events studied, the exponential decay constant (e-folding time) fell between 2 and 6 days. Precipitation amount is not correlated with drydown rates. Instead, the rate of soil drying is well-correlated with air temperature: the exponential constant decreases by 0.1 days per degree Celsius. We are currently investigating how other factors, such as soil type and vegetation, influence soil drying. This study highlights the utility of the PBO H₂O soil moisture product. Surface soil moisture changes rapidly, and thus the dynamics of surface soil moisture cannot be accurately characterized using datasets based on less than daily measurements.

Rasmussen, Laura
Poster

*Is Dance Team a Sport? Selective Exposure Theory and Identification of Sports*

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Dr. Grace Coggio, Communication Studies and Theatre Arts

Young men and women all over the world participate in an activity called dance team. It’s an activity that requires participants to work hard physically and emotionally and perform in front of judges to win first place. The rules for dance team change by region and even by competition, but the main goal is the same: for the team to score high enough to win. Many school districts, states, and individuals do not believe that dance team is a sport. This is important because participation in activities and sports during adolescent years has been proven to increase GPA levels and lessens the drop out rate in schools. Ten participants were interviewed about their views on dance team being a sport. What was found was that eight participants agreed that dance team is a sport while two disagreed that dance team is a sport. Selective exposure theory was used to see if those participants who said they knew a person who was involved with dance team had an impact on their response to the question if dance team is a sport. 100% of the female participants said that dance team is a sport, while 50% of male participants said that dance team is a sport.

Rolseth, Mark
Short Film

*Community Education Promotional Video*
Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts

The Community Education Program facilitated by the River Falls School District provides members of the local community with a variety of valuable learning opportunities that foster personal and communal growth. The Community Education Promotional Video serves the purpose of lending this vibrant program, through a visually compelling medium, an opportunity to share their vision with the local community, and show how locals can benefit from being involved.

Rolseth, Mark
Short Film

*Take On Me Music Video*

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts

This music video was created for the Advanced Field Production course offered by Erik Johnson. Behind its creation was the desire to tell a simple narrative in a humorous fashion, while implementing advanced cinematography techniques.

Rootes, Brittany
Poster

*Grafting Tomatoes to Improve Tolerance of Adverse Environmental Conditions*

Faculty Mentor(s): Dr. Veronica Justen, Plant and Earth Science

The original experiment involved two test groups of tomatoes. I was interested in comparing two different varieties of non-grafted tomatoes to two varieties of grafted tomatoes. The objective was to compare the two groups side by side to see if the grafted test group would be more vigorous, water and temperature tolerant, and/or less susceptible to disease than the control group.

Grafting tomatoes turned out to be a not-so-simple task, and after three rounds of failed grafting, I realized this experiment wasn't going to be quite what I expected. My poster will be heavily based on the experimental process and how sometimes, methods, timing, and data don't come through in the
scientist’s favor. This experience teaches students that not all experiments give results, and that it’s okay for your project to fail as long as you’ve put in the effort and learned from your mistakes.

Roth, Daniel
Poster

*Is it Worth Your Time? A Study on Surveys*

Faculty Mentor(s): Dr. Melanie Ayres, Psychology

This study examines the relationship between interest level of the research topic and the question formats that are used in a survey and their effects on receiving thoughtful answers and participants’ ability to follow the directions. 27 participants from a Mid-western university completed an online survey where they were randomly divided into two groups using a hierarchical question were some participants went to a category they found interesting and the rest to an uninteresting one. They then asked five who, what, when, where, why preferential questions asked regarding the category they had chosen. No significant relationship was found between interest level and thoughtfulness or the ability to follow directions. Also, no significant relationship was found between question format and thoughtfulness or the ability to follow directions. However, the data does show that 96% of the participants failed to follow directions. This data suggests that participants do not read the directions for the tasks they are to complete.

Ruegsegger, Ryan
PowerPoint presentation

*China’s Dairyman*

Faculty Mentor(s): Dr. Lissa Schneider-Rebozo, English

China’s Dairyman is an original magazine written, and edited by myself. The project required extensive research into the dairy industry of China, the U.S., and around the world. Some background information was also provided by my education as a third year Dairy Science Major. The magazine is meant to mimic dairy research magazines in the U.S. like Hoard’s Dairyman. It is eight pages long with six articles, all of which are presented with visual aids and formatted to look professional. These articles discuss: China’s dairy industry in the past and present, how China compares to the U.S., how China influences the global market, and some issues in China related to the dairy industry. While working
on this project I was astounded at how each country affects the other countries of the world. China’s high importation of milk powder is a large part of what has brought the U.S. milk prices to an all-time high. This in turn helps our economy and we then purchase more manufactured goods from China. It is a circle that is always fluctuating but never really leaves one country completely above the other. I was also astonished by our food safety risks as I learned about the Melamine scandal in 2008. Six children died in China because corporations simply wanted more money for their product and they didn't care about the consequences. This research project took a large majority of my time for several weeks, but I am proud of my accomplishment and I feel my education has greatly benefited from this experience.

Rusterholz, David
Poster and Demonstration – Faculty Project

*Bruker Avance III 400 MHz NMR*

Research Collaborator(s): Dr. Michael Kahlow, Chemistry; Dr. Karl Peterson, Chemistry; Dr. Stacey Stoffregen, Chemistry; Dr. David Rusterholz, Chemistry

In the winter of 2013, the UWRF Chemistry Department received permission from the UWRF Administration to acquire a new 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer. The new instrument replaces a 200 MHz instrument that, while functioning adequately, was 19 years into a 15 year life expectancy. Additionally, many of the more advanced NMR experiments were difficult or impossible to perform on the old instrument.

The new Bruker Avance III 400 MHz spectrometer provides user friendly access to a wide range of simple and advanced NMR experiments. This poster examines the molecule, N-methyl-2-(4’-bromophenyl)morpholine, using some of the more common NMR experiments. Labeled structures identifying the different types or hydrogen atoms and carbon atoms are provided below. Setting up the experiments took minutes and data acquisition took a couple of hours. Acquiring the same spectra on the old instrument would have been impossible.

The UWRF Chemistry Department would like to thank the UWRF Administration for their support of our program. The instrument will help us to continue to meet our program goal of providing our students with hands-on experience with modern chemical instrumentation.
Sanford, Carol
Poster

**Preliminary Audit Plan**

Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance

Inform individuals about the Audit Objective and give a preliminary business and industry condition analysis. I will go over significance accounting and auditing matters.

Schiller, Jacob
Short Film

**Sunshine by Atmosphere Music video**

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts

Here lies a short film music video produced for a class here at River Falls. DFT - 360 with Erik Johnson. A quick glimpse at how a little sun can make even the worst days better starring Kaycee McGary as talent.

Schmidt, Lucas
Poster

**Cross Cultural Interactions: United States and Japan**

Research Collaborator(s): Mikaela Moening, Shannon McNamara, Madeline Shields, Elizabeth Knopf, Ichiko Mori, and Mizuki Watanabe

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Scoqui Guimaraes, Mariana
Poster
Making Muenster-Style Cheese

Research Collaborator(s): Magregor Damiao de Oliveira, Katrina Nunes

Faculty Mentor(s): Michelle Farner, Animal and Food Science

The goal of the project is show the steps and procedures in the manufacturing of the Muenster-style cheese and sensorial evaluation between smoked and no-smoked of the Muenster style cheese.

Seppelt, Katie

Poster

Cultivating Through the Bad and the Good: The Power Commercials Hold in Iconizing the Public View of the Farmer

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Dr. Grace Coggio, Communication Studies and Theatre Arts

Effective advertisements can alter the public’s perception on a topic. Businesses will iconize topics negatively and positively in commercials to capture the desired view for the subject. The purpose of this research is to identify how televised advertisements are effectively framing farmers as an icon. Burke’s theory of Positive, Dialectical and Ultimate Terms will be used to determine how the farmer is iconized to the public. The first phase of this project involves the selection of four different commercials which guide its audience to perceive a farmer as a god or a devil. Two of the chosen commercials will negatively frame agriculture to its viewers and the other two chosen advertisements will positively capture agriculture to its audience. The final phase involves the comparison of Burke’s theory and the use of metanarratives to persuade the public to accredit the commercials content. Metanarratives will capture the devil and angelic characteristics (music selection, background, word usage, themes, etc.) used throughout the commercials. This study concluded that negative agriculturally-based commercials create farmers as a devil by using the uncertain ethnics of livestock farming. It was also concluded that positive agriculturally-based commercials highlight angelic farmers through the metanarrative of assisting nature’s processes through crop farming.
Shaw, Andrew
Poster

*Population Density of Grain Amaranth*

Faculty Mentor(s): Dr. Veronica Justen, Plant and Earth Science

Grain amaranth is an ancient pseudo-grain that has gained new favor with the gluten free audience. Seven accessions of grain amaranth obtained through the USDA's GRIN system were used to evaluate plant production at two population densities.

Shields, Madeline
Poster

*Cross Cultural Interactions: United States and Japan*

Research Collaborator(s): Mikaela Moening, Shannon McNamara, Elizabeth Knopf, Ichiko Mori, Lucas Schmidt, and Mizuki Watanabe

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Silva, Lucas
Poster

*Culture Shock: Brazil and America*

Research Collaborator(s): Helen Zuelke, Casey Maus, Ben LaMere, Dalton Miller, and Amanda Amaral

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English
This project is one of a number from the COMS 213 course where International Students and US students came together to discuss similarities and differences in their cultures.

**Silva, Ariane**

*Poster*

*Modeling Breast Cancer Metastasis using MCF-7 Hanging Drop Spheroid Cultures.*

Collaborative Research Project

Faculty Mentor(s): Dr. Timothy Lyden, Biology

Since 2004, our laboratory has been focused on using 3D modeling techniques to examine and explore the behavior of cells engaged in normal and pathological histogenesis. Until recently, the majority of this work has been focused on the application of natural 3D matrix materials to develop artificial tissues. In 2008, our work shifted onto a strongly defined pathway of modeling several types of cancer in 3D and generating long-term artificial tissues from both primary patient samples and standard tumor cell lines. These studies identified an interesting aspect of 3D tumor modeling, in that as the tissue became established and developed it also began to produce significant numbers of potentially metastatic cells and nodules or spheroids. This effect was particularly seen in breast cancer models and is the focus of this report.

One limitation for the intricate study of these tumor products (spheroids) has been the relatively pleomorphic distributions observed in these cultures. In order to address this short coming, and to study the actual metastatic potential of such shed nodules, we have begun to employ a new hanging-drop technology to produce large numbers of very consistently sized spheroids using the breast adenocarcinoma cell line, MCF-7. In this report, we present the initial results of both labeling studies and morphometric analysis of the spheroids generated from an initial 5000 cells and cultured for up to 5 days. The results of this work have already provided significant evidence that these spheres are reasonable models for metastatic nodules and/or micro-tumors in-vivo. Continuing studies are working to evaluate the invasive capacities of these and the “natural” spheres from each respective time point and relative morphology.
Silva Farias, Priscilla  
Poster  

_Making Muenster-Style Cheese_  

Research Collaborator(s): Erika Borges Ferreira, Samara De Vasconcelos Vieira, Samara De Vasconcelos Vieira  

Faculty Mentor(s): Michelle Farner, Animal and Food Science  

Muenster is an American imitation of the French Munster cheese. It is made from pasteurized whole cow's milk. It has a smooth, moist and soft texture, a pale yellow color, which results from the vegetable coloring during the cheese making. The taste varies from mild and bland to sharp like Jack cheese. The purpose of this project was to produce a different type of muenster-style cheese, by adding basil to create a different taste.

Sjolander, Jason  
Poster  

_North American Duck Flyways_  

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences  

This map combines tracking and nesting data of ducks found in North America. Through the combination of this data I created a map of where ducks nest, their flying routes, and where they stay for the winter.

Slaikeu, Kayla  
Poster  

_Preliminary Audit Plan For Toro Company_  

Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance  

The preliminary audit plan for Toro Company gives a brief description of audit objectives and significant accounting matters to show the company's economic status, by analyzing and comparing objectives and ratios to the industry conditions.
Sleiman da Costa, Matheus

Poster

*Market Integration Between Brazilian and American Commodity Markets*

Faculty Mentor(s): Dr. Amber Remble, Agricultural Economics

This research project tries to explain the market correlation between two of the most competitive countries in agriculture, especially with corn, soybeans, cattle, and cotton. The project used the theory of Law of One Price as a background for research, based on other occasions when the theory did or did not hold. Also, the trend towards globalization served as basis for project. The yearly mean from prices from each country were obtained, converted to dollars ($), and units were standardized for both countries. Indexing of prices as necessary to obtain real values, so we could calculate the coefficient of variation to measure volatility of prices, and the mean-difference. As results corn for the U.S. and cotton for Brazil were the most volatile. In addition, the fact that none of the mean-difference results were significant does not support the Law of One Price.

Smith, Eric

Poster

*Demand for Money Function*

Research Collaborator(s): Tyler Arnold, John Novotny, Clinton Lagrander

Faculty Mentor(s): Dr. John Walker, Economics

This project examines whether or not there is a stable and non-zero relationship between money and economic activity from 1980-2008. The monetary aggregates used were M1, MZM, and Divisia M4. The results suggest that there is a significant relationship between money demand and the variables real GDP and opportunity cost.

Sorenson, Andrea

Artwork (2D - Painting)

*Consumed Chemicals*

Faculty Mentor(s): Jeannine Kitzhaber, Art
Food determines a civilization for its quality as a necessity for life. As a surplus of food stock grows to meet the demands of urban growth and population in the United States there is an increased dependence of additives to improve the shelf life of our food supply. Nutrition quality has decreased and many health concerns have developed therefore the representation of our country through the lens of food is becoming unpleasant.

Currently my work as an artist is focused on the issues of additives in food that can have negative outcomes for human health. By presenting this knowledge through a visual form the viewer is impacted with the entire listing of side effects at once changing the way we digest the information. My interest in this topic comes from what I have observed working at an elementary school and watching the allergy table grow quickly over the years, the immense growth of processed food, and my connection to growing and harvesting my own food. Negative repercussions have arrived after the many years of manipulating our food supply and need to be realized. It is easy to ignore a problem in society if it isn’t put in front of you; therefore an exploration in this study of research will permit me to educate others with visual impact. By showing the public an insight to the effects of chemicals and additives in the items we eat I hope to promote an idea of change and awareness.

Sorge, Erin
Poster

The effects of nucleotide supplementation on the health and growth of dairy calves prior to weaning.

Faculty Mentor(s): Dr. Sylvia Kehoe, Animal and Food Science

Calves are important for the dairy industry because they are the future dairy herds. It is important to keep calves healthy and growing so they can become future milk producers for the industry. Scours or diarrhea is the number one cause of sickness and death within the dairy calf population. This study looked at whether a nucleotide supplement can help reduce the incidence of scours among calves by monitoring the health and growth of the University of Wisconsin-River Falls Lab Farm calves. This study involved 3 groups of calves, a control which were given no nucleotide supplement and no challenge( N Group), a second group which was given both the nucleotide supplement and the challenge( S Group), and a third group which was given a challenge, but no nucleotide supplement(C group). The results showed no significant differences between the treatment groups. Although further analysis is needed for the
health data, it appears that nucleotide supplementation would not positively or negatively effect the dairy calves growth. Because of these results, a nucleotide supplement does not appear to benefit producers.

**Sosnoski, Heather**
Poster

*Tri-Cultural View*

Research Collaborator(s): Emily Van Grinsven, Robert Kueppers, Gabriela Mota Negueira, Koyuki Suwahara, and Olivia Gardner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Sousa Araujo, Nathalia**
Poster

*Making Provolone Style Cheese*

Research Collaborator(s): Vanessa Cristina Johann

Faculty Mentor(s): Michelle Farner, Animal and Food Science

Provolone is an Italian cheese made from cow’s milk. This kind of cheese is a “pulled” cheese, like mozzarella. It is also traditionally smoked. The project goal is making a different kind of provolone cheese using different "starter cultures" and cheese color, more dark yellow than usual.

**Starke, Rachael**
Artwork (3D - Cotton/Polyester Thread, Wood, Ceramic, Handmade Paper)

"Before the Sleep"

Faculty Mentor(s): Asako Nakauchi, Art
"In the time before winter, as trees get ready to 'hibernate,' there is a beautiful tension between the fragility of autumn and the encumbering frost. Here, the endearing forces of nature prepare for their long rest." This project was an experiment with the formation of paper and the structures it can create during the drying process, as well as a practice in figure carving. Figures are used as an anthropomorphistic metaphor for nature in order to express the significance of nature.

Steen, Jeff  
Poster  

Superior Hiking Trail  
Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences  
The map is a shaded relief map of the North Shore in Minnesota. It details the trails, campgrounds, and parks associated with the trail.

Stehr, Nikki  
Poster  

Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties  
Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, and Samantha Thorson  
Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science  
Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.
**Sterzinger, Jonna**  
Poster

*Phillips Curve*

Research Collaborator(s): Jack Liu, Maggie Peterson, Steven Denzer  
Faculty Mentor(s): Dr. John Walker, Economics  
This research examined the stability of Phillips Curve. Based on Traditional Phillips Curve model and New-Keynesian Phillips Curve model, we employed multiple linear regressions using 1965-2013 quarterly economic data, and concluded that the relationship between inflation and employment is not always stable and both lagged inflation and forward looking inflation would explain the current inflation, and thus making Phillips Curve unstable over time.

**Stoffregen, Stacey**  
Poster and Demonstration – Faculty Project

*Bruker Avance III 400 MHz NMR*

Research Collaborator(s): Dr. Michael Kahlow, Chemistry; Dr. Karl Peterson, Chemistry; Dr. Stacey Stoffregen, Chemistry; Dr. David Rusterholz, Chemistry

In the winter of 2013, the UWRF Chemistry Department received permission from the UWRF Administration to acquire a new 400 MHz Nuclear Magnetic Resonance (NMR) Spectrometer. The new instrument replaces a 200 MHz instrument that, while functioning adequately, was 19 years into a 15 year life expectancy. Additionally, many of the more advanced NMR experiments were difficult or impossible to perform on the old instrument.

The new Bruker Avance III 400 MHz spectrometer provides user friendly access to a wide range of simple and advanced NMR experiments. This poster examines the molecule, N-methyl-2-(4’-bromophenyl)morpholine, using some of the more common NMR experiments. Labeled structures identifying the different types or hydrogen atoms and carbon atoms are provided below. Setting up the experiments took minutes and data acquisition took a couple of hours. Acquiring the same spectra on the old instrument would have been impossible.

The UWRF Chemistry Department would like to thank the UWRF Administration for their support of our program. The instrument will help us to
continue to meet our program goal of providing our students with hands-on experience with modern chemical instrumentation.

**Stueven, Noah**  
Poster  

*The Effect of Perfluorooctanoates on the Aggregation of Amyloid Peptides*

Faculty Mentor(s): Dr. Daniel Marchand, Chemistry

Alzheimer’s disease (AD) is a debilitating condition that eventually affects roughly two-thirds of the population. AD is believed to be result from the aggregation of the amyloid (Abeta) peptide. Since Abeta peptide aggregates are insoluble, they form plaques which destroy brain tissue. Our research project was to see if the rate of Abeta peptide aggregation can be attributed to external factors, such as environmental chemicals. Perfluorooctanoates (PFOA) are a class of commercial chemicals used in the manufactured of commercial products, like Teflon. Since PFOA are widespread and persistent in the environment, we were interested in determining if they affect the behavior of the Abeta peptide.

To study the Abeta peptide, high-performance liquid chromatography (HPLC) was used in conjunction with size exclusion chromatography (SEC). SEC separates molecules based on their molecular weight. Analysis of the Abeta peptide by SEC results in the separation of the monomer, dimer, and oligomer peaks. We used this to determine if the Abeta peptide aggregated differently depending on presence of PFOA at a neutral pH. Our initial results suggest that there may not be significant difference in the rate of aggregation for Abeta peptide in the presence of PFOA.

References:

**Subasic, Dee**  
Poster  

*Duas Culturas Que Caminham Juntas*
Research Collaborator(s): Vanessa Maione, Larissa Jahnel Rodrigues de Oliveira, Denner Nogueira Guimaraes, Tarrin Halvorson, and Stacy Ballman

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

Suwahara, Koyuki
Poster

Tri-Cultural View

Research Collaborator(s): Emily Van Grinsven, Heather Sosnoski, Robert Kueppers, Gabriela Mota Negueira, and Olivia Gardner

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

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Thorson, Samantha
Poster

Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties

Research Collaborator(s): Anton Yelk, Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, and Nikki Stehr
Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Tilson, Adam
Short Film (Music Video)

*Music Video “Everyday is Exactly the Same” by Nine Inch Nails*

Faculty Mentor(s): Erik Johnson, Communication Studies and Theatre Arts

This is a music video for my Advanced Field Production class DFT 360. The video features a man going through some troubled times in his life and drinks alcohol to ease the pain and thinks about life and suicide. The goal was to put together a story the best way I can that best complements the lyrics and the mood of the song. For that approach I decided to use only one actor for the video since the song focuses on the story of one person and their troubled life. I used inside and outside locations with dim lighting to set the mood right and many close ups to capture the emotions of the character. I decided to approach the video in which I would have the character perform as well as sing out the lyrics.

Treuenfels, Amara
Poster

*Typical English Pronunciation Errors of Mandarin and Korean First Language Speakers*

Research Collaborator(s): Maddie Kiley

Faculty Mentor(s): Dr. Douglas Margolis, English

This research will use speech samples previously collected by Dr. Margolis in Taiwan and Korea during the summer of 2013 and approved by UWRF’s Institutional Review Board for the Protection of Human Subjects (IRB). This phase of the project entails analysis and quantification of pronunciation and grammatical errors within the speech samples. There are two groups of speech samples, one from 11 Korean students and the other from 11 Taiwanese
students. Each student contributed three speech samples for a total of 66 speech samples.

**Van Grinsven, Emily**  
Poster  

*Tri-Cultural View*  
Research Collaborator(s): Heather Sosnoski, Robert Kueppers, Gabriela Mota Negueira, Koyuki Suwahara, and Olivia Gardner  
Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English  

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Verbraken, Tonya**  
Poster  

*2013 Audit of Walgreens Co.*  
Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance  

This presentation looks at the elements regarding an audit of Walgreens, a US drug store, for the year 2013. Financial statements, business practices, and industry standards are investigated in order to determine the risks related to the company's financial reporting, as well as the strategies for analytical procedures.

**Vieira, Samara**  
Poster  

*Making Muenster Style Cheese*  
Research Collaborator(s): Erica Borges and Priscila Farias  
Faculty Mentor(s): Michelle Farner, Animal and Food Science
We have a project in Dairy Manufacturing class to make a cheese, so we did one following the Muenster style but adding our own different ingredient to make it unique.

**Vitor da Paz Neto, Joaquim**

*Poster*

*Fontina Cheese: A classic Italian Cheese*

Faculty Mentor(s): Michelle Farner, Animal and Food Science

Fontina Cheese is known as one of Italy's great cheeses. Its texture can vary from semi-soft to firm and the flavours from mild and rich to more robust and overpowering; these attributes depend on how long the cheese has been aged. In addition to that, Fontina Cheese comes only from the Valle d'Aosta, Italy, but it is also produced in the United States, Sweden, Denmark, and France tending to be blander and softer than the Italian original.

This project was developed as a requirement of the course Dairy Production II aiming to improve students knowledge about the course contents and familiarize them with the industrial process.

**Wacek, Mark**

*PowerPoint presentation*

*Introductory Audit Plan*

Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance

I completed this project in my auditing class here at UW-River Falls. I chose to complete a plan for McDonald's. Major sections of the audit plan that I covered included:

1. Audit Objectives
2. Preliminary Business and Industry Condition Analysis
3. Client Objectives, Strategies, and Business Risk
4. Significant Risks, including Fraud Risk Factors
5. Significant Accounting and Auditing Matters
6. Preliminary Analytical Procedures: liquidity (current ratio), solvency (debt-to-equity ratio), profitability (profit margin), and return on equity

For class, I completed a paper, but I will add a PowerPoint presentation to make it more interactive than merely presenting the paper.
Wang, Shensi
Poster

**Preliminary Audit Plan - Nokia**

Faculty Mentor(s): Dr. Dawn Hukai, Accounting and Finance

My project is a preliminary audit plan on Nokia Corporation that examines its industry condition, peer competition, operation strategies, as well as fraud/business/significant risks. The plan is designed from multiple perspectives including management, marketing, and most importantly, accounting. There'll be a poster that presents all my work, and a PC that runs PowerPoint if there's enough room on the station.

Warmus, Grant
Poster

**Occupational Stressors & The Role on Absenteeism**

Faculty Mentor(s): Dr. Melanie Ayres, Psychology

The current study aimed to look at potential correlations between occupational stressors and the affect they would have on absenteeism rates. The study was conducted via an online survey to 56 Psychology majors here at UW-River Falls. It was predicted that role ambiguity and workload & responsibility would have a positive correlation with absenteeism. The implications of a study such as this one are substantial in that the results and information gained can help to identify key stressors that affect employees within the workplace. Once these stressors are found interventions can be put in place to decrease the frequency of the stressors creating a better work environment for employees.

Watanabe, Mizuki
Poster

**Cross Cultural Interactions: United States and Japan**

Research Collaborator(s): Mikaela Moening, Shannon McNamara, Madeline Shields, Elizabeth Knopf, Ichiko Mori, and Lucas Schmidt

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English
This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**Waterhouse, Allison**

*Poster*

*Connecting Cultures*

Research Collaborator(s): Grady Nelson, Joicy Alves Chaves, Tia Crotty, Kevin Judd, April O'Connor, and Nathalia Perieiera Silva

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This is a project where students in the ELT program paired with students in COMS 213 and discussed the similarities and differences in their cultures for two class periods. The students then spent 2 class periods creating the posters. Students will speak on not only the similarities and differences in their cultures, but also the benefits of connecting with and spending time in conversation with students of other nationalities.

**White, Maggie**

*Poster*

*Maximizing Seed Bomb Efficiency*

Research Collaborator(s): Mariah Cooper, Mollie McArthur

Faculty Mentor(s): Dr. Kim Mogen, Biology

A new product from Plantables LLC is throwable seed bombs - clay balls enriched with native plant seeds. We determined seedling success with different planting substrates and with pre-plant temperature treatments to find the most efficient way to use seed bombs to increase native plant species. Substrates included rock, potting soil (control), mulch, sod, and crushed leaves. Results showed that garden potting soil produced the second highest seedling quantity and highest plant diversity. In our second experiment, seed bombs were exposed to -20°C, room temperature, or 50°C for one week prior to planting. The seed bombs that were placed in the freezer prior to planting
produced the best results. Results show that seed bombs are a good product for its targeted area – the Western/Midwestern regions of America. For maximum efficiency, consumers should plant their seed bombs in garden soil in the Western/Midwestern regions of America.

Williams, Alexandra
Poster

*The Black-White Male Earnings Gap*

Research Collaborator(s): Saida Mamadjonova, Dan Norlin, Tyler Paulsen

Faculty Mentor(s): Dr. John Walker, Economics

We examined the Black-White male earnings gap for the periods between 2003 to 2012 looking at different variables and their impact on the wage of both black and white workers. We decided to focus specifically on education and experience to formulate our main hypotheses.

Wolf, Kari
Poster

*Frac Sand Mine Reclamation and the Impacts on Soil Hydrology*

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Wisconsin is the world’s largest supplier of frac sand. Almost half the state is covered by Cambrian sandstones where frac sand is derived. Because of the extensive scale of frac sand mines in Wisconsin there is huge potential for soil and hydrologic impacts. State laws require frac sand mines to reclaim mining locations to state standards, however, there is little information on the best ways to restore the land after frac sand mining. The objective of this project was to document soil and hydrologic impacts by establishing benchmark data prior to mining. This data was collected to better understand soil health and land use capabilities pre-mining and after reclamation. Data were collected at a mine located near Chippewa Falls, Wisconsin which has been actively mining for three years and had land nearing reclamation. During this project soil hydrological properties in the unmined areas were measured. Properties such as: hydraulic conductivity, permeability, infiltration rate, volumetric water content, leachate quantity and water quality. A total of 15 randomly selected sites, disturbed and undisturbed, were chosen in 20 acres to determine the
natural variability in soil hydrologic characteristics. This research will provide important data to guide reclamation policies and practices for mining companies for the future and increase today’s information on the best ways to restore land after frac sand mining.

**Wolf, Steven**
Poster

*Hatcher Pass Topographic Map*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

This is a topographic map of Hatcher Pass, Alaska located in the southwest part of the Talkeetna Mountains.

**Wolfe, Cody**
Poster

*Judge C.R. Magney State Park*

Faculty Mentor(s): Dr. Mathew Dooley, Geography and Mapping Sciences

It is a contour map of the state park, that also shows rivers and the outline of the state park.

**Yang, Pheng**
Poster

*Natural Hmong Herb Extraction for Active Compounds to Rescue Heart Failure in Zebrafish (Danio rerio) Embryo*

Faculty Mentor(s): Dr. Cheng-Chen Huang, Biology and Dr. Karl Peterson, Chemistry

Cardiovascular disease is a major health concern and many adults are diagnosed with serious heart problems that can lead to heart failure. The usage of traditional Hmong medicines has been passed down and practiced for generations without any scientific evidence. There is a wide range of herbs that can help treat people with heart diseases; while only a handful do benefit patients, another large number of these herbs fail in doing so. The goal of the research is to identify compounds from natural Hmong herbs that can
attenuate heart failure using zebrafish embryo models. First, we used steam distillations to extract compounds into either water or ethyl acetate. All fractions will undergo a biological assessment on 24 hours post fertilization embryos that have been treated with aristolochic acid (AA), causing heart failure in the embryos. After testing a total of six fractions from three different herbs, we found that one fraction, identification number PYGI-1S, has the potential to rescue heart failure. During our preliminary treatment, 17% of 20 embryos showed attenuated heart failure. We ran a second trial and the results were parallel, 50% of 60 embryos were attenuated. However, a higher concentration of PYGI-1S became too toxic for the embryos causing premature death. Future experiments are to increase PYGI-1S production and conduct a liquid column chromatography to isolate individual compounds from PYGI-1S fractions to see which compound is responsible for heart failure rescue.

Yelk, Anton
Poster

Quantifying the Impact of Land Use Change and Long-term Agricultural Production on Soil Physical Properties

Research Collaborator(s): Logan Ahlers, Kevin Beth, Greg Brown, Shane Farnell, Jake Filo, Taylor Gieser, Nathan Hankes, Aaron Johnson, Dustin Kassera, Bryan Leonard, Alan MacQuarrie, Fernando Nascimento Santos, Tatiana Nishida Maximo da Cruz, Nikki Stehr, and Samantha Thorson

Faculty Mentor(s): Dr. Holly Dolliver, Plant and Earth Science

Continuing current research of soil property differences between undisturbed soil and soil which has been tilled for the past one hundred years. Examining basic soil physical and hydro-logic properties. The Soils 460 (Soil Physics) class, has taken on this responsibility to continue and broaden the research conducted by Dr. Dolliver.

Young, Amanda
Poster

Characterization of CH-18

Faculty Mentor(s): Dr. Cheng-chen Huang- Biology
In this study, we studied a compound called CH-18. CH-18 is a compound that has the ability to rescue the heart from cardiac arrest. We used young zebrafish embryos in this experiment as our model organism. We studied CH-18 to determine the most effective dose size, the critical time at which it's best to administer treatment, and we also tested two analogous compounds. CH-18 has showed a lot of potential in our study and we look forward to our experiment's future results.

**Zuelke, Helen**

Poster

*Culture Shock: Brazil and America*

Research Collaborator(s): Casey Maus, Ben LaMere, Dalton Miller, Amanda Amaral, and Lucas Silva

Faculty Mentor(s): Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts and Diane Jacobson, English

This project is one of a number from the COMS 213 course where International Students and US students came together to discuss similarities and differences in their cultures.

**Zwiefelhofer, Jacob**

Poster

*Working to Achieve Drift Control for EmergingDicamba Technologies*

Faculty Mentor(s): Dr. Veronica Justen, Plant and Earth Science and Dr. Bill Anderson, Plant and Earth Science

The introduction of new dicamba technologies present a great opportunity for growers across our nation. It also poses a great threat to non-tolerant crops. Finding the correct drift retardant and nozzle type will be a key player in how widely accepted the increased use of dicamba technologies will be. Comparisons of drift retardants and nozzle types will be done both in field trials and a wind tunnel. The primary goals of this research is to maximize drift reduction to protect non-tolerant crops and improve efficacy on the spray target.
URSCA Mentors

We would like to acknowledge the efforts of Faculty and Staff Mentors, whose dedication allows our campus URSCA to thrive. We deeply appreciate their contributions in support of the university’s commitment to undergraduate research, scholarly and creative activity. Thank you!

Below is a comprehensive list, by college, of all of the URSCA Mentors who have students presenting projects at the 2014 Fall Gala.

College of Agriculture, Food and Environmental Sciences

Dr. Bill Anderson, Plant and Earth Science
Dr. Jill Coleman Wasik, Plant and Earth Science
Dr. Holly Dolliver, Plant and Earth Science
Michelle Farner, Animal and Food Science
Janie Huot, Coach of the IHSA Western Show Team
Dr. Veronica Justen, Plant and Earth Science
Dr. Sylvia Kehoe, Animal and Food Science
Dr. Sonja Maki, Plant and Earth Science
Dr. Dean Olson, Agricultural Engineering Technology
Dr. Joel Peterson, Agricultural Engineering Technology
Dr. Amber Remble, Agricultural Economics
Dr. Joseph Shakal, Agricultural Engineering Technology
Dr. Brian Smith, Plant and Earth Science
Dr. Kurt Vogel, Animal and Food Science
Dr. David C. Zlesak, Plant and Earth Science

College of Arts and Sciences

Dr. Davida Alperin, Political Science
Dr. Melanie Ayres, Psychology
Dr. Earl Blodgett, Physics
Eoin Breadon, Art
Dr. Arunendu Chatterjee, Mathematics
Dr. Grace Coggio, Communication Studies and Theatre Arts
Dr. James Cortright, Psychology
Heather Delisle, Art
Dr. Mathew Dooley, Geography and Mapping Sciences
Dr. Greta Gaard, English
Dr. Cheng-Chen Huang, Biology
Diane Jacobson, English
Erik Johnson, Communication Studies and Theatre Arts
Randy Johnston, Art
Dr. Michael Kahlow, Chemistry
Brett Kallusky, Art
Jeannine Kitzhaber, Art
Conan Kmiecik, English
Dr. Kurt Leichtle, History and Philosophy
Dr. Timothy Lyden, Biology
Dr. James Madsen, Physics
Dr. Daniel Marchand, Chemistry
Dr. Douglas Margolis, English
Dr. Lowell McCann, Physics
Dr. Brad Mogen, Biology
Dr. Kim Mogen, Biology
Robin Murray, Communication Studies and Theatre Arts
Asako Nakauchi, Art
Dan Paulus, Art
Dr. Karl P. Peterson, Chemistry
Steven Phalen, Communication Studies and Theatre Arts
Dr. Charles Rader, Geography and Mapping Sciences
Dr. Joseph Rein, English
Dr. David Rusterholz, Chemistry
Dr. Lissa Schneider-Rebozo, English
Dr. Surujhdeo Seunarine, Physics
Dr. Stacey A. Stoffregen, Chemistry
Dr. Sergio Valverde, Political Science
Dr. Jennifer Willis-Rivera, Communication Studies and Theatre Arts
College of Business and Economics

Dr. Charlie Corcoran, Accounting and Finance
Dr. Dawn Hukai, Accounting and Finance
Dr. June Li, Accounting and Finance
Dr. John Walker, Economics

College of Education and Professional Studies

Dr. Naomi Hashimoto, Communicative Disorders
Dr. Sharyl Samargia, Communicative Disorders
Questions?

For additional information about upcoming events, grant funding, trainings, and presentation opportunities, visit the URSCA webpage at www.uwrf.edu/URSCA/ or contact the URSCA Office by phone at 715-425-3902 or email at ursca@uwrf.edu.

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