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2013 Program for Celebrating Scholarship & Creativity Day

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Gorecki Center A, B & C, CSB

Center for Global Education

Katherine E. Nystrom (Marah Jacobson-Schulte, Center for Global Education) La Gente de Maíz: Culture and the Role of Maize in Neural Tube Defects Among Rural Mayan Guatemalans

While studying abroad in Guatemala, researcher began project that elucidates the link between Mayan Guatemalans and the high prevalence of spina bifida in rural Guatemala. A staple food and cultural icon, maize is equal to no other food in the Mayan way of life. The Mayan people of Guatemala and southern Mexico believe that they were created from corn; the Popol Vuh, the Mayan religious text comparable to the Christian Bible, tells a creation story explaining how humans were first constructed of maize. However, a hazardous mycotoxin (a secondary metabolite produced by fungi) is present in high amounts on corn kernels grown in Guatemala. Studies have shown that this mycotoxin inhibits certain enzymes in the human body from being able to properly utilize folic acid, ultimately leading to a debilitating neural tube defect in the developing fetus of a pregnant mother. While living in Guatemala, researcher interviewed a number of people familiar with the Guatemalan health care system, cultural beliefs about disability, and governmental support of disabled citizens.

Exercise Science and Sport Study

Corey Babcock, Roye Philipp, Secor Duncan (Don Fischer, Exercise Science and Sport Study) First Step Length and 20-Meter Sprint Time in Male Collegiate Track & Field Sprinters

Step length has been shown to be a contributing factor to overall sprint performance. PURPOSE: To examine the relationship between first step length and sprint speed through the start and acceleration phases of sprinting. METHODS: Eight male collegiate track and field sprinters (age range 18-22 yrs.) consented to participate in the study. Following a dynamic warm-up, each participant performed three trials of a 20-meter sprint, with 6 minutes rest between trials. Each participant's first step was captured on video and analyzed using Dartfish software. First step length was compared to a 1-meter marker placed adjacent to the starting block; from the comparison marker, first step length was calculated to the nearest centimeter. Step length was then normalized to each participant's leg length, defined as the distance from anterior superior iliac spine to the medial malleolus. A

Brower electronic timing system was used to quantify 20-meter sprint time to the nearest tenth of a second. STATISTICAL ANALYSIS: Data were analyzed using a Pearson's r test for correlation. RESULTS: A significant negative correlation was found between first step length and 20-meter sprint time [r (24) = -.647, p < .01]. CONCLUSIONS: First step length was found to be significantly related to performance within the start and acceleration phases of a sprint. However, a number of confounding variables may have influenced the effectiveness of the sprint technique during start and acceleration phases. Future research should control for variables such as position of center of mass over the foot, stance type in the starting blocks, shin angle during first step contact, and vertical rise of the center of gravity during the sprint start.

Melanie R. Berscheit, Hannah M. Von Arb, Luke A. Weyrauch (Don Fischer, Exercise Science and Sport Study) The relationship of core stability to static and dynamic balance

The ability to maintain balance is prerequisite to many functional activities. Core stability may be a contributing factor to both static and dynamic balance. PURPOSE: The present study was designed to examine the relationship of core stability to static and dynamic balance in recreationally active young adult men and women. METHODS: Thirty recreationally active individuals (males n =15; females n = 15) ranging in age from 18 to 23 years participated in this study. Static balance was tested with the Balance Error Scoring System (BESS). Three BESS trials were conducted with participants balancing on their non-dominant leg; the average number of balance errors was recorded. Dynamic balance was tested by the Star Excursion Balance Test (SEBT). Participants balanced on their non-dominant leg and performed three trials of reaching with their dominant leg in the lateral and then the medial directions; the distance reach for the three trials in each direction were averaged and recorded. The BESS and SEBT tests were conducted in counterbalance order. The duration of a single, maximal effort side plank was used to test frontal plane stability on the same side as the subject's non-dominant leg. STATISTICAL ANALYSIS: Bivariate correlation was used to examine the relationship of BESS and SEBT scores to side plank time. A value of $p < 0.05$ was used for determining statistical significance. RESULTS: Average BESS scores were not significantly correlated with the time the side plank was held, [r(30) = -.185, p = .329]. There was also no significant correlation between side plank time and SEBT reach distance in the medial direction [r(30) = .233, p = .215] or in the lateral direction [r(30) = .151, p = .425]. CONCLUSION: The results indicate that there is not a significant

relationship between core stability and either static or dynamic balance in recreationally active young adults.

Danielle A. Busch, Rhiannon M. LeGarde, Jennifer R. Hall (Don Fischer, Exercise Science and Sport Study) Foot Strike Patterns of Division III Female Cross Country Runners: Comparison Of Three Footwear Conditions

Many collegiate cross country runners practice in standard running shoes, but compete in track spikes. However, different types of footwear may produce different foot strike patterns and different foot strike patterns have been associated with different types of running injuries. PURPOSE: This study examined the foot strike patterns of female cross country runners while running shod, with track spikes, and barefoot. METHODS: Eleven female Division III cross country runners were videotaped from the waist down while running at a self-determined "race pace" around a 200 meter indoor track under three footwear conditions: with traditional running shoes, with track spikes, and barefoot. Two or three foot strikes were recorded per participant. The order of footwear conditions was counterbalanced. The video images were analyzed using Dartfish software and the foot strike pattern for each participant was classified (3 = rearfoot, 2 = midfoot, or 1 = forefoot) for each of the three conditions. STATISTICAL ANALYSIS: A Friedman's Test was used to test for differences in foot strike location between the footwear groups. RESULTS: A significant difference was found between the three groups [$\chi 2$ (2, N = 11) = 8.00, p =.018] with descriptive values indicating a progression from rearfoot to forefoot strike when changing from shod (M= 2.909, SD= 0.301) to track spikes (M= 2.454, SD= 0.820) to barefoot (M= 2.272, SD= 0.786) footwear conditions. CONCLUSION: The three footwear conditions resulted in significantly different foot strike patterns during race-pace running of Division III female cross country runners. This finding may have practical implications for athletes, coaches, and athletic trainers as they consider specificity of training and risk factors associated with running injuries.

Charles Dudek, Hannah Vanderheyden, Dustin Schlangen, Savannah Kuester (Don Fischer, Exercise Science and Sport Study) Effect of Ankle Taping On Vertical Jump Performance Before and After Participation in Basketball Drills

Ankle taping is a common injury prevention and treatment method that reduces ankle range of motion. However, the effect of ankle taping on exercise performance is not well studied. Purpose: To examine the effects of ankle taping on countermovement

vertical jump (VJ) performance before and after a basketball specific warm-up. Methods: Ten Division III male collegiate basketball players consented to participate in the study. After a general warm-up, participants completed three maximal VJ test trials on a Just Jump contact mat to determine baseline maximal jump height; the best of the three trials was recorded in centimeters. Participants then had both ankles taped and maximal VJ was measured again after participants had both ankles taped by an athletic trainer. The participants then performed a 10 minute basketball specific dynamic warm-up with their ankles taped and maximal VJ was measured a third time. Statistical Analysis: A One-Way Repeated Measures Analysis of Variance with a Bonferroni post-hoc analysis was used. Results: VJ was significantly different between the three trials ($F(2, 18) = 37.87$, $p < .001$). VJ performance significantly ($p < .001$) decreased immediately after taping (Baseline: $M = 62.76$, $SD = 4.63$). After taping: $M = 58.92$, $SD = 4.96$) and remained significantly ($p < .050$) lower than baseline after the dynamic warm-up ($M = 61.39$, $SD = 3.46$). Conclusion: Ankle taping has a detrimental effect on VJ performance in male collegiate basketball athletes, both immediately after taping and after a basketball specific dynamic warm-up.

Mitchell A. Hagen (Manuel Campos, Exercise Science and Sport Study) Interning for EPPA: Emergency Physicians Professional Association

I will be presenting on my internship experience at Mercy and Unity Hospitals working as a scribe in the emergency department. I will be talking about my experience working with physicians and what I have learned about medicine as a career. I will also share how I have been able to use my curriculum here at CSB/SJU during the internship and how the internship has enhanced my knowledge of medicine. A case study will be included to demonstrate what the scribe position entails and how it promotes further learning. I will talk about the scribe program at EPPA and how others are able to gain the same internship experience.

Matthew T. Hanowski, Thomas W. Broback, Anna E. Krieger (Don Fischer, Exercise Science and Sport Study) Compensatory Movement Patterns of Agility and Non-Agility Sport Athletes

The purpose of this study was to compare the compensatory movement patterns of agility sport athletes to non-agility sport athletes. METHODS: Agility sport athletes [volleyball n = 20, soccer n = 24, and basketball n = 8] and non-agility sport athletes [cross country n = 24] performed three box drop vertical jump test (BDVJ) trials from a 30cm platform. All BDVJ trials were

videotaped, and the Landing Error Scoring System (LESS) was used to analyze the trial with the greatest vertical displacement. Individual LESS composite scores were calculated for each leg from seventeen separately scored items, and the LESS relative injury risk scores were determined. The FMS consisted of seven movement tests that were analyzed and scored on a three point scale. Individual test scores were summed to create a composite FMS score, and the FMS relative injury risk scores were determined. STATISTICAL ANALYSIS: Independent t-tests were used to compare the mean scores of agility to non-agility athletes. RESULTS: A non-significant difference was found between the mean composite FMS and relative risk FMS scores of agility sport athletes (M = 15.1, SD = 2.10; M = 0.40, SD = 0.495) and non-agility sport athletes (M = 15.3, SD = 1.37; M = 0.25, SD = 0.442) [t(74) = 0.63, p = .53; t(74) = 1.36, p = .18]. Mean left leg composite LESS and LESS relative risk scores of agility sport athletes (M = 5.63, SD = 1.59; M = 1.50, SD = 1.08) and non-agility sport athletes (M = 5.25, SD = 1.73; M = 1.46, SD = 1.18) were not significantly different [t(74) = 0.96, p = .34; t(74) = 0.15, p = .88]. Similarly, mean right leg composite LESS and LESS relative risk scores of agility sport athletes (M = 5.69, SD = 1.59; M = 1.56, SD = 1.09) and non-agility sport athletes (M = 5.50, SD = 1.72; M = 1.58, SD = 1.10) were not significantly different [t(74) = 0.48, p = .63; t(74) = .095, p = .93]. CONCLUSION: Athletes from agility and non-agility sports have similar movement characteristics and injury risk.

Samantha R. Imholte, Dave Kahat, Kristina Burk, Elizabeth Camber (Don Fischer, Mary Stenson, Exercise Science and Sport Study) Movement Characteristics and Prior Injury in Agility and Non-Agility Sports

Function Movement Screens (FMS), Landing Error Scoring System (LESS) and peak eccentric ground reaction force (GRF) assess athletes' injury risk. Purpose: To compare the injury risk of female athletes who have sustained serious musculoskeletal injury in the past four years, but who have been medically cleared to participate fully in intercollegiate athletics, to female athletes who have not sustained serious musculoskeletal injury in the past four years. Methods: Seventy-six Division III female athletes clustered into two groups, agility sport athletes (volleyball n = 20, soccer n = 24, basketball n = 8) and non-agility sport athletes (cross country n = 24), performed three box drop vertical jump (BDVJ) test trials onto a force platform from a 30cm box. All BDVJ trials were videotaped and the trial with the greatest vertical displacement was analyzed. LESS scores were calculated for each leg and the LESS injury risk classifications were determined. The FMS consisted of seven scored movement tests used to determine

a FMS injury risk classification. Participants completed a health history survey regarding serious musculoskeletal injuries occurring in the past four years. Statistical analysis: Independent t-tests compared mean peak eccentric GRF, FMS injury risk classification, and left and right lower extremity LESS injury risk classifications of the athletes with a history of serious injury to the non-injured athletes within both the agility sport group and non-agility sport group. Results: Within the non-agility sport group, only the left extremity LESS risk classification of previously injured athletes (M = 1.00, SD = 1.00) and non-injured athletes (M = 2.00, SD = 1.18) were significantly different [$t(22) = 2.25$, $p < .05$]. Non-significant differences were found in the agility sport group. Conclusion: Medically cleared athletes with a history of serious musculoskeletal injury are at no greater risk for injury than athletes that have not sustained an injury.

Maren E. Iverson, Tori M. Grootwassink, Alex M. Hanson, Colleen E. Bouchard (Donald Fischer, Exercise Science and Sport Study) A Comparison of Injury Risk Determined by Laboratory and Field Tests

College athletic programs commonly use laboratory and field tests to assess athletes' injury risk. Purpose: To determine the relationship between variables measured by three injury risk assessments: Landing Error Scoring System (LESS), vertical ground reaction force (GRFv), and Functional Movement Screen (FMS). Methods: Seventy-six Division III female athletes (basketball n = 8, soccer n = 25, cross-country n =23, and volleyball n = 20) performed three box drop vertical jump (BDVJ) trails from a 30cm box onto an AccuPower force platform. All BDVJ trials were videotaped; the trial with the greatest vertical displacement was analyzed. LESS scores were calculated for each leg from seventeen separately scored items from which LESS injury risk classification was determined for each leg (0 = low risk; 3 = high risk). The FMS consisted of seven movement tests that were analyzed and scored, and used to determine FMS injury risk classification (0 = low risk; 1 = high risk). Statistical Analysis: Bivariate correlations were used to examine the relationships between test variables. Results: Significant positive relationships were found between peak eccentric GRFv (M = 1813.8 SD = 798.78) and both right leg (M = 1.57 SD = 1.087) and left leg (M = 1.49 SD = 1.101) LESS injury risk classification [$r(76) = .318$, $p = .005$; $r(76) = .284$, $p = .013$]. A significant negative correlation was found between peak eccentric GRFv and FMS injury risk classification (M =.36 SD =.482) [$r(76) = -.229$, $p = .047$]. Non-significant correlations were found between FMS injury risk classification and both right leg and left leg LESS injury risk classifications [$r(76) = .018$, $p=.875$; $r(76) = .122$, $p = .294$].

Conclusion: LESS risk scores and peak eccentric GRFv are positively related and, therefore, may assess similar or related injury risk factors. FMS risk scores and peak eccentric GRFv are negatively related and, therefore, may assess distinctly different injury risk factors.

Katie J. Schwab, Abbie L. Palmer, Colleen E. Bouchard (Donald Fischer, Exercise Science and Sport Study) The effects of fatigue at the gastro-soleus complex on dynamic balance during a single-leg landing

Dynamic postural stability is believed to be important in minimizing risk of injury and optimizing performance. Researchers suggest fatigue has a negative impact on dynamic postural stability. Purpose: To examine the effects of local fatigue at the ankle joint on dynamic postural stability in collegiate female athletes. Methods: After consenting to participate in the study, nine collegiate female athletes (soccer n = 5; lacrosse n = 3; soccer and lacrosse n = 1) completed the test protocol in a non-fatigued and then fatigued state. The protocol consisted of a single maximum height countermovement jump test performed on a Just Jump mat to determine baseline maximum jump height. A single leg drop box landing off a 30 cm box, landing on the non-dominant leg on an AccuPower portable force platform, was held for three seconds. Athletes then performed double leg hops until local muscle fatigue, defined as a 33.3% decrease in maximum jump height compared to baseline, was induced. Immediately after reaching a fatigued state, athletes performed a second single leg drop box landing trial. The force platform recorded movement of the athlete's center of pressure (COP) in the medial-lateral, anterior-posterior, and vertical directions during landing. The COP scores were combined using the Dynamic Postural Stability Index (DPSI) to provide a composite dynamic postural stability score for each athlete in both the non-fatigued and fatigued condition. Statistical Analysis: A dependent t-test and an effect size measure were used to compare the non-fatigued and fatigued condition DPSI scores. Results: A non-significant difference between non-fatigued DPSI scores (M = 3.212, SD = 0.594) and fatigued DPSI scores (M = 3.13, SD = 0.533) was found [t(8)= .598, p > .05, d = 0.15]. Conclusion: Results of this study suggest that local fatigue at the gastro-soleus complex does not affect dynamic stability in collegiate female athletes.

Experiential Learning & Community Engagement

Mary N. Baumgard (Marah Jacobson-Schulte, Experiential Learning & Community Engagement) Anna Marie's Alliance: Marie and Robert Jackson Fellows Poster Presentation

The Marie and Robert Jackson Fellows Program seeks to involve CSB/SJU students in civic engagement and community building. In addition to a summer internship, students work year-long to promote these values on campus with Bennies and Johnnies. As part of my summer internship, Mary interned at Anna Marie's Alliance in St. Cloud, MN. Anna Marie's is a battered women shelter that aims to end the cycle of violence by helping promote healthy relationships. Anna Marie's works with schools, churches, and local organizations to instill these values in the community, in addition to providing a safe place for women and children to begin new lives. Mary served as a Women's Advocate and Criminal Justice Intervention intern while at Anna Marie's.

Theresa J. Farrell, Jacqueline M. Liska (Adia Zeman, Experiential Learning & Community Engagement) The Bonner Leader Mentor/Mentee Program

The presenters will be highlighting the Mentor/Mentee program facilitated by the Bonner Leader Program. The Bonner Leader Program is a civic engagement and social justice program that allows college students to combine their education with community engagement and philanthropy. The Mentor/Mentee program is a newly established aspect of the Bonner program that pairs up a new first-year Bonner Leader with a more experienced upperclassman in order to provide the mentee with guidance during his or her first year in the program. This program was established to help new Bonner Leaders navigate the confusions that come from working on off-campus sites and allow the different age groups to get to know each other. The mentor and mentee are expected to meet at least one a month one-on-one so they can discuss any concerns or issues that the mentee might have about the Bonner program, his or her community site, or his or her college experience in general. The Mentor/Mentee program is a great addition to Bonner - it allows the new and experienced Bonner Leaders to get to know one another and the program in a more complete way. The presenters will include all these aspects of the Mentor/Mentee Program and the Bonner Program in their presentation, and will include descriptions of their personal experiences as Mentees. For example, they will describe the monthly "coffee dates" that the Bonner Program funds as a way for mentors and mentees to get together. They will also describe how their experience in the Bonner Program has been improved by having Bonner Mentors from whom they can ask for guidance.

Stephen M. Gross (Marah Jacobson-Schulte, Experiential Learning & Community Engagement) FINNEGANS Here's to Doing Good

FINNEGANS is a beer company that donates 100% of its proceeds to local foodshelves. Ranging from sales and marketing to volunteer coordination and development, the poster will outline experiences as a Marie and Robert Jackson Fellow serving at FINNEGANS for the summer of 2013. Presenter will share how his experience developed his understanding of passion in work and the presence of entrepreneurial ventures that work to alleviate hunger and combat major societal issues.

Wenyu Heng (Marah Jacobson-Schulte, Experiential Learning & Community Engagement) College of Saint Benedict Marie and Robert Jackson Fellow

As a Jackson Fellow, Wenyu served with Jubilee USA Network, an alliance of churches, diverse faith communities, and labor, environmental, solidarity, and community organizations. The aim of this grassroots movement is to achieve the complete cancellation of debt owed by countries with high levels of human need, the cancellation of odious debt, and an end to the imposition of economic policies as a condition for debt relief. Intern aided Jubilee in its mission of international debt relief to fight poverty and injustice; organized and wrote grant proposals and reports; helped to prepare budget report; researched and published Jubilee's blog; educated readers on the European debt crisis; initiated and improved the donation tracking system recognizing recurring donors; and communicated effectively with donors to enhance relationships and garner contributions.

Galen R. Himrich (Marah Jacobson-Schulte, Experiential Learning & Community Engagement) Breaking Free - Human Trafficking

Learn from a CSB Marie and Robert Jackson Fellow about an internship at Breaking Free, an organization that works with survivors of sex trafficking in Saint Paul. Fellow focused on helping to film a documentary of the surivors, researching other organizations similar to Breaking Free in the US, and advocating for the women in the program.

Cullen T. McAnally, Tyler R. Heimerl (Adia Zeman, Experiential Learning & Community Engagement) Bonners in Action: Kennedy Kidstop

The Bonner Foundation, known for it's aim on community services, has many different sites where its leaders reach out to the community. This presentation will be focusing on Kennedy Kidstop, a site where the presenters serve, use this aim to work with the youth of the community as "Youth Guidance Counselors".

The Bonner Foundation is designed to transform not only the students who are directly supported by the program, but also the campus and community in which they serve and learn. At Kidstop, the Bonner Leaders act as role models and guidance for which the children use as an opportunity to discover their own abilities, talents, and leadership so that they may serve as well. In addition, as a Bonner Youth Guidance Counselor, the presentors have the opportunity to form relationships with the kids and their parents, and are able to make a difference in their lives.

Collin J. Motschke (Marah Jacobson-Schulte, Experiential Learning & Community Engagement) Fresh Food Facilitator: Marie and Robert Jackson Fellows Program

As a member of the 2012 College of Saint Benedict Marie and Robert Fellows Program, Collin served at The Minnesota Project, a St. Paul-based environmental nonprofit organization. Collin assisted with two of the organization's food-related initiatives: Fruits of the City and The Garden Gleaning Project. Each of these programs intends to redistribute fresh produce from community gardens and independent growers to local food shelves. Ultimately, each initiative aims is to provide fresh produce to underprivileged populations that lack access to healthy food. As a community organizer and neighborhood coordinator, Collin facilitated partnerships between produce growers and local food shelves, planted fruits and vegetables, monitored the status and ripeness of produce, educated gardeners and orchard owners about effective growing methods, and organized produce-gleaning events. The experience introduced Collin to the troubles and triumphs of the nonprofit world and enriched my understanding of urban environmentalism.

Margaret A. Peyton (Marah Jacobson-Schulte, Experiential Learning & Community Engagement) Jeremiah Program

The College of St. Benedict Marie & Robert Jackson Fellows Program mission is to "empower students with opportunities to serve the common good through community engagement, collective learning, and leadership and professional development." Poster presentation will highlight experiences and lessons learned during a Jackson Fellows internship at Jeremiah Program, a non-profit organization serving single mothers and their children. Jeremiah Program emphasizes holistic, two-generational

education and empowerment as a means to prevent single-mother families from falling into the cycle of poverty.

Rylee R. Pool, Melissa R. Goranowski, Dona R. Marthaler (Adia Zeman, Experiential Learning & Community Engagement) CSB/SJU Bonner Leader Program Exchange Retreat

The presenters will be focusing on their experience at their exchange retreat with Macalester and Augsburg Colleges. They will highlight why the retreat was held, what was done, the relationships and networks that were created, and how they will implement what they learned in their future work with the Bonner Organization. The ability to sharing ideas and build off of each other's unique perspectives and experiences pertaining to their Bonner service will be a focus of the presentation. The Bonner Leader Program focuses on social justice issues and community engagement. The College of Saint Benedict - Saint John's University, Macalester College, and Augsburg College are the three colleges in Minnesota out of over seventy schools in the nation who have a Bonner program.

Meagan V. Schrafft, Kathryn A. Cleary (Adia Zeman, Experiential Learning & Community Engagement) The Bonner Leader Program

The Bonner Leader Program gives students opportunities to serve the community by providing financial support through college. The Foundation was started by Corella and Bertram Bonner in 1989, and has since helped 75 schools across the nation. CSB/SJU joined the Bonner Network in 2007, and currently has 23 Bonner Leaders on campus. There are six common commitments Bonner Leaders engage in: Social Justice, Civic Engagement, Spiritual Exploration, Diversity, International Perspective, and Community Building. Using these commitments, Bonner Leaders serve all over the community, fulfilling the mission of the Foundation: “Through sustained partnerships with colleges and congregations, the Corella and Bertram F. Bonner Foundation seeks to improve the lives of individuals and communities by helping meet the basic needs of nutrition and educational opportunity.” Specifically, the presenters will discuss the history of the Foundation, as well as the history of the program at CSB/SJU. The presentation will also include information on the work Bonner Leaders do, and how this work reflects the Five E’s of Student Development; Expectation, Exploration, Experience, Example and Expertise.

Kathryn J. Smith, Katherine A. Maguire (Adia Zeman, Experiential Learning & Community Engagement) Bonner Leaders: 2013 Alternative Break Experiences

This poster will focus on two different Alternative Break Experiences; one to Kansas City to work with inner-city children at a childcare center, another to Utah to work at the Center for Persons with Disabilities and the Common Ground Outdoor Adventure Program. The Bonner Leader Program supported both of these students' trips. Bonner is a nationwide social justice and civic engagement program, which encourages the involvement of college students in service, both in their communities and throughout the world. Although these two ABE experiences were very different, the themes of social justice and leadership that Bonner prizes were common to both. This presentation will cover the differences between the trips, as well as the similarities as they relate to the values espoused by the Alternative Break Experience and Bonner programs.

Jamie L. Swanson (Adia Zeman, Experiential Learning & Community Engagement) Southside Boys & Girls Club: Learning Center

This poster will present the primary objectives of the Learning Center at the Southside Boys & Girls Club service site in St. Cloud, a site at which the presenter serves as a part of the Bonner Leader Program. It will detail programming and overview many activities planned specifically for the Learning Center. The work done in the Learning Center relates directly to Bonner through the aspect of social change working toward social justice. Many children who attend Boys & Girls Club come from varying racial, economic, and ethnic backgrounds and/or have varying mental and educational abilities. Our job is to treat each member with respect and provide them a safe and opportunistic place for learning to occur. One way we are able to do this is by providing activities that suit many ability levels.

Erin E. Wurzberger, Maria K. Anderson (Adia Zeman, Experiential Learning & Community Engagement) Bonner Workshops

The Bonner Leadership Program is a civic engagement group at the College of St. Benedict. Bonner students meet bimonthly and engage in social justice workshops and discussions. The poster will depict and describe a sampling of some of the Bonner workshops that the members have done including the Intercultural Development Inventory, Power workshop, and other various workshops that have been completed throughout the year. These workshops will reflect the six Bonner Common Commitments; community building, spiritual exploration,

diversity, international perspective, civic engagement, and social justice.

Internships

William P. Moore (Laura Hammond, Internships) A Summer Fellowship at Minnesota Public Radio

This poster presentation will provide an in depth description of my internship experience last summer at Minnesota Public Radio (MPR) in Saint Paul, the skills I learned, and how the Fellowship started me on a career in broadcasting and journalism.

Travis J. O'Connell (Laura Hammond, Internships) McGlynn's/O'Connell's Internship

This poster will discuss the Management-related things I've learned while completing my internship this Spring Semester with McGlynn's/O'Connell's.

Arianna Stotz, Katherine Nystrom, Yifei Huang, Alex Hanson (Laura Hammond, Internships) Mayo Innovation Scholars Program

The Mayo Innovation Scholars Program offers CSB/SJU students an innovative, interdisciplinary model for experiential learning through assessment of the scientific and market potential of an invention or product idea submitted by Mayo Clinic professionals. One of CSB/SJU's 2012-2013 teams will present a poster regarding their journey with this program.

Nutrition

Lauren A. Wojciechowski (Jayne Byrne, Nutrition) EFFECT OF A COMBINED FRUIT AND VEGETABLE JUICE PRODUCT VS. APPLE JUICE ON HS-CRP LEVELS IN COLLEGE-AGED STUDENTS.

Introduction: Fruit and vegetable intake is inversely correlated to serum levels of hs-CRP, a marker of inflammation. The effects of single foods such as red orange juice and carrot juice on hs-CRP levels have been analyzed; however fruit and vegetable juice combination has not been investigated. Juices provide a convenient way to increase fruit and vegetable intake.

Purpose: To investigate the effect of a blended juice product compared to a single ingredient fruit juice on serum hs-CRP levels in college-aged students.

Methods: Eleven subjects were recruited from among 190 students enrolled in an introductory nutrition course. Subjects were randomly assigned to two treatment groups. One group consumed 16 oz. of Pomegranate Blueberry V8 V-Fusion ®juice for 21 days (providing an additional 2 servings each of fruit and vegetables per day) and one group consumed 4.23 oz. Apple Juicy Juice ® (providing an additional 1 serving of fruit per day) for 21 days. The two treatment groups did not consume equal amounts of juice in order to investigate if consuming more juice would have a more pronounced effect on hs-CRP levels. Three day dietary intake records for each subject were analyzed to evaluate average fruit and vegetable consumption. If baseline fruit and vegetable consumption was significantly different between group, results would have to be adjusted since fruit and vegetable intake correlates with hs-CRP levels. All subjects were non-smokers and did not regularly use anti-inflammatory drugs. Whole blood samples to analyze hs-CRP levels were drawn on day 1 and 21. A Cholestech LDX was used for sample analysis.

Results: Initial hs-CRP values were 2.21±2.05 mg/L for the V8 V-Fusion® group and 0.85 ±0.49 mg/L for the Juicy Juice® group. Final hs-CRP values were 1.60 ±2.13 mg/L for the V8 V-Fusion® group and 1.36 ±1.60 mg/L for the Juicy Juice® group. Baseline intakes for fruits (cups) was: V8 V-Fusion® group (1.95±1.07) and Juicy Juice® (1.39 ±0.27). Baseline intakes for vegetables (cups) was: V8 V-Fusion® group (1.95±0.48) and Juicy Juice® (1.60±0.55). There was no significant difference in baseline fruit and vegetable consumption, initial hs-CRP or final hs-CRP between groups. Each treatment group did not have a significant change from initial to final hs-CRP levels. However the V8 V-Fusion® group on average did experience a decline in hs-CRP levels and the Juicy Juice® group on average did experience a rise in hs-CRP levels.

Conclusion: Despite V8 V-Fusion® providing an additional 2 servings each of fruits and vegetables per day, hs-CRP levels were

not significantly lowered. The Juicy Juice® group did not significantly lower their hs-CRP levels by consuming the treatment which provided an additional serving of fruit per day. The results suggest combined fruit and vegetable juice may have a positive effect on lowering hs-CRP levels, however a larger sample size is needed to establish a clear trend.

Gorecki Center Fireside & Lobby, CSB

Center for Global Education

Lindsey Brull, Kyra Knoff, Lichuan 'Tony' Liang, Tu Tran, Jenna Franklin, Mary Weber, Joseph Harren (Joe Rogers, Center for Global Education)
2012 Summer Global Internship Program

The Summer Global Internship Program, supported by the Center for Global Education (CGE), provides international experiential learning opportunities and fellowships for CSB/SJU students. The objectives of the program are for students to 1) gain international experience that advances their academic and professional goals 2) acquire and reinforce global perspectives in their field and in general and 3) share those experiences and perspectives with the CSB/SJU community.

The 2012 program placed student interns in China and Hong Kong, Vietnam, and Bosnia and Herzegovina. Their posters include a comparison of general business practices in China and the United States (Mary Weber), an overview Hong-Kong's history/culture (Tu Tran) and investment banking industry (Lichuan 'Tony' Liang), as well as a profile of a Shanghai business with Minnesota connections (Joe Harren).

An overview of post-conflict Bosnia and Herzegovina will be the subject of one poster (Lindsey Brull). Another will feature the Tunnel Museum, which is dedicated to the small underground passage constructed during the Siege of Sarajevo (1992-1996) that served as the only land link between the city and the outside world for nearly three years (Jenna Franklin & Kyra Knoff).

Gorecki Center Fireside Lobby, CSB

Office of Education Abroad

Colleen Kennedy, Emily Hayne, Sue Yang, Mao Vue, Pisenny Xiong, Lavy Lee, Kia Her, Song Her, Dan Cahill, Caitlin Miller, Madeline O'Brien (Joy Ruis, Office of Education Abroad) Office for Education Abroad Poster Showcase

The Office for Education Abroad (OEA) provides high quality academic opportunities abroad to facilitate global and intercultural learning for the CSB/SJU community. Every year over 350 students participate on one of the 20 semester-long study abroad programs.

On any of our study abroad programs, all participants should be able to demonstrate:

- knowledge of the host society
- recognition of cultural values and culturally appropriate behaviors
- willingness to independently seek out and learn from new intercultural situations
- deepened awareness of their own culture and its role in shaping themselves
- integration of their education abroad experience with their CSB|SJU liberal arts experience, with their future vocation, and into lifelong patterns of learning.

Using these learning goals as a guide, students from the Chile, China, Galway-Ireland, and Japan are showcasing one or more aspects of their experience a poster presentation. Please join us for this showcase.

Henrita Academic Building 107, CSB

Modern & Classical Languages

Laura A. Becker (Karen Erickson, Modern & Classical Languages) La Nouvelle Vague et le jeune cinema français

Explore the inspiration and characteristics of French cinema in the 50s and 90s; periods renowned for their innovation and realism. *Note, both the poster and presenter are bilingual- French and English.

Elizabeth J. Ringle (Karen Erickson, Modern & Classical Languages) The Music of Bruno Coulais

A poster project detailing the life and in particular the music of Bruno Coulais and its effect on film music. He is a well-known french film composer.

Henrita Academic Building 121, CSB

Hispanic Studies

Mary E. Sweet, Jamie R. Korin, Kelly K. Bechtold, Madeline R. Hansen, Rhiannon M. LeGarde (Elena Sanchez Mora, Hispanic Studies) RE-EVALUATION AND PRESERVATION OF INDIGENOUS COMMUNITIES' ANCESTRAL TRADITIONS IN CENTRAL AND SOUTH AMERICAN SOCIETIES

The papers in this group poster session center on diverse aspects of the lives of indigenous communities located in rural areas of Northwestern and Southeastern Mexico, Guatemala, Bolivia, Chile and Andean Perú. Their common thread is that they all focus on these communities' efforts to preserve cultural traditions rooted in co-existence with their natural surroundings, while enclosed by urban modern Latin American societies. The specific topics examined include resistance running, oral traditions, transmission of ancestral knowledge, water conservation and maternal practices.

Peter Engel Science Center 212, SJU

Computer Science

Lucy K. Colosimo (Lynn Ziegler, Computer Science) Ecosystem Similation

Computer modeling is a useful tool for solving problems that can be reduced to mathematical equations. In this project, we took a situation, translated it into equations and then modeled that equation using the computer coding program python. The situation we modeled was the relationship between three species in an ecosystem. The three species we chose were foxes, rabbits, and cabbage. The foxes eat rabbits, and the rabbits eat cabbage. Thus, the computer model must show that when there are more foxes, the rabbit population decreases which then in turn causes the cabbage population to increase. We also incorporated birth rates into our computer program. Every day there is a set rate of foxes, rabbits and cabbages that die naturally, are born and the number of the lesser organism they must eat to survive. We attempted to find the right balance of numbers to get a model that was near equilibrium.
That means each organism fluctuates in a sinusoidal wave, but does not get too big or die out.

Amanda S. Luby (Lynn Ziegler, Computer Science) Gauss-Legendre Quadrature

Gauss-Legendre quadrature is a very accurate form of numerical integration which uses a system of points and weights to estimate integrals of functions without singularities. For this project, we created a program that performed Gauss-Legendre quadrature using known Legendre polynomial weights and zeros to estimate the integral of any non-singular function over any interval. We then attempted to recreate the Gauss-Legendre procedure using a simple weight function (x^2). Although we were unable to find the weights of these polynomials past the 3rd degree (and so were unable to test our process) we were able to find the polynomials and their zeros, up to the fourth degree.

Pa W. Vang (Lynn Ziegler, Computer Science) Interpolation

Interpolation is the idea given a set of data points, a polynomial can be found that goes through those points. In other words, given (x1, y1), (x2, y2), … (xn, yn), there is a polynomial that has the property where f(x1) = y1, f(x2) = y2, and so on. The purpose of our project is to address this concept by writing a program that computes the interpolating polynomial given a set of points. We will be picking roughly 100 points (ordered pairs) from known functions such as f(x)=sin(x) and f(x)=ex. Having written our program, we will feed in a list of these ordered pairs thereby generating an interpolating polynomial. After computing the polynomial, we are to determine whether it shows a "good approximation" of f(x). We will approximate by using three different norms. First norm will integrate the absolute value of (P(x)-f(x)) from a to b. Second norm will take the square root of the integral of the absolute value of (P(x)-f(x))2 from a to b. The third norm will take the max of the absolute value of (P(x)-f(x)) where $a \leq x \leq b$. If the result of these computations is small, then the interpolating polynomial is considered a good approximation of the original function (f(x)).

Kelsey A. Weiers (Lynn Ziegler, Computer Science) Color Constancy Simulation

Color constancy is defined as the ability of the brain to correctly assign a constant color to an object under various projections of light. For example, grass always looks green to the human eye whether it is dawn, dusk, or midday despite the changing tint of the projected light from the sun. In our project, we attempt to simulate the ability of the brain to distinguish color under various colors of light. We wrote and used a program in MATLAB that

utilizes the process of averaging to determine the original color of the image. Our program takes in a colored image under three different light projections (blue, red, and yellow) and predicts what the same image looks like under white light conditions.

Mathematics

Alyssa C. Anderson (Kris Nairn, Mathematics) Classification of Double Stars Using the Independence Partition Number

This graph theory research is an ongoing classification of Double Stars and similar-structured graphs using the Independence Partition Number, βPRT(G), where βPRT(G) is defined to be βPRT(G) = min{β(G, S) : S is a proper partition of V(G)}. β(G,S) is defined to be the size of the maximum independent vertex set size of G given a proper partition S of V(G). In this presentation, I will show that the Independence Partition Number may be found in any Double Star using a 3-coloring. We will also investigate and explain a formula for calculating the Independence Partition Number for any Double Star.

Peter Engel Science Center PENGL 212, SJU

Physics

Kathryn A. Barclay (Jim Crumley, Physics) The Effect of Weather Conditions on the Efficiency of Photovoltaic Cells

Siliken, the manufacturer of the solar panels we have in the St. John's Solar Farm, claims no more than a 3% efficiency decrease in the first year and a decrease of 0.7% in the next 25 years. Our project aimed to study the decrease in efficiency of the St. John's panels over the last three years. We examined how certain conditions such irradiance, temperature, and humidity affected the efficiency. We built a regression function to model how all three interact with efficiency. Our results showed a negligible change in efficiency from year to year, however, we were able to demonstrate that St. John's solar panels follow expected trends with temperature, irradiance, and humidity versus efficiency.

Alexandra M. Brancale (Jim Crumley, Physics) Carbon Footprint Reduction at the College of Saint Benedict

The College of Saint Benedict takes pride in the attention given to reducing our carbon footprint as the demand for cleaner energy increases. In order to see what more the college could do in order to decrease the current carbon footprint, we analyzed CSB's most recent Greenhouse Gas Inventory. We broke down the inputs and discovered what changes would decrease the carbon footprint the

most. Purchased electricity makes the biggest contribution to our footprint. Since wind power is typically a clean and efficient source of renewable energy, we analyzed the possibility of using wind power for CSB's electricity needs. This project focused on some of the simple physics behind wind power and the logistics of building one or two turbines on the College of Saint Benedict's property.

Emily A. Furst (Jim Crumley, Physics) Double Pendulum

A poster examining the chaos in a double pendulum using both physical observations and mathematical modeling. With a physical double pendulum, we filmed and observed the behavior of the pendulum with different large initial angles. Then, using given equations, we modeled the behavior of a double pendulum using Mathematica. Using these equations and Mathematica, we were able to plot behavior for large and small initial angles. We examined these plots to find any normal behaviors that might be present. Then, we looked at our videos of the physical pendulum to determine how similar the mathematical model was to the physical pendulum. From these observations, we were able to determine that the behavior of a double pendulum is predominately chaotic. Finally, using the physical double pendulum, we experimented with large initial velocity as opposed to no initial velocity as in my other tests. From this, we concluded that large initial velocities also produced highly chaotic behavior.

Elizabeth M. Hansen (Jim Crumley, Physics) Gamma-Ray Burst Detection

Gamma-ray bursts, most commonly caused by supernovas or merging neutron stars, are brief periods of high-energy radiation that appear randomly in the sky. Known as the brightest electromagnetic events to occur in the universe, gamma-ray bursts can last anywhere from under a second to a few hours. Current gamma-ray burst detectors are able to detect the length of these gamma-ray bursts, but not where they occur.

This project looks at one possible way of detecting the location of gamma-ray bursts by use of triangulation. By using spacecrafts that detect the start and end time of gamma ray bursts, approximations are made of where the gamma-ray bursts occurred. Each pair of spacecrafts can create a circle in the sky where the gamma-ray burst potentially happened. By looking at the overlap of the circles and possible uncertainties, the area in which the gamma-ray burst occurred can be determined down to a

single angle. We applied this method to sample data in order to determine approximate gamma-ray burst locations.

Kathryn R. Jacobson (Jim Crumley, Physics) Mass Extinction - Comets

Comets are celestial objects consisting of a dense nucleus of ice and dust that release gas or dust tails as they travel near the sun. Comets travel orbits throughout space. The orbits that comets take sometimes end with them colliding with planets and their moons. If an impact is large enough, a collision between Earth and a comet could cause a mass extinction. Comets can differ in size from microscopic pebbles to enormous bodies measuring 1 million miles in diameter. In order for a comet to cause such a catastrophic event on Earth, the comet would need to be 6 km or larger in diameter. This project was designed to calculate the probability of a comet colliding with Earth, causing mass extinction within the next 100 years.

Clare M. Johnston (Jim Crumley, Physics) Eco-Simulation

Population dynamics can be modeled using mathematical equations, and then these results can be displayed graphically. Using the computer-programming interface Python, we created a program based on these population dynamics equations to model potential population cycles of cabbage, rabbits, and foxes. Within the simplified ecosystem, foxes eat rabbits, and rabbits eat cabbage. Given the inputs of initial populations, birthrates, and death rates, we attempted to model different possible scenarios that could be found in a natural environment by varying the initial numbers. We explored boom and bust cycles, equilibrium situations, and also tried to find other interesting results.

Richard J. Kirchner (Jim Crumley, Physics) Electric Shock Prevention for Operators of an Elevated Work Platform

According to The Occupational Safety and Health Administration (OSHA), 350 electrical related fatalities occur each year in the United States for workers in electrical related industries. This amounts to roughly one death per day. A large amount of these

deaths occur around high voltage power supply lines and this study focused on decreasing that number. Access to these high voltage supply lines is most commonly available through an elevated work platform. Elevated work platforms, or bucket trucks, allow electrical workers to quickly access their work and perform rapid repairs. These work platforms also concede a risk of fatal electric shock to the operator. This study evaluated the process by which an elevated platform works to place an operator in close contact with high voltage power lines. A small scale representation of an elevated work platform arm was created to simulate the motion of a full size elevated work platform. An Ardunio Uno microcontroller board, programmed in the C language, was used to control the platform motion. This motion was achieved with a set of four SPDT switches which controlled direction of four direct current motors attached to the platform. The C code was developed further to implement an electric shock prevention feature. Length of motor run time and spin direction were recorded by the program. The program continually checks for a deadly amount of voltage in the operator. Once a deadly amount of voltage is detected, the program terminates all directional communication received by the operator and performs correct maneuvers to return the operator to a safe position where no deadly amount of voltage is present. Further research for this study would include full scale implementation of such a program for an elevated work platform which carries human operators. More testing and operator friendly steps should be taken to improve the utilization of such a program.

Kaela H. Kopp (Jim Crumley, Physics) Probability of Mass Extinction by Asteroid

Asteroids are classified in groups by many variables including size, material, and distance from Earth. Near Earth Asteroids are asteroids that are within 10-14 million miles from the sun. Out of these, only asteroids with a diameter of at least 150 meters at a distance of 4.6 million miles from Earth are considered to be Potentially Hazardous Objects (PHO). In this project we examined the probability of mass destruction/global damage from an asteroid strike. With a current number of PHO and an estimated rate of global damaging asteroid strikes in the past, we calculated the probability of future mass extinctions from an asteroid. This probability could vary due to the possibility of asteroids being thrown out of an asteroid belt into a PHO orbit, as well as a previously calculated PHO being thrown out of its current orbit, eliminating its chance of striking Earth.

Sophia M. Korman (Jim Crumley, Physics) The Probability of Mass Extinction Caused by Supernovas

Supernovas are stellar explosions that have the capability to wipe out a species by the significant amount of radiation they emit. They can irradiate life directly and also have devastating effects on the atmosphere, such as burning off the ozone layer. Although it is an unconventional theory, supernovas have been proposed as a cause of mass extinctions in Earth's history. In order to determine the likelihood of such a catastrophic event, my partner and calculated how close an event of a given size would have to be to cause mass extinction. Our analysis involved determining the probabilities of several conditions ranging from the size of various stars to the lifespan of each type to their distance from Earth. We discovered that there is very little to no possibility that a supernova will cause mass extinction during any given year.

Sarah K. Lange (Jim Crumley, Physics) Tsunami Mass Extinction

Many different causes have been proposed in what sources mass extinction events. Tsunamis as result of earthquakes are among these. Tsunamis are a series of waves caused by the displacement of a large body of water. In this project, we calculated the probability that earthquake generated tsunamis would cause mass extinction. Our calculations were based on a power-law relationship in which the magnitude increases as the intensity of the stimulus increases and the Poisson distribution in which the occurrence of an event is relative and constant with time. We found that as time, the number of occurrences each year, and the rate parameter increased, so did the probability of mass extinction due to earthquake generated tsunamis.

Melania R. Meyer (Jim Crumley, Physics) Gamma-Ray Bursts

Gamma-Ray Bursts are explosions of high-energy light waves that come from stars that have run out of fuel and collapse. This causes energy to be shot out of the opposite poles of the star, resulting in the Gamma-Ray Bursts. During this project, we showed how detectors are used to determine the location of the Gamma-Ray Burst. This location is found by using the time the Gamma-Ray Burst arrives at different spacecraft. Since the Gamma-Ray Burst signal arrives at different times at these locations, we are able to use triangulation form a circle in the sky of possible directions the Gamma-Ray Burst could have originated. In our calculations, we used angles in the sky and the distance from the center of the earth to find the circle in the sky. When given three spherical coordinates, we were able to find

where our circles on the sky intersected and therefore we had a good estimation of where the Gamma-Ray Burst had originated.

Kelsey M. Rollag (Jim Crumley, Physics) Double Pendulum Behavior

This project examines the behavior of a double pendulum. We conducted the project using a variety of initial conditions for the pendulum. The resultant behavior depended on the different initial angles of each piece of the double pendulum. We observed this behavior physically and then compared the motion and angular velocities of the pendulum to mathematical models. Using modelling equations in a mathematical software We could graphically display the motion of the double pendulum. This represented the expected behavior. Final analysis compared the observed behavior to the theoretical expectations. We found that the mathematical model agreed with the physical observations. Thus although the motion of a double pendulum is very chaotic it can be accurately predicted using proper mathematical models.

Erynn J. Schroeder (Jim Crumley, Physics) Mass Extinction by Gamma Ray Burst

Gamma-Ray Bursts are astronomical events, such as a dense star collapsing in on itself, that emit high-energy light waves. These waves can damage the Earth's ozone layer and cause mass extinction if pointed toward the Earth. The probability of this occurring is low, though these bursts can be seen throughout the galaxy every day. GRB's can lead
to an ice age because of the depletion of the Earth's ozone layer. In this project, we calculated the probability of GRB's causing mass extinction on the Earth. This probability depends on the distance to the GRB and the direction they point. The dangerous rays only come out a small cone-shaped beam from each side of the star. We found that events that could be dangerous occur approximately once every 170 million years.

Kathleen K. Talbot (Jim Crumley, Physics) Arduino Piano

Arduino microprocessors are used for open-source electronics prototyping. The Arduino board can receive inputs from a variety of sensors, such as touch, buttons, and sound, as well as output to its surrounding environment using lights, motors, or even a speaker. For our project we built an Arduino piano. It receives touch input from a user (in the form of a piano), and in return, outputs the note corresponding to the key. Our project is based on examples of programs for touch sensors and sound outputs.

Hamrawit G. Tebeka (Jim Crumley, Physics) Lego Robots

Our project was on how to manipulate Lego robots and make them follow a specific path using various features of the robot such as the light-sensor. The type of paths varied from simple shapes like sqaures and triangles to more complicated zig-zag paths. The software that allowed me to do this is installed on the robots. By connecting a robot to a computer with the software, we were able to change ways in which the robot can perform the given task. When to travel straight, for how long, when to turn right or left, to what extent it should make the turn (in degrees, revolutions, seconds, etc.) and specification of the intensity of light that the robot should respond to are more specific examples of what I had to work on. Since it is difficult to know the exact numbers right away, we used a trial and error method to observe where my robot wasn't doing what we wanted it to do. We faced technical problems with our robot due to weak batteries but I was able to replace it with another robot and continue with the project. After plugging in different numbers and observing my robot we were able to make it follow the paths that it was supposed to follow.

Jenna M. Vogel (Jim Crumley, Physics) Comparison of Solar and Wind Energy Availability Patterns to Energy Consumption Patterns

This project compares the availability of wind and solar energy to times of the year in which energy is most needed. We used national data on wind and solar energy production and consumption from the U.S. Energy Information Administration due to the limited availability of consistent local data.

Through our research, we found that wind and solar energy availability had a largely inverse relationship to energy consumption. Wind generation peaked at times of the year when energy needs were lower and dropped at times of the year when energy consumption was at its highest. Solar energy generation demonstrated fluctuations of alignment with energy consumption throughout the year. While solar energy generation peaked in the summer months when energy consumption was high, solar energy generation was at its lowest during the winter months when energy consumption was also high.

Alyssa M. Whitesell (Jim Crumley, Physics) Super Volcanoes

There exists many possibilities for the end of the human race as we know it. One of these possibilities is the ever present treat of a super volcano. Only seven are known to exist in the world, but

their potential danger is much greater. This project calculated the possibility of mass extinction due to a super volcano. It looks at the ever growing chance of a super volcanic explosion, and also that if Yellowstone was to erupt how much of the United States would be affect. The result is the calculated probability that an eruption will occur during the next calendar year. The probability we came up with was extremely close to the probability that the rest of the world came up with. The probability was quite small approximately 0.00014% for Yellowstone, the main super volcano we looked at.

Quadrangle 353, SJU

English

Matt J. Callahan, Brittany C. Basden, Kimberly M. Bogerding, Daniel J. Cahil, Angela M. Dols, Joseph J. Laue, Ryan D. Longley, Brady T. O'Brien, Nikki S. Orth, Joseph W. Pekarna, Nicole M. Rechtzigel, Jeremy P. Robak, Cathryn M. Sehnert, Mark T. Steingraeber, Jessica R. Studniski, Maria L. Trenda, Lindsey A. Wilson (Mathew Callahan, English) This We Believe

As part of our "This We Believe" Scholarship and Creativity Day session, we will read "This I Believe" essays, which we have written and revised during the past semester in Matt Callahan's Writing Essays course. "This I Believe" essays are creative nonfiction prose pieces limited to no more than 500 words. The essays range across the spectrum of beliefs from the philosophical ("I believe in Justice") to the whimsical ("I believe in cream cheese"), but they are all personal and, therefore, hopefully meaningful to the audience.

Quadrangle 360, SJU

English

Emily A. Boeckmann (Ozzie Mayers, English) The Prevalence of Sexism in Regulated and Non-Regulated Language

I will be presenting my paper on how sexism continues to hold a position in the English language whether we realize it or not. By using examples of our everyday speech, I will demonstrate how numerous commonalities of the English language aid in perpetuating sexism and explore the similar patterns between non-regulated (slang) and regulated language.

Hannah M. Miller (Ozzie Mayers, English) "We" Talk Among Couples Dealing with Chronic Illness

I will be presenting a research project that I produced for an introduction to linguistics course, taught by Professor Mayers, in the spring of 2012. For my project, I was interested in learning about the ways that linguists study the verbal interaction between couples. My initial investigation lead me to several interesting articles about the ways that couples facing chronic illness speak to each other and the way these interactions impact their relationship and their health. I knew that many couples in the US will at one point face a chronic illness in their relationship and I wanted to discover if their were linguistic strategies to help coop with chronic illness. Thus, I decided to focus my project on the use of "we" or plural pronouns verses the use of "I" or singular pronouns among couples facing chronic illness.

Quadrangle 365, SJU

English

Daniel A. Flesher (Christina Shouse Tourino, English) Absalom, Absalom! 's Thomas Sutpen: Statistical Anomaly or Cosmic Irony?

Throughout Thomas Sutpen's life, he attempts to build a southern dynasty. However, despite his best efforts, he fails as a result of several statistical improbabilities. By calculating the odds of each event, one can see just how unlikely Sutpen's failure is. Thus, one can argue that Sutpen's fall is a result of cosmic irony rather than simple bad luck.

Quadrangle Alumni Lounge, SJU

English

Katherine M. Chambers (Chris Bolin, English) Creative Cloud: Creative Writing and Experiential Learning

The project will detail the Creative Cloud writing program in Saint Cloud, it's transition into an AmeriCorp program. It will also include information about my internship/capstone for Chris Bolin and teaching Poetry and Fiction to fourth and fifth grade classes at Discovery School in Saint Cloud.

Mathematics

Hannah M. Anderson, Samantha J. Keller (Robert Hesse, Mathematics) Pythagorean Theorum

We would like to develop a lesson plan that allows gifted and talented eighth grade students to prove why a certain geometric formula works. Specifically, we would like to work with the Pythagorean theorem. We want students to go beyond the simple memorization of the equation and understand WHY it works. At the beginning of the lesson, we will introduce the idea of area, assuming that they already have learned how to find the area of a certain figure. We will give the students examples and practice problems of right triangles that all follow the Pythagorean theorem. Students will try to create a general equation on their own. From here, we will conclude by proving how the equation works. At the end, they will summarize what the equation is, when it should be used, and why it works. We (Hannah and Sammi) will display a final result example at the poster display on SCD.

Brianna Blatzheim, Abby Lundeen (Bob Hesse, Mathematics) 2nd Grade Geometry

Information involving a one week unit of lesson plans. This unit addresses the Second Grade Minnesota state standard 2.3.1.2 - Identify and name basic two- and three-dimensional shapes, such as squares, circles, triangles, rectangles, trapezoids, hexagons, cubes, rectangular prisms, cones, cylinders and spheres.

Amanda K. Dvorak, Jenna A. Bosch (Robert Hesse, Mathematics) 4th grade tesselations activity

For our geometry project, we want to do an enrichment activity for a group of gifted students on the topic of tessellations for 4th grade. This activity would be an extension of the MN benchmark math strands about classifying and sketching polygons and translations/rotations/reflections. Since we have learned about tessellations (in Fundamentals of Math II), including Escher's tessellations, students will be challenged to create their own tessellation with complicated shapes or pictures (not just simple polygons).

Stephanie M. Loecken, Caylee J. Haus (Robert Hesse, Mathematics) Going Above, Below, and All-Around

We will give examples of ways to include students of all levels in projects.

Laura M. Meyer (Robert Hesse, Mathematics) Polyhedra

The project focuses on polyhedra and includes a proposed outline of how to teach it in a week to elementary students.

Zach Meyer (Bob Hesse, Mathematics) Enrichment for Advanced Students

This activity will be for a group of advanced-level 2nd graders. It will be a lesson to explore 2D shapes through tessellations. In this activity, students will get a chance to make their own tessellations through an art project. Students will be able to recognize and build tessellations of their own. Students will first create tessellations with 1 type of shape. They will then proceed to create tessellations with 2 types of shapes. For students who have time or who are able, they will create tessellations with 3 types of shapes. This will all be done using pre-cut colored shapes made out of peel-back foam on paper. At the end, students will be able to have a personal, homemade tessellation that they can either take home with them or display around the room.

Katie M. Monahan, Ali A. Hanus (Robert Hesse, Mathematics) Tessellation

Our math lesson is for elementary students that excel in math. Our lesson involves students connecting abstract math principles to the real world using tessellation.

Holly A. Peters, Val Kloeckl (Robert Hesse, Mathematics) Math Geometry Project

We are creating a geometry curriculum for one week for elementary education.

Erin Quigley, Regina Joyce (Robert Hesse, Mathematics) Geometry in Real Life

For an Elementary lesson plan that could apply to multiple levels of intelligence, naming everyday objects is a good start to recognizing math in real life. For this project, it is aimed for students at about the 2nd grade level. Students will think of a place where they like to spend time, such as the playground, their room, other rooms in their house, etc. Students draw this special space on a large sheet of paper. Students will now name the objects in the space, but with a special twist. In this project, we are pretending that things in real life are all named after geometry! Students will rename objects in their drawing with its geometric shape, and anything else they wish to include. For example, Sally draws a picture of her favorite playground at a nearby park.

Instead of calling the object a slide, she can call it the slippery rectangle, or the firefighter's pole the cylinder slide. For students who may be at a lower ability level, teachers will help think of a place in school to draw, and ask them to name 3 items. For students at a normal ability level, they will label approximately 6 items. For students at a high ability level, they will also name 6 items, and have the option to make 1 or more items from their drawing out of construction paper for a '3D' affect. This project will help students build their creativity and art skill, and bring what they learn in the math curriculum to objects they encounter on a daily basis. This project is designed to help students bring light to a subject that is commonly misperceived as unenjoyable.

Jon T. Radel, Zach Lanners (Robert Hesse, Mathematics) Geometry Project for 4th graders

My partner and I are going to introduce the topic of polyhedrals to a 4th grade class. We will have the class break up into groups of 2 or 3 and pick a type of polyhedral to design. They will have to construct it and present to the class how many edges, faces, and vertices their polyhedral has. After each group presents their polyhedral, we will have them hang them up on the walls around the school so the whole school can see each polyhedral.

Alyssa C. Timmerman (Robert Hesse, Mathematics) 2-D and 3-D Geometrical Shapes for Kindergarten

Show 2-D shapes and remind students what each of them are. Then show how the different shapes can be made into 3-D shapes. (Ex. Squares into a cube) Then show/teach the students about edges, faces and vertices. I plan to use actual 2-D and 3-D models to demonstrate these ideas.

Emily A. Watson, Leah M. St. Ores, Emily A. Watson, Leah M. St. Ores (Bob Hesse, Mathematics) Teaching Three-Dimensional Shapes to Kindergartners

A unit plan (ten days of lessons) teaching kindergarten students how to classify and make certain three-dimensional shapes. The unit teaches these objectives through hands-on activities, such as building three-dimensional shapes, classifying three-dimensional shapes in the classroom, and looking for patterns using Euler's formula.

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Psychology

Elizabeth Bergner, Tricia Engen, Katelynn Strelow (Robert Kachelski, Psychology) The Effect of Positive and Negative Pictures on the Processing of Emotion-Related Words

> The purpose of our research was to determine whether or not people are able to process emotion-related words faster if they have recently seen pictures designed to prime those same emotions. The participants either saw negative or positive pictures and then rated each picture on several characteristics and answered questions about what was represented in the picture. After completing the picture portion of the experiment, all participants completed a lexical decision task to measure their reaction times when processing words. In a lexical decision task, participants are given both real words and nonwords, and they have to say whether each item is a real word or not as fast as they can. We included both negative and positive emotion words in our lexical decision task to see if participants responded faster to the words that were consistent with the picture condition they were in (positive or negative). We hypothesized that priming participants with negative or positive pictures would lead them to have faster reaction times to words related to the emotion with which they were primed.

Kayla S. Bolland (Rodger Narloch, Psychology) The Effect of the Number of Choice Options on Choice Satisfaction and Decision Time

> This study sought to find a mean difference in the satisfaction and amount of time it takes to make a choice depending upon the amount of options presented to a person. Unlike in past research that presented options that were clear to the participants, the participants in this study (N = 93) chose from 30, 6, or 2 boxes that were wrapped up to look like Christmas presents. Due to the mystery of the content of each present, we were able to look purely at the effect of the amount of choice on satisfaction and decision time whereas other studies needed to take into account the inherent preferences of the participants when interpreting their results. While we found that there was a no significant mean difference in decision time across amount of options, there was greater satisfaction for the 2-option condition than the 6-option condition, which was higher than the 30-option condition. This indicates that people are more satisfied with their choices when there are fewer options.

Claire E. Cunningham, Maria L. Trenda, Michelle E. Loye (Robert Kachelski, Psychology) Gender Stereotype Threat and Task Performance

Stereotype threat occurs when people are reminded about a negative stereotype regarding a group to which they belong, and they become worried that others will evaluate their performance using the negative stereotype or that, if they don't do well on a task, their performance will perpetuate the negative stereotype. This stereotype threat may produce anxiety that actually impairs performance on the task. A number of studies have shown the effects of stereotype threat on women, especially on tests of math abilities, for which there is a strong gender stereotype in American society. The purpose of our research was to investigate gender differences in stereotype threat using a task that does not have a strong gender stereotype, solving anagrams. Using this task allowed us to determine whether stereotype threat requires that participants be aware of the stereotype before the experiment, or simply for participants to be told that their gender does not do as well on the task. To test this, we gave an anagram-solving task to both men and women. Each participant was given a list of 100 five-letter scrambled words (anagrams) and ten minutes to solve as many as they could. There were control groups of men and women who performed the task under normal instructions. There were also experimental groups of men and women who were told, as part of the instructions, that previous research had shown that their gender generally performs worse on this type of test. We compared the average number of solved anagrams for each group to determine whether participants were affected by gender stereotype threats.

Paige R. Espelien, Michelle C. Howe, Craig B. Gemmill (Pam Bacon, Psychology) Perceived Reputation at CSB|SJU in 2005 as Compared to Now.

A study conducted in 2005 found that both CSB and SJU students perceived that SJU had a stronger reputation than CSB. We conducted a replication study in 2013 to see if CSB students' and SJU students' perceptions of the schools has changed.

Abby E. Hansen, Sarah K. Deutz, Taylor L. Pederson (Robert Kachelski, Psychology) Establishing Rapport to Increase Compliance

The purpose of our experiment was to test whether compliance with a request could be increased by establishing rapport during a brief interaction between two individuals who had no pre-existing relationship. In order to test this idea, we created two groups of participants. The participants in one group were interviewed by a researcher they do not know about their preferred methods for communicating with friends, family and classmates. The interview itself was designed to establish rapport between the

researcher and the participant. The participants in the other group answered the same questions through a written survey and therefore did not establish rapport by interacting with the researcher. Compliance was measured by having each participant respond to a request for additional help with an unrelated research project. We predicted that those who had established rapport with the researcher via the interview would be more likely to comply with the request.

Jennifer A. Keller (Linda Tennison, Psychology) The effect of trait mindfulness on emotional reaction

This study will be examining the relationship between mindfulness as a trait and reaction to emotional visual stimuli as measured by heart rate variation. It is hypothesized that those who are less mindful, as measured by the Kentucky Inventory of Mindfulness Skills (Bauer, Smith, & Allen, 2004) will have greater reductions in HRV when exposed to emotional stimuli, particularly those of a negative context, than those who are more mindful. Participants in this experiment first filled out the mindfulness measure and were then set up with the Polar Watch RS800CX, which measured their heart rate variation during the next part of the experiment. Participants then viewed 60 affective images, 20 positive, 20 negative, and 20 neutral, each of the 3 groups in a randomized order, and were asked to rate their emotional reaction to each image on a scale of 1 to 7, 1 being very negative and 7 being every positive. The participants' heart rate variations for each stimuli group (negative, positive, neutral) were then measured to see how they correlated to their scores on the mindfulness measure.

Eun Ah Kim (Janet Tilstra, Psychology) Learning Words with Unfamiliar Characters: The Picture Superiority Effect on Foreign Characters

Some researchers have found a picture superiority effect (PSE) in language learning, a phenomenon that language items studied as pictures are more likely to be recalled better than language items studied as words. However, the full extent of this effect is not clear as some research has not supported this language effect in language learning. Most of research on PSE was conducted with a language that shares the same alphabet as English. The goal of the present study, is to determine if the PSE is present when participants are learning Korean words, an Asian language with characters, rather than letters, to represent the sounds of the words. In this within subjects experiment, participants were given a word list consisting of fifteen Korean words for each condition (word-picture or word-word). After studying the words in each

condition, participants memory of the word meanings was tested. In the word-word condition, participants studied Koreans words along with the English translation in words. In the word-picture condition, they studied Korean words with corresponding picture meanings. Results will be discussed in relation to the PSE.

Katie Kuehn, Michelle Anderson, Natalie Gannon, Connor Piechota, Emilee Lahr, Maria Lopez (Pam Bacon, Psychology) How Sexism at the College of St. Benedict and St. John's University is Associated with School Identity and Perceived Reputation

We examined sexism levels at the College of St. Benedict and St. John's University and the association between sexism and identity and perceived reputation of CSB and SJU. Our research methods class conducted a study of students at the two colleges and compared the results to data collected in 2005. The findings suggest that although there are some differences in 2013, sexism continues to be associated with school identity and the perceived reputation of CSB.

Madeline C. Lenker, Nihal S. Bhakta, Julie A. Oakes, Katelyn M. Thoresen, Kendra M. Guck (Pam Bacon, Psychology) What We Wear: An Analysis of CSB/SJU Students and the Type of School Apparel Worn

We coded the type of school related apparel (CSB, SJU, or CSB/SJU) worn by CSB and SJU students in different public areas around both campuses. The results of the study suggest that CSB students are most likely to wear CSB clothing and SJU students are more likely to wear SJU clothing. CSB students were more likely to wear SJU clothing than SJU students were to wear CSB clothing. The results are compared to data collected in 2005.

Sean P. Murphy (Stephen Stelzner, Psychology) SEND HIM HOME: THE EFFECT OF KINESTHETIC VS. VISUAL IMAGERY ON PUTTING

The current research reveals the impact that imagery has on performance in sport. Golfers use many approaches to integrate imagery into their pre-swing routine; however, the effectiveness of each pre-swing strategy is not understood. Some golfers use a practice swing, while others mentally image their swing, without physical practice. There are conflicting views about why imagery works and the goal of the current research was to determine which type of cognitive specific imagery is most effective: visual imagery or kinesthetic imagery. The results of this study found that kinesthetic imagery was effective only for the male participants. This was attributed to the greater length of practice time males had with the skill. It has been seen that imagery is more effective

for skilled athletes. The male visual imagery group did not show an increase in performance, which seems to suggest that it is not as useful to performance.

Amanda A. Olsen, Gwen L. Marrin (Ben Faber, Psychology) Gesture Development and Spatial Memory

This study seeks to identify whether gesture will differentially affect spatial and non-spatial language comprehension and memory in both children and adults. Although previous research has examined the role of gesture in learning (ie. Goldin-Meadow, 1996, 2001; McNeill, 1992, 2005), the present study will look at this type of development in children and adults.

A story containing spatial or non-spatial components will be read to the participants and they will then be asked factual and convergent comprehension questions regarding the story. Each participant will listen to six stories in a 3 X 2 experimental design varying the degree of gesture (Natural Gesture, No Gesture, Forced Gesture) and story content (Spatial or Non-Spatial). The participants will be recorded during the entire experiment and their gestures will be coded according to McNeill's coding scheme (McNeill, 1992). Additionally, the participant's baseline gesture rate will be recorded, they will complete a three-term series problem (Knauff & Johnson-Laird, 2002) to measure visuo-spatial abilities, and a sentence memory task (Deneman & Carpenter, 1980; Miyake, 2001) to measure working memory capacity .

We expect that gesture will aid significantly more in the comprehension of the spatial stories over the non-spatial stories in both children and adults. We plan to conduct a 3 X 2 within subject ANCOVA (Degree of Gesture by Story Content) with the number of correct factual and convergent comprehension questions answered at the conclusion of each story as the dependent variable. Working memory capacity and visuo-spatial abilities will be covariates.

The results will illuminate whether gesture can help children and adults remember spatial or non-spatial stories better. In a broader context, it will have implications in an educational setting where children are often asked to think in spatial terms. By capturing the essence of how children and adults learn to use gesture and spacial representation tools, teaching methods could be modified to help improve a person's academic success or even more broadly, a person's ability to learn.

Ryan M. Peters, Anh D. Doan, Jeremy D. Klein (Robert Kachelski, Psychology) The Effect of Rhythmic Auditory Distractor Tempo on Recall

Previous research suggests that working memory performance is hindered by the presence of most auditory distractor stimuli. The purpose of our research was to determine whether different tempos of a rhythmic auditory distractor have different effects on recall performance, both in terms of accuracy and efficiency. Participants were given a battery of straightforward working memory tasks under conditions of high or low tempo rhythmic distractor; they were asked to recall a series of digits and the location of colored squares in a grid. We conducted trials in an environment controlled for both other auditory distractors and potentially confounding visual distractors, and gave participants uniform instructions. We measured both the accuracy of digit and spatial recall and the response times of each participant so as to determine whether the tempo of a distractor had an appreciable effect on the participants' ability to efficiently and correctly remember. We compared these data to a baseline set gathered under a condition of no distraction in order to tease apart the effects of any distraction on performance and tempo on performance. We also included a survey designed to assess how much experience each participant had performing memory tasks while listening to music or rhythms. Based on previous research, our hypothesis was that a rhythmic distractor of a higher tempo would yield less accurate and slower performance on working memory tasks.

Kallie R. Reiter (Rodger Narloch, Psychology) Gender Differences in Decision Making When Faced with Multiple Food Options

This study tested the gender differences in decision-making patterns when multiple options were available. The researchers measured the amount of time it took students to choose a food line to wait in at a cafeteria, predicting that males would not spend as much time observing all of the different options as females would. Participants included in the study were 116 male students and 116 female students from two separate cafeterias on two different campuses. The researchers found that when males had formed a routine and were in their more natural environment, they were quicker to choose a line than females, but when in a less familiar situation, males and females did not significantly differ in the amount of time it took to choose their food line.

Nicole K. Tamm, Darian B. Schwietz, Jordan R. Falk, Sydney Schleif (Pamela Bacon, Psychology) CSB VS. SJU Then and Now: Which School Do You Identify With?

In this study students from CSB and SJU were asked to indicate how much they identify with being a Bennie and a Johnnie. The

results are compared to data gathered in 2005. The findings suggest that CSB students have developed a stronger identification as a Bennie since 2005.

Ellen T. Thomson, Manke Wang, Nancy E. Sibri Guaman, Danielle L. Tossey (Bob Kachelski, Psychology) Performance and Anxiety Scores on a Timed Math Task

The purpose of this study was to test the effect of perceived time pressure on students' anxiety and performance when completing a math task. Two groups of participants were asked to complete a set of math problems to the best of their ability. Although both groups of participants were given the same amount of time to complete the problems, only one group was explicitly told about the time limit in the instructions before they began. The other group received the same instructions, but without mention of a time limit. Participants were randomly assigned to the two groups. Immediately following the math task, all participants completed a short survey regarding their current anxiety levels. The survey also included questions addressing math courses taken in college, confidence in math skills, and test anxiety. We predicted that the participants who were told about the time limit in the instructions would report higher levels of anxiety and have fewer correct answers on the math task than participants who were not told about the time limit.

Matia C. Twedt (Jan Holtz, Psychology) Comparison of the attachment with parents and attachment with romantic partner

This study investigated the comparison of attachment with parents compared to the attachment in romantic relationships. A meta-analysis was conducted to find those results.

Alex Twohy (Linda Tennison, Psychology) The effects of Gregorian chant on physiological and subjective measures of emotion.

The goal of this study is to create normative data for a musical selection of Gregorian Chant in terms of empirical physiological and subjective emotional ratings, as none exist in the literature. Gregorian Chant is directly compared to 4 normative musical selections that have been empirically tested in terms of emotional ratings

Sociology

Nicole R. Cornell (Christopher Scheitle, Sociology) Congregational Attendees' Exposure to Social and Political Messages: Examining the Effects of Religious Tradition and Personal Interest

Every week a significant proportion of the United States population attends religious services, but little systematic research has examined what exactly attendees hear during these services and how it could shape their views beyond the walls of the congregation. The objective of this research is to identify factors that affect the likelihood that a congregational attendee will report hearing their clergyperson speak out about the certain social or political issues of abortion, homosexuality, and the environment. The data used for this research come from the 2010 Religion and Public Life Survey. We find that an individual's personal interest in particular social issues increases their likelihood of reporting hearing about those issues from their clergyperson. This likely reflects self-selection into congregations where those issues are central as well as the individual's attention to and recollection of the messages being given by their clergyperson. There are also significant religious tradition effect with Catholics being most likely to report hearing about abortion.

Kia Her, Sheng Xiong, Ashley A. Baggenstoss (Chris Scheitle, Sociology) Civic Engagement

Civic Engagement has been found to be related to volunteering, which we have defined as any unpaid service activities. Previous research has found that there are two predictors of volunteering, the motives that influence people to volunteer and exposure to different races, religions, and economic class. Using and analyzing data from an original survey of second-year students at CSB-SJU, we will examine the relationship between these two predictors and how it affects students' volunteering experience. We measured volunteering by asking students the amount of volunteer work CSB-SJU students have engaged in since the two years they have been on campus. We present findings on the relationship between students' motives to volunteer and exposure to different races, religions, and economic class through the volunteering experiences.

Maria I. Jagodinski, Nicole R. Cornell, Yasas R. Ratnayake (Christopher Scheitle, Sociology) Examining Factors and Results of Religious Change and Development in Second-Year CSB/SJU Students

College is a time of change and development in many different ways for students. These changes can occur in one's social life, idealogy, or even their behavior. Using data from an original survey of second-year students at the College of Saint Benedict and Saint John's University, we examine the religious change and development students personally feel they have experienced since

coming to college. Religious change and development has been found to be prevelant during the college years due to a variety of different factors. Previous research suggests that such factors as the general liberalness of the college environment, personal independence, and changes in peer groups are highly influential in religious change and development. We measured change through three different questions. Our first question addresses “how has their religious beliefs changed?” and in which ways; the second question goes deeper to answer the question “what has caused their religious beliefs to change?” by inquiring about the influence of certain factors on religiosity; and finally, the third question of our survey seeks to address development and answers the question “what are the implications of this change in belief?” Our questions specifically seek to target aspects of the Catholic, liberal arts atmosphere promoted on our campuses and examine the effects of this environment on students' religiosity. Different statistical analyses are then run on the collected data. We present our findings of how the Catholic, liberal arts atmosphere and education received here at CSB/SJU is related to religious change and development in students.

Katie J. Johnson, Christa M. Troup, Suzie K. Hayhoe (Chris Scheitle, Sociology) Friendships, Networks, & Connections- Social Capital at CSB/SJU

Previous research has found that if one has higher social capital, he has more friendships, greater networking skills, and stronger connections to others. Two types of social capital remain prominent in research: bridging and bonding. Using data from an original survey of second-year students at CSB/SJU, we examine the types of social capital students have: either friendships with people similar to them or connections with people with much different characteristics. We present findings of how social capital is related to variables such as gender, race, majors, and other defining characteristics.

Gwendolyn L. Marrin, Symphony M. Grant-Moser, Joslyn P. Brugh, Ian R. Goldsmith (Jessica O'Reilly, Sociology) Anthropology of Food: Viet Tien & El Portal

Through our research, we are hoping to answer the following questions: What significance does serving ethnic food have for the individuals running the restaurants/markets in the U.S.? How does food tie them to their heritage? What is the importance of food to culture? To answer these questions, we have visited two locally owned food enterprises. During our visits, we interviewed the owners of restaurants and ethnic food markets to learn about

their individual experiences in running their businesses in central Minnesota and how that has affected their menu and food offerings.

Tess M. Mattson, Nikki S. Orth, Elizabeth C. Grega, Molly C. Carter (Jessica O'Reilly, Sociology) Non-traditional, holistic approaches to medicine within the western society

Each member of our group chose their own focus under the general field of non-traditional medical practice, and did subsequent literary and field research. The individual focuses include energy healing, Hmong medical practices, Somali medical practices, acupuncture, homeopathy, counseling, and chiropractic.

Tou C. Moua, Ka Lia Lor, Cynthia Gudiel (Chris Scheitle, Sociology) Moral Views of CSB-SJU Students

Our project presents findings on the moral views of CSB-SJU students. Our findings are not whether CSB-SJU students are moral or immoral but rather about how they view morality. Using a survey, we asked three simple questions that show whether students use an absolutist or a relativist lens to look at issues of morality. Our three questions are about how the students view abortion, stealing, and lying. Our work will show how our students view morality which may have profound implications upon the subject matter of how classes at CSBSJU are taught and the development of our students up to the point of the ending of their sophomore year. We hope future studies may be done about this not only for the sophomore class but perhaps also for the senior class or even a longitudinal survey among the four years of the students of CSB-SJU.

Reynaldo Ortega, Akshya Mahindru, Sean Raible (Christopher Scheitle, Sociology) Religious Tolerance among Second Year Students

The definition of religious tolerance is allowing individuals of other faiths to practice without any disapproval or discrimination. This research project will examine the religious tolerance of the second year students at CSB-SJU. We will go over results from an original survey conducted in our Social Methods class and review how second-year students view religious tolerance and the effects of a liberal arts education for developing awareness of other faiths.

Stephanie Pinkalla (Jessica O'Reilly, Sociology) The Production of Knowledge in the Intergovernmental on Climate Change

The Intergovernmental Panel on Climate Change (IPCC) produces reports assessing the state of climate science. IPCC assessors are scientists nominated by their governments who perform the work of assessing all of the peer-reviewed literature on their topic (voluntarily) for the purpose of compiling the state of climate science into one set of documents. This project explores conflict and consensus within the scientific community: those who accept the reality of anthropogenic climate change and have stakes in ensuring the most recent scientific findings are presented clearly to policy makers. To study this, the archived draft review comments for Fourth Assessment Report were analyzed and levels of conflict through draft report comments were categorized. This helped outline a trajectory showing how reviewers and authors interacted to produce the final IPCC assessment reports. Politics at multiple scales shape a purportedly policy-neutral document while climate scientists grapple with interjections from climate contrarians out of the public eye.

Jessica D. Raboin, Natalia E. Gall, Courtney Kelley, Maria Anderson, Maria Jagodinski, Ashley Baggenstoss (Jessica O'Reilly, Sociology) Hmong Refugee Experiences

Presenting on the findings from fieldwork done with Hmong Refugees about the services and experiences they have had.

James R. Saintey, Katie M. Pearce, Bryan S. Aguilar (Christopher Scheitle, Sociology) Response Rate Patterns in the Sophomore Survey

Our poster will present the project management aspect of the Sophomore Survey. There were several aspects to the Sophomore Survey itself and our group mainly handled the logistical side of placing everything together and formulating everything into a cohesive and comprehensive survey. We did more of the “behind-the-scenes” type of work in order to make sure that the survey went smoothly and that people actually responded to the survey. The bulk of our outside research looked at how we could attain higher response rates; whether it was finding the best times to send out the survey or how many times to resend the survey. And since our survey was electronic we focused all of our research on the criteria of “web-based surveys” looking at it through online databases. This helped us get a better insight into how we could further strengthen our survey. Our research was crucial to the survey because we pulled everything together and made things more comprehensible for not only the students taking the survey but also for the rest of the researchers involved with developing

the Sophomore Survey. Our poster will present information concerning response rates and potential non-response bias.

Jon D. Schumacher, Matthew F. Dummer, Isaak M. Jones (Jessica O'Reilly, Sociology) The Western Medical Experience of Somali Immigrants

The Western Medical Experience of Somali Immigrants

With the large influx of Somali immigrants in the greater St. Cloud area, cultural competence is a much need attribute of health care providers in the medical field. Many healthcare providers are not aware of the many factors that contribute to the difficulties faced by recent Somali immigrants. The first purpose of this ethnographic research was to learn and understand the difficulties recent Somali immigrants have navigating the western medical systems in Minnesota. The second purpose of this research is to better understand how medical professionals can better address the needs of the new Somali community by improving cultural competency of healthcare providers. This research was accomplished through interviews with a Somali community health worker, pre-medicine college student, and nursing student. In addition, literature from anthropological journals was consulted to properly supplement this research. The research indicated that difficulties faced by Somalis were related to their conservative traditional culture and native language. Several ideas were proposed that may help ease the transition and interaction between Somali patients and medical professionals in Minnesota by promoting bipartisan cultural competence. These propositions will be further addressed to give more insight as to how they could be implemented in a medical setting.

Madison Skudlarek, Dominic Todora, Sam Hines, Taylor Curtis (Jessica O'Reily, Sociology) Looking Outside Mainstream Religion

We have conducted research on major religions, outside of Catholicism, in Central Minnesota. The research contains field interviews with representatives of the Evangelical Lutheran Church of America, Judaism, and Islam practicing in the Greater Central Minnesota area. Through looking at the cultural, social, and economic influences on each of these religions in the context of Central Minnesota experiences, we have compiled a thorough comparison of the three major religions. Using an cultural anthropological lens, we explain the rich attributes each religion bring to the area, and how Central Minnesotans respond to these influences.

Rob Sybrant, Patrick Buller, Silvio Zabala (Jessica O'Reilly, Sociology) Anthropology of Food: Star of India and Cafe Renaissance

> We are looking to evaluate the restaurants and how the uniqueness of their restaurant ties to their culture. What adjustments have they had to make to appeal to the people of central Minnesota. What is their experience like in running a business in central Minnesota and how they view the reaction of the community they work in. Why did they choose to open their establishment in central Minnesota. Also we are looking to learn how they get their food products.

Simons Hall G 30, SJU

Political Science

Ryan C. Wold (Claire Haeg, Political Science) Campaign Finance Ethics: It's not an oxymoron

> As politicians continue to break fundraising records in each election cycle, many citizens fear that the money in politics is corrupting American democracy. In the mainstream discussion about the problems of campaign finance few pause to articulate what ethical harm is caused by large contributions, what effects large political contributions have on the integrity of American democracy, and what political contributors expect to gain by making donations. In this paper I seek to answer those questions by reviewing the philosophical scholarship and political science research pertaining to campaign finance, free speech, and the connection between economic inequality and political equality. Using data collected through interviews with directors of the most active corporate political action committees this paper identifies the motivations for making political donations. I conclude that money in politics is not necessarily a bad thing, and that American democracy is not being bought. This paper provides a rare combination of perspectives from corporate America, philosophers, and political scientists that provides a comprehensive picture of the ethical dilemmas in campaign finance.

Fine Arts Presentations:

Art

Schedule

9:00 - 9:30 AM *HAB 119*	Kristen R. Lundberg (Julie Davis, Art) A Grim Vision? A Study of Death in 15th Century Europe through an Examination of the Office of the Dead
9:30 - 10:00 AM *HAB 119*	Dana A. Johnson (Julie Davis, Art) Victimization, Vengeance, Virtue, and Violence: Eliza Wheeler and British Representations of Middle-Class Englishwomen During the Indian Rebellion of 1857
10:20 - 10:30 AM *HAB 106*	Bao Vang (Shibata Yuko, Art) The Wonders of Kyoto
10:30 - 10:40 AM *HAB 106*	Kevyn F. Woods (Yuko Shibata, Art) Harajuku
10:40 - 10:50 AM *HAB 106*	Naymaraha S. Castro (Yuko Shibata, Art) Setsubun Mantoro
11:00 - 11:10 AM *HAB 106*	Kevin A. Horton (Yuko Shibata, Art) Nikko Japan
11:00 - 11:20 AM *HAB 107*	Felicia N. Burns (Karen Erickson, Art) Technology and Functions of French Cinema
11:10 - 11:30 AM *Main TRC Board Room*	Josh Yang (Martha Tomhave Blauvelt, Carol Brash, Art) Finding Your Own Way: Masculinity Portrayed in Japanese Manga
11:20 - 11:30 AM *HAB 106*	Nou S. Vang (Yuko Shibata, Art) One Piece
11:40 - 11:50 AM *HAB 106*	Pisenny Xiong (Yuko Shibata, Art) Takashi Murakami - Japanese Contemporary Artist

Abstracts

Lundberg: Books of Hours are some of the most beautiful and luxurious medieval manuscripts. Very popular with the upper to middle classes, these prayer books became known as 'the medieval bestseller.' Each book contained a group of preset daily prayers and corresponding illuminations, including the Office of the Dead. The Office of the Dead contains some of the most varied representations of death from the 15th century. Because these books were so detailed and popular they offer great insights into the social histories of death, book culture and popular religion during the late Middle Ages. Through an analysis of depictions of death in Books of Hours, I examine the development of popular images of death in Western Europe during the 15th century.

Johnson: I will be looking at novels, historical texts, visuals, articles, and a memoir that circulated in Great Britain during and in the 50 years after the Indian Rebellion of 1857 to examine the representations of middle class women such as Eliza Wheeler. Are there multiple examples of female agency in these narratives? Were the depictions of Eliza Wheeler atypical to the normal representations of British middle-class women in India, or does Miss Wheeler belong to a collection of complex portrayals of women? What do these representations say about the ideal gender roles of British, middle class women? What do they say about actual British middle class women?

Vang: Come explore the wonders of Kyoto. An exquisite city in the central part of the island of Honshu, Japan. There, you will find various temples, shrines, gardens,parks, ancient architectures, and many more!

Woods: Oral Presentation on Harajuku. Informative session on facts of Harajuku.

Castro: Celebration of the Lantern Festival

Horton: A description of the Nikko area in Japan including famous shrines and the history surrounding the area

Burns: This project will be an analytical assessment of the role and function of French cinema. It aims to show the role that cinema has played in French society and culture throughout its history. It will start with the discovery of film as an art form and a cultural movement - how the invention of the camera provided a new resource for an accurate representation of life and the transformation to film reinforced this capability. It will then evaluate the earliest stages of French cinematography by tracing its technological development and the social impacts of the growth of film technology in France. This project also aims to show how film content both shapes and reflects French culture and

society. Therefore, a select group of films will be analyzed which together provide a strong illustration of the role of film content in characterizing the general place and functions of French cinema.

Yang: The questions that I will be answering are: How does action/adventure manga portray Japanese masculinity? Does it fit the masculine stereotypes of contemporary Japanese culture or does it portray the stereotypes of the subculture and why? I will be looking at 10 different manga from this genre including Naruto, One Piece, Full-Metal Alchemist and more. My thesis is that the manga portray both mainstream and subculture stereotypes.

Vang: I will talk about the different themes that appear in the Japanese manga comics, One Piece, and how it became so successful.

Xiong: The project is to talk about who Takashi Murakami is and what he does. The project explains the kind of art he creates and how that is contemporary. The project will also talk about how Takashi Murakami goals and how he has spread his art to other countries besides Japan. The project will be presented in Japanese with PowerPoint slides.

Music

Schedule

9:00 - 9:30 AM *HAB 120*	Connor T. Grill (Julie Davis, Music) Between a Rock and a Heavy Place: African American Musicians in Heavy Metal, the Early Years
10:00 - 10:30 AM *BAC 106*	Emily M. Martin (Denise Meijer, Music) Music Therapy as an Intervention to Relieve Pain and Anxiety in Post-Operative Spine Patients.
10:30 - 10:50 AM *Quad 365*	Connor T. Grill (Christina Shouse-Tourino, Music) "Snowblind": Racial Dynamics in Metal and Minstrelsy
11:00 - 12:00 PM *Music 028 Choral Rehearsal*	Eric M. Larsen (Axel Theimer, Music) Musical Portrayal of Political Thought

Abstracts

Grill: This project is an investigation into the racial dynamics of the heavy metal music industry from 1967-1990, the genre's formative and defining period. The guiding inspiration for the study is answering the question of whether or not heavy metal was a predominantly white genre during this period, and if so, why might that be the case? Analysis of media features, record sales charts, interviews and other evidence shows that heavy metal was an overwhelmingly white form of music. Not only that, this musical culture formed a social identity so predictable in its rigid standards that African American musicians playing heavy metal sounded too white for black audiences, but then looked too black for white audiences.

Martin: Postoperative pain is a major concern for those who are undergoing a surgical procedure, especially a major procedure, such as spinal surgery. Inadequate pain management poses harm to the functions of different systems, negatively influencing postoperative rehabilitation and possibly leading to chronic pain and long term complications. Failure to ease pain interferes with patients' emotions, activities, quality of sleep and appetite, which can delay discharge and increase medical costs. Along with pain, surgical patients often have high levels of anxiety related to pain, complications of surgery, and the unknown of the surgical outcome (Hsu, Huang, C. Lin, M. Lin, & P. Lin, 2011). Due to the harmful effects of insufficient pain and anxiety control, a growing interest in music therapy has drawn attention to its potential as an intervention to reduce pain and anxiety in surgical patients of all ages. Music therapy has been an established intervention to reduce preoperative and postoperative pain and anxiety since the mid-20th century. In adjunct to pharmacological treatment, music therapy is designed to be an effective non-invasive treatment that can distract patients from focusing on pain and anxiety, promote relaxation, restore and improve physiological, psychological emotional health and reduce pain (The Joanna Briggs Institute, 2011). The purpose of this project is to explore the possibility of using music therapy to alleviate pain and anxiety in post-surgical spinal patients. A staff survey will be developed and analyzed to facilitate planning for future implementation of music therapy at the Spine Institute of this hospital.

Grill: Minstrel shows of antebellum America were a space for white, working-class men to secretly express frustrations about their social and economic instability under a guise of openly racist, blackface performance. These men did so by adapting a body of slave culture—speech, fashion, song styles, lyrical themes, etc.—and amplifying it, exaggerating it, to the point of controversy as a way of making money. This is precisely how the musical genre of heavy metal has operated since its inception with Black Sabbath's debut album in 1970. The only difference is that white, working-class men now openly express those same economic and social frustrations under a guise of secretly racist

performance. The influence of slave culture is present in heavy metal as it was in minstrelsy, except now the performers have removed their blackface, effectively applying “whiteface” to the genre. The final result of this phenomenon is that black musicians playing heavy metal music can only achieve success by “whiting up”, through either the assistance of established white musicians or by compromising their sound/ appearance to fit a more stereotype-fulfilling impression. Scholarship on race in heavy metal is as woefully scarce as its subjects are in the musical field of its study.

Larsen: This work compares and contrasts how two composers portrayed political events in their major works. Carlisle Floyd portrayed the McCarthy hearings in his opera "Susannah" and Kurt Weil satirically criticized the Capitalist system of post World War I Germany in his famous work "The Threepenny Opera". This presentation will involve a performance of numbers from these works, including a lab choir and a soloist.

Theater

Schedule

10:20 - 10:40 AM	
HAB 107	Joshua J. Bikus (Karen Erickson, Theater) Elements of a Revolution: Comparing the Revolutionary Works of Satre and Rousseau
11:20 - 11:30 AM	
HAB 106	Nou S. Vang (Yuko Shibata, Theater) One Piece

Abstracts

Bikus: Paris, commonly seen as a hotspot for revolution, has experienced several eras of oppression. Whether it is the unyielding monarchy of the mid-18th century or the Nazi regime during the height of the Second World War, the city often finds itself in need of a change of authority. Two revolutionary French writers composed works that inspired citizens to not only revolt against a government, but against the traditional way of thinking as well. By studying the primary works of Jean-Paul Sartre and Jean-Jacques Rousseau and the historical context in which they wrote, I discover and compare the key elements of two of France’s most famed intellectual revolutions.

Humanities Presentations:

Communication

Schedule

9:30 - 9:40 AM *HAB 106*	Bao Lao (Yuko Shibata, Communication) Places in Japan: Ikebukuro
9:40 - 9:50 AM *HAB 106*	Ian C. Manion (Yuko Shibata, Communication) Sapporo
9:50 - 10:00 AM *HAB 106*	vanessa montes (yuko shibata, Communication) Nagasaki's Culture
10:00 - 10:10 AM *HAB 106*	Samantha M. Muldoon (Yuko Shibata, Communication) Asakusa
10:10 - 10:20 AM *HAB 106*	Kaileigh B. Nicklas (Yuko Shibata, Communication) Harajuku
10:20 - 10:30 AM *HAB 106*	Bao Vang (Shibata Yuko, Communication) The Wonders of Kyoto
10:30 - 10:40 AM *HAB 106*	Kevyn F. Woods (Yuko Shibata, Communication) Harajuku
10:40 - 10:50 AM *HAB 106*	Naymaraha S. Castro (Yuko Shibata, Communication) Setsubun Mantoro
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, Communication) Higashino, Keigo
11:00 - 11:10 AM *HAB 106*	Kevin A. Horton (Yuko Shibata, Communication) Nikko Japan
11:00 - 11:20 AM	

HAB 107	Felicia N. Burns (Karen Erickson, Communication) Technology and Functions of French Cinema
11:10 - 11:20 AM *HAB 106*	Frederick Jones (Yuko Shibata, Communication) Koshien
11:20 - 11:30 AM *HAB 106*	Nou S. Vang (Yuko Shibata, Communication) One Piece
11:30 - 11:40 AM *HAB 106*	Pa W. Vang (Yuko Shibata, Communication) Japanese Folk Tales
11:40 - 11:50 AM *HAB 106*	Pisenny Xiong (Yuko Shibata, Communication) Takashi Murakami - Japanese Contemporary Artist
11:50 - 12:00 PM *HAB 106*	Mai c. yang (Yuko Shibata, Communication) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Lao: I will be presenting speaking all in Japanese with a slideshow of Ikebukuro, a city in Japan.

Manion: I will present using powerpoint a presentation about the city of Sapporo, capital of the Hokaido Prefecture. My project will be in Japanese, and I will give information about the city's history and things that can be done in Sapporo.

montes: I will be talking about Nagasaki,Japan and its culture. Types of food, events, and special celebrations. I will provide statistics and lots of fun and interesting facts.

Muldoon: A presentation about the Asakusa shrine and the surrounding sounds, souveniers and sites.

Nicklas: I will have a brief oral presentation on Harajuku, Japan. It will focus on where it is specifically located and some of the key aspects of the culture surrounding the Harajuku area. Some of these aspects include the fashion culture sparking from the area as well as its economic significance as it provides affordable shopping for youths.

Harren: Oral presentation on the life and many works of the prominent Japanese author Keigo Higashino

Jones: I will present, in Japanese, a report about the Japanese high school baseball tournament, named Koshien.

Vang: My presentation will be based on ancient Japanese Folk tales in present day modern Japan using some specific popular stories to relate to my oral presentation.

yang: This oral presentation is about the experience of a conveyor belt sushi called Hamazushi. During my stay in Japan for study abroad 2012 I went to this sushi shop often. I want to share the experience in Japanese.

English

Schedule

9:30 - 10:00 AM *Quad 353*	Emily R. Gasperlin (Betsy Johnson-Miller, English) Children's Literature and the Human Experience
10:00 - 10:10 AM *Quad 365*	Kyle B. Lamb (Christina Shouse Tourino, English) Nevermore: Absalom, Absalom! Through the Eyes of “The Raven”
10:10 - 10:30 AM *Quad 365*	Jacob P. Harris (Christina Shouse Tourino, English) Threatening the "Decorous Order:" Class Antagonisms in Faulkner's Absalom, Absalom!
10:20 - 10:40 AM *HAB 107*	Joshua J. Bikus (Karen Erickson, English) Elements of a Revolution: Comparing the Revolutionary Works of Satre and Rousseau
10:20 - 10:40 AM *Quad 360*	Matthew P. Doyle (Ozzie Mayers, English) Politicians and Warspeak
10:30 - 10:50 AM *Quad 365*	Connor T. Grill (Christina Shouse-Tourino,

	English) "Snowblind": Racial Dynamics in Metal and Minstrelsy
10:40 - 11:00 AM *HAB 107*	Christina Desert (Camilla Krone, English) Women in Conflict: Culture, Exile, Alienation, and Immigration
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, English) Higashino, Keigo
11:00 - 11:20 AM *HAB 107*	Felicia N. Burns (Karen Erickson, English) Technology and Functions of French Cinema

Abstracts

Gasperlin: Examines how values, religion/religious beliefs, relationships, sense of self/identity, and language contribute to the human experience and how these elements are expressed in children's literature and used to introduce a young audience to the human experience as a whole. The literature studied includes Grimm/Andersen fairy tales, The Chronicles of Narnia, Harry Potter, The Wonderful Wizard of Oz, Alice's Adventures in Wonderland, and Dr. Seuss and Shel Silverstein's poetry.

Lamb: A mere month after William Faulkner published Absalom, Absalom!, Malcolm Cowley – one of Faulkner's contemporaries – described Faulkner as "Poe in Mississippi", forever linking the two authors in both his mind and the minds of many in literary circles. This presentation examines the link between the two authors, particularly the links between Poe's "The Raven" and Faulkner's Absalom, Absalom! in the hope that an acute understanding of the former leads to a deeper understanding of the latter.

Harris: The intimate interplay between issues of race and class in Absalom, Absalom! has long been identified. However, critiques employing Marxist critical tools that explore the role class antagonism plays in the racism depicted in Faulkner's South are relatively scarce. In my analysis, I identify the specific ways in which both poor and aristocratic white characters participate in the fetishism of commodities. I argue that the social value declared by commodities translates into a declared value of self-worth. The experiences of Faulkner's poor white characters reveals a deeply-seeded fear of worthlessness and associations with bound labor. I posit that as a mechanism against these fears, Thomas Sutpen, Rosa Coldfield, and Wash Jones erect "sentimental masks" made

of feelings of inherent white superiority. However, in the course of narrative events, these masks are punctured by insults which reveal their falsity. The trauma that ensues exposes how issues of class take a precedent to race, and in this positioning, Faulkner draws a causative relationship from class antagonisms to racial sentiment.

Doyle: An investigation of the way in which politicians employ language, especially during times of war, to sway the opinions of the electorate, obscure negative outcomes, and unconsciously invalidate the opinions of international entities.

Desert: Haiti is a country of many paradoxes. As the first black republic, Haiti holds a place of distinction in world history. Today, Haiti is recognized as the poorest nation in the world as well as for its great cultural wealth. The revolutionary hero Toussaint Louverture and the Duvaliers, whose long reign of terror was brutally enforced by the Tonton Macoutes, are equally emblematic of the island nation that today is still reeling from the combined effects of the devastating earthquake of 2010, widespread poverty, and weak government infrastructure.

Amidst all of the paradoxes that represent Haiti the question of Haitian identity is complex. In my thesis, I present the views of two Haitian women writers, Edwige Danticat and Jan Domique whose semi-autobiographical novels (Breath, Eyes, Memory and Memoire d'une amnesique, respectively) feature Haitian women seeking to define their own identities and place in Haitian culture both in country and as émigrés. These Haitian women writers critique Haitian history presented solely as the history of powerful men some of whom are also our national heroes. My thesis explores how each of these writers contrasts traditional masculine narratives, with the stories of Haitian women, particularly poor, peasant, and migrant women, thus giving a voice to Haitian women and breaking a long patriarchal tradition of silence.

Gender & Women's Studies

Schedule

9:00 - 9:30 AM
HAB 119

Kristen R. Lundberg (Julie Davis, Gender & Women's Studies) A Grim Vision? A Study of Death in 15th Century Europe through an Examination of the Office of the Dead

9:00 - 10:00 AM

Gorec Pres. Conf. Rm.	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Gender & Women's Studies) Jackson Fellowship 2010 & Jackson Fellows
9:30 - 10:30 AM Main 322	Elizabeth A. Beaty (Christi Siver, Mary Geller, Gender & Women's Studies) Intersectionalities: Relfections on Intersections of Gender and Other Forms of Identity
9:30 - 10:00 AM HAB 119	Dana A. Johnson (Julie Davis, Gender & Women's Studies) Victimization, Vengeance, Virtue, and Violence: Eliza Wheeler and British Representations of Middle-Class Englishwomen During the Indian Rebellion of 1857
9:30 - 10:00 AM NewSc NS 140	Feiran Chen (Stephen Stelzner, Gender & Women's Studies) Heterosexual Romantic Relationships and Mate Preferences in College Students from the U.S. and China: Cross-Cultural and Gender Difference in Beliefs and Attitudes
10:00 - 10:20 AM Main TRC Board Room	Raisa Guillemette (Martha Tomhave Blauvelt, Sheila Nelson, Gender & Women's Studies) Woman Sex Trafficked within the U.S.: Women at Risk
10:20 - 10:40 AM Main TRC Board Room	Paidamoyo Chikate (Martha Tomhave Blauvelt, Kelly Kraemer, Gender & Women's Studies) Never forget- Rwandan women, the genocide and the consequences of sexual violence
10:40 - 11:10 AM HAB 119	Mary M. Carr (Julie Davis, Gender & Women's Studies) The Enduring ‘Industrious Squaw’: The Continuity of Native Women’s Experiences in the Red River Colony, 1812-1869
10:40 - 11:00 AM Main TRC Board Room	Sarah B. Anderson (Martha Tomhave Blauvelt, Patricia Bolanos, Gender & Women's Studies)

	Technology, Reproduction, and Motherhood in The Left Hand of Darkness, Woman on the Edge of Time, and Ethan of Athos
10:40 - 11:00 AM *HAB 107*	Christina Desert (Camilla Krone, Gender & Women's Studies) Women in Conflict: Culture, Exile, Alienation, and Immigration
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, Gender & Women's Studies) Higashino, Keigo
11:10 - 11:20 AM *HAB 106*	Frederick Jones (Yuko Shibata, Gender & Women's Studies) Koshien
11:10 - 11:30 AM *Main TRC Board Room*	Josh Yang (Martha Tomhave Blauvelt, Carol Brash, Gender & Women's Studies) Finding Your Own Way: Masculinity Portrayed in Japanese Manga
11:20 - 11:30 AM *HAB 106*	Nou S. Vang (Yuko Shibata, Gender & Women's Studies) One Piece
11:30 - 12:00 PM *Simns 340*	Katie J. Johnson, Marie H. Cherry, Stephen M. Gross, Nicole R. Cornell, Maria I. Jagodinski, Bridget A. Foley, Samantha L. Exsted (Sheila Nelson, Gender & Women's Studies) What it Means to be a Johnnie
11:30 - 11:40 AM *HAB 106*	Pa W. Vang (Yuko Shibata, Gender & Women's Studies) Japanese Folk Tales
11:30 - 11:50 AM *Main TRC Board Room*	Matia C. Twedt (Martha Tomhave Blauvelt, Shane Miller, Gender & Women's Studies) How fathers of daughters in hockey conceptualize and convey gender attitudes
11:40 - 12:10 PM *HAB 119*	Danika J. Lindquist (Julie Davis, Gender & Women's Studies) The Student Experience at the College of Saint Benedict in the 1950s

11:40 - 11:50 AM
HAB 106

Pisenny Xiong (Yuko Shibata, Gender & Women's Studies) Takashi Murakami - Japanese Contemporary Artist

Abstracts

Sinner, Andreasen, Mevissen, Minten, Reiner, Vandelac, Weinhandl, Wojtalewicz, Walgamott: The presentations during this session will cover the Marie & Robert Jackson Fellowship; Kaleidoscope Place, Minneapolis, MN; Children's Museum, Brookings, SD; Jeremiah Program, St. Paul, MN; CLUES (Communidades Latinas Unidas en Servicio), MN; White House Project, St. Paul, MN; Catholic Charities/LaCruz, St. Cloud, MN; "Summer of Solutions" campaign of the NGO Grand Aspirations, Minneapolis, MN; and the Al Franken Campaign, St. Cloud, MN.

Beaty: This project will act as a Capstone to my internship at the Institute for Women's Leadership, in which I will reflect on how my views of gender as an identity have changed, and how those changes have helped me understand how gender interacts with other identities such as religion, race, class, etc.

Chen: This study examines how culture influences U.S. and Chinese college students' mate preferences, and attitudes and beliefs on the following elements of romantic relationships: love as the only basis for marriage, premarital sex, and the influence of family and friends on mate choice. This study included 291 American participants and 292 Chinese participants and found that: overall, American and Chinese participants vary in their mate preferences; most American participants, especially female participants, would be more likely to "marry for love," whereas Chinese participants, especially female participants, would be more likely to consider health and financial conditions in a mate; Chinese participants emphasize chastity more than American participants; American participants tend to consult with parents and friends, whereas Chinese participants tend to obey parents' views about getting married.

Guillemette: Sex trafficking is a very prevalent issue in the U.S. as well as many other countries. It is estimated that every year there are 105,000 children sex trafficked and that number is probably underestimated because of the secrecy of sex trafficking. The average age for a child to be sexually exploited is between 11 and 14 years old. But the question is how do these women in the U.S. end up in this situation? What are the risk factors for women between the ages of 12 and 18 who are sex trafficked in

urban parts of the United States and why? I will answer this question by analyzing memoirs such as The Sacred Bath: An American Teen's Story of Modern Day Slavery by Theresa Flores who is a licensed social worker and also an advocate and survivor of sex trafficking. I will also be looking at a memoir by Carissa Phelps called Runaway Girl: Escaping Life on the Streets One Helping Hand at a Time. Carissa Phelps is a survivor of sex trafficking and also an social entrepreneur, youth advocate, licensed lawyer, and author. I will be using secondary literature that analyzes the many risk factors associated with sex trafficking as well as the cultural and societal factors that allow sex trafficking to exist. Although there are many risk factors involved with sex trafficking, I will be focusing on familial risk factors.

Chikate: The Rwandan genocide of 1994 is one of the most horrific events of our time. The genocide covered many aspects including it's effects on Rwanda as a whole yet not much attention has been paid to the women who were sexually abused during the genocide. The research aims to explore the psychological, physical and societal consequences of women who were sexually abused and how their communities have treated them as a result of the sexual violence.

Carr: This presentation considers the impact of British permanent settlement at the Red River Colony from 1812 to 1869 on Native American women in the upper Midwest and Central Canada. Given that the Red River Colony was the first permanent settlement in Western Canada, did its establishment dramatically alter native women’s experience compared to earlier fur trade society, and if so, how? This presentation will also address what we can and can’t know about the lives of native women by combining analysis of biased European male accounts of the colonial era with less traditional sources.

Anderson: The 1970s and 1980s was a time of change for women and their place in society. These changes were taken into reflection in all aspects of life, but found a special interest in science fiction novels of the time. These novels explored new ways for women and men to live together and explored new ideas of sexuality and reproduction. This project was a study of three novels written by female authors from this period in which men and women share and play out new (and some old) roles in futuristic societies and utopias, in order to understand how The Left Hand of Darkness (1969) by Ursula Le Guin, Woman on the Edge of Time (1976) by Marge Piercy, and Ethan of Athos (1986) by Lois McMaster Bujold envision new roles of motherhood for men through altering gender dynamics, and why the authors envision these roles in certain ways but not others, giving thought to the time period and the authors’ own experiences.

Johnson, Cherry, Gross, Cornell, Jagodinski, Foley, Exsted: Inspired by Michael Kimmel's "Guy Code," our Sex & Gender Sociology research project explores what it means to be a Johnnie at CSB/SJU. During late November 2012, we conducted informal interviews with Bennies and Johnnies of all class years to determine if Johnnies adhere to a specific code regarding emotions, attitudes, and values. We then coded all responses and came up with our own "Johnnie Code." Come hear what we learned about what it means to be a Johnnie and witness the fascinating discovery about men on our campus!

Twedt: How do fathers of daughters in hockey conceptualize and convey gender attitudes and why?

Exploration into blogs and articles written by hockey fathers have given better understanding and insight into fathers' beliefs of their daughters in hockey. It has also been found that most fathers convey positive attitudes towards their daughters and about girls in hockey in primary sources. However, not all secondary sources agree with the idea of fathers being supportive.

Lindquist: In preparation for the centennial celebration of the College of Saint Benedict, I have spent my time researching our local history. Approaching the story from the prospective of students, my research has been directed to the decade of the 1950s. I have analyzed oral interviews, student publications, and other archival records to piece together the student experience of our women's Catholic institution. Marked by both continuity and transformation, the students who called this place home in the 1950s have a story worthy of our attention.

Hispanic Studies

Schedule

9:00 - 10:00 AM *Gorec Pres. Conf. Rm.*	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Hispanic Studies) Jackson Fellowship 2010 & Jackson Fellows

Abstracts

History

Schedule

9:00 - 9:30 AM *HAB 119*	Kristen R. Lundberg (Julie Davis, History) A Grim Vision? A Study of Death in 15th Century Europe through an Examination of the Office of the Dead
9:00 - 9:30 AM *HAB 120*	Connor T. Grill (Julie Davis, History) Between a Rock and a Heavy Place: African American Musicians in Heavy Metal, the Early Years
9:20 - 9:30 AM *HAB 106*	Kia Her (Yuko Shibata, History) The Benjamin A. International Scholarship & It's Impact on Studying Abroad in Japan
9:30 - 9:40 AM *HAB 106*	Bao Lao (Yuko Shibata, History) Places in Japan: Ikebukuro
9:30 - 10:00 AM *HAB 119*	Dana A. Johnson (Julie Davis, History) Victimization, Vengeance, Virtue, and Violence: Eliza Wheeler and British Representations of Middle-Class Englishwomen During the Indian Rebellion of 1857
9:30 - 10:00 AM *HAB 120*	Daniel J. Owens (Julie Davis, History) Jesse James: Popular Representations of an American Outlaw
9:40 - 9:50 AM *HAB 106*	Ian C. Manion (Yuko Shibata, History) Sapporo
9:50 - 10:00 AM *HAB 106*	vanessa montes (yuko shibata, History) Nagasaki's Culture
10:00 - 10:30 AM *HAB 119*	Maxwell Tusa (Julie Davis, History) The Occupation of the Channel Islands and a New Understanding of the British Experience in WWII
10:00 - 10:30 AM	

HAB 120	Megan F. Girgen (Julie Davis, History) "The Eternal Jew.": Nazi Media and the Jewish Question
10:00 - 10:10 AM *HAB 106*	Samantha M. Muldoon (Yuko Shibata, History) Asakusa
10:00 - 10:20 AM *HAB 107*	Joshua J. StGeorge (Margaret Cook, History) Democratic Superiority: Herodotus' pro-Athenian account of Marathon and its implications for the Peloponnesian War
10:10 - 10:20 AM *HAB 106*	Kaileigh B. Nicklas (Yuko Shibata, History) Harajuku
10:20 - 10:40 AM *HAB 107*	Joshua J. Bikus (Karen Erickson, History) Elements of a Revolution: Comparing the Revolutionary Works of Satre and Rousseau
10:20 - 10:30 AM *HAB 106*	Bao Vang (Shibata Yuko, History) The Wonders of Kyoto
10:30 - 10:40 AM *HAB 106*	Kevyn F. Woods (Yuko Shibata, History) Harajuku
10:40 - 11:10 AM *HAB 119*	Mary M. Carr (Julie Davis, History) The Enduring 'Industrious Squaw': The Continuity of Native Women's Experiences in the Red River Colony, 1812-1869
10:40 - 11:10 AM *HAB 119*	Margaret E. Free (Julie Davis, History) Evaluating the Success of the Model Cities Program for the Minneapolis Native American Community
10:40 - 11:10 AM *HAB 120*	erik t. nagaoka (julie davis, History) The Forgotten Man-Made Holocaust: Identifying the Causes of the Bengal Famine of 1943
10:40 - 11:00 AM *HAB 107*	Christina Desert (Camilla Krone, History) Women

	in Conflict: Culture, Exile, Alienation, and Immigration
10:40 - 10:50 AM *HAB 106*	Naymaraha S. Castro (Yuko Shibata, History) Setsubun Mantoro
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, History) Higashino, Keigo
11:00 - 12:00 PM *Music 028 Choral Rehearsal*	Eric M. Larsen (Axel Theimer, History) Musical Portrayal of Political Thought
11:00 - 11:10 AM *HAB 106*	Kevin A. Horton (Yuko Shibata, History) Nikko Japan
11:10 - 11:20 AM *HAB 106*	Frederick Jones (Yuko Shibata, History) Koshien
11:10 - 11:40 AM *HAB 120*	Rongfei Gou (Julie Davis, History) A Dangerous Game? Political, Personal, and Domestic Reasons behind the U.S. Government's Decision to Sell Arms to Taiwan in 1982
11:30 - 11:40 AM *HAB 106*	Pa W. Vang (Yuko Shibata, History) Japanese Folk Tales
11:40 - 12:10 PM *HAB 119*	Danika J. Lindquist (Julie Davis, History) The Student Experience at the College of Saint Benedict in the 1950s
11:40 - 11:50 AM *HAB 106*	Pisenny Xiong (Yuko Shibata, History) Takashi Murakami - Japanese Contemporary Artist
11:50 - 12:00 PM *HAB 106*	Mai c. yang (Yuko Shibata, History) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Her: As a Fall 2012 recipient of the Benjamin A. Gilman International Scholarship, I was able to study abroad in Japan and gain a valuable international experience. In my presentation, I will emphasize the importance of international education through what I learned while I was in Japan and how the scholarship helped me to achieve my goal to study abroad.

Owens: The story of Jesse James has become one of the most familiar myths in American history, as a western outlaw, gunfighter, and even as an American Robin Hood. Newspaper coverage and popular fiction helped to establish James as a legendary figure while he was still alive. Following his death in 1882, his representation continued in a multitude of media, further solidifying him as a legendary outlaw hero within American history. This project looks into not only the various representations of the outlaw, but also into what has shaped these representations.

Tusa: The Occupation by the Germans in the Channel Islands was a unique event in which Islanders experienced a war different than that of mainland Britons. The British Myth of World War II describes the experience of the British people as one in which everyone banded together as a single unified people against an overwhelming force. It is now understood that there was no such single unified experience of the British people. The wartime experiences of the Channel Islanders add to a new understanding of the British experience of World War II based in broadly varied war experiences.

Girgen: An analysis of Nazi propaganda from the years 1933-1945 examining how Jews were represented in various types of mass media and how effective these representations were as propaganda.

StGeorge: Herodotus, father of the western conception of history, writes the only surviving relatively contemporary accounts of the famous Battle of Marathon. But, unlike modern or even other historians of the classical period in the Mediterranean, his historical account falls short of being called factual history. Instead, Herodotus, likely drawing from the Homeric tradition, crafts an entertaining and heroic picture of the events of the Battle of Marathon, missing important factual details. Examined using Thucydides' History of the Peloponnesian War and Aeschylus' The Persian, Herodotus' account of the Battle of Marathon is critiqued to show forth its insufficiencies and its underlying democratic bias. Ultimately, Herodotus' notions of democracy are traced to the

overarching sentiments of Athens at the outbreak of the Peloponnesian War, and the effects these thoughts and notions would have had on the outbreak of the war.

Free: I examine three aspects of President Johnson's Model Cities program and the urban Native American situation in Minneapolis from 1969-1974: the goals and outcomes of the Model Cities program as applied to Indian people, the challenges faced by Minneapolis Indian people, and the extent to which the former successfully addressed the latter. I hope to share a richer understanding of what Native Americans living in the Minneapolis area in the late 1960s and early 1970s needed to flourish in American society, and how well the Model Cities program met these needs.

nagaoka: This presentation explores the question of what caused the Bengal Famine of 1943. It will examine the impact of food availability decline as well as the role of local, state, national and British policies enacted between 1942-1945. It will identify factors that created an environment conducive for famine, the direct causes of the famine, and exacerbating factors that intensified the famine. It concludes that the famine was primarily man-made.

Gou: This research will focus on the reasons why the U.S. government decided to sell arms to Taiwan in 1982, even though such a policy would downgrade its fragile relations with China. This research will focus on the political, personal and domestic reasons behind such a decision.

Modern & Classical Languages

Schedule

9:10 - 9:30 AM *HAB 101*	Joseph A. Harren (Sophia Geng, Modern & Classical Languages) Jiaotong Zai Shanghai
9:20 - 9:30 AM *HAB 106*	Kia Her (Yuko Shibata, Modern & Classical Languages) The Benjamin A. International Scholarship & It's Impact on Studying Abroad in Japan
9:30 - 9:40 AM *HAB 106*	Bao Lao (Yuko Shibata, Modern & Classical Languages) Places in Japan: Ikebukuro

9:30 - 9:50 AM
HAB 101
Mao Vue (Sophia Geng, Modern & Classical Languages) The Hidden Truth behind Fortune Cookies

9:30 - 10:00 AM
BAC 109
Nicole M. Behne (Gary Gillitzer, Modern & Classical Languages) The Under-Utilization of Non-Pharmacological Interventions to Treat Geriatric Veterans with Depression

9:40 - 9:50 AM
HAB 106
Ian C. Manion (Yuko Shibata, Modern & Classical Languages) Sapporo

9:50 - 10:00 AM
HAB 106
vanessa montes (yuko shibata, Modern & Classical Languages) Nagasaki's Culture

9:50 - 10:10 AM
HAB 101
Linda Xiong (Sophia Geng, Modern & Classical Languages) Childhood Dream

10:00 - 10:10 AM
HAB 106
Samantha M. Muldoon (Yuko Shibata, Modern & Classical Languages) Asakusa

10:00 - 10:20 AM
HAB 107
Joshua J. StGeorge (Margaret Cook, Modern & Classical Languages) Democratic Superiority: Herodotus' pro-Athenian account of Marathon and its implications for the Peloponnesian War

10:10 - 10:20 AM
HAB 106
Kaileigh B. Nicklas (Yuko Shibata, Modern & Classical Languages) Harajuku

10:10 - 10:30 AM
HAB 101
Saki Iwakiri (Sophie Geng, Modern & Classical Languages) Ginat Panda Bear

10:20 - 10:40 AM
HAB 107
Joshua J. Bikus (Karen Erickson, Modern & Classical Languages) Elements of a Revolution: Comparing the Revolutionary Works of Satre and Rousseau

10:20 - 10:30 AM *HAB 106*	Bao Vang (Shibata Yuko, Modern & Classical Languages) The Wonders of Kyoto
10:30 - 10:40 AM *HAB 106*	Kevyn F. Woods (Yuko Shibata, Modern & Classical Languages) Harajuku
10:30 - 10:50 AM *HAB 101*	Avidan H. Tabak (Sophia Geng, Modern & Classical Languages) Experiencing Art Through Asian Studies
10:40 - 11:00 AM *HAB 107*	Christina Desert (Camilla Krone, Modern & Classical Languages) Women in Conflict: Culture, Exile, Alienation, and Immigration
10:40 - 10:50 AM *HAB 106*	Naymaraha S. Castro (Yuko Shibata, Modern & Classical Languages) Setsubun Mantoro
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, Modern & Classical Languages) Higashino, Keigo
10:50 - 11:10 AM *HAB 101*	Lucas R. Eggerichs (Sophia Geng, Modern & Classical Languages) Living Abroad in China
11:00 - 11:10 AM *HAB 106*	Kevin A. Horton (Yuko Shibata, Modern & Classical Languages) Nikko Japan
11:00 - 11:20 AM *HAB 107*	Felicia N. Burns (Karen Erickson, Modern & Classical Languages) Technology and Functions of French Cinema
11:10 - 11:20 AM *HAB 106*	Frederick Jones (Yuko Shibata, Modern & Classical Languages) Koshien
11:20 - 12:00 PM *HAB 102*	Luis A. Beltran, Justin S. Brooks, Michelle Chang, Matthew T. Devery, Cynthia Gudiel, Dorealyss A.

	Johnson, Ah Lor, Annastacia D. Stubbs, Manke Wang, Xiayi Wang, Michael A. Williamson, Wan Dee Xiong, Yadan Zhang (Masami Limpert, Modern & Classical Languages) Presentation of Students in Japanese Language Class (JPAN 112)
11:20 - 11:30 AM *HAB 106*	Nou S. Vang (Yuko Shibata, Modern & Classical Languages) One Piece
11:30 - 11:40 AM *HAB 106*	Pa W. Vang (Yuko Shibata, Modern & Classical Languages) Japanese Folk Tales
11:40 - 11:50 AM *HAB 106*	Pisenny Xiong (Yuko Shibata, Modern & Classical Languages) Takashi Murakami - Japanese Contemporary Artist
11:50 - 12:00 PM *HAB 106*	Mai c. yang (Yuko Shibata, Modern & Classical Languages) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Harren: I plan to give an oral presentation (humorous) about my experience with traffic while living in Shanghai last summer. I grew up in a town without stoplights, so living in Shanghai for the summer was a very unique experience, and getting used to the people and commotion was one of my biggest challenges. I also thought of myself and my country as very different from China before visiting. The way the traffic opened my eyes about differences was a very important personal experience, and perhaps sharing it with others will help them better embrace differences and to be more open to the practical implications behind them.

Vue: Have you ever question if a Chinese Fortune Cookie is truly Chinese? It took me long distances to find that this in fact is false as difficult it may be to accept. While in China bumping into two former students of CSBSJU, I learned that the Chinese Fortune Cookie was in fact invented in America. It is ironic as my reasons for traveling to China was because of a Chinese Fortune Cookie. "Stop waiting. Buy that ticket and take a trip."

Behne: The principle method utilized for medical treatment is by way of pharmacological interventions. Therefore, non-pharmacological interventions such as talk therapy and guided imagery are overlooked and underutilized, especially in regards to treating mental health conditions. A specific example I experienced was with treating depression, as many veterans I encountered during my time at the Veterans' Affairs Medical Center are diagnosed with depression. A few effective non-pharmacological interventions for depression treatment are talk therapy and guided imagery. During my experience at the Veterans' Affairs Medical Center, I was able to practice these interventions, which yielded effective results for temporary treatment of depressive symptoms. This presentation will focus on depression among the geriatric population and the effectiveness of non-pharmacological interventions with such symptoms.

Xiong: In my Chinese presentation, I will be talking about one of my dream goals that I have always had since I was a little girl. It is to learn about China: its cultures, traditions and language. Having the chance to learn more about China in college gave me an opportunity to experience China first hand. Next semester, I will be studying abroad in China. I hope that my language skills and my understanding of the Chinese culture will prepare me to learn even more. When I come back, I hope to become more fluent in the language and be able to continuously apply them to my everyday life. I believe that by working hard and never giving up, I can turn a seemingly naive childhood dream into a reality.

Iwakiri: My speech talks about the endangered species. I will illustrate this serious issue by talking about the giant panda bear's predicaments. I will also talk about the relationship between endangered species and the human beings. Due to our destructive way of life, endangered species are losing their habitats. We need to take actions to prevent their lives from extinction.

Tabak: The experience of being an Asian Studies major has greatly shaped my life as an artist and lover of art. However, my instersts in Asia and Art seemed very seperate to me until I realized that I could combine them in Asian Art History. In this Chiense language speech, I explore what this discoverty means for me as a student and artist.

Eggerichs: My presentation is about my study abroad experience in China. I talk about many of my favorite places, foods, and memories from my four months abroad. My time in China helped improve my Mandarin

speaking,writing, and grammar skills. I am combining all of these acquired skills to fluently present this speech.

Beltran, Brooks, Chang, Devery, Gudiel, Johnson, Lor, Stubbs, Wang, Wang, Williamson, Xiong, Zhang: We are taking a survey from CSB/SJU students and presenting the result in Japanese. The topic of this survey is Spring break, Summer break, dating, and music.

Philosophy

Schedule

10:20 - 10:40 AM
HAB 107
Joshua J. Bikus (Karen Erickson, Philosophy) Elements of a Revolution: Comparing the Revolutionary Works of Satre and Rousseau

Abstracts

Theology

Schedule

9:30 - 10:30 AM
Main 322
Elizabeth A. Beaty (Christi Siver, Mary Geller, Theology) Intersectionalities: Relfections on Intersections of Gender and Other Forms of Identity

9:30 - 10:00 AM
BAC 104A
Kate Nowakowski (Kari-Shane Davis Zimmerman, Theology) Community in Faithful Life Navigation

10:00 - 10:30 AM
BAC 104
Derek L. Rausch (Kari-Shane Davis-Zimmerman, Theology) Restorative Justice and the United States Bureau of Prisons

10:00 - 10:15 AM
Gorec 204 A
Mary Catherine M. Decker, Kelly N. Stephens (Jeff Kaster, Theology) Festival of Faith

10:00 - 10:15 AM *Gorec 120 B*	Alexa K. Kubinski (Jeff Kaster, Theology) Festival of Faith
10:00 - 10:15 AM *Gorec 120 A*	Mackenzie H. Neal, Katrina M. Siebels (Jeff Kaster, Theology) Festival of Faith
10:10 - 10:25 AM *Gorec 120 A*	Katrina L. Siebels (Jeff Kaster, Theology) Festival of Faith
10:10 - 10:25 AM *Gorec 204 A*	Kelly N. Stephens, Mary Catherine M. Decker (Jeff Kaster, Theology) Festival of Faith
10:10 - 10:25 AM *Gorec 120 B*	Mariya L. Lawinger (Jeff Kaster, Theology) Festival of Faith
10:30 - 11:00 AM *BAC 104A*	Kathleen M. Dierberger (Kari-Shane Davis-Zimmerman, Theology) Feed My Lambs: A Proposal for Renewal and Transformation in the American Catholic Church Today
10:30 - 10:45 AM *Gorec 204 A*	Peter M. Vakulskas, Adam J. Happ (Jeff Kaster, Theology) Festival of Faith
10:30 - 10:45 AM *Gorec 120 A*	Jennifer M. Line, Jamie L. Hoffman (Jeff Kaster, Theology) Festival of Faith
10:30 - 10:45 AM *Gorec 120 B*	Christian C. Wilmore, Katie Cocca (Jeff Kaster, Theology) Festival of Faith
10:40 - 10:55 AM *Gorec 120 A*	Jamie L. Hoffman, Jenny M. LIne (Jeff Kaster, Theology) Festival of Faith
10:40 - 10:55 AM *Gorec 204 A*	Adam J. Happ (Jeff Kaster, Theology) Festival of Faith
10:40 - 10:55 AM	

Gorec 120B	Katie M. Cocca (Jeff Kaster, Theology) Festical of Faith
11:00 - 11:15 AM *Gorec 204A*	John T. Kleason, John M. Williams (Jeff Kaster, Theology) Festival of Faith
11:00 - 11:15 AM *Gorec 120B*	Leah M. Christensen (Jeff Kaster, Theology) Festival of Faith
11:00 - 11:15 AM *Gorec 120 A*	Kevin D. Greening, Maria n. Pugliese (Jeff Kaster, Theology) Festival of Faith
11:00 - 11:30 AM *BAC 104A*	Courtney C. Kimball (Kari-Shane Davis Zimmerman, Theology) The Wildly Relational Consumer: Essential Relatedness and the Garment Industry in Bangladesh
11:10 - 11:25 AM *Gorec 120 B*	Kendra C. Coleman (Jeff Kaster, Theology) Festival of Faith
11:10 - 11:25 AM *Gorec 204A*	John M. Williams, Jack Kleason (Jeff Kaster, Theology) Festival of Faith
11:20 - 11:35 AM *Gorec 120 A*	Maria N. Pugliese (Jeff Kaster, Theology) Festival of Faith
11:30 - 11:45 AM *Gorec 120 A*	Paula K. Kearns, Shane Fennell (Jeff Kaster, Theology) Festival of Faith
11:30 - 11:45 AM *Gorec 120 B*	Patrick S. Laird, Sean K. Nilan (Jeff Kaster, Theology) Festival of Faith
11:40 - 11:55 AM *Gorec 120A*	Shane D. Fennell (Jeff Kaster, Theology) Festival of Faith
11:50 - 12:20 PM *BAC 104*	Alyssa M. Brown (Kari-Shane Davis Zimmerman,

Theology) Različitost Obogaćuje: The Use of Memory in the Reconciliation Process in Bosnia and Herzegovina

11:50 - 12:20 PM
BAC 104A

Jennifer J. Simonton (Kari-Shane Davis, Theology) The Transformative Power of Vulnerable Living in a Desensitized Society

Abstracts

Nowakowski: I will design a Catholic faith formation curriculum for young adults ages 20-30 that will consist of twelve topics to be implemented in Midwestern parishes, utilizing contemporary Catholic teaching, modern technology, and the latest pedagogical research.

Rausch: In the last 30 years, incarceration rates have climbed to 2.3 million people behind bars. Of these 2.3 million incarcerated citizens, an average of 52% will return to the prison system within three years. This paper argues that the Christian tradition, more specifically the notion of restorative justice, offers an alternative perspective to the conventional ethics of justice required in order to improve incarceration rates. As Christians we are compelled to confront the United States Incarceration rate by advocating for reform of the Federal Bureau of Prisons in accordance with the principle of restorative justice.

Decker, Stephens: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

In our Theology 381 Youth Ministry course we read about evangelization and the process of conversion. We read sociological studies indicating that the fasting growing population in the United States is those who identify themselves as religiously unaffiliated. We then prepared and presented an evangelization talk in class seeking to foster interest in Christianity. We watched a videotape of our preaching and reflected on how to improve it. We then gave this evangelization talk in a local congregation to youth as part of a religious education teaching session. Now we would like to share our evangelization talks with the CSB/SJU community. We are calling it a festival of faith.

Kubinski: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian

evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Neal, Siebels: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Lawinger: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Dierberger: I propose a plan for renewal and transformation in the American Catholic Church today through spiritual renewal, intellectual development, and social action by uncovering the work and inspiration of past leaders in these three aspects of the Catholic faith: Julian of Norwich, Pierre Teilhard de Chardin, and Dorothy Day.

Vakulskas, Happ: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Line, Hoffman: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental

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Wilmore, Cocca: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Kleason, Williams: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Christensen: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Greening, Pugliese: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of
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Kimball: This project will argue that the concept of essential relatedness, as expressed in process theology, cultivates a language by which to approach social justice issues such as the garment industry in Bangladesh that offers United States consumers participation in restorative and transformative action when it comes to the purchase of clothing.

Coleman: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Kearns, Fennell: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental

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Laird, Nilan: St. Paul write is the Letter to the Romans, ""How beautiful are the feet of those who bring good news!" This is a class project in Christian evangelization where we address the fundamental question: Why might someone be interested in following Jesus Christ? Our method of evangelization begins with sharing a story from our lives and then connecting it to the good news and challenge presented in a gospel story.

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Brown: "This paper argues that the concept of memory may serve as a useful tool in bridging the estranged Muslim, Orthodox, and Catholic communities involved in the Bosnian Civil War (1992-1995) together under a common aim for reconciliation."

Simonton: In this paper, I argue for the retrieval of the notion of vulnerability in contemporary Christian ethics in order to assist young adults in the process of reimagining their authentic selves within an isolating and individualistic consumer society.

Natural Sciences Presentations:

Astronomy

Schedule

10:30 - 11:00 AM
PEngl 167
Thomas M. Moore (Sarah Yost, Astronomy)
Investigating Correlation Between Gamma-ray Variability and Optical Luminosity in Gamma-Ray Bursts

Abstracts

Moore: We are investigating whether there is a correlation between the optical luminosity and the variability of gamma rays during cosmic explosions known as gamma-ray bursts (GRBs). We select GRBs with observation of a rise and decline of visible light associated with the event. For each GRB, we determine properties of the optical data, notably the time at which maximum optical brightness occurs. We measure the irregularity of the gamma-ray emission using two accepted measures of variability. Statistical analysis of the data against both variability measures suggest correlation between optical properties and gamma-ray variability is unlikely.

Biochemistry

Schedule

9:00 - 9:30 AM
ASC 127
Jacob A. Zetah (Henry Jakubowski, Biochemistry)
Purification of Double Mutant (C12SW49F) Protein Tyrosine Phosphatase (PTP)

9:00 - 9:30 AM
ASC 142
Ansenio A. Gibson (Md Fazal, Biochemistry)
Current analytical methods for detection of oxidized proteins in biological samples

9:30 - 9:50 AM
ASC 107
Christopher P. Moore (Ed McIntee, Biochemistry)
Rational Design of Low Molecular Weight Protein Tyrosine Phosphatase (LMW-PTP) Inhibitor Pyridoxal 5'-phosphonate

9:30 - 10:00 AM
ASC 127
Thomas E. Ortlieb (Amber Onorato, Biochemistry)

	Dental Application of Mytilus Edulis Foot Proteins
9:30 - 9:50 AM *ASC 142*	Krista A. Barzen-Hanson (Md Fazal, Biochemistry) Spectroscopic characterization of the protein-nanoparticle interactions under normal and oxidative stress conditions
10:00 - 10:20 AM *ASC 142*	Matthew M. Syverson (Md Abul Fazal, Biochemistry) Separation and Detection of Hydroxyl Radical Oxidized (Tert-Butoxycarbonyl)-Tryptophan Using Reverse Phase HPLC-UV
10:00 - 10:30 AM *ASC 107*	Gregory J. Wieland (Edward McIntee, Biochemistry) The Role of the Beta-Amyloid Peptide in Alzheimer's Disease
10:30 - 11:00 AM *ASC 142*	Felicia N. Burns (Abul Fazal, Biochemistry) Saliva as a Diagnostic Specimen for Monitoring Oxidative Stress.
10:30 - 11:00 AM *ASC 107*	Vant Andreas J. Washington (Ed McIntee, Biochemistry) A systematic investigation of Selective Serotonin Reuptake Inhibitors
11:00 - 11:30 AM *ASC 142*	Abby J. Gauer (Michael Ross, Biochemistry) Rate of Tetracycline Photolysis
11:00 - 11:50 AM *ASC 107*	Kyle A. Richards (Edward McIntee, Biochemistry) Identification of New Inhibitors of Low Molecular Weight Protein Tyrosine Phosphatase
11:50 - 12:00 PM *HAB 106*	Mai c. yang (Yuko Shibata, Biochemistry) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Zetah: Transcription and subsequent translation of the gene for a double mutant (C12SW49F) of human PTP were initiated by addition of the lactose analog, IPTG, to archived transformed E. Coli JMB 109 cells

containing a PGEX-6P plasmid with the PTP gene linked to the gene for glutathione S-transferase (GST). A crude protein solution containing the fusion protein was obtained by lysing and centrifuging the cells. The purification of the fusion protein and double mutant PTP from the crude protein sample are reported here. The fusion protein was isolated using affinity column chromatography. The PTP-GST fusion protein bound to Pierce® Immobilized Glutathione stationary phase while the remainder of the crude protein was washed through. The fusion protein was eluted with a buffer solution containing glutathione and protein concentrations in eluted fractions were measured using the CB-X™ protein assay. Purification was monitored by polyacrylamide gel electrophoresis (PAGE). Prescission Protease was added to cleave the fusion protein to separate GST from PTP. Once cleaved, the C12SW49F PTP and the GST were separated with a column containing Pierce® Immobilized Glutathione. The double mutant PTP should have eluted through the column while the GST remained bound to the column. The fusion protein was successfully cleaved as determined by PAGE, but the double mutant PTP was not successfully purified. Multiple variations of the purification method of the double mutant PTP and the results are reported here. The ultimate goal was to determine the binding constants of various inhibitors to the double mutant PTP using tryptophane fluorescence, which required the separation and purification of PTP from the fusion protein.

Gibson: Abstract
Oxidative stress is defined by the imbalance of reactive oxygen species (ROS) and the body's ability to counteract them. Oxidative stress can lead to the oxidization of important biomolecules. Protein oxidization in particular causes peptide bond cleavage and further oxidization of other proteins. Oxidized proteins have been linked to certain disorders or diseases like Alzheimer disease and Huntington's disease. Because of this, it is important to find new efficient methods of detecting oxidized proteins. Most forms of protein oxidization causes the formation of carbonyl groups. Detection of these carbonyl groups can be used as biomarkers for oxidative stress and many other pathological conditions. This project summarizes the importance and significance of oxidized proteins, and currently available detection methods.

Moore: The over expression of Low Molecular Weight Protein Tyrosine Phosphatase (LMW-PTP) is connected to tumor onset and progression. Markedly high levels of LMW-PTP have been recorded in human tumor tissues including breast, colon, and neuroblastoma cancers. Past research has shown that pyridoxal 5'-phosphate (PLP), the active form of vitamin B6, tightly binds LMW-PTP as an inhibitor. In past research, PLP was used as a structural basis for synthesis of non-hydrolysable phosphonate acid analogs. The analogs of PLP were synthesized and screened for their inhibitory properties against LMW-PTP isoform B. In continuation of this

research, processes were developed toward synthesis of a pyridoxal 5'-phosphonate inhibitor.

Ortlieb: Biological mechanisms of marine organisms, such as mussels, offer unique opportunities for innovation within modern medicine. The adhesive properties of Mytilus Edulis byssal proteins, utilized in underwater attachment, suggest use within dental medicine as polymer sealants and coatings. The adhesive mechanisms employed by mussels are the result of 3,4-dihydroxyphenylalanine (DOPA) containing proteins, particularly mefp-1, mefp-3, and mefp-5. These proteins are located in the mussel byssus threads secreted for aqueous attachment. The oxidation of tyrosine to DOPA yields semiquinone formation capable of both cross linkage and surface adhesion to a variety of surfaces. Utilizing atomic force microscopy and nanoindentation, researchers have shown that single DOPA molecules are capable of withstanding remarkably high retraction forces, while maintaining greater degrees of hardness and durability than traditional epoxy-resin coatings. Results support the application of DOPA-rich mussel foot proteins in the development of new, compliant dental sealants.

Barzen-Hanson: The rapidly developing field of nanotechnology has dramatically increased the exposure of humans to nanoparticles and demands thorough toxicological assessments for their safe use. This research project is focused on the quantitative determination of the effects of oxidative modifications of human serum albumin (HSA) on its binding interactions with iron (III) oxide magnetic nanoparticles (MNPs). Spectroscopic techniques (UV-Vis, IR, fluorescence, and circular dichroism spectroscopy) were used to characterize the MNP-HSA binding interactions. The circular dichroism spectra suggest that the addition of MNPs increases the stability of the MNP-HSA complex. The time dependent oxidation of HSA resulted in a significant and gradual decrease in binding interactions with MNPs.

Syverson: The free radical oxidation of amino acids by reactive oxygen species (ROS) is related to protein misfolding and aggregation leading to many pathological conditions. However, simple methods for the separation and detection of oxidized amino acids in biological samples are not widely available. In this study, we used amine protected tryptophan as our model amino acid. Tryptophan was oxidized by a free radical hydroxyl group, generated from the Fenton reaction. The structure of the oxidized compound was determined using proton and carbon nuclear magnetic resonance spectroscopy, and infra-red spectroscopy. The oxidation mixture was separated by high pressure liquid chromatograph (HPLC) with UV detection at 220 nm and 280 nm. An HPLC gradient method was developed and optimized for separation of oxidation product from non-oxidized tryptophan in less than 35 minutes.

Wieland: Alzheimer's disease is a degenerative brain disorder that is the 6th leading cause of death in the United States. Currently there is no effective cure or treatment of the disease, but over the last three decades there has been much advancement in the understanding of its causes. Beta-amyloid peptides have been shown to play a large role in the formation of senile plaques in the brain and in the killing of cells that occurs in the brains of Alzheimer's patients. This presentation provides an overview of the role of beta-amyloid peptides in Alzheimer's disease. It also explores the current research that is being done to target beta-amyloid peptides that could potentially lead to the development of an effective treatment or prevention of Alzheimer's disease.

Burns: This research project aims to establish a functional technique for monitoring oxidative stress levels using saliva as a diagnostic specimen. Malondialdehyde (MDA) is a common biomarker for oxidative stress and naturally occurs in saliva. Most currently available methods for MDA detection are based on reaction of MDA and thiobarbituric reactive substances (TBARS) which form an adduct that can be measured spectrophotometrically. This type of assays suffer from poor selectivity because TBARS forms adducts with many other components of saliva. In this project we evaluate, the reagent dye 1-methyl-2-phenylindole as an alternative to TBARS for detection of MDA using UV-Vis spectroscopy. MDA concentrations in simulated and real saliva samples will be measured using this new method.

Washington: A description of the anti-depressant drug class of Selective Serotonin Reuptake Inhibitors (SSRIs) along with their efficiency in minimizing depression related symptoms. This presentation focuses on the description of the above class of drugs' methods of action, synthesis, selectivity, specific examples of commercial products and binding affinity. This presentation also highlights precursor anti-depressant drug treatments, and the future studies of SSRIs.

Gauer: Kinetics of photolysis of the antibiotic tetracycline hydrochloride (TC) was investigated in three buffer solutions under a medium pressure mercury vapor lamp with wavelength ranging from 220-1400 nm. The rate of photodecomposition was measured by high performance liquid chromatography. The results verified that TC degrades by direct photolysis.

Richards: Low Molecular Weight Protein Tyrosine Phosphatase (LMW-PTP) plays a vital role in both cell proliferation and intercellular communication. Over-activation of LMW-PTP has been linked to the transformation of cells in the liver, kidney, and breast. Past research has shown the National Cancer Institute's diversity set I and II both contained inhibitors targeted against LMW-PTP. Our research is focused on the identification of novel inhibitors of LMW-PTP based on the National

Cancer Institute's diversity set III. Inhibitors were first identified via virtual screening using Maestro (Schrodinger LLC) before being tested through an enzymatic assay. Results of these efforts will be presented.

Biology

Schedule

9:00 - 9:20 AM
ASC 104
Samantha M. Woolson, Angel M. Brunik, Trent J. Fader, Abigail L. Palmer (Mary Stenson, Biology) The effect of caffeinated 5 hour energy versus decaffeinated 5 hour energy on maximal hand grip strength and power produced during a maximal vertical jump test.

9:30 - 10:00 AM
ASC 127
Thomas E. Ortlieb (Amber Onorato, Biology) Dental Application of Mytilus Edulis Foot Proteins

9:30 - 10:00 AM
BAC 108
Hannah L. Prososki (Kathleen Twohy, Biology) Failed Extubations in the Pediatric ICU

10:00 - 10:30 AM
BAC 106
Emily M. Martin (Denise Meijer, Biology) Music Therapy as an Intervention to Relieve Pain and Anxiety in Post-Operative Spine Patients.

10:00 - 10:20 AM
ASC 104
Katie J. Schwab, Hannah M. Vanderheyden, Madelyn R. Milton, Dylan E. Graves (Mary Stenson, Biology) Does fasting glucose and hip flexor flexibility correlate to sedentary time among college students?

11:00 - 11:30 AM
ASC 142
Abby J. Gauer (Michael Ross, Biology) Rate of Tetracycline Photolysis

11:30 - 11:50 AM
PEngl 325
Lucas M. Dingman (Stephen Saupe, Biology) The potential antibacterial effects of phospholipase A2 enzymes found in Viperidae venom

Abstracts

Woolson, Brunik, Fader, Palmer: The aim of this study is to determine whether or not caffeine has a significant effect on increasing muscle force and power production. Participants of this study will ingest either a 5 Hour Energy drink or a decaffeinated 5 Hour Energy drink and will perform strength and power exercises immediately after consumption, 15, 30, 45, and 60 minutes post consumption. Power will be measured by vertical jump height (cm) and isometric force production will be measured with a handgrip dynamometer. We expect that power and force production will incrementally increase throughout the hour. Therefore, the highest recorded power and force production will be at the 60 minute mark.

Prososki: Failing extubation in the Pediatric ICU can be a stressful and life-threatening event for patients. Failing extubation is defined as re-intubating a patient within 48 hours of extubation time. Failed extubations occur in all populations, but in this case the focus is on pediatric patients. Failing extubation is a result of the care team believing the child is ready for extubation, extubating, and finally the child declining in status and ability to provide adequate oxygenation for him or herself, resulting in the need for re-intubation. A Minnesota Children's Pediatric ICU has data on the number of failed extubations at their hospitals from a six-month window, September 3, 2012 through February 4th, 2013. Existing research already identifies common risk factors that result in extubation failure. Using the existing research, this project aims to identify the common risk factors present at this facility and to determine a way to improve care provided for high-risk extubation failure patients. This project will specifically consider nursing's role in preventing failed extubations for patients at high risk for failure.

Schwab, Vanderheyden, Milton, Graves: The purpose of this experiment is to determine if there is a correlation between sedentary behaviors, fasting glucose and hip flexor flexibility. Participants will have their fasting glucose measured using a LifeScan OneTouch Ultra II glucometer and their hip flexor flexibility measured using a Modified Thomas Test. They will then be asked to fill out the IPAQ survey to assess sedentary behavior. Participants will also fill out a typical daily schedule worksheet detailing their daily activities throughout the day for a typical week. We expect to find a positive relationship between sedentary behaviors and fasting glucose, and a negative relationship between sedentary behavior and hip flexor flexibility.

Dingman: For this presentation, I will discuss the potential antibacterial effects of the phospholipase A2 proteins found in the venoms of snakes belonging to the Viperidae family. As a result of the prevalence of

bacterial resistance, patient morbidity and mortality rates have drastically increased worldwide. Therefore, it is necessary to procure different classes of antibiotics – antibiotics that can effectively treat antibiotic resistant bacterial infections. It was recently discovered that certain snake venoms, which contain hundreds of different enzymes and proteins, also contain an enzyme (phospholipase A2) that has the ability to kill or inhibit the growth of certain bacteria. These proteins are highly concentrated in the venoms of Viperidae snakes, which is why those venoms may hold the key to treating antibiotic resistant bacteria. I intend to discuss the mechanism of action by which phospholipase A2 is bactericidal, the different bacteria that may be susceptible to various types of phospholipase A2, and what may be in store for the future of antibiotics.

Chemistry

Schedule

9:00 - 9:30 AM
ASC 127
Jacob A. Zetah (Henry Jakubowski, Chemistry)
Purification of Double Mutant (C12SW49F) Protein Tyrosine Phosphatase (PTP)

9:00 - 9:30 AM
ASC 107
Andrew Calascione (Brian johnson, Chemistry)
Synthesis and Characterization of Ni[P(OEt)3]4 and Exploration of its Catalytic Properties in a New Integrated Lab

9:00 - 9:30 AM
ASC 105
Jennifer L. Marple (T. Nicholas Jones, Chemistry)
MacMillan-Type Cascades Using Dendrimer Bound Catalysts

9:30 - 9:50 AM
ASC 107
Christopher P. Moore (Ed McIntee, Chemistry)
Rational Design of Low Molecular Weight Protein Tyrosine Phosphatase (LMW-PTP) Inhibitor Pyridoxal 5'-phosphonate

9:30 - 10:00 AM
ASC 127
Thomas E. Ortlieb (Amber Onorato, Chemistry)
Dental Application of Mytilus Edulis Foot Proteins

9:30 - 9:50 AM
ASC 142
Krista A. Barzen-Hanson (Md Fazal, Chemistry)
Spectroscopic characterization of the protein-

	nanoparticle interactions under normal and oxidative stress conditions
9:30 - 10:00 AM *ASC 105*	Sarah R. Beddow (Alicia Peterson, Chemistry) Development of Catalytic Degradation of Chlorinated Ethylenes Reaction for Upper Division Integrated Lab
10:00 - 10:30 AM *ASC 105*	Katherine J. Kaiser (Alicia Peterson, Chemistry) The Determination of the Capabilities of the C6 Multi-Sensor Platform and Cyclops-7 Sensors
10:00 - 10:30 AM *ASC 127*	Jonathan Wolf (Anna McKenna, Chemistry) Structure and Properties of Complexes of Nickel(II) and Salicylaldehyde Derived Schiff Base Ligands
10:00 - 10:20 AM *ASC 142*	Matthew M. Syverson (Md Abul Fazal, Chemistry) Separation and Detection of Hydroxyl Radical Oxidized (Tert-Butoxycarbonyl)-Tryptophan Using Reverse Phase HPLC-UV
10:00 - 10:30 AM *ASC 107*	Gregory J. Wieland (Edward McIntee, Chemistry) The Role of the Beta-Amyloid Peptide in Alzheimer's Disease
10:30 - 11:00 AM *ASC 127*	Damiene A. Stewart (Kate Graham, Chemistry) Asymmetric Aldol reaction Induced by Chiral Auxiliary
10:30 - 11:00 AM *ASC 142*	Felicia N. Burns (Abul Fazal, Chemistry) Saliva as a Diagnostic Specimen for Monitoring Oxidative Stress.
10:30 - 11:00 AM *ASC 105*	Daniel M. Neuburger (Alicia Peterson, Chemistry) Rhodium Catalyzed Dehalogenation of Environmental Pollutants
10:30 - 11:00 AM *ASC 107*	Vant Andreas J. Washington (Ed McIntee,

	Chemistry) A systematic investigation of Selective Serotonin Reuptake Inhibitors
11:00 - 11:20 AM *ASC 105*	Marissa K. Oram (Alicia Peterson, Chemistry) Degradation of Chloroethylenes in Lake Sagatagon
11:00 - 11:30 AM *ASC 142*	Abby J. Gauer (Michael Ross, Chemistry) Rate of Tetracycline Photolysis
11:00 - 11:30 AM *ASC 127*	Tyler L. Gerads (Leo Seballos, Chemistry) Counter Ion Effect on the Synthesis of Silver Iodide Nanoparticles in Ionic Liquids
11:00 - 11:50 AM *ASC 107*	Kyle A. Richards (Edward McIntee, Chemistry) Identification of New Inhibitors of Low Molecular Weight Protein Tyrosine Phosphatase
11:30 - 12:00 PM *ASC 105*	Christopher P. Stevermer (Chris Schaller, Chemistry) Polyurethane Synthesis using Biorenewable Monomers

Abstracts

Calascione: The College of St. Benedict/Saint John's University chemistry department has undergone a change in curriculum recently. After two years of restructuring the lower division classes and labs, the time for restructuring the upper division curriculum has come. The department is looking to introduce a four credit lab that exemplifies the interdisciplinary nature of the chemistry labs. One experiment in this lab begins with the synthesis of Ni[P(OEt)¬3]4, an inorganic catalyst, followed by characterization of the nickel catalyst using proton and phosphorus NMRs using a JEOL 400 MHz NMR. The synthesis is followed by the catalytic isomerization of 1-heptene using the nickel catalyst. The isomerization is analyzed using GC/MS on a Varian Saturn 2000 GC/MS. The synthesis and instrumentation required for this lab demonstrates the interdisciplinary nature needed in an integrated lab by including inorganic, organic, and analytical chemistry. Students will design further experiments to more completely explore the reaction and properties of the catalyst.

Marple: We have functionalized PAMAM dendrimers with imidazolidinone catalysts. Fuctionalized PAMAM dendrimers were characterized by NMR analysis. We are now investigating these organocatalytic-functionalized PAMAM dendrimers for their effectiveness as catalysts in MacMillan-type cascade catalysis.

Beddow: The CSB/SJU Chemistry Department has introduced a new curriculum for students with a 4-credit integrated lab as a required upper level chemistry course. This is a potential project for use in the integrated lab. Students will develop a method for monitoring the kinetics of the dechlorination of tetrachloroethylene (PCE) by titanium (III) citrate reducing agent and Vitamin-B12 cobalt catalyst . The students would first be required to develop their own GC experimental parameters such as column temperature, temperature ramps, and pressure to monitor PCE degradation and trichloroethylene formation. Then the students would be able to calculate the rate constant of degradation by GC analysis by taking a gas headspace sample every 20 minutes of the dechlorination reaction. Students will also have to calculate the concentration of PCE from an original unknown solution by developing a calibration curve. This experiment allows students to develop the skills needed for quantitative analysis and proper use of the GC instrument along with comparing their rate constants with reported values from the literature.

Kaiser: Oil is a toxic contaminant in marine ecosystems that can have a harmful effect on water and the environment. As components of oil have fluorescent qualities, fluorescence spectroscopy can be used to identify the presence of oil in water. The C6 Multi-Sensor Platform with the Cyclops-7 sensors is an instrument that uses fluorescence to analyze water quality. Through the use of custom designed sensors, a wide spectrum of oil mixtures can be tested as well. The instrument had six sensors, one each for chlorophyll, CDOM (colored dissolved organic matter), and turbidity and had three sensors for oil. As the instrument was custom designed, the various capabilities and parameters of the instrument were investigated. The sensor responses to CDOM, Turbidity, and oil were analyzed individually. Standard plots were created for each sensor for future use. Finally, combinations of parameters were analyzed to determine the effects they have on each other.

Wolf: An integrated lab developed for upper-division chemistry program incorporates organic synthesis, inorganic synthesis, and recrystallization followed by analysis using UV-Vis spectrophotometry, cyclic voltammetry, and magnetic susceptibility. The lab involves the coupling of salicylaldehyde derived Schiff bases ligands with nickel (II). Ligands were chosen based on the sterics of the amine group, which allowed for control of the geometry of the complex. Previous research has shown substitutions of the amine in N',N'-bis-(salicylidene)-diamine nickel(II)

cause shifts in peak potential and λmax. This lab can be used to demonstrate the basics of ligand field theory, and to have students correlate changes in cyclic volumetric, absorption peak, and magnetic susceptibility data with geometry as controlled by the ligands on the metal.

Stewart: The aldol reaction is important in forming new carbon-carbon bonds and, as such, in forming molecules that may be important starting material for many pharmaceutical products. This experiment is a three – step asymmetric aldol reaction that attempts to use a 'chiral auxiliary' and a substrate to prepare a specific aldol product with controlled stereochemistry. The first step of the experiment is the preparation of the chiral auxiliary; the second, the coupling of the auxiliary and the substrate. The third step is performing a base catalyzed aldol condensation reaction at 0°C or lower. After each step, the product formed is purified and analyzed.

Neuburger: Halogenated organic compounds are known toxins and ground water pollutants. Toxicity is related to the halogen substituents, so complete dehalogenation of these pollutants effectively removes this concern. Catalytic hydrodehalogenation of chlorinated ethylenes and halobenzenes by 5 wt % rhodium on alumina catalyst in the presence of dihydrogen as the reducing agent under aqueous conditions is described. Kinetic parameters and product distribution for hydrodehalogenation reactions were determined using gas chromatography-mass spectrometry headspace analysis. The effects of various buffers on the rate of trichloroethylene hydrodechlorination were investigated. The presence of a phosphate buffer in the reaction flask was found to increase the dehalogenation rate constant. Substrate scope was explored using halogenated benzenes where the final products are cyclohexanes. The rate constants for the halogenated benzenes were found to be less than that of trichloroethylene under the same reaction conditions.

Oram: Catalytic hydrodechlorination of trichloroethylene (TCE) using a 5 wt % rhodium on alumina catalyst with dihydrogen as the reducing agent is described. The reactions kinetic parameters of TCE hydrodechlorination and ethane product formation was determined using gas chromatography head space analysis. The goal was to explore the affect of water collected at different times of the year on the rate of TCE degradation by performing the reaction in deionized water, pH 7 phosphate buffer, fall lake water, and summer lake water. Both of the natural water samples behaved more closely to the pH 7 phosphate buffer system than to the deionized water system. The fall lake water had a faster

rate of TCE degradation and product formation than the summer lake water, implying differences in their seasonal constituents. The natural water components did not have a clear effect on the rate of TCE degradation. The rate of ethane product formation was slowest in both of the natural water samples, indicating that natural water components have a negative effect on product formation, particularly delaying the initial rate.

Gerads: In this experiment, an ionic liquid of either,1-butyl-3-methylimidazolium tetrafluoroborate (BmimBF4) or 1-butyl-3-methylimadazolium hydrogen sulfate (BmimHSO4), was added to a water-in-oil micro emulsion to observe the effect of the ionic liquid on the rate of formation of silver iodide nanoparticles (AgI NPs) in a reverse micelle template of Polyethylene glycol tert-octylphenyl ether (Triton X-100) surfactant. A time driven UV-Vis absorbance measurement was used to approximate the relative population of nanoparticles and showed an increase in the rate of formation of the nanoparticles when ionic liquid is present up to a certain quantity. It is suspected that the viscosity and the polarizability of the ionic liquid components compete to affect the reaction rate. In an effort to determine how the ionic liquids in the synthesis is affected by other ionic species during the synthesis, a growth kinetics study using iodide precursors with different counter-cations (potassium iodide and sodium iodide) were conducted. Results show that the BmimHSO4 ionic liquid solution shows an ionic mobility trend similar to water, but BmimBF4 does not.

Stevermer: Biorenewable polymers and their properties have become a growing field of interest with the increasing price of petroleum products. Biorenewable monomers are becoming a move cost effective and viable alternative. In pursuit of this field two natural products menthone, derived from spearmint oils, and dihydrocarvone, derived from caraway oil, were transformed into the lactones menthide and dihydrocarvide using a green Baeyer-Vilager reaction utilizing Oxone and sodium bicarbonate. The lactones were purified of epoxides and excess reagent using distillation and column chromatography and confirmed using GC-MS and H-NMR. The lactones were then used as monomers in a polymerization of polyurethane.

Schedule

9:30 - 10:00 AM
PEngl 167

Richard J. Kirchner (Adam Whitten, Mathematics)
Differential Modeling and Efficiency Testing of the Saint John's University Co-generation Power Plant

Abstracts

Kirchner: Saint John's University and Saint John's Abbey of Collegeville, Minnesota own and operate a domestic power plant. The plant engineers control six boilers which produce high pressure steam. The power plant is a co-generation facility, which implies that the produced steam serves two purposes. As high pressure steam exits the boiler, it is transported to a steam turbine which generates electricity at a rate of 425 kW. The steam serves its second purpose as it exits the turbine and is transported to campus buildings to provide heat. The focus of this study was on boiler number six which combusts natural gas fuel to produce steam. Boiler number six is the most efficient and environmentally favorable boiler that the power plant operates. Data for this study were collected on November 8 & 9, 2012. This data set was analyzed using thermodynamic theory which ultimately led to the determination of the efficiency of each power plant process. The calculated efficiency values were applied to a unique set of differential equations which accurately describe power plant operation. The overall efficiency of the Saint John's University power plant was determined to be 90.1 + 3.6 %. It was determined that the least efficient process of the power plant is the electrical generation process. The power plant would benefit from the implementation of a new generator. It was also determined that the theory used to determine the efficiency of the different systems needs improvement and verification with further data recording and further consideration of water loss during the generation and heating processes. It is suggested that future research include more data collection and utilization of the set of differential equations to create a computer model of power plant operations.

NATS

Schedule

9:20 - 9:30 AM	
HAB 106	Kia Her (Yuko Shibata, NATS) The Benjamin A. International Scholarship & It's Impact on Studying Abroad in Japan
10:30 - 10:50 AM	
PEngl 325	Gretchen Osdoba (Stephen Saupe, NATS) Combating Dental Anxiety in Patients
10:50 - 11:10 AM	
PEngl 325	Maura Schumacher (Stephen Saupe, NATS) Analysis of Carbon Capture at Coal Fired Power Plant Sites

11:10 - 11:30 AM
PEngl 325 Stephen J. Middlebrook (Stephen Saupe, NATS)
Detecting Denial of Service Attacks in the Cloud

Abstracts

Osdoba: Dental Anxiety is a highly debilitating condition that can keep people away from the dentist and from receiving critical care. This can lead to serious medical conditions that could have easily been prevented through proper dental care. The purpose of this presentation is to describe the nature of dental fear and the different treatment options available. I will focus on helpful traits of dentists and the use of psychological treatments, nitrous oxide, anti-anxiety medications, and general anesthesia to reduce this fear. I will also discuss a comparison of a psychological treatment and an anti-anxiety medication as short-term and long-term treatment options and why dentists generally choose in-office options before reaching out to a psychologist.

Schumacher: In this paper, I will seek to find the some of the most efficient and cost effective ways to remove carbon from power plant outputs. I will compare and contrast methods including carbon capture and sequestration (CCS) at coal-firing power plants versus carbon capture at power plants that are co-fired with coal and biomass: Bio-energy carbon capture and storage (BECCS). I will also compare the costs and efficiencies between retrofitting existing power plants with carbon capture methods versus newly built power plants and the effects of introducing biomass as fuel to existing carbon firing power plants.

Middlebrook: Cloud computing is a very rapidly expanding sector of the IT industry. Computing in the cloud gives end-users scalable, reliable, and on demand computing power. Cloud computing provides three main areas of Internet based services: Software, Infrastructure, and Platform as a Service or SaaS, IaaS, and PaaS. Security is the largest concern going forward with cloud computing. Distributed Denial of Service (DDoS) attacks have the ability to disrupt services in the cloud. Attackers are able to utilize the cloud to flood servers with unwanted requests and effectively disable entire systems. Utilization of Intrusion Detection Systems (IDS) is the most effective way to prevent DDoS attacks. Working in the cloud poses new challenges in efficiently analyzing and acting on alerts by IDSs. By utilizing 3-valued logic IDSs can improve detection rates and reduce false negatives. Improving the methods of IDSs to collect and analyze alerts will mitigate the risk of DDoS attacks.

Nursing

Schedule

9:00 - 9:30 AM
BAC 107
Kristen E. Schulstad (Roxanne Wilson, Nursing) Reducing Delirium in the Intensive Care Setting

9:00 - 9:30 AM
BAC 106
Jennifer K. Brattensborg (Denise Meijer, Nursing) Improving Nursing Care with Bedside Reporting

9:00 - 9:30 AM
BAC 108
Rachel M. Dunham (Kathleen Twohy, Nursing) Prevention and Treatment of Diaper-Area Dermatitis in the Neonatal Population: An Evidence-Based Practice Improvement

9:00 - 9:30 AM
BAC 109
Natalie J. Peterson (Carrie Hoover, Nursing) J-tip Needleless Injection System: Standardizing anesthetic practices to reduce pain in children during intravenous catheter insertion

9:30 - 10:00 AM
BAC 106
Ariel R. Reischl, Cady M. Sea, Emily A. Swenson, Kristie A. Mueller, Sara M. Fiedler, Shannon L. Murphy (Denise Meijer, Nursing) Healing Touch

9:30 - 10:00 AM
BAC 108
Hannah L. Prososki (Kathleen Twohy, Nursing) Failed Extubations in the Pediatric ICU

9:30 - 10:00 AM
BAC 109
Nicole M. Behne (Gary Gillitzer, Nursing) The Under-Utilization of Non-Pharmacological Interventions to Treat Geriatric Veterans with Depression

10:00 - 10:30 AM
BAC 106
Emily M. Martin (Denise Meijer, Nursing) Music Therapy as an Intervention to Relieve Pain and Anxiety in Post-Operative Spine Patients.

10:00 - 10:30 AM
BAC 107
Jennifer E. Stocker (Roxanne Wilson, Nursing) Integrating Presence and Holistic Care in Caring for Laboring Parents

10:00 - 10:30 AM

BAC 109	Gina C. Luke (Gary Gillizter, Nursing) Distress Screening in Cancer Patients
10:30 - 11:00 AM *BAC 108*	Sheila M. Lungay (Kathleen Twohy, Nursing) Managing Compassion Fatigue
10:30 - 11:00 AM *BAC 109*	Kirsten M. Czaplewski (Gary Gillitzer, Nursing) Proper Intramuscular Injection Administration Technique
10:30 - 11:00 AM *BAC 107*	Stephanie J. Gerlich (Roxanne Wilson, Nursing) One check, two check, three check, four: Surgical Checklists and Teamwork will Score
11:00 - 11:30 AM *BAC 107*	Nicholas L. Gardner (Roxanne Wilson, Nursing) Promoting Veteran Health Through Enrollment in MOVE Program
11:00 - 11:30 AM *BAC 106*	Hannah M. Frost (Carrie Hoover, Nursing) Stroke Rehabilitation Discharge Process: Barriers to Going Home
11:00 - 11:30 AM *BAC 108*	Nicole M. Behne (Kathy Twohy, Nursing) Examination of the Impact of Living Arrangements and Marital Status on Depression Among Geriatric Male Veterans
11:00 - 11:30 AM *BAC 109*	Danielle c. Goetzke, Brooke d. Brodeur, Kelly m. Cass, Bethany l. Carlson (Rachelle Larsen, Nursing) stress management for women's shelter residents
11:30 - 12:00 PM *BAC 106*	Molly A. Tikalsky (Carrie Hoover, Nursing) Drug Diversion: identification, prevention, education
11:30 - 12:00 PM *BAC 107*	Mollie E. Holte (Roxanne Wilson, Nursing) Influenza Vaccination Among Healthcare Workers
11:30 - 12:00 PM	

BAC 108 Hannah L. Prososki (Kathleen Twohy, Nursing)
Identification of Contributing Factors to Alcohol Abuse in Vietnam War Era Veterans

Abstracts

Schulstad: Delirium is a serious disturbance of a person's perception that results in a decreased awareness of one's environment and results in confused thinking. The onset of delirium is often sudden and can last a few hours to a few days. Delirium differs from dementia because it can be traced to one or more contributing factors such as severe or chronic medical illnesses, medication(s), infection, surgery or drug or alcohol abuse and the onset is sudden. Since many patients in the ICU setting often have one or more of these contributing factors delirium is of a major concern for higher mortality rate, increased length of stay, and a higher incidence of cognitive impairment at the time of discharge. Educating critical care nurses about how to identify causes and risk factor of the disorder are key to delirium reduction. The goal of this practice improvement project is to increase knowledge and assessment of delirium in the intensive care setting (ICU) in one central Minnesota inpatient hospital setting. A review of the literature and recommendations for assessment and implementation will be provided to the ICU and their staff.

Brattensborg: The purpose of this practice improvement project is to educate staff at this hospital about the benefits of bedside reporting and encourage better compliance with this expectation in order to improve the patient experience and enhance effectiveness of shift handoff. Miscommunication among members of the healthcare team has been identified as a leading cause of sentinel events. The most frequent communication between these professionals is during nurse-to-nurse change of shift report. Typical report on the unit occurs at the nursing station. While this process is currently working fine, it is believed that this could be improved with many positive patient outcomes. The patients on this unit are high acuity and require complex care and equipment. Changes in their health status can be frequent and dramatic, and any misunderstanding regarding their highly individualized care could have severe and detrimental consequences. Bedside reporting is a method of shift change report that occurs at the bedside in a patient's room. This method allows the nurse to visualize the patient and better prioritize cares for the day. Also, several articles have reported a decrease in medication errors and patient safety concerns that have been identified and addressed during bedside report. Despite a common belief that bedside reporting takes longer, evidence shows that after a period of implementation, bedside reporting takes less time than other reporting methods. Additionally, patients are given the opportunity to be involved of their plan of care and are comforted knowing pertinent information

was passed on to the next nurse. There are challenges to bedside reporting including concerns of patient privacy and comfort level of the nurse and patient. However, improvements in patient safety as well as increased patient and nurse satisfaction have led to a growing shift throughout healthcare systems towards bedside reporting.

Dunham: Gestation, diet, nutritional status and congenital anomalies are all factors that contribute to increased cases of diaper dermatitis in the neonatal unit. The neonate population is estimated to urinate more than 20 times per day, keeping the skin soiled under the prolonged occlusion of a diaper. Intestinal malabsorption syndromes seen in the neonate during the first four weeks of life often lead to constant dribbling of stool further eroding skin integrity. The goal of this practice improvement project is to identify the best quality practice for the treatment and prevention of incontinence-associated dermatitis (IAD) in this vulnerable population. The health of the neonatal infants on this unit is already compromised, so providing a comfortable environment to promote rest and healing is a principal priority. Providing nurses with education on current best practices that involve the frequency of diaper changes, safe and effective cleansing agents and prevention techniques such as moisture barrier creams, can significantly decrease the risk of IAD. Although cost is a factor in any situation, in the hospital or at home, nurses must be the leading example of the ultimate quality care. The nurses will adapt the recommended changes in their care practices and properly educate parents on the safest and most effective practices and products to protect the delicate skin on the infant's buttocks prior to discharge.

Peterson: Insertion of intravenous catheters is a painful and stressful process for most children. Common strategies nurses use to reduce this pain are distraction and EMLA anesthetic cream. A new product called the J-tip has been approved by the Food and Drug Administration to be used as an anesthetic before IV placements. The J-tip is a needleless injection system of 1% buffered lidocaine that delivers the medication by use of pressurized CO2 gas through the subcutaneous tissue. It allows for an instantaneous anesthetic effect and is easy to use yet there is a discrepancy in practice between CentraCare's outpatient pediatric nurses who use the product consistently and inpatient pediatric nurses who rarely use this product prior to IV insertion in children. This discrepancy is a problem because many inpatient nurses float to the outpatient unit and are not as familiar with or comfortable using the J-tip. This discrepancy in anesthetic practices before IV placement can lead to confusion among nurses who float to the outpatient unit, increased risk for errors, and dissatisfaction among patients and families. With further education and research evidence, pediatric nurses could use the J-tip effectively across both outpatient and inpatient settings. Therefore, the purpose of this practice improvement project is to research the costs and

the effectiveness of the J-tip needleless injection system at reducing pain during IV catheter insertion in children and standardize practice across units through education of pediatric nurses .

Reischl, Sea, Swenson, Mueller, Fiedler, Murphy: This project strived to identify what Healing Touch (HT) practices could be implemented in a population of inpatient acute care patients. Considerations for implementation included patient preferences and patient-centered care interventions to enhance individualized therapy outcomes and patient satisfaction. HT is a form of complementary and alternative medicine (CAM) based on the belief that vital energy flows through the human body; this energy is essential to the healing process and is said to be balanced or made stronger by HT practitioners who pass their hands over or gently touch a patient's body. Research demonstrated an increasing trend for the use of CAM and willingness for adult populations to invest in its use. Studies have shown significant improvements in stress, anxiety, and overall well-being. Mental health symptoms and psychological well-being have been reported as improved after using HT. Research studies surrounding oncology patient populations have demonstrated significant positive benefits in the fatigue, pain, and health-related quality of life. A survey was conducted to determine if the literature review was an accurate reflection of the facility experience with HT. Based on this data, policy changes were proposed and an implementation plan was coordinated for HT.

Stocker: The purpose of this performance improvement project is to identify the evidence to select common holistic therapies useful in caring for laboring patients in a rural hospital. This will include identification of barriers to implementation, patient and family preferences, education for nurses, and increased use of holistic therapies for women in labor. The literature supports integrating therapies including physical presence of the nurse during labor, aromatherapy, massage, hydrotherapy, and a birthing ball. The assessment of need was conducted with leadership and staff RNs involved in providing care for laboring patients. Based on the results, education on holistic interventions will be designed to provide nurses at this facility ways to enhance involvement in the labor process, thus increasing satisfaction of patients, staff and families.

Luke: Distress is a psychological, social, emotional or spiritual concern caused by physical symptoms or other concerns. Distress is a very common occurrence among cancer patients. However, research has shown that distress is one symptom that is often overlooked. The providing oncologist often focuses more on pain and physical symptoms that may occur from chemo, radiation or other treatment. These symptoms may lead to increased amounts of distress. Distress can lead to decreased quality of life, compromised decision-making and negative treatment outcomes. It is important for clinicians to remember that

distress is not an easy topic for patients to discuss with anyone. One study found that a third of patients with cancer struggle with significant amounts of distress and less than 5% actually reported these feelings with their healthcare provider. As research continues to become more prevalent on the issue of distress, some facilities are noting it as the "6th vital sign" for cancer patients. The goal of this practice improvement project is to implement a distress-screening tool for patients in the specialty clinic, which can also extend to the hospital if needed, and to educate nurses on the causes of distress and importance of screening for it. Along with the screening tool, I would also like to provide ideas for the interdisciplinary team to execute if the healthcare provider finds a problem with distress.

Lungay: Compassion fatigue (CF) is the final result of a progressive and cumulative process that is caused by prolonged, continuous, and intense contact with patients and exposure to stress. Studies indicate that the prevalence of CF in nurses is between 16-39%. The term CF was first introduced in 1992 as a way to describe the phenomenon when nurses turned off their own feelings or experience helplessness and anger to the stress they feel watching patients go through devastating illness or trauma. It has also been described as "the cost of caring." A nurse experiencing CF may experience sleep disruption, loss of appetite, fatigue, reduced resistance to infection, body aches, depression, anxiety, and irritability. Nurses who experience CF are more likely to leave the profession or switch specialties. At a time when nurses are so critical, it is important to preserve the well-being of nurses to prevent staff turnover. Oncology nurses are especially at risk for CF due to the nature of the specialty. Various methods are used to reduce self-reported stress and burnout, such as mindfulness-based stress reduction. The purpose of this practice improvement project is to help chemotherapy/infusion nurses at the Coborn Cancer Center identity risk factors for developing CF and implement strategies to build resiliency against it.

Czaplewski: The administration of intramuscular (IM) injections is a basic skill frequently practiced by nurses in the healthcare setting. IM injections are used to administer vaccines and medication. The correct administration of IM injections is important because improper administration can cause adverse outcomes to occur such as infection, nerve injury, and inadequate absorption of the medication or vaccine. It has been noted that many nurses, while administering these injections "successfully", are not administering them correctly. It is common for nurses to administer the injection without using the Z-track method, to aspirate after initial injection, and to withdraw the needle too soon. It is important for nurses to be knowledgeable of the proper administration technique, which includes medication preparation, administration, site, and needle size. The purpose of this practice improvement project is to increase education and awareness, and improve the IM injection

administration technique in a critical access hospital in central Minnesota.

Gerlich: A surgical checklist is a tool that is currently required for all facilities seeking surgical unit accreditation. The tool helps surgical centers prevent wrong side, site, and patient mistakes by requiring redundant checks by both the patient and surgical team. Current research indicated that when a team is properly trained to use a surgical checklist, there is an increase in demonstration of safety in peri-procedural and procedural behavior. Furthermore, research has shown that improved team communication and collaboration decreases wrong side, site, and patient mistakes. The use of a checklist can improve team collaboration and communication but education on such areas in addition to the use of a checklist will have an additive effect. The goal of this practice improvement project is to simplify the current checklist used by a Central Minnesota pain clinic and to provide further education to the staff on its proper use and techniques to improve their team collaboration skills.

Gardner: Obesity affects over 50% of the American population and over 60% of the Veteran population. Obesity is linked as a causative factor for several health problems including, but not limited to diabetes, high blood pressure, heart failure, and a shorter life expectancy. The St. Cloud VA system has developed a MOVE program which aims to use continuing education and monitoring of weight, exercise, and food intake to lower the obesity rates and promote the health of their Veterans. In recent years the VA has fallen short in obtaining significant Veteran participation in this MOVE program. This performance improvement project will identify barriers to enrollment from the veteran and staff perspective, develop education for staff, and outline an action plan to increase enrollment with a focus on personal accountability.

Frost: Every 40 seconds, an American suffers from a new or recurrent stroke, according to the American Stroke Association. A stroke may leave cognitive and physical residuals that vary by the amount and location of hemorrhage or ischemia in the brain. Many of these patients require intensive, inpatient therapy in order to maximize their functional abilities and return to home. The Commission on Accreditation of Rehabilitation Facilities, also known as CARF, is an independent accreditation process that provides standards and quality measures for institutions with rehabilitation services. One quality indicator identified by CARF, is the amount of patients with a stroke diagnosis that are discharged to home, as opposed to a skilled nursing facility (SNF) or other rehabilitation service that provides 24-hour care. A suburban Minnesota hospital with an Inpatient Rehabilitation Services department has identified their discharge to home percentage in stroke patients as being lower than the national average, and have a goal to increase this percentage to the standard identified by CARF. The goal of this project is to identify any

common factors in their department that influence patients discharged to facilities outside of their home, and any correlation between family involvement in therapy, overnight/weekend passes outside of the facility, team meetings, family meetings, and the functional ability of the patient. Once data is collected, literature will be reviewed to provide a comprehensive overview for the staff and leadership of the rehabilitation unit to increase successful discharge home for patients with stroke.

Behne: Project Title: Examination of the Impact of Living Arrangements and Marital Status on Depression among Geriatric Male Veterans

Background: As the geriatric population grows, depression rates are also on the rise. This is especially evident in American veterans, as depression affects close to 30% of veterans, making it one of the most common diagnoses treated within the Veterans Health Administration (Hankin, Spiro, Miller et al, as cited in Cully, Zimmer, Khan & Petersen, 2008).

Objective: The purpose of this study is to identify selected variables associated with depression among older male veterans. The results could help improve patterns of care, hopefully improving the management of depression.

Method: This retrospective descriptive study uses existing medical record data to identify patterns of factors commonly occurring in veterans with depression. Demographic variables, depression screening scores, and patterns of International Statistical Classification of Diseases and Related Health Problems 9th Revision (ICD9 codes) are analyzed for patterns that can improve care.

Results: Descriptive findings and relevant correlations are reported with recommendations to improve clinical practice for male older adult veterans diagnosed with depression.

Goetzke, Brodeur, Cass, Carlson: Nursing students working at a local woman's shelter identified stress and coping as a major concern. An evidence based practice project was developed to address these concerns. Outcomes addressed for this project included a decrease in stress following an intervention of yoga, exercise, aromatherapy and massage. For the second outcome residents identified two ways to reduce their stress. The outcomes for this project were met. This presention will describe the evidence for the outcomes as well as the intervention used.

Tikalsky: Medication diversion is the use of prescription drugs for recreational purposes. According to the Drug Enforcement Administration, seven million Americans abuse prescription drugs. Due to easy access of pharmaceuticals healthcare providers are some of the most common abusers of prescription medications. The American Nurses

Association has found that 10% of registered nurses are dependent on drugs. In 2009, there were roughly three million nurses in the US; 300,000 of them struggled with addiction. No hospital or care setting is immune to this issue. To the public, it is out of character for an entrusted healthcare provider to be addicted to drugs; however drug diversion is of growing concern across the nation. The goal of this practice improvement project is to educate health care providers on assessing risk factors of medication diversion, how to prevent it, and to investigate what the benefits of early education to nursing staff and students are in the reduction of medication diversion.

Holte: Influenza vaccination is the most effective way to prevent seasonal influenza viruses. Vaccination helps prevent potential infection of the influenza virus, transmission to others, and severe complications that can occur. According to the CDC, the 2012-2013 vaccination protects against three types of influenza viruses: an influenza A (H3N2) virus, an influenza B virus, and the H1N1 virus. Among health care workers, higher influenza vaccination rates have shown to be affective in reducing the number of hospital acquired influenza cases. The importance of health care worker vaccination is essential to reducing the potential influenza related illnesses in settings were vulnerable populations are cared for. In the 2010-2011 influenza season about 63.5% of health care workers received the influenza vaccination. The goal of this practice improvement project is to increase awareness about the importance of influenza vaccination through education of healthcare workers and to increase the percentage of those vaccinated.

Prososki: Project Title: Identification of Contributing Factors to Alcohol Abuse in Vietnam War Era Veterans
Background: It is known that alcohol use is prevalent among American military personnel. There is little research on whether or not alcohol abuse in the military today can also be applied to Korean and Vietnam era war veterans.
Objective: This study aims to discover if risk factors for alcohol abuse patterns from Korean/Vietnam era war veterans match a more recent model. It also aims to identify the most common risk factors related to abuse in this population, and to start recommending interventions for older veterans.
Method: A Retrospective descriptive study, using existing medical record data, drawn from a total record set of 188veterans from the St. Cloud VAHS was used. Cases were drawn based on ICD-9 codes from 2007-2010.
Results: Descriptive findings and relevant correlations will be reported.

Nutrition

Schedule

9:00 - 9:30 AM
BAC 106
Jennifer K. Brattensborg (Denise Meijer, Nutrition) Improving Nursing Care with Bedside Reporting

9:00 - 9:20 AM
ASC 104
Samantha M. Woolson, Angel M. Brunik, Trent J. Fader, Abigail L. Palmer (Mary Stenson, Nutrition) The effect of caffeinated 5 hour energy versus decaffeinated 5 hour energy on maximal hand grip strength and power produced during a maximal vertical jump test.

9:00 - 9:20 AM
ASC 121
Luke A. Weyrauch (Amy Olson, Nutrition) Can the Buffering Effects of Sodium Bicarbonate Reduce Muscle Damage as Measured by Creatine Kinase?

9:20 - 9:40 AM
ASC 121
James M. Obler (Amy Olson, Nutrition) PREVALENCE OF METABOLIC SYNDROME IN A DIVISION III FOOTBALL TEAM

9:40 - 10:00 AM
ASC 121
Kelly A. Borgerding (Amy Olson, Nutrition) What is the serum vitamin D status of division III football team?

10:00 - 10:20 AM
ASC 104
Katie J. Schwab, Hannah M. Vanderheyden, Madelyn R. Milton, Dylan E. Graves (Mary Stenson, Nutrition) Does fasting glucose and hip flexor flexibility correlate to sedentary time among college students?

10:00 - 10:20 AM
ASC 121
Jennifer M. Erickson (Amy Olson, Nutrition) AD LIBITUM SALT USE BEHAVIORS IN COLLEGE-AGED STUDENTS

10:20 - 10:40 AM
ASC 121
Alyssa M. Virnig (Amy Olson, Nutrition) Has Pressure to Reduce Salt Consumption Put Us at Risk for Iodine Deficiency

10:40 - 11:00 AM
ASC 121
Gretchen E. Mach (Amy Olson, Nutrition)

	VITAMIN D AND SEASONAL AFFECTIVE DISORDER IN COLLEGITE FEMALES DURING THE WINTER.
11:00 - 11:20 AM *ASC 121*	Laura M. Wiechmann (Amy Olson, Nutrition) Dietary Intake Compared to Nutrition Knowledge in College Students
11:20 - 11:40 AM *ASC 121*	Anna M. Mirsch (Amy Olson, Nutrition) PRE AND POST-PRACTICE HYDRATION STATUS OF FEMALE COLLEGIATE BASKETBALL PLAYERS
11:40 - 12:00 PM *ASC 121*	Lauren A. Wojciechowski (Jayne Byrne, Nutrition) EFFECT OF A COMBINED FRUIT AND VEGETABLE JUICE PRODUCT VS. APPLE JUICE ON HS-CRP LEVELS IN COLLEGE-AGED STUDENTS.
11:50 - 12:00 PM *HAB 106*	Mai c. yang (Yuko Shibata, Nutrition) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Weyrauch: High intensity exercise results in muscle damage, which may be reflected in elevated serum creatine kinase (CK). Sodium bicarbonate is a buffering agent that can be an effective ergogenic aid (Peart, D. et al., J Strength Cond. Res. 26:1975-83, 2012). Purpose: to investigate whether the buffering effects of sodium bicarbonate can minimize muscle damage.

METHODS: Institutional Review Board approval was received for this research and all participants signed an informed consent. Recreationally active individuals (M = 12, F =8) completed a double blind crossover design consisting of two exercise trials involving going up and down stairs and push-ups to fatigue. Subjects consumed sodium bicarbonate (0.3g/kg body weight) for one trial (SB), and a placebo (0.045g NaCl/kg with club soda) for the other trial (P). Heart rate (HR), rate of perceived exertion (RPE), blood lactate (BL), and gastrointestinal (GI) distress (on a 0-10 scale) were measured before and after each trial. CK was measured before exercise and 48 hours post-exercise.

RESULTS: CK, HR, GI distress, RPE, and blood lactate were analyzed using a repeated measures ANOVA. Time and push-ups were analyzed using a paired t-test. GI distress was significantly higher in the SB trial

pre- and post-exercise than in the P trial (SB: 2.6 + 2.0; 3.2 + 2.4. P: 0.8+ 0.9; 2.0 + 2.1. $p < 0.05$). BL was significantly higher post-exercise in the SB trial compared to the P trial (12.8 + 3.1; 9.8 + 3.2 mmol/L. $p < 0.05$). RPE was significantly lower in males post exercise in the SB trial compared to the P trial (8.5 + 0.7, 8.9 + 0.6. $p < 0.05$) but not in females. No significant differences existed in CK, time, push-ups, or HR between the two trials.

CONCLUSION: Sodium bicarbonate is an effective buffering agent and makes exercise seem less strenuous, as evidenced by the higher BL and lower RPE (in males) in the SB trial. However, the GI distress associated with sodium bicarbonate reduces the potential of enhancing exercise. The exercise protocol used failed to induce significant muscle damage; consequently no treatment effect was observed in CK. In order to determine the possible protective effects of sodium bicarbonate against muscle damage, a more vigorous exercise protocol must be employed.

Obler: Metabolic syndrome [MS] is a clustering of clinical symptoms including increased abdominal obesity, high blood pressure [BP], elevated triglycerides [TG], low high density lipoproteins [HDLs], and elevated fasting glucose [FBG]. Three of these five criteria must be present in order for MS to be clinically diagnosed. MS increases the risk of heart disease and diabetes. The physique of football linemen is consistent with increased mass and abdominal fat stores (1). PURPOSE: to examine the prevalence of MS in young athletes. METHODS: IRB approval and informed consent was obtained for each of the 22 DIII football players (linemen, n = 15; non-linemen, n = 7). Subjects completed a three-day food log to record food and beverage intake. Height, weight [WT], waist circumference [WC], BP, FBG and lipids were measured. Individual subjects discussed food logs with a student researcher and completed medical history questionnaires. RESULTS: Pearson correlation coefficients and an analysis of variance were used for statistical analyses. Linemen compared to non-linemen met MS criteria for WC [73% vs. 0%], HDL [40% vs. 14%], and systolic BP [SBP] [80% vs. 57%]. WC and SBP significantly correlated with WT ($r = .898$ $p = .000$; $r = .494$ $p = .019$). SBP significantly correlated with total fat [TF] and saturated fat [SF] intake ($r = .439$ $p = .041$; $r = .427$ $p = .047$). The SBP for all subjects averaged 40% higher than an age matched cohort from NHANES. CONCLUSIONS: despite being physically active, the prevalence of MS amongst linemen was 27% and 14% among non-linemen. These results may predict future health problems in DIII football players since the prevalence in NFL linemen retirees is 59.8% (2). Given the significant correlation with TF and SF and SBP and the high WC, nutritional counseling may help reduce cardiometabolic risk factors. Future research should examine whether the presence of MS risk factors also affects performance.

[1] Wilkerson, et. al. (2010). Journal of Athletic Training, 45, 67-74.
[2] Miller, et. al. (2008). American Journal of Cardiology, 101, 1281-4.

Borgerding: Athletes who train indoors are at a higher risk of vitamin D deficiency than those who engage in outdoor sports. Athletes with less than optimal serum vitamin D have increased risk of injury (1). Purpose: To determine the vitamin D status of an outdoor sport in late fall. Methods: Research was approved by the Institutional Review Board and informed consent was received from all subjects. Twenty- two players from a Division III football team aged 18-22 were recruited. Data collection was held in mid- November. Subjects completed 3 day food logs recording the amount of food and beverage intake. Researchers recorded weight, height, waist circumference, blood pressure, and a blood sample for blood lipids (total cholesterol (TC), high density lipoprotein (HDL), low density lipoprotein (LDL), and triglycerides (TG)) and vitamin D was also measured. An ELISA 25-Hydroxy Vitamin D assay was used to determine serum vitamin D. Results: Ninety percent of the football players had inadequate serum vitamin D levels; average serum vitamin D was 56 ± 26 nmol/L (optimal > 75 nmol/L). Vitamin D deficiency (< 50 nmol/L) was present in 10 of 22 subjects (2). The average dietary vitamin D consumption was 12 µg (±11 ug) which did not meet the RDA recommendation of 15 µg for men age 18- 50. Only 27% met the RDA (6/22) and one had an optimal serum D. Seventy three percent failed to obtain the RDA and again only one had an optimal serum D. Statistical analysis was conducted using the Pearson correlation. Serum vitamin D did not correlate with total cholesterol, HDL, LDL, TG, weight, BMI, fasting blood glucose or blood pressure. However, serum vitamin D negatively correlated with waist circumference ($r= -0.438$, $p= 0.4$) Dietary vitamin D did not correlate with serum vitamin D. Conclusion: Despite being outdoor athletes, 45% were vitamin D deficient by mid-November. Meeting the RDA for vitamin D did not ensure adequate serum vitamin D levels, so to avoid the risk of injury, these athletes should consider beginning a vitamin D supplement in the fall.

Erickson: Introduction:
High sodium intake results in elevated blood pressure, cardiovascular disease and kidney disease. About 7 million deaths were credited to elevated blood pressure around the world in 2000*. Sodium reduction has the potential to prevent deaths and lower health care costs. The current RDA for sodium is 1500mg. A study conducted at CSB/SJU in 2012 established that the average sodium intake for CSB/SJU students was approximately 3500 mg per student per day. Making salt less accessible during the mealtime will decrease the amount of salt used per person.
Purpose:
To understand the effects of accessibility on salt consumption at campus dining facilities and investigate a potential difference in salt consumption

at a primarily male facility verses a primarily female facility. A secondary purpose for this study is to understand student salting behaviors and perceptions.
Methods:
The research study was approved by IRB. A three-day control period was conducted at the dining facilities at both male and female campuses during the dinner meal period to determine typical salt use; followed by a three-day experimental period conducted at both facilities, during which saltshakers were relocated to the condiment station. Saltshakers were numbered and weighed before and after the meal period. Head counts were obtained through dining services to calculate salt use per person. Signs were placed in napkin holders to inform diners of the relocation of the saltshakers during the experimental period. Statistical analysis was conducted using unpaired t-tests.
Online survey sent to CSB/SJU students to investigate salting habits and awareness. Statistical analysis was conducted using two proportion z-tests.
Results:
Average salt use decreased significantly by 80% when saltshakers were relocated to the condiment station. Salt use between men and women was not statistically different. Only 21% of CSB/SJU students reported regularly using the saltshaker. Eighty-three percent of students surveyed mistakenly believe their sodium consumption is at or slightly above the RDA.
Conclusions:
Students are aware that most dietary sodium comes from processed foods and understand the implications of a high sodium diet; but, only 11% of students recognize that they consume much more than the RDA. Relocating the saltshaker away from the table may be helpful for those who frequently use the saltshaker; however, to achieve recommended levels of sodium, students need to dramatically reduce the amount of convenience and processed foods in their daily diets.
* Frisoli, T.M., Schmieder, R.E., Grodzicki, T., Messerli, F.H. (2012). Salt and hypertension: Is salt dietary reduction worth the effort? The American Journal of Medicine, 125, 433-439. Doi: 10.1016/j.amjmed.2011.10.023.

Virnig: HAS PRESSURE TO REDUCE SALT SONSUMPTION PUT US AT RISK FOR IODINE DEFICIENCY? A.M. Virnig, J.M Erickson, A. Olson, PhD, RD, LD, College of Saint Benedict/ St. John's University, St. Joseph MN
Introduction: Iodine is an integral part of the structure of thyroid hormone in the body. Companies began to iodize table salt to increase iodine consumption in 1924 and by the 1950's about 70% of households only used iodized salt (1,2). In 2008, only 1/5 of the salt sold in the United States was iodized. Iodized salt dramatically reduced the rate of iodine deficiency and goiter (3). The pressure to decrease salt consumption may

be putting the U.S population at risk for iodine deficiency today because of decreased discretionary salt use (4).
Purpose: To investigate ad libitum salt use, more specifically iodized salt use, and selection of high iodine foods in college students. To investigate the use of iodized salt in college food service, area restaurants and campus apartments.
Methods: The use of iodized salt was determined in 31 local restaurants and 107 campus apartments. About 890 students completed an online survey regarding salt use and food selections.
Results: Seventy-three percent of apartment residents were unaware of the type they use. Approximately 86% of CSB/SJU students reported using iodized salt in an online survey however; only 61% of CSB/SJU students had iodized salt in their apartments. Only 21% of students reported using saltshakers while at the dining center. Less than 1% of students reported consuming three of the best five sources of iodine 3 or more times per week. Sixty-three percent of restaurants reported using iodized salt.
Conclusions: Over 2/3 of students were unaware of what type of salt they use demonstrating their lack of knowledge regarding iodized salt. The difference between student's reports of iodized salt use and actual iodized salt use reveals a lack of awareness when purchasing salt. The iodine status of students may be in jeopardy because of the limited number of students using the saltshaker when consuming a meal, the fractional use of iodized salt in area restaurants and the insignificant number of students consuming food sources naturally rich in iodine.

Sources:
1) Leung, A. M., Braverman, L. E., & Pearce, E. N. (2012). History of U.S. iodine fortification and supplementation. Nutrients, 4, 1740-1746
2) Markel, H. (1987). "When it Rains it Pours": Endemic Goiter, Iodized Salt and David Murray Couwi, MD. American Journal of Public Health , 77 (2), 219-229.
3) Dasgupta, P. K., Liu LIU, Y., & Dyke, J. V. (2008). Iodine Nutrition: Iodine Content of Iodized Salt in the United States. Environmental Science and Technology , 42, 1315-1323.
4) Campbell, N., Dary, O., Cappuccio, F. P., Neufeld, L. M., Harding, K. B., & Zimmermann, M. B. (2012). Collaboration to optimize dietary intakes of salt and iodine: a critical but overlooked public health issue. Bulletin of The World Health Organization , 90, 73-74.

Mach: Seasonal affective disorder (SAD) is characterized by an increase in anxiety and depression during the winter months. There is an inverse relationship between solar ultraviolet (UVB) ray exposure in the winter and SAD occurrence in young adults (Groh, C., Kwasky, A., J Am Psychiatr Nurses Assoc. 18(4): 236-243, 2012). The major source of vitamin D in humans is endogenous synthesis from UVB exposure. It is unclear if low vitamin D status contributes to the onset of SAD.

PURPOSE: To compare serum vitamin D (25[OH]D) status with depressive symptoms using Beck Depression Inventory (BDI)-II scores in collegiate females. METHODS: Institutional Review Board approval was received and informed consent was obtained by 136 college-aged women. Subjects were recruited via email and participants completed the BDI-II online in early March to assess depressive symptoms. Participants were screened for current antidepressant medications and vitamin D supplement use was noted. Caucasian women with the highest and the lowest BDI-II scores were asked to provide a serum for vitamin D analysis, measured using a 25(OH)D ELISA Assay. RESULTS: BDI-II scores obtained from the 136 participants had an average of 13 ± 12. Forty two women were invited to provide serum samples. Twenty subjects had a BDI-II survey score range from 0-3 (minimal depression), average score of 2 ± 1; 22 subjects had a BDI-II survey score from 19-36 (moderate to severe depression), average score of 24 ± 6. Vitamin D deficiency was identified as <50 nmol/L; optimal vitamin D was identified as >75 nmol/L. Subjects scoring in the minimally depressed range (0-3) had average vitamin D values of 54.6 ± 24.1 nmol/L; participants scoring in the moderate to severe depression range (19-36) had an average vitamin D value of 61.8 ± 25.7 nmol/L. Thirteen subjects were either currently taking a vitamin D supplement or multivitamin or had tanned recently. There was no significant correlation between BDI-II scores and serum vitamin D values. CONCLUSION: There was no relationship between vitamin D values and BDI-II scores in this population of young adult females in March. Vitamin D levels ranged from a minimum of 14 nmol/L to a maximum of 154 nmol/L. The average serum level of vitamin D was 58.4 ± 25.8 nmol/L. Vitamin D levels were inadequate in 38% of the 42 subjects; 6 out of the 8 subjects that had optimal levels were either taking supplements or tanned. More research is needed to identify the relationship between vitamin D storage capacity and chronic deficiency with depressive symptoms attributed to SAD in the young adult population.

Wiechmann: ABSTRACT: Many college students fail to meet United States Department of Agriculture (USDA) dietary goals due to low budgets, monotonous food choices, preferences for taste, and limited nutrition knowledge[1]. Purpose: to compare nutrition students reported 3-day intake values to the USDA recommended guidelines and correlate students' intake to their nutrition knowledge. Methods: this research study was approved by the Institutional Review Board and all subjects gave informed consent. Seventy nutrition students volunteered to participate in the study. Subjects provided dietary records composed of 3-day average nutrient values and detailed food logs. Participants (men n=22, women n=48) also completed a 20 question electronic nutrition survey[2] that tested basic nutrition knowledge of dietary recommendations, sources of nutrients, and diet-disease relationships. Each diet was assessed using the validated Diet Quality Index-Revised

(DQI-R) method[3] and scored on a 0-100 scale [0-poor; 50-needs improvement; 100-exceptional]. The scoring criteria consisted of ten components (with 10 possible points per component) including total fat, saturated fat, cholesterol, calcium, iron, and total servings of grains, fruits and vegetables, and scores for diet diversity and moderation. Trends across male and female data groups were compared using independent-tests. Results: the mean DQI-R score for men was 42.1 (±14.9) [Range: 38-71] and for women was 51.5 (±14.5) [Range: 50-81]. Approximately 60% of students over-consumed the recommended intake for total fat, 56% for saturated fat, and 77% for sodium. Only 38% met goals for servings of fruits, 47% for vegetables (included potatoes), and 25% consumed adequate fiber. The mean knowledge score for men was 44.3% (±15.2%) [Range: 20-75%] and for women was 56.3% (± 14.4%) [Range 50-80%]. There was a weak correlation between students' DQI-R scores and nutrition knowledge (R=0.35). Conclusions: there is not a strong correlation between nutrition knowledge and a nutritious diet. DQI-R scores were not significantly different between men and women, nor were knowledge scores. Nutrition knowledge appears to have little influence on students' dietary intakes. These tests were administered at the beginning of the semester; perhaps if these tests would have been done at the end of the course, scores would have improved.

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2.Parmenter K., Wardle J. (1999). European Journal of Clinical Nutrition, 53(4), 298-308.
3.Haines, et al. (1999). Journal of the American Dietetic Association, 99(6), 697-704.

Mirsch: Basketball is a high intensity sport and although played indoors, sweat losses can be significant (1). Failure to consume adequate fluids can lead to dehydration which can impair performance (2). PURPOSE: To determine the pre and post-practice hydration status of female collegiate basketball players and compare fluid consumption between water and PowerAde. METHODS: This study was approved by the Institutional Review Board and 13 female collegiate basketball players gave informed consent. Hydration status was determined by urine specific gravity (USG) of pre and post-practice urine samples during four practices. All players had ad libitum water at two practices and ad libitum PowerAde at the other two practices; fluid consumption was tracked.RESULTS: all players on average were dehydrated at the beginning of practice; 46% (n = 6) were minimally dehydrated(1.010-1.020) and 54% (n = 7) were significantly dehydrated(1.021-1.030)(3). Hydration status did not improve with fluid consumption during practice. On average 85% of players had a higher USG post-practice and 23% of players became seriously dehydrated (>1.030)(3). There was a significant difference between pre-practice USG (1.021 +/- 0.008) and post-practice USG

(1.026 +/- 0.009) (p = 0.00). Average fluid intake was greater with PowerAde (591 +/- 34 mL)than in water (560 +/- 85 mL), but fluid intake was not statistically different. Paired t-tests also indicated no significant difference in USG after consuming PowerAde compared to water. CONCLUSION: On average 100% of the players arrived at practice dehydrated. Furthermore, fluid consumption during practice did not improve hydration status as USG significantly increased. The importance of starting practice well hydrated must be addressed with these players to prevent dehydration from occurring during practice/games so that performance is not compromised.

1.Osterberg, et .al. (2009). Journal of Athletic Training, 44(1), 53-7.
2.Baker, et. al. (2007). Medicine & Science in Sports & Exercise, 39(7), 1114-23.
3.Casa et. al. (2000).Journal of Athletic Training, 35(2), 212-24.

Wojciechowski: Introduction: Fruit and vegetable intake is inversely correlated to serum levels of hs-CRP, a marker of inflammation. The effects of single foods such as red orange juice and carrot juice on hs-CRP levels have been analyzed; however fruit and vegetable juice combination has not been investigated. Juices provide a convenient way to increase fruit and vegetable intake.

Purpose: To investigate the effect of a blended juice product compared to a single ingredient fruit juice on serum hs-CRP levels in college-aged students.

Methods: Eleven subjects were recruited from among 190 students enrolled in an introductory nutrition course. Subjects were randomly assigned to two treatment groups. One group consumed 16 oz. of Pomegranate Blueberry V8 V-Fusion ®juice for 21 days (providing an additional 2 servings each of fruit and vegetables per day) and one group consumed 4.23 oz. Apple Juicy Juice ® (providing an additional 1 serving of fruit per day) for 21 days. The two treatment groups did not consume equal amounts of juice in order to investigate if consuming more juice would have a more pronounced effect on hs-CRP levels. Three day dietary intake records for each subject were analyzed to evaluate average fruit and vegetable consumption. If baseline fruit and vegetable consumption was significantly different between group, results would have to be adjusted since fruit and vegetable intake correlates with hs-CRP levels. All subjects were non-smokers and did not regularly use anti-inflammatory drugs. Whole blood samples to analyze hs-CRP levels were drawn on day 1 and 21. A Cholestech LDX was used for sample analysis.

Results: Initial hs-CRP values were 2.21±2.05 mg/L for the V8 V-Fusion® group and 0.85 ±0.49 mg/L for the Juicy Juice® group. Final hs-CRP values were 1.60 ±2.13 mg/L for the V8 V-Fusion® group and

1.36 ±1.60 mg/L for the Juicy Juice® group. Baseline intakes for fruits (cups) was: V8 V-Fusion® group (1.95±1.07) and Juicy Juice® (1.39 ±0.27). Baseline intakes for vegetables (cups) was: V8 V-Fusion® group (1.95±0.48) and Juicy Juice® (1.60±0.55). There was no significant difference in baseline fruit and vegetable consumption, initial hs-CRP or final hs-CRP between groups. Each treatment group did not have a significant change from initial to final hs-CRP levels. However the V8 V-Fusion® group on average did experience a decline in hs-CRP levels and the Juicy Juice® group on average did experience a rise in hs-CRP levels.

Conclusion: Despite V8 V-Fusion® providing an additional 2 servings each of fruits and vegetables per day, hs-CRP levels were not significantly lowered. The Juicy Juice® group did not significantly lower their hs-CRP levels by consuming the treatment which provided an additional serving of fruit per day. The results suggest combined fruit and vegetable juice may have a positive effect on lowering hs-CRP levels, however a larger sample size is needed to establish a clear trend.

Physics

Schedule

9:30 - 10:00 AM *PEngl 167*	Richard J. Kirchner (Adam Whitten, Physics) Differential Modeling and Efficiency Testing of the Saint John's University Co-generation Power Plant
10:00 - 10:30 AM *PEngl 167*	Stephen A. Kuebelbeck (Todd Johnson, Physics) Laser's Wavelength Measurement Through the Use of a Dual-Path Michelson Interferometer
10:30 - 11:00 AM *PEngl 167*	Thomas M. Moore (Sarah Yost, Physics) Investigating Correlation Between Gamma-ray Variability and Optical Luminosity in Gamma-Ray Bursts
11:00 - 11:30 AM *PEngl 167*	Allison C. Reinsvold (Jim Crumley, Physics) Roll and Pitch Corrections for a Shipboard Anemometer
11:00 - 11:30 AM *ASC 127*	Tyler L. Gerads (Leo Seballos, Physics) Counter Ion Effect on the Synthesis of Silver Iodide Nanoparticles in Ionic Liquids

Abstracts

Kuebelbeck: The design of an interferometer is simple to use and is an accurate way of determining the wavelength of light. The basic design of an interferometer measures the fringe counts which can be used to find the wavelength of the laser. In this experiment, two lasers and a fringe counting machine was used. By taking the ratio of the fringe count of one laser and taking the ratio of the fringe count of another laser one can calculate the wavelength of the unknown laser.
The dual path interferometer used was able to give a value for the wavelength of a diode laser of 780.227 nanometers with an uncertainty of 0.0055 nanometers. The reference value for the laser was 780.246 nanometers, so the reference value for the laser wavelength did not fall within the range of the interferometer. Likely causes for this may be due to the reference value itself being inaccurate and the fringe counter not being accurate to enough decimal places.

Reinsvold: Physics Thesis Presentation
Abstract:An anemometer is an instrument which measures wind speed and direction. Ideally, an anemometer would measure solely the true wind, but in practice anemometers measure wind induced by the motion of the instrument in addition to the true wind. For anemometers mounted on ships, the pitch and roll of the ship is an important source of induced wind, but this effect has never been specifically investigated. In this project, I first explored the magnitude of the roll effect to determine whether or not it is worth correcting. Second, I investigated this effect for a particular anemometer: namely, a Flush Air Data System (FADS) anemometer designed by researchers at the Fluid Mechanics Lab at NASA Ames Research Center. The wind speeds measured while the anemometer was experiencing sinusoidal motion were analyzed to evaluate the robustness of the system. The experiment was insufficient to judge the FADS anemometer's performance, but the theoretical work demonstrated that the effect of pitch and roll is well worth examining further.

Social Sciences Presentations:

Accounting & Finance

Schedule

9:00 - 9:15 AM *Simns 310*	Wenyu Heng (Warren Bostrom, Accounting & Finance) Reasons why accounting professionals leave public accounting
9:00 - 9:15 AM *Simns 310*	Collin A. Hager (Warren Bostrom, Accounting & Finance) How does the age at which one retires affect their wealth at retirement?
9:00 - 9:15 AM *Simns 310*	Seyi A. Alabi (Warren Bostrom, Accounting & Finance) Difficulties small business owners face and the best practices to overcome the difficulties.
9:00 - 9:15 AM *Simns 310*	Yingting Wang (Bostrom Warren, Accounting & Finance) Personal Budgeting and Financing for Young Professionals
9:00 - 9:15 AM *Simns 310*	Sarah B. Carlson (Warren Bostrom, Accounting & Finance) A study to find the best practices for small family business succession
9:00 - 9:15 AM *Simns 310*	Charlie W. Perrine (Warren Bostrom, Accounting & Finance) The Most Efficient Way to Raise Capital for a Business
9:00 - 9:15 AM *Simns 310*	Nicholas J. Archbold (Warren Bostrom, Accounting & Finance) Warren Buffett's investment strategy
10:30 - 10:50 AM *Quad Alumni Lounge*	Laurel E. Kennedy, Melissa L. Mehaffey, Chris R. Otterstetter, Jack H. Ryan, Anthony M. Retica (Steve Schwarz, Accounting & Finance) S.A.M
11:00 - 11:15 AM *Simns 310*	Isaiah R. Streed (Warren Bostrom, Accounting &

	Finance) The Impact of Tax Rates on GDP Growth
11:00 - 11:15 AM *Simns 310*	Ben P. Brummer (Warren Bostrom, Accounting & Finance) The estimated effect of the increase on personal income tax on national unemployment
11:00 - 11:15 AM *Simns 310*	Josh D. Wells (Warren Bostrom, Accounting & Finance) Common overlooked deductions and credits on individual tax returns
11:00 - 11:15 AM *Simns 310*	Jesse D. Gebhardt (Warren Bostrom, Accounting & Finance) The effect of a flat tax rate on federal income tax revenue
11:00 - 11:15 AM *Simns 310*	John R. Yungers (Warren Bostrom, Accounting & Finance) Increasing Tax Rates Affecting Workplace Behavior
11:00 - 11:15 AM *Simns 310*	Ashley E. Chandler (Warren Bostrom, Accounting & Finance) The marriage tax penalty and its affects at various income levels
11:40 - 12:10 PM *Quad Alumni Lounge*	Arianna Stotz, Adam Sperl, Yixi Chen (Lisa Lindgren, Accounting & Finance) Mayo Innovation Scholars Program

Abstracts

Heng: As many accounting students are preparing to enter the professional world, many are curious about how to plan their careers wisely and better prepare themselves for the transition. Specifically, students who start their career in public accounting may wonder about the high turnover in the industry. My research question will explore when it is the best timing to leave a public accounting firm. In answering this question, I am gathering information through a survey sent out to St. Ben's and St. John's Alums. Based on the results of the survey, I will analyze different accounting-related career paths and try to make helpful suggestions for graduating accounting majors entering the accounting work-world.

Hager: Retirement is a transition in life that many people strive to achieve as fast as humanly possible. However in a world where economies are struggling and inflation is a constant, many people see it as an unobtainable fantasy. In my research, I will be exploring retirement age to determine if there is a strong or weak correlation between the age at which people retire and their overall wealth at retirement.

Alabi: Most small business owners are aware that their business is in competition with larger, more stable companies. Regardless of the awareness, they are still in the hunt to make their business successful within the industry. However, small business owners are facing critical difficulties that lead to filing bankruptcy. My research will explore the reasons to why small business owners might be on the verge of filing bankruptcy, and how to successfully hedge against the risk. After figuring out the common reasons to why bankruptcy is being filed by small business owners, I will share common best practices that can be used to amend the situation.

Wang: Young professionals are those who are in their first 1 to 9 years of career. When they first started their career, most of them were being financially independent for the first time, and later on, they also had growing responsibilities managing their assets and income. Due to the lack of experience, personal financing and budgeting could be a complex and challenging task for a lot of young professionals, especially for those in their earlier years. It can also have a significant ramification on their lifestyles and savings for later years. My research will survey a group of young professionals and explore how young professionals are handling their personal budgeting and financing, as well as the lessons that graduating students can learn.

Carlson: Small family owned businesses generally are passed down in two ways. They are passed down either to a family member, or an independent party. Transitioning the company to a family member can be complex for several different reasons. In fact, more than 70% of companies do not make it through the transition. My research will help small family company owners create a plan that will help them smoothly continue their business with minimal conflicts within relationships and tax laws.

Perrine: The most common form of business is a sole proprietorship; this is the type I will be researching. If the sole owner does not have sufficient funds to start up the business, he or she will need to raise capital to start up. There are multiple ways to raise capital. I will be interviewing multiple sole proprietors inquiring about how each of them acquired the capital.

Archbold: Warren Buffett has been a long time investor in the stock market and has proved to be one of the most successful investors. Buffett's strategy has some unique qualities that differ from the more traditional investment strategies. These include never investing on a hunch, using "value investing", and a few other differences. I will do research to see if differences in his strategy are the reason why he has been so successful with investing.

Kennedy, Mehaffey, Otterstetter, Ryan, Retica: The S.A.M. Student Case Study Competition Team consists of five CSB/SJU student presenters and a student advisory board of ten students that participate in a National Case Study Competition. Students in this program conduct industry and company specific research in order to travel to the S.A.M. Conference and present their strategic recommendations to a panel of judges. This year's conference was in Washington DC and students presented their research and recommendations related to Netflix. This session will give an overview of the program for other students that might be interested in this program.

Streed: Recently, after the financial crisis began in 2008, lawmakers in Washington have focused on ways to get our economy back on track again; it was the focus of the most recent election. A highly anticipated and controversial tax reform bill was passed in 2012 that raised the top tax bracket, as well as capital gain treatment for high-income earners. Tax brackets for the majority of the population, however, remained fairly consistent with prior tax law. My research will examine how raising taxes actually affects economic growth. I will look at prior year tax rates and try to find a correlation between GDP growth and higher or lower tax rates.

Brummer: The current economic viewpoint on taxation is that of a trickle down approach, where by decreasing the taxes of the very rich, it will benefit everyone below them. Because the rich have more money, they pay more in taxes, based on the progressive tax system. The theory is that by reducing the amount of money they pay and putting more money in their pockets will stimulate the economy because they will spend that money, thus creating jobs. This was the general theory of the Bush era tax cuts that have just now expired. My research will explore the current increase on taxes and its effect on unemployment by comparing tax and unemployment rates of several countries including the United States, Great Britain, and Germany.

Wells: After completing my Tax course here a Saint John's University I felt as if I had learned much of what there is to know about tax. When talking to my parents about their taxes last year I discovered that if a person has never taken a tax class in college or searched for information online they quite possibly could be paying much more in taxes than necessary. I surveyed a number of tax practitioners to identify commonly

missed deductions and credits and it is my goal to inform the students, faculty and local community of ways to get more money back on their tax returns.

Gebhardt: The U.S. currently uses a graduated federal tax schedule that creates the need for a complex tax code, professional tax preparers and an expansive regulation authority, the IRS, to assure compliance. One solution to this problem is a modified flat tax rate that still incorporates select tax deductions. My research will look into the effect a modified flat rate would have on tax revenue with a variety of deductions at a variety of tax rates.

Yungers: When individuals earn larger amounts of income, the tax bracket they enter is higher therefore increasing the portion of their income to taxes. In the United States the individual tax rates continue to rise which affects how much after-tax income is earned. In future years the rates will continue to rise, affecting more levels of income. It may seem difficult to think people would work harder or give less effort based on taxes, but the amount of pre-tax income people earn and the corresponding tax rate can greatly differ after-tax income. My research will explore whether or not these rising tax rates affect effort in the workplace, to reach higher income levels/tax brackets or not and the reasoning behind each argument.

Chandler: Compared to the single individual tax bracket, married couples filing jointly have a smaller income window than single individuals. As a result, married couples filing joint tax returns may be susceptible to a tax penalty. For example, single individuals can make up to $400,000, while a married couple filing jointly can only make up to $450,000 before getting into the 39.6% income tax rate. The difference that results from the same two income amounts taxed as two single individuals versus a married couple filing joint is the tax penalty. My research will discuss how the marriage tax penalty affects couples at differing income levels, and I will also try to interpret my results in order to suggest possible strategies for avoiding marriage tax penalties.

Stotz, Sperl, Chen: These MGMT and ACFN majors were members of teams of the Mayo Innovation Scholars Program. They worked on interdisciplinary teams of business and science students to evaluate the technical/medical and business potential of a Mayo Clinic idea or invention. They will present the process of working on this prestigious program and the lessons they learned.

Economics

Schedule

9:00 - 9:30 AM *Main 320*	Landon H. Brodersen (Louis Johnston, Terri Barreiro, Economics) Clemens Perk Economic Analysis
9:00 - 10:00 AM *Gorec Pres. Conf. Rm.*	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Economics) Jackson Fellowship 2010 & Jackson Fellows
10:30 - 10:50 AM *Main 320*	Christopher J. Heitzig, Shawn M. Tangen (Louis Johnston, Economics) Sports Economics
10:40 - 11:10 AM *HAB 120*	erik t. nagaoka (julie davis, Economics) The Forgotten Man-Made Holocaust: Identifying the Causes of the Bengal Famine of 1943

Abstracts

Brodersen: An Independent Learning Project giving an in depth economic analysis of Clemens Perk Coffee Shop as well as the gourmet coffee shop industry. The project covers cost analysis, nature of the industry, labor capacity, and price elasticity of demand.

Heitzig, Tangen: Shawn and I will be doing a literature review on the material we read on the subject of sports economics. This includes themes such as competition in sports, antitrust laws and sports leagues, economics of stadium and Olympic infrastructure, and rules and regulations that foster competitive balance in sports among others. Then we will apply what we've learned by replicating a study done by Dr. Grier in a paper titled, "The rookie draft and competitive balance: The case of professional football." We will present our results of the study and compare them to Grier's.

Education

Schedule

9:00 - 10:00 AM *Gorec Pres. Conf. Rm.*	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner,

	Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Education) Jackson Fellowship 2010 & Jackson Fellows
9:20 - 9:30 AM *HAB 106*	Kia Her (Yuko Shibata, Education) The Benjamin A. International Scholarship & It's Impact on Studying Abroad in Japan
11:30 - 12:00 PM *Simns 340*	Katie J. Johnson, Marie H. Cherry, Stephen M. Gross, Nicole R. Cornell, Maria I. Jagodinski, Bridget A. Foley, Samantha L. Exsted (Sheila Nelson, Education) What it Means to be a Johnnie
11:40 - 12:10 PM *HAB 119*	Danika J. Lindquist (Julie Davis, Education) The Student Experience at the College of Saint Benedict in the 1950s

Entrepreneurship

Schedule

9:00 - 9:30 AM *Main 320*	Landon H. Brodersen (Louis Johnston, Terri Barreiro, Entrepreneurship) Clemens Perk Economic Analysis
9:00 - 10:00 AM *Gorec Pres. Conf. Rm.*	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Entrepreneurship) Jackson Fellowship 2010 & Jackson Fellows
10:50 - 11:20 AM *Quad Alumni Lounge*	Anthonique E. Hanna, Gretchen L. Hughes, Andrew J. Mueller, BreAnna K. Ahrenholz (Steve Schwarz, Paul Marsnik, Entrepreneurship) Students In Free Enterprise

Abstracts

Hanna, Hughes, Mueller, Ahrenholz: Abstract:
Students in Free Enterprise (SIFE) is a student run non-profit organization that has been a part of the CSBSJU community for fifteen (15) years. SIFE seeks to empower people, generate a profit, and help to sustain our planet. Pressing forward with the spirit of entrepreneurship, the CSBSJU SIFE team has created and executed eight (8) projects in both the U.S. and Africa this academic year. Square one, a second year project consisted of five (5) CSBSJU students traveling to Uganda to build a sustainable business for the local villagers of Kyetume. Our C.O.R.E project is in its twelfth year and seeks to empower members of society who are at a disadvantage for various circumstances. These members are willing and able to become productive citizens with the guidance of our team. Both our Launch Pad and Just Stand projects are in their first year with a focus on students at CSBSSJU. Launch Pad seeks to empower Bennies and Johnnies entrepreneurs to launch their ventures. Just Stand in collaboration with Heather Beshears, alum, brought sit stand computer stations to our campus with hopes of changing the unhealthy working patterns of our students. The SIFE team has made all of their projects possible and strongly believes in their theme of the year, AGENTS OF CHANGE.

Exercise Science and Sport Study

Schedule

9:00 - 9:20 AM
ASC 104

Samantha M. Woolson, Angel M. Brunik, Trent J. Fader, Abigail L. Palmer (Mary Stenson, Exercise Science and Sport Study) The effect of caffeinated 5 hour energy versus decaffeinated 5 hour energy on maximal hand grip strength and power produced during a maximal vertical jump test.

9:30 - 9:50 AM
ASC 104

Erin K. Sand, Brandon A. Schaust, Sara R. Buermann (Mary Stenson, Exercise Science and Sport Study) Impact of Active Rest by the use of Supersets versus Passive Rest on Recovery Between Bench Press Sets

10:00 - 10:20 AM
ASC 104

Katie J. Schwab, Hannah M. Vanderheyden, Madelyn R. Milton, Dylan E. Graves (Mary Stenson, Exercise Science and Sport Study) Does

	fasting glucose and hip flexor flexibility correlate to sedentary time among college students?
10:30 - 10:50 AM *ASC 104*	Corey P. Babcock, Samantha R. Imholte, Charles C. Dudek (Mary Stenson, Exercise Science and Sport Study) Effects of whole-body versus localized fatigue on reaction time for collegiate Division III female athletes
11:10 - 11:20 AM *HAB 106*	Frederick Jones (Yuko Shibata, Exercise Science and Sport Study) Koshien
11:30 - 11:50 AM *Main TRC Board Room*	Matia C. Twedt (Martha Tomhave Blauvelt, Shane Miller, Exercise Science and Sport Study) How fathers of daughters in hockey conceptualize and convey gender attitudes

Abstracts

Sand, Schaust, Buermann: The purpose of this study is to examine the difference in recovery when active rest or passive rest is used between sets of resistance training. Subjects involved in the study will perform two different testing protocols: one trial of active/superset rest and one trial of passive rest. During the trials, participants will perform 2 sets of 5 repetitions of the bench press and the 3rd set to fatigue. Active rest will consist of a 3x5 seated row. During the passive recovery trial, subjects will sit between bench press sets. Heart rate, blood lactate and the number of repetitions completed during the 3rd set will be measured. We hypothesize that heart rate and blood lactate will increase during the active rest trial compared to the passive rest trial; however, the number of repetitions will stay the same for both trials.

Babcock, Imholte, Dudek: This experiment compares the effects of whole-body fatigue or localized fatigue on hand reaction time. Well-trained Division III female athletes will complete two trials of reaction time measures after fatiguing exercise: once after completing an anaerobic treadmill test to exhaustion, and once after performing a maximal isometric grip strength test to exhaustion. Measurements include time to exhaustion during the treadmill test, maximal grip force as measured by the hand dynamometer, 60% of maximal grip force, and reaction time measurements. Three reaction times will be measured: one at baseline, a second immediately after each fatiguing exercise, and a third two minutes after the fatiguing exercise. Reaction time will be

quantified using the ruler drop method. We expect to find that reaction time will increase compared to baseline after both trials, but also that reaction time will increase significantly more after inducing localized fatigue in the hand than after whole-body fatigue.

Global Business Leadership

Schedule

9:00 - 9:30 AM
Main 320
Landon H. Brodersen (Louis Johnston, Terri Barreiro, Global Business Leadership) Clemens Perk Economic Analysis

9:20 - 9:30 AM
HAB 106
Kia Her (Yuko Shibata, Global Business Leadership) The Benjamin A. International Scholarship & It's Impact on Studying Abroad in Japan

9:30 - 9:40 AM
HAB 106
Bao Lao (Yuko Shibata, Global Business Leadership) Places in Japan: Ikebukuro

9:40 - 9:50 AM
HAB 106
Ian C. Manion (Yuko Shibata, Global Business Leadership) Sapporo

9:50 - 10:00 AM
HAB 106
vanessa montes (yuko shibata, Global Business Leadership) Nagasaki's Culture

10:00 - 10:10 AM
HAB 106
Samantha M. Muldoon (Yuko Shibata, Global Business Leadership) Asakusa

10:10 - 10:20 AM
HAB 106
Kaileigh B. Nicklas (Yuko Shibata, Global Business Leadership) Harajuku

10:20 - 10:30 AM
HAB 106
Bao Vang (Shibata Yuko, Global Business Leadership) The Wonders of Kyoto

10:30 - 10:40 AM

HAB 106	Kevyn F. Woods (Yuko Shibata, Global Business Leadership) Harajuku
10:30 - 10:50 AM *Quad Alumni Lounge*	Laurel E. Kennedy, Melissa L. Mehaffey, Chris R. Otterstetter, Jack H. Ryan, Anthony M. Retica (Steve Schwarz, Global Business Leadership) S.A.M
10:50 - 11:20 AM *Quad Alumni Lounge*	Anthonique E. Hanna, Gretchen L. Hughes, Andrew J. Mueller, BreAnna K. Ahrenholz (Steve Schwarz, Paul Marsnik, Global Business Leadership) Students In Free Enterprise
11:20 - 11:40 AM *Quad Alumni Lounge*	Tracy Schefers, Mike Nimmo, Nick Donovan, John Duda, Kerby Rigelman, Claire Kochevar, Andrea Betts, Sam Forster, Jack Ghizoni, Natalie Woggon, Mary Weber (Margrette Newhouse, Global Business Leadership) Marketing Club
11:20 - 11:30 AM *HAB 106*	Nou S. Vang (Yuko Shibata, Global Business Leadership) One Piece
11:40 - 12:10 PM *Quad Alumni Lounge*	Arianna Stotz, Adam Sperl, Yixi Chen (Lisa Lindgren, Global Business Leadership) Mayo Innovation Scholars Program
11:40 - 11:50 AM *HAB 106*	Pisenny Xiong (Yuko Shibata, Global Business Leadership) Takashi Murakami - Japanese Contemporary Artist

Abstracts

Schefers, Nimmo, Donovan, Duda, Rigelman, Kochevar, Betts, Forster, Ghizoni, Woggon, Weber: The CSB|SJU AMA Chapter will be presenting on our projects, events and accomplishments over the past year. Our trip to New Orleans to compete in the AMA Collegiate Conference brought us home with 3 awards including: Outstanding Community Service, Best Event for AMA Saves Lives and Honorable Mention for Marketing Week. Our chapter continues to grow in size and success each year. Find out how you can become involved.

Membership in the AMA connects you to marketers across all specialties to collaborate, network, gain practical experience and empower your career. You'll get industry knowledge and insights along with everyday resources that will help you in the classroom and beyond.
The CSB|SJU Collegiate chapter will help you gain valuable experience managing finances, people, projects and deadlines - perfect leadership skills to highlight on your resume! Collegiate chapters focus on professional development, community service and fundraising as well hosting activities like Marketing Week, with marketing speakers, etiquette dinners, open houses and more."
The CSB|SJU AMA Chapter will be presenting on our projects, events and accomplishments over the past year. Our trip to New Orleans to compete in the AMA Collegiate Conference brought us home with 3 awards including: Outstanding Community Service, Best Event for AMA Saves Lives and Honorable Mention for Marketing Week. Our chapter continues to grow in size and success each year. Find out how you can become involved.
Membership in the AMA connects you to marketers across all specialties to collaborate, network, gain practical experience and empower your career. You'll get industry knowledge and insights along with everyday resources that will help you in the classroom and beyond.
The CSB|SJU Collegiate chapter will help you gain valuable experience managing finances, people, projects and deadlines - perfect leadership skills to highlight on your resume! Collegiate chapters focus on professional development, community service and fundraising as well hosting activities like Marketing Week, with marketing speakers, etiquette dinners, open houses and more.

Military Science

Schedule

10:20 - 10:40 AM
HAB 107

Joshua J. Bikus (Karen Erickson, Military Science)
Elements of a Revolution: Comparing the Revolutionary Works of Satre and Rousseau

Abstracts

Peace Studies

Schedule

9:00 - 10:00 AM
Gorec Pres. Conf. Rm.

Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner,

Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Peace Studies) Jackson Fellowship 2010 & Jackson Fellows

Abstracts

Political Science

Schedule

9:00 - 10:00 AM
Simns G40
Alexander M. Ricci (Scott Johnson, Political Science) A Study of Presidential Inaugural Addresses: Values of an American Ideology

9:00 - 10:00 AM
Simns G40
Mary E. Erickson (Scott Johnson, Political Science) The Divisive Primary Hypothesis: Answers to the 2012 Election

9:00 - 10:00 AM
Simns G40
Katherine M. Friendshuh (Scott Johnson, Political Science) Minnesota's Finance Formula: Is it Fair?

9:00 - 10:00 AM
Simns G40
Joshua J. Vasseur (Scott Johnson, Political Science) USDA's MyPlate vs. Harvard Healthy Eating Plate: Initiatives Meant to Improve American Health

9:00 - 10:00 AM
Simns G40
Beau Grams (Scott Johnson, Political Science) Theories on Why Local Economic Aid Programs Start, but More Importantly How they End

9:00 - 9:10 AM
Sextn 200
Jillian M. Yanish (James Read, Political Science) "Unhealthy food tax to curb obesity"

9:00 - 10:00 AM
Gorec Pres. Conf. Rm.
Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Political Science) Jackson

Fellowship 2010 & Jackson Fellows

9:10 - 9:20 AM
Simns G30
Kunihiro Shimoji (Manju Parikh, Political Science)
The Politics of the U.S. Military Bases in Japan

9:10 - 9:20 AM
Simns G30
Rongfei Gou (Manju Parikh, Political Science)
Reasons behind the U.S. Arms Sales to Taiwan – Realist and Domestic Politics Approaches

9:10 - 9:20 AM
Sextn 200
Victoria Adolfoli (James Read, Political Science)
Enough is Enough: Ending Sex Trafficking in Minnesota

9:10 - 10:40 AM
Simns G 30
Jocelyn E. Norman (Claire Haeg, Political Science)
The Rally Around The Flag Effect: A Look at Former President George W. Bush and Current President Barack Obama

9:20 - 9:30 AM
Sextn 200
Katie L. Spoden (James Read, Political Science)
"Making Sustainable Aquaculture Projects Top Priority"

9:30 - 9:40 AM
Sextn 200
Gabriel B. Karstrom (James Read, Political Science) "Vouchers in Private Schools"

9:40 - 9:50 AM
Sextn 200
Kathrine E. Tillman (James Read, Political Science)
"Physicians Role in Addressing Domestic Violence"

9:50 - 10:00 AM
Sextn 200
Joseph J. Dingmann (James Read, Political Science) "Legitimate Rape? The Misuse of Marriage to Legitimize Rape of Female Syrian Refugees in Jordan and Egypt"

10:00 - 10:10 AM
Sextn 200
Bridget F. Cummings (James Read, Political Science) "Student Mobility and The Minnesota Achievement Gap"

10:10 - 10:20 AM

Sextn 200	Diana K. Elhard (James Read, Political Science) "District 742: Underperforming in English Language Education"
10:20 - 10:30 AM *Sextn 200*	Jesse C. Rogers (James Read, Political Science) "Can Fishing and Mining Coexist in Bristol Bay, Alaska?"
10:20 - 10:40 AM *HAB 107*	Joshua J. Bikus (Karen Erickson, Political Science) Elements of a Revolution: Comparing the Revolutionary Works of Satre and Rousseau
10:30 - 11:30 AM *Simns G30*	Jennifer M. Kunkel (Christi Siver, Political Science) A Borderless World? How History has Kept us in Controversy
10:30 - 10:40 AM *Simns G30*	Drew Stommes (Gary Prevost, Political Science) An Arms Race or a Bureaucratic Dogfight?
10:30 - 10:40 AM *Simns G30*	Sarah Kruger (Kelly Kraemer, Political Science) Shaking the Military Pillar of Regime Support:
10:30 - 10:40 AM *Sextn 200*	William J. Jude (James Read, Political Science) "Wind Energy for New Hampshire"
10:30 - 10:40 AM *Simns G30*	Nirmani C. Perera (Gary Prevost, Political Science) A Window of Opportunity: Defeat of the Tamil Tigers Movement in Sri Lanka
10:30 - 10:40 AM *Simns G30*	Tucker Mithuen (Christi Siver, Political Science) The Adoption of Gay Rights Legislation in Resistant States
10:30 - 10:40 AM *Simns G30*	Patrick Desutter (Christi Siver, Political Science) Nuclear Non-Use Since 1945: Assessing Israel's Nuclear Decision-making in the Yom Kippur War
10:40 - 10:50 AM	

Sextn 200	Jake P. Collins (James Read, Political Science) "Independent Redistricting Commission in Minnesota"
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, Political Science) Higashino, Keigo
10:50 - 11:00 AM *Sextn 200*	Devin A. Massopust (James Read, Political Science) "Making Arterial Streets in Rapid City, South Dakota More Accessible"
11:00 - 11:10 AM *Sextn 200*	Bridget N. Barry (James Read, Political Science) "Using Survey Feedback to Allocate Medicare Funds"
11:00 - 12:00 PM *Music 028 Choral Rehearsal*	Eric M. Larsen (Axel Theimer, Political Science) Musical Portrayal of Political Thought
11:10 - 11:40 AM *HAB 120*	Rongfei Gou (Julie Davis, Political Science) A Dangerous Game? Political, Personal, and Domestic Reasons behind the U.S. Government's Decision to Sell Arms to Taiwan in 1982
11:20 - 11:30 AM *Sextn 200*	Ellen C. Newkirk (James Read, Political Science) "Teacher-led schools for Rochester, MN"
11:30 - 11:40 AM *Sextn 200*	Caitlin M. Coleman (James Read, Political Science) "Revise the Family and Medical Leave Act (FMLA)"

Abstracts

Ricci: A Study of Presidential Inaugural Addresses: Values of an American Ideology

Erickson: The Divisive Primary Hypothesis: Answers to the 2012 Election

Friendshuh: Minnesota's Finance Formula: Is it Fair?

Vasseur: USDA's MyPlate vs. Harvard Healthy Eating Plate: Initiatives Meant to Improve American Health

Grams: Theories on Why Local Economic Aid Programs Start, but More Importantly How they End

Yanish: Abstract: More than 26 percent of Americans are obese and 36.1 percent are considered overweight. It is projected that obesity will cost approximately $344 billion in medical-related expenses by 2018, constituting about 21 percent of health care spending. I propose that the United States establish a tax on unhealthy foods. Because price is important in food selection and diet, the tax will be an incentive for Americans to decrease consumption of unhealthy foods and select healthier options.

Shimoji: The Politics of the U.S. Military Bases in Japan
~Reason Why Okinawa Accepted the Henoko Plan in 2006~

Gou: Reasons behind the U.S. Arms Sales to Taiwan – Realist and Domestic Politics Approaches

Adolfoli: This policy memo will describe how law enforcement officials in Minnesota can better identify and respond to victims of sexual exploitation and sex trafficking.

Norman: On September 11, 2001, New York City and Washington D.C. were devastated by terrorist attacks. Former President George W. Bush's approval rating surged, a textbook example of the "rally-round-the-flag effect". But why, when President Obama experienced five international events that fit John Mueller's criteria for a rally event, no substantial change in approval occurred? This is a question that previous research has failed to investigate. Employing data from Gallup, The Poynter Institute for Journalism, and The Huffington Post and conducting three case studies, I found that the "rally-round-the-flag effect" influenced Bush and Obama's approval ratings in a vastly different manner, John Muller's criteria for a rally event are no longer viable, and external factors, specifically the economy, United States military intervention in the Middle East, Obama's already high and steady approval rating, and lack of media coverage played a minimal to no role in Obama's absence of rally events. This research contributes to the already extensive scholarship on the "rally" effect and provides new insight into Obama's experience with rally event.

Spoden: Abstract: In order to feed a world of nine billion by 2050, sustainable aquaculture projects need to become a priority. Within programs that implement aquaculture projects around the world, there

needs to be strict enforcement of the Aquaculture Stewardship Council's international aquaculture certification system, or other certification systems of similar caliber.

Karstrom: Abstract: In my presentation, I plan to address the implementation of state vouchers in the private school system. I will examine the benefits of state vouchers in these institutions and explore the reasons as to why state governments ought to support private establishments.

Tillman: Abstract: This policy memo will recommend training for physicians in the Sudan to better identify symptoms of intimate partner violence, and to better respond to the problem.

Dingmann: Abstract: The conflict in Syria has attracted worldwide attention. Estimations of the death toll are as high as 70,000. But there is another facet to this war that is being ignored, the refugees. 100,000 Syrians have fled to Jordan and another 100,000 have fled to Egypt. Once there, these refugees are facing an incredibly difficult time finding work. They are being forced to marry off their daughters to Jordanian and Egyptian men for the dowries given to them. These men have sex with their new "brides" and then leave them a month, or even a week, later to find a new wife. I propose a series of federal funded works projects, similar to FDR's New Deal, to help prevent this legitimate rape.

Cummings: Abstract: This policy memo will describe how student mobility – students who frequently move from one school district to another – contribute to the educational achievement gap in Minnesota, and recommend ways in which schools can work with communities to remedy the problem.

Elhard: Abstract: A Policy Memo regarding English as a Second Language education. There is a large disparity between the opportunities offered to English Language Learners and mainstream students in the St. Cloud School District (District 742). There were 9,396 students enrolled in the St. Cloud School District in 2010-11 school year. With roughly 625 mainstream teachers the ratio of students to teachers was about 1:15 overall. The district currently has 1,100 ELL students and 28 staff assigned as EL teachers that serve in the schools. This leaves the student to teacher ratio at 1:39. Mainstream students clearly have more access to teaching professionals. The learning opportunities for these ELL students are most certainly not equal in terms of the academic support they are offered.

Rogers: Abstract: A policy memo about the sustainability of the largest sockeye salmon run in the world with all five types of wild Pacific salmon. The memo covers the protection of the Southwest Alaska's Bristol Bay

fisheries and asks whether they can coexist with the development of the proposed Pebble Mine, containing copper-gold-molydenum deposits one of the biggest of its kind in the world. My proposed policy solution is to have the EPA implement public process under Section 404(c) of the Clean Water Act or for the EPA to continue to conduct more scientific peer reviewed research on a mine of this scale with other stakeholders.

Kunkel: A Borderless World? How History has Kept us in Controversy

Stommes: An Arms Race or a Bureaucratic Dogfight?
Assessing the Underlying Causes of India's Nuclear Force Developments

Kruger: Shaking the Military Pillar of Regime Support:
A Closer Look at the Factors Influencing Military Defections during the Revolutions in Egypt, Libya, and Syria during the Arab Spring Movement

Jude: Abstract: New Hampshire currently gets 90 percent of its energy from out of state, predominantly using fossil fuel sources. This policy memo recommends a major wind energy project for the city of Merrimack, New Hampshire.

Perera: A Window of Opportunity: Defeat of the Tamil Tigers Movement in Sri Lanka

Mithuen: The Adoption of Gay Rights Legislation in Resistant States

Desutter: Nuclear Non-Use Since 1945: Assessing Israel's Nuclear Decision-making in the Yom Kippur War

Collins: Abstract: This memorandum to the Senate and House Elections Committees is an effort to replace Minnesota's legislative redistricting process that thrives on political motivations with an independent redistricting commission that gives the task of drawing legislative and congressional district lines to the people of the great state of Minnesota and ensures a fairer, more transparent redistricting process.

Massopust: Abstract: Policy Proposal to create safer and more accommodating arterial streets in Rapid City, South Dakota.

Barry: Abstract: The Affordable Care Act will use patient surveys as a way to fund different Medicare reimbursement strategies. The patient response to their care will be one benchmark in the response they have to determine the different levels in terms of funding. My question concerns the most effective use of surveys. When the responses are used to dictate funding, hospitals have an incentive to keep survey scores high, rather than using the surveys to focus on the potential problems of the

treatment. It is more effective to use patient surveys as a tool to identify and fix problems. So, hospitals should be graded on their ability to identify and fix problems with their patient surveys, rather than the actual surveys themselves.

Newkirk: Abstract: A new Minnesota law permits school districts to replace traditional forms of school administration with schools directly administered by teachers. The policy recommends that the Rochester, MN school district implement teacher-led schools because classroom teachers better understand the needs of students than administrators who have not been in the classroom for decades, if ever.

Coleman: Abstract: The United States Congress is called to revise the Family and Medical Leave Act through the allocation of 2 weeks paid leave to individuals who have specific family medical issues.

Psychology

Schedule

9:30 - 10:00 AM *BAC 106*	Ariel R. Reischl, Cady M. Sea, Emily A. Swenson, Kristie A. Mueller, Sara M. Fiedler, Shannon L. Murphy (Denise Meijer, Psychology) Healing Touch
9:30 - 10:00 AM *NewSc NS 140*	Feiran Chen (Stephen Stelzner, Psychology) Heterosexual Romantic Relationships and Mate Preferences in College Students from the U.S. and China: Cross-Cultural and Gender Difference in Beliefs and Attitudes
10:00 - 10:30 AM *BAC 106*	Emily M. Martin (Denise Meijer, Psychology) Music Therapy as an Intervention to Relieve Pain and Anxiety in Post-Operative Spine Patients.
10:00 - 10:30 AM *NewSc 140*	Rachel Heying (Ben Faber, Psychology) Music and Aspects of Identity in People with Alzheimer's Disease
10:30 - 11:00 AM *NewSc 140*	Kelsey N. Koch (Michael Livingston, Psychology)

	Matter over Mind: Comparing Emotional Self-Regulation Techniques with Ego Depletion
10:30 - 11:00 AM *BAC 108*	Sheila M. Lungay (Kathleen Twohy, Psychology) Managing Compassion Fatigue
10:40 - 11:00 AM *HAB 107*	Christina Desert (Camilla Krone, Psychology) Women in Conflict: Culture, Exile, Alienation, and Immigration
11:00 - 11:30 AM *BAC 108*	Nicole M. Behne (Kathy Twohy, Psychology) Examination of the Impact of Living Arrangements and Marital Status on Depression Among Geriatric Male Veterans
11:00 - 11:30 AM *NewSc NS140*	Maria A. Stevens (Michael Livingston, Psychology) Treatment Efficacy of Exposure Therapy and Mindfulness Meditation on the Physiological and Self-Perceived Measures of Stress for a Certain Public Speaking Task
11:30 - 12:00 PM *Simns 340*	Katie J. Johnson, Marie H. Cherry, Stephen M. Gross, Nicole R. Cornell, Maria I. Jagodinski, Bridget A. Foley, Samantha L. Exsted (Sheila Nelson, Psychology) What it Means to be a Johnnie
11:30 - 12:00 PM *NewSc 140*	Blair John (Michael Livingston, Psychology) The Psychological Effects of Discrimination on Minority and International Students at College of St. Benedict's and St. John's University
11:30 - 12:00 PM *BAC 108*	Hannah L. Prososki (Kathleen Twohy, Psychology) Identification of Contributing Factors to Alcohol Abuse in Vietnam War Era Veterans

Abstracts

Heying: Music and Aspects of Identity in People with Alzheimer's Disease

Koch: It has been found that tasks that require self-control deplete our willpower gradually over time, and have been linked with glucose levels. This “ego depletion” effect has rarely been tested in emotional regulation. The combined effects of glucose depletion (by means of the mentally challenging Stroop Task) will be compared with two emotional self-regulation strategies by pairing them in four conditions. Half of all participants will undergo the Stroop task, which will ask them to read aloud the ink color of words while ignoring the semantic content of those words. They will then be given instructions for viewing a video clip asking them to either suppress or reappraise their reaction to the film. Participants will be then shown a brief video clip invoking disgust, as measured by an emotional rating scale. It is hypothesized that of the four proposed conditions (normal glucose/reappraisal, low glucose/reappraisal, normal glucose/suppression, low glucose/suppression), the normal glucose/reappraisal condition will be the most successful in moderating emotional experience and the low glucose/suppression condition will be the least successful. As for the other two conditions, it is hypothesized that the normal glucose/suppression technique will be more successful in moderating emotional experience than the low glucose/reappraisal condition. Essentially, it is thought that our glucose levels will be more effective in determining emotional intensity than our conscious strategies.

Background: As the geriatric population grows, depression rates are also on the rise. This is especially evident in American veterans, as depression affects close to 30% of veterans, making it one of the most common diagnoses treated within the Veterans Health Administration (Hankin, Spiro, Miller et al, as cited in Cully, Zimmer, Khan & Petersen, 2008).

Objective: The purpose of this study is to identify selected variables associated with depression among older male veterans. The results could help improve patterns of care, hopefully improving the management of depression.

Method: This retrospective descriptive study uses existing medical record data to identify patterns of factors commonly occurring in veterans with depression. Demographic variables, depression screening scores, and patterns of International Statistical Classification of Diseases and Related Health Problems 9th Revision (ICD9 codes) are analyzed for patterns that can improve care.

Results: Descriptive findings and relevant correlations are reported with recommendations to improve clinical practice for male older adult veterans diagnosed with depression.

Stevens: Exposure therapy and mindfulness meditation are frequently used to decrease anxiety during certain stressor tasks. Previous research has indicated that the Trier Social Stress Test (TSST) consists of public speaking that is judged and repetitive arithmetic equations to increase the release of the hormone cortisol, heart rate, and perceived stress. Other studies have found evidence that answering interview questions or speaking in front of a video camera can also increase these physiological and perceived measures of stress. The purpose of this study is to see if practicing an exposure exercise or practicing a mindfulness meditation will decrease physiological and perceived measures of anxiety after speaking in front of a video camera. To test this, participants were instructed to practice in front of a mirror for three sessions throughout the week, practice a formal meditation technique for three sessions throughout the week, or have no preparation. At the end of the week participants were asked to prepare and present a speech by answering several job interview questions in front of a video camera. Participants were then told that they would be judged for the quality of their speech. Participants' cortisol samples, heart rate, and subjective units of distress were taken before and after the speech. It is predicted that in all conditions, participants' physiological and perceived measures of stress will increase after the speech. However, it is predicted that in the exposure and mindfulness meditation conditions, participants' physiological and perceived measures of stress will be significantly lower than the control condition immediately after the speech.

John: For decades, the importance of factors such as race and cultural background has been disputed in the diagnoses of both the rates and severity of psychological disorders. There has been little research done into this area and the research done has proven both inconclusive as well as conflicting. The research is divided on whether or not ethnic minorities suffer from greater rates of psychological disorders than the majority population. The research is also divided as well as whether or not minorities suffer from more severe cases of psychological disorders in comparison to the majority of the population. This study investigates the comparison between the levels of psychological distress minority and international students have versus those of white students as well as the correlation between the recorded numbers of microaggressions and levels psychological distress measured via different scales. Three sources were used in this study: survey data from over 100 students, in-depth interview data from 24 students and a content analysis of a popular Facebook page used by students on campus. Five hypotheses were examined: 1) that minority and international students will score significantly higher on the

Center of Epidemiologic Studies Depression Scale than Majority students; 2) minority and international students will score significantly higher on the Racial Microaggression Scale than the Majority students; 3) The third hypothesis is that Minority and international students will score significantly higher on the UCLA Loneliness Scale than Majority students; 4) there will be a significant correlation between the score on the Racial Microaggression Scale and the UCLA Loneliness Scale; 5) there will be a significant correlation between the score on the UCLA Loneliness Scale and the Center for Epidemiologic Studies Depression Scale.

Service Learning

Schedule

9:00 - 10:00 AM *Gorec Pres. Conf. Rm.*	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Service Learning) Jackson Fellowship 2010 & Jackson Fellows

Abstracts

Sociology

Schedule

9:00 - 10:00 AM *Gorec Pres. Conf. Rm.*	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Sociology) Jackson Fellowship 2010 & Jackson Fellows
9:30 - 9:40 AM *HAB 106*	Bao Lao (Yuko Shibata, Sociology) Places in Japan: Ikebukuro
9:30 - 10:00 AM *NewSc NS 140*	Feiran Chen (Stephen Stelzner, Sociology) Heterosexual Romantic Relationships and Mate Preferences in College Students from the U.S. and China: Cross-Cultural and Gender Difference in Beliefs and Attitudes

9:40 - 9:50 AM *HAB 106*	Ian C. Manion (Yuko Shibata, Sociology) Sapporo
9:50 - 10:00 AM *HAB 106*	vanessa montes (yuko shibata, Sociology) Nagasaki's Culture
10:10 - 10:20 AM *HAB 106*	Kaileigh B. Nicklas (Yuko Shibata, Sociology) Harajuku
10:20 - 10:30 AM *HAB 106*	Bao Vang (Shibata Yuko, Sociology) The Wonders of Kyoto
10:30 - 10:40 AM *HAB 106*	Kevyn F. Woods (Yuko Shibata, Sociology) Harajuku
10:40 - 10:50 AM *HAB 106*	Naymaraha S. Castro (Yuko Shibata, Sociology) Setsubun Mantoro
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, Sociology) Higashino, Keigo
11:00 - 11:20 AM *Simns 340*	Kia M. Lor (Jessica O'Reilly, Sociology) Life, Marriage, Death: The Life and Afterlife of Hmong Women
11:00 - 11:10 AM *HAB 106*	Kevin A. Horton (Yuko Shibata, Sociology) Nikko Japan
11:10 - 11:20 AM *HAB 106*	Frederick Jones (Yuko Shibata, Sociology) Koshien
11:20 - 11:30 AM *HAB 106*	Nou S. Vang (Yuko Shibata, Sociology) One Piece
11:30 - 12:00 PM *Simns 340*	Katie J. Johnson, Marie H. Cherry, Stephen M. Gross, Nicole R. Cornell, Maria I. Jagodinski, Bridget A. Foley, Samantha L. Exsted (Sheila Nelson, Sociology) What it Means to be a Johnnie

11:30 - 11:40 AM *HAB 106*	Pa W. Vang (Yuko Shibata, Sociology) Japanese Folk Tales
11:40 - 11:50 AM *HAB 106*	Pisenny Xiong (Yuko Shibata, Sociology) Takashi Murakami - Japanese Contemporary Artist
11:50 - 12:00 PM *HAB 106*	Mai c. yang (Yuko Shibata, Sociology) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Lor: After 38 years of the Hmong people's permanent residence in the United States, many Hmong Americans have adapted and integrated into mainstream American society, yet still rooted to the Hmong heritage. More Hmong Americans have moved up the socio-economic ladder by attaining higher education. Hmong American leaders have emerged as politicians, business owners, authors, comedians, actors and educators. In general, the Hmong American community has progressed. However, not all Hmong Americans are progressing at the same rate. I would be turning a blind eye on the Hmong American community if I fail to acknowledge the Hmong Americans who are regressive, who still practice traditional cultural practices that hinder the growth of the Hmong community, especially for Hmong women. This paper aims to analyze the intersection of the language on marriage and divorce for women in the Hmong culture, and to propose necessary changes to the Hmong religious and patriarchal worldview that has been deeply rooted in pessimism about the women condition in which death dictates how women live their lives.

Interdisciplinary Presentations:

Asian Studies

Schedule

9:20 - 9:30 AM *HAB 106*	Kia Her (Yuko Shibata, Asian Studies) The Benjamin A. International Scholarship & It's Impact on Studying Abroad in Japan
9:30 - 9:40 AM *HAB 106*	Bao Lao (Yuko Shibata, Asian Studies) Places in Japan: Ikebukuro
9:30 - 10:00 AM *NewSc NS 140*	Feiran Chen (Stephen Stelzner, Asian Studies) Heterosexual Romantic Relationships and Mate Preferences in College Students from the U.S. and China: Cross-Cultural and Gender Difference in Beliefs and Attitudes
9:40 - 9:50 AM *HAB 106*	Ian C. Manion (Yuko Shibata, Asian Studies) Sapporo
9:50 - 10:00 AM *HAB 106*	vanessa montes (yuko shibata, Asian Studies) Nagasaki's Culture
10:00 - 10:10 AM *HAB 106*	Samantha M. Muldoon (Yuko Shibata, Asian Studies) Asakusa
10:10 - 10:20 AM *HAB 106*	Kaileigh B. Nicklas (Yuko Shibata, Asian Studies) Harajuku
10:20 - 10:30 AM *HAB 106*	Bao Vang (Shibata Yuko, Asian Studies) The Wonders of Kyoto
10:30 - 10:40 AM *HAB 106*	Kevyn F. Woods (Yuko Shibata, Asian Studies) Harajuku
10:40 - 11:10 AM	

HAB 120	erik t. nagaoka (julie davis, Asian Studies) The Forgotten Man-Made Holocaust: Identifying the Causes of the Bengal Famine of 1943
10:40 - 10:50 AM *HAB 106*	Naymaraha S. Castro (Yuko Shibata, Asian Studies) Setsubun Mantoro
10:50 - 11:00 AM *HAB 106*	Wendell G. Harren (Yuko Shibata, Asian Studies) Higashino, Keigo
11:00 - 11:20 AM *Simns 340*	Kia M. Lor (Jessica O'Reilly, Asian Studies) Life, Marriage, Death: The Life and Afterlife of Hmong Women
11:00 - 11:10 AM *HAB 106*	Kevin A. Horton (Yuko Shibata, Asian Studies) Nikko Japan
11:10 - 11:20 AM *HAB 106*	Frederick Jones (Yuko Shibata, Asian Studies) Koshien
11:10 - 11:40 AM *HAB 120*	Rongfei Gou (Julie Davis, Asian Studies) A Dangerous Game? Political, Personal, and Domestic Reasons behind the U.S. Government's Decision to Sell Arms to Taiwan in 1982
11:10 - 11:30 AM *Main TRC Board Room*	Josh Yang (Martha Tomhave Blauvelt, Carol Brash, Asian Studies) Finding Your Own Way: Masculinity Portrayed in Japanese Manga
11:20 - 11:30 AM *HAB 106*	Nou S. Vang (Yuko Shibata, Asian Studies) One Piece
11:30 - 11:40 AM *HAB 106*	Pa W. Vang (Yuko Shibata, Asian Studies) Japanese Folk Tales
11:40 - 11:50 AM *HAB 106*	Pisenny Xiong (Yuko Shibata, Asian Studies) Takashi Murakami - Japanese Contemporary Artist

11:50 - 12:00 PM
HAB 106 Mai c. yang (Yuko Shibata, Asian Studies) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Campus Ministry

Schedule

11:30 - 12:00 PM
Simns 340 Katie J. Johnson, Marie H. Cherry, Stephen M. Gross, Nicole R. Cornell, Maria I. Jagodinski, Bridget A. Foley, Samantha L. Exsted (Sheila Nelson, Campus Ministry) What it Means to be a Johnnie

Abstracts

Center for Global Education

Schedule

9:20 - 9:30 AM
HAB 106 Kia Her (Yuko Shibata, Center for Global Education) The Benjamin A. International Scholarship & It's Impact on Studying Abroad in Japan

Abstracts

Environmental Studies

Schedule

9:00 - 10:00 AM
Gorec Pres. Conf. Rm. Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Environmental Studies) Jackson Fellowship 2010 & Jackson Fellows

9:30 - 10:00 AM
PEngl 167 Richard J. Kirchner (Adam Whitten, Environmental Studies) Differential Modeling and

Efficiency Testing of the Saint John's University Co-generation Power Plant

11:00 - 11:30 AM
ASC 142
Abby J. Gauer (Michael Ross, Environmental Studies) Rate of Tetracycline Photolysis

Abstracts

Experiential Learning & Community Engagement

Schedule

9:30 - 10:30 AM
Main 322
Elizabeth A. Beaty (Christi Siver, Mary Geller, Experiential Learning & Community Engagement) Intersectionalities: Relfections on Intersections of Gender and Other Forms of Identity

10:30 - 10:50 AM
Quad Alumni Lounge
Laurel E. Kennedy, Melissa L. Mehaffey, Chris R. Otterstetter, Jack H. Ryan, Anthony M. Retica (Steve Schwarz, Experiential Learning & Community Engagement) S.A.M

11:50 - 12:00 PM
HAB 106
Mai c. yang (Yuko Shibata, Experiential Learning & Community Engagement) Japan Study Abroad 2012: Hamazushi Experience

Abstracts

Institute for Women's Leadership

Schedule

9:30 - 10:30 AM
Main 322
Elizabeth A. Beaty (Christi Siver, Mary Geller, Institute for Women's Leadership) Intersectionalities: Relfections on Intersections of Gender and Other Forms of Identity

11:30 - 12:00 PM

Simns 340 — Katie J. Johnson, Marie H. Cherry, Stephen M. Gross, Nicole R. Cornell, Maria I. Jagodinski, Bridget A. Foley, Samantha L. Exsted (Sheila Nelson, Institute for Women's Leadership) What it Means to be a Johnnie

Abstracts

Internships

Schedule

9:30 - 10:30 AM
Main 322 — Elizabeth A. Beaty (Christi Siver, Mary Geller, Internships) Intersectionalities: Relfections on Intersections of Gender and Other Forms of Identity

Abstracts

Latino/Latin American Studies

Schedule

9:00 - 10:00 AM
Gorec Pres. Conf. Rm. — Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Latino/Latin American Studies) Jackson Fellowship 2010 & Jackson Fellows

Abstracts

MapCores

Schedule

11:00 - 11:30 AM
PEngl 167 — Allison C. Reinsvold (Jim Crumley, MapCores) Roll and Pitch Corrections for a Shipboard Anemometer

Abstracts

Office of Academic Review and Curricular Advancement

Schedule

Abstracts

Office of Education Abroad

Schedule

Abstracts

Sustainability

Schedule

9:00 - 10:00 AM *Gorec Pres. Conf. Rm.*	Aaron J. Sinner, Kaitlin M. Andreasen, Grace S. Mevissen, Kelsey E. Minten, Kelci A. Reiner, Carolyn Vandelac, Ashley L. Weinhandl, Casey B. Wojtalewicz, Daniel K. Walgamott (Marah Jacobson-Schulte, Sustainability) Jackson Fellowship 2010 & Jackson Fellows
10:00 - 10:10 AM *HAB 106*	Samantha M. Muldoon (Yuko Shibata, Sustainability) Asakusa
10:50 - 11:20 AM *Quad Alumni Lounge*	Anthonique E. Hanna, Gretchen L. Hughes, Andrew J. Mueller, BreAnna K. Ahrenholz (Steve Schwarz, Paul Marsnik, Sustainability) Students In Free Enterprise

Abstracts

Benedicta Arts Center Escher, CSB

Music

Joseph W. Berns, Kathryn N. Keller-Miller, Jessie F. Sorvaag, Clara Miliotis (David Arnott, Music) Overview, Analysis, and Performance of Dvořák's "American" String Quartet

> Antonin Dvořák's "American" string quartet is one of his more popular pieces of music. It was written while on vacation in Spillville, Iowa, during his time in America. After briefly covering Dvořák's time here and the contemporaneous music he wrote, a

short analysis of the piece will be provided. We will then perform the first movement of the quartet.

Spencer T. Frie, Lisa A. Knapek, Sean M. Jacobson (David Arnott, Music) Mendelssohn's Piano Trio No. 2

Felix Mendelssohn, prolific composer of the Romantic era, composed his Piano Trio No. 2 in C Minor, Op. 66, in 1845. This music is among the final chamber pieces Mendelssohn wrote, and it demonstrates the composer's ability to create works of superb craftsmanship and captivating lyricism. This presentation will address the first movement of the trio, discussing the nuances of the two primary themes and the abundance of ways in which the three voices interact. A complete performance of the first movement will conclude the presentation.

Spencer T. Frie, Lisa A. Knapek, Amanda A. Olsen, Arjun Ganguly (David Arnott, Music) Ravel's String Quartet in F Major

Earning him a loss during the 1904 Prix de Rome and a rejection from the Conservatoire de Paris, Maurice Ravel's String Quartet in F Major, ironically, propelled the composer's career forward. The enthusiastic public support for Ravel's compositional style is not lost in our current day - this quartet is one of the most widely performed works in the chamber music repertoire. This may be for good reason: in response to Ravel's query about the work, famous French composer Claude Debussy wrote, "In the name of the gods of Music and for my sake personally, do not touch a note of what you have written." Built with two distinct theme groups, the first movement of his solitary quartet showcases both Ravel's atmospheric, gossamer writing and his roaring triple fortes. This presentation will demonstrate the range (in dynamics and styles) of Ravel's composition and conclude with a complete performance of the first movement.

Rachel A. Steenson, Daniel K. Larson, Spencer T. Frie, Jordan W. Berns, Ashleigh N. Walter (David Arnott, Music) A Palette Full of Color: Dvorak's String Quintet No. 2, Op. 77

Early in his career, Antonin Dvorak's work can be characterized by its interests in and influences from Richard Wagner. This String Quintet is a marvelous example of Dvorak's voice as he begins to abandon his fixation for Wagner's work. With its Bohemian influences, seen in the piece's lively and dotted rhythms, its liquid melodies and its expressive harmonies, it marks a style unique to Dvorak's own compositional style, while staying within the traditional Sonata-allegro form. This project means to examine

the context in which Dvorak published the work, the then-unusual scoring, and the aspects that mark it as characteristically Dvorak. It will conclude by playing the first movement of the piece.

Amy Zheng, Jordan W. Berns, Kaela H. Kopp (David Arnott, Music) Beethoven String Trio, Opus 3 No. 1

Through a short presentation and a performance of select movements of Beethoven's Op. 3, No. 1 string trio, we will demonstrate how Beethoven's early compositional style was greatly influenced by the Classical Era of music but how even in his early years he was expanding the horizons of music. We will discuss such topics as instrumentation, form, and rhythmic motivic material.

Benedicta Arts Center Escher Auditorium, CSB

Music

Iliya M. Hoffert, Sean M. Jacobson, Katie E. Cossette, Ali M. Felix, Alex J. Twohy (Dale White, Music) CSB/SJU Brass Quintet

The Brass Quintet is a select brass chamber group performing original and transcribed works for five players. Consisting of two trumpets, a horn, a trombone or euphonium, and a tuba, the small group is a fantastic way for brass musicians to explore the nuances of chamber music.
The purpose of this project is to educate the audience about the art of the brass quintet. A brief historical overview of the brass quintet will be presented at the beginning of the performance. The follow pieces will be performed:
-Canzona per sonare No. 2 (Giovanni Gabrieli)
-La Fille aux cheveux de lin (C. Debussy/arr. E. Smedvig)
-Four Freilachs from "The Art of Klezmer" (Stanley Friedman)
I. Die Macheteneste
II. Gypsy
IV. Roumanian/Serbian
Each piece will be preceded by a description of the piece, its historical context, and why it is significant to the brass quintet repertoire.

Benedicta Arts Center Student Gallery, CSB

Art

Hannah K. Anderson, Keegan E. Crose, Rebecca L. Dymit, Evan T. Gruenes, Joseph J. Hollenback, Rachel A. Holzknecht, Laura R. Jellinger, Haruka Kimura, Nicole K. Larsen, Yunya Liu, Meghan M. O'Brien,

Zengsen Qiao, Kayla A. Reininger, Katlyn M. Sovada, Jie Zhang (Andrea Shaker, Art) Photography Two/Three Exhibition: Identity

This is a group exhibit by students in the Photography Two/Three class, Spring 2013. Students will be exhibiting work that addresses the theme of identity from a variety of conceptual and visual perspectives. Students will be present to discuss their work.

Gorecki Center A, B & C, CSB

Campus Ministry

Abby Hendricks, Alexa Rinde, Allyson Kohler, Breanna Chapman, Gaby Galeano, Hiwote Bekele, Jill Kraemer, Joseph Kinnan, Katherine Claeys, Lauren Thoma, Margaret Peyton, Michaela Barrett, Rebeka Schwendemann, Sophie Kem (Carley Braegelmann, Campus Ministry) Just Do The Same: a testimony of the immense impact on 14 CSB/SJU students after one week of service in the Dominican Republic

Our group embarked on a one-week Alternative Break Experience (ABE) hosted through CSB Campus Ministry to serve the community of Las Terrenas, a town in the Samaná province of the Dominican Republic. Our main project took place at La Granja, a school located in Las Terrenas. Our primary focus was to enhance the school's sense of community by helping to build a playground and basketball court. In addition to serving the community, we were able to learn about the challenges that faced the community such as poverty, illiteracy and corruption. We were also able to tie in what we learned to the 5 Pillars of ABE and the Benedictine Values. We found a connection to the community in which we served through their culture, language, and the similarities that drew us together while growing more appreciative of the vast diversity of the world through the differences. Our presentation through pictures, PowerPoint and student testimony will aim to inform the CSB/SJU community of this wonderful opportunity as well as its impact on our lives and our mission going forward.

Victoria Hernandez, Samantha Exsted, Wenyu Heng, Austin Barkley, Chloe Holtan, Kathryn Smith, Treasure Kenny, Molly Johnson, Adam Steinbach (Carley Braegelmann, Campus Ministry) Operation Breakthrough ABE

Our group will make a poster including our experience at Operation Breakthrough (CSB Campus Ministry Alternative Break Experience trip). More specifically, we will present in our poster the poverty that occurs in Kansas City and how one of the founders of Operation Breakthrough explained to us that this

poverty is an ongoing system that is almost impossible to get out of. We want to share the work that Operation Breakthrough has done to help provide childcare to parents who cannot afford it otherwise. The children at Operation Breakthrough have touched all of our hearts and have showed us how to love no matter what circumstance. These children have witnessed traumas that no child should have to go through and live in very unstable lives. All they need is for someone to show them that he or she does care for them. That is what our team did while at Operation Breakthrough. We would like to spread the word of how poverty effects people of any age, gender, and ethnicity. Hopefully we will be able to influence people to take an extra step to help out a child and family in need

Nursing

Rebecca M. Angermeier (Carrie Hoover, Nursing) In-patient Hospital Diabetes Education

Diabetes mellitus is one of the most common chronic conditions. According to the American Diabetes Association, approximately 25.8 million Americans have diabetes. Furthermore, 90-95% of all Americans living with the disease have type II diabetes. Effective disease management may allow one to reduce symptom severity or even reverse effects of prediabetes, as well as type II Diabetes. Current recommendations include nutrition adjustments, exercise, oral antidiabetic agents or insulin therapy, blood glucose monitoring, and diabetes self-management education.

A large Hennepin County hospital no longer employs in-patient diabetes unit educators; therefore, staff nurses are fully responsible for fundamental diabetes education to both newly diagnosed clients, as well as those who do not adequately manage their disease. Although nurses are aware of their role in teaching diabetes “survival skills” and coordinating outpatient appointment referrals, a number of patients have still been discharged without documentation of diabetes management education. To assist nurses in carrying out this expectation, hospital education staff has implemented didactic sessions for nurses and provided them teaching resources. Nonetheless, education staff indicates that adequate diabetes education is still lacking, and identifies barriers to effective in-patient teaching for nurses, namely time constraint and uncertainty regarding expectations, as ample information exists regarding the disease. The purpose of this practice

improvement project is to facilitate diabetes education for nurses by streamlining existing teaching practices. Barriers to effective diabetes education, as well as solution recommendations or suggestions identified by education staff, evidence-based research, and staff nurses are utilized while planning for project implementation. A concise diabetes education resource guide for nurses may improve efforts to support disease self-management strategies for patients with diabetes.

Sarah M. Berkowitz (Carrie Hoover, Nursing) Bedside Shift to Shift Communication

At a Mid-western- suburban hospital on a Medical/Neuro unit patient satisfaction with medical staff communication is below the 50th percentile. Hospitals value themselves on patient quality patient care related to staff to staff communication. Better communication between staff is a key component in quality and safety. In order to address the communication problem current research on shift to shift report was researched. The data is consistent in saying that a standardized tool, written and verbal report are most successful in improving shift to shift communication. Standardized tools include ISBAR, SBAR and a checklist. Attempts have been made to implement standardized tools however they have largely been unsuccessful and not sustainable. Barriers to the current problem include perceived lack of time, interruptions, report being unclear and lack of a standard process. The purpose of the project is to implement shift to shift hand over on every shift to improve patient satisfaction with care; including use of a shift to shift report check list. Updated education will also be implemented, with the goal of improved patient satisfaction with medical staff communication.

Samuel A. Chase (roxanne wilson, carrie hoover, Nursing) Quality Improvement Project: Restraint/Seclusion Flow Sheets

ABSTRACT
Evidence suggests that there is much variation in use and effectiveness concerning documentation for patients while in restraints. There are many different causes for this variation in documentation. According to the Department of Health (DH) all the NHS (National Health Service) professions have their own codes of conduct and standards of ethical behavior. These standards typically include good record-keeping practice. This institution does not have an updated, evidenced based flow sheet to document care for patients are in restraints. There are laws that require healthcare providers to document incidents and care of patients in restraints. Each institution has to follow JCHAO

standards and their institutional protocols for documentation. This project is to updat a flow sheet that makes documentation of patients while in restraints or seclusion simple and less time consuming, in order to effectively raise the quality of care that patients receive. Team members will include the Quality Assurance nurse, Clinical nurse leader, nurse manager, and several staff nurses.

Susan N. Commers (Roxanne Wilson, Nursing) Adverse Effects from Hydromorphone among Hospice Patients

Patients receiving palliative and hospice care often require very high doses of pain medication. There is a misconception that it is safe to raise the dose of opioid medications if the increase is gradual. The recommended dose of hydromorphone, an opioid used frequently in palliative care, is 2-4 mg every 3-4 hours orally or .2mg/hr when using a PCA. However, in palliative and hospice care settings, patients often experience chronic severe pain that requires the dosage of hydromorphone to be much higher—in some cases 500x higher than the recommended dose. Hydromorphone is metabolized into a compound called hydromorphone-3-glucuronide (H3G) which research suggests has neurotoxic properties. Some rare adverse effects in patients receiving high doses of this opioid for extended periods of time are hyperalgesia, myoclonus, and seizures. St. Cloud Hospital Home Care Hospice is analyzing ways to reduce the incidences of adverse affects from this medication, while still adequately relieving pain. The goal of this practice improvement project is to increase the knowledge and awareness of toxicity from hydromorphone. A literature review and baseline action plan will be provided to the facility.

Sarah A. Dingmann (Jodi Berndt, Nursing) Exploring Interventions to Prevent Mental Health Issues in Critical Care Patients

Patients hospitalized in intensive care units (ICUs) are subject to a great deal of stress as a result of pain, perceived isolation from family, and the fear of death. Recent studies indicate that an increasing number of patients are developing anxiety related mental health problems after they are discharged from an ICU. There is little awareness of the prevalence of this problem among ICU nursing staff, and it is not common practice to actively implement any preventive interventions while patients are still hospitalized. While most ICU nurses focus on life-saving interventions, they are responsible for caring for the whole patient, including addressing mental health concerns. This poster presentation will provide a summary of recent literature findings,

report the results of interviews with ICU nursing staff, and list recommendations for nursing practice improvement to increase awareness of the incidence of mental health problems arising in patients after discharge from the ICU.

Molly R. Doboszenski (Carrie Hoover, Nursing) Managing Acute on Chronic Pain in Orthopedic Surgical Patients

According to recent reports from the National Institute of Medicine roughly 100 million Americans suffer from chronic pain, adding to the 1.5 billion people with chronic pain worldwide. Chronic pain is described by the American Chronic Pain Association as, “ongoing or recurrent pain, lasting beyond the usual course of acute illness or injury or more than 3 to 6 months; which adversely affects the individual's well-being”. Therefore it is of no surprise that prescription drugs are the second-most abused category of drugs in the United States today. Long-term narcotic use is often an attempt by the individual to maintain an adequate quality of life, frequently leading to narcotic tolerance: slowly requiring larger doses in order to receive the same level of relief. If possible, surgery is often a final attempt to relieve this pain. This is especially true for chronic pain which is orthopedic in nature. But how best does the healthcare team provide adequate acute pain management for the narcotic tolerant patient post-operatively? This practice improvement project will describe the use of a multimodal approach to care, with an emphasis on advocating for adequate pain management.

Melissa C. Flaig (Kathleen Twohy, Nursing) Teach Back Method: Reducing Patient Falls Through Education

Each year around six percent of all medical costs for persons ages sixty-five and older are spent on falls and fall related injuries. In 2010 alone about 30 billion dollars were spent on medical care due to falls (Centers for Disease Control and Prevention, 2012). Traumatic brain injuries and fractures can be consequences of patients falling. There are many factors in the hospital that can put patients at risk for falls such as medications, equipment, an unfamiliar setting, and pain. It is important that patients in the hospital are educated about their risk for falls and know what they can do to prevent themselves from falling. However, recent research has shown that patients are not educated about their risk for falls putting them into situations where they experience a fall. Common practice for patient education in hospitals is for nurses and doctors to simply explain educational materials to patients. This is not effective according to recent studies which report that as many as 40-80 percent of patients are unable to recall

information immediately after it has just been taught to them, and of the information that they remember, only about half of it is remembered correctly ("The Teach-Back Method", n.d.). The 'teach back' method is a new tool being used where doctors and nurses ask patients open-ended questions about information that they were just taught to see if they understood it correctly. Where lapses in information are found follow-up education is able to be reinforced ('Teach back', 2007). The teach back method has been shown to improve patient safety, give direction for clarification, and reduce hospital readmissions ("Teach-back gives direction," 2011). A review of the literature and recommendations for teach back implementation will be provided to an inpatient unit.

Jenna M. Franklin (Denise Meijer, Nursing) Barcoded Medication Administration With Removal Wristbands

Medication barcoding has been an important step within nursing care to help prevent medication errors from occurring. Medication errors are very common and nurses are the last line of defense in preventing medication errors. At this city hospital, medication barcoding has recently been implemented in 2012. Even though this implementation of barcoding has been a positive change, the wristbands that contain the barcodes for scanning are removable. For this reason, the barcodes are often scanned without the wristband consistently being on the patient's wrist. According to the National Patient Safety Agency (2007) "...72% of all wristband-related errors were instances in which a patient was not wearing a wristband." This practice improvement project will reinforce the evidence-based practice of scanning barcodes only when the wristband is on the patient's wrist and will also explore the implications of removable wristbands on patient safety.

Jennifer M. Gledhill, Kathleen C. Jameson (Gary Gillitzer, Nursing) Renal Calculi and Use of Nephrostomy Tube in Spinal Cord Injury Patients

Renal Calculi (also known as kidney stones) are the formation of mineral stones in the kidneys. These stones can be comprised of various organic compounds including calcium oxalate, struvite, urate, or cystine. In the general population, prevalance of kidney stones is 5.2%. Once a person develops one stone, their risk of developing another stone increases. In patients with spinal cord injuries, the risk of developing stones is between 7 and 20%. The spinal cord injury population is at a higher risk for kidney stones due to their nutritional states, risk for urinary stasis, and bone demineralisation. On our unit at the Minneapolis VA, the occurrence of kidney stones and subsequent complications has increased in the past six months. The goal of this practice

improvement project is to provide education to the nursing staff about the prevention, management, and treatment of kidney stones in the spinal cord population, while also focusing in on the protocol for nephrostomy tube care and indications for use. A review of the literature and recommendations for education and care implications will be provided to the inpatient unit.

Stephanie K. Hall, Madeline P. Burns (Denise Meijer, Nursing) Infection Control with Individual Patient Supply Carts

Supply carts on inpatient units are becoming more prevalent, however, evidence is lacking on recommendations on how to effectively manage the supply carts in individual patient rooms, and more specifically for patients on isolation precautions. In a quantitative study conducted by Huslage (2010), supply carts were identified as one of the top five "high-touch" surfaces in a patient room. Specifically in this hospital, nurses on multiple units have identified that infection control practices in regards to the supply carts are inconsistent among staff. These inconsistent practices put patients at an increased risk for acquiring infection during their hospital stay. This project is in response to a need identified by all staff to create a standardized policy on proper methods of infection control related to supply carts. This policy aims to decrease the number of hospital-acquired infections in patients and to ensure consistent infection control practices among the nursing staff. Prior to policy implementation, a staff education intervention focusing specifically on daily infection control nursing practices will be provided.

Elizabeth A. Hoffman (Gary Gillitzer, Nursing) The Barriers to and Benefits of Hourly Rounding

Health care organizations are always incessantly searching for ways to increase patient safety and satisfaction. The Joint Commission is an accrediting organization formed to encourage health care organizations to provide the safest and most effective care possible. The Joint Commission issues an annual list of National Patient Safety Goals, such goals have included reducing patient injuries related to falls and the prevention of pressure ulcers. One evidenced-based intervention that has emerged in the past decade to target such goals is hourly rounding. Hourly patient rounding is the practice of intentionally checking on patients at regular intervals. Its purpose is to organize existing work for nursing staff in a way that they are able to anticipate and meet patient needs, thus increasing patient safety and satisfaction. Hourly rounding has been shown to increase patient safety by decreasing the number of falls and incidences of skin breakdown.

Both patient and nurse satisfaction increase when hourly rounding is employed. Less call lights, a quieter atmosphere, and more time to complete other tasks like charting are some results of the implementation of hourly rounding. The practice of hourly rounding is currently being trialed on one inpatient unit in a Twins Cities hospital; however, several barriers exist to its implementation. The purpose of this practice improvement project is to analyze the barriers of using hourly rounding and to provide information on the benefits and tools associated with the practice in order to increase the usage of hourly patient rounding on this inpatient unit. An appraisal of the literature and recommendations will also be provided to the impatient unit.

Katie A. Huot (Denise Meijer, Nursing) Patient and Family-Centered Care in the Ambulatory Surgery Setting

The ambulatory surgery experience can be one of prominent stress for patients and their families. Anxiety is particularly high during the preoperative stage when healthcare teams are preparing the patient for surgery. Current research demonstrates that anxiety has a negative impact on recovery by compromising the immune system, increasing the need for anesthesia, and increasing post-operative pain. Nurses have the unique opportunity to utilize anxiety reduction strategies as they care for patients in the perioperative setting. One of the simplest but potentially most profound strategies is the incorporation of family members throughout the entire ambulatory surgery process. It is current practice at some hospitals to admit the patient for surgery without any family members present. However, many more ambulatory surgery centers are beginning to incorporate best practice in line with patient family-centered care and anxiety reduction by allowing a family member or "care partner" to be with the patient throughout the entire perioperative experience, including admission. Research suggests that it is indeed best practice for the nurse to bring the family back with the patient right away to be active members in the admission process. The literature shows that this strategy reduces patient anxiety, increases family and patient satisfaction, and increases compliance when the patient returns home. In accordance with best practice, this should be implemented in all ambulatory surgical centers. The purpose of this practice improvement project is to inform the Same Day Surgery staff of the purpose and benefits of allowing family to participate in the admitting process, based on current literature and best practice.

Alicia M. Johnson (Carrie Hoover, Nursing) Hospice Standing Orders

Standing orders are written or electronic documents that guide patient care by nurses without requiring a separate physician order. Standing orders empower nurses to autonomously implement interventions in response to common patient symptoms. The need to contact the primary physician, a time-consuming process that takes time away from the patient and delays relief of symptoms is thus eliminated. In hospice nursing, prompt and effective symptom management is of utmost importance to provide for patient comfort during the process of end of life. Recently, hospice agencies have begun to remove standing orders from their practice citing that standing orders do not promote individualization of care, limit physician control over medications and decrease essential communication between physicians and nurses on patient status. The Center for Medicare Services and the Joint Commission maintain that standing orders are based on nationally recognized and evidenced-based practice guidelines and recommendations. The goals for this improvement project are to review, revise, and rewrite the standing orders for one hospice facility in the Mid-western area. Current research findings that comply with Medicare guidelines as well as nurse satisfaction data on current standing orders are incorporated into the revision. Best practice recommends that standing orders be reviewed regularly to provide safe patient care. This will be the first in-depth standing order review since the facility's opening in 2006. A revision will update and improve nurses' use of standing orders to more effectively and efficiently provide for patients' needs.

Kyra T. Knoff (Gary Gillitzer, Nursing) Warfarin Re-education Tool

Warfarin (Coumadin) is an oral anticoagulation drug that is used to prevent blood clots. Patients who commonly take Warfarin are those who have undergone a trauma or injury. Although Warfarin is common and effective, it is a drug that necessitates close monitoring, comprehensive patient education, and an understanding of the lab values and pharmacology. Discussions with nurses on the Polytrauma Rehabilitation Unit of the Minneapolis VAMC and reviewing relevant literature has led me to discover that a review of Warfarin and the nurse's role in administration would be beneficial to both the patients and the nurses. The purpose of this practice improvement project is to refresh the nurses' understanding of the importance of patient education, assessment, laboratory values review, and pharmacology of Warfarin. This will be done through a comprehensive yet concise written educational piece.

Samantha Lloyd, Nathan King, Jared Anderson, Emily Bendickson, Sarah Spencer, Emily VanKeulen (Kathy Twohy, Nursing) Discharge Planning

Abstract:
Discharge planning is a critically important process which facilitates a safe and effective transition from the hospital to the patient's next destination or, commonly, their home. A prominent Midwestern hospital in the United States has identified the need for a more consistent and evidence-based process of discharge to support continuity and patient-centered care. In fiscal year 2012, this Midwestern hospital had over 28,000 discharges. With discharge planning being required by Medicare, insurance companies, and the quality of such planning influencing insurance coverage, it is important to strengthen this process in order to provide the highest level of patient-centered care. Barriers to consistent discharge planning include the absence of one consistent policy hospital-wide and incongruent policies across units. In order to make discharge planning more successful, roles in discharge must be clarified, a timeline developed, and discharge planning should start at the time of admission. A more uniform discharge process would decrease cost of healthcare expenditure, improve communication and performance of staff, and increase patient satisfaction and quality of care. The goal of this practice improvement project is to identify barriers and provide recommendations synthesized through literature reviews. These recommendations will be the stepping stone to developing evidence-based policies which can be implemented hospital-wide.

Katie M. Lubenow, Sarah A. Dingmann (Gary Gillitzer, Nursing) Exploring Solutions to Bedside Reporting

Change of shift report is one of the most important types of communication between nurses. Traditionally, on-coming nurses would get report at the nurse's station or in a conference room away from patients and family. Increasingly, hospitals have been transitioning to bedside report, where the off-going nurse gives report and the on-coming nurse receives report in the patient's room. Studies show that bedside reporting improves communication between professionals, allows team members to hold one another accountable for the care they provide, reduces the incidence of errors and sentinel events, and encourages patients and family to be active members of the care team. While the practice of bedside reporting positively impacts patient care outcomes, transition to report at the bedside can be stressful for the nursing staff and many barriers that prevent it from being introduced and implemented effectively. Rice Memorial Hospital in Willmar, Minnesota has recently transitioned to bedside

reporting and is currently experiencing some of these barriers. Our practice improvement project focuses on improving the transition to bedside reporting at Rice Memorial and nurse satisfaction by assisting nursing staff to reduce actual and potential barriers. This poster presentation will proved background information on bedside reporting, outline the methods used to implement the practice improvement project, provide a summary of the recommendations disseminated to the nursing staff at Rice Memorial, and evaluate of the effectiveness of the intervention.

Sara Mickolichek (Carrie Hoover, Nursing) Best Practice for Drawing Blood Culture Samples from Oncology Patients with a Suspected Catheter Related Blood Stream Infection

In oncology patients, with a suspected catheter related blood stream infection (CRBSI), the practice for drawing blood cultures from a multi-lumen catheter is not standardized among physicians and nurses. There is an unresolved issue for the number of lumens from which blood cultures should be drawn to accurately diagnose a CRBSI. The inconsistency of this practice is leading to undiagnosed CRBSIs in patients. A recent study showed if one lumen-associated culture had been eliminated for double-lumen catheters, 27.2% episodes of CRBSIs would have been undiagnosed. Multi-lumen catheters are used for many purposes such as medication administration, TPN infusion, and blood sampling which increases the susceptibility for bacterial contamination. If a CRBSI is left undiagnosed, this leads to a greater chance for the development of sepsis. Studies reviewed recommend drawing blood cultures from all lumens present due to the potential source of infection in each lumen. The goal of this practice improvement project is to implement the best practice for drawing blood cultures from a multi-lumen catheter in oncology patients with a suspected CRBSI. Implementation of the best practice will protect the safety of patients by preventing further complications of undiagnosed CRBSIs. A review of literature and recommendation for implementation of this practice guideline will be presented as a poster to the nurses on the inpatient oncology unit.

Sophia C. Nolan (Carrie Hoover, Nursing) Aromatherapy and Mental Health

Aromatherapy is becoming increasingly popular in its use as a Complementary Alternative Medicine (CAM) intervention within healthcare. The literature shows well-documented evidence that suggests that aromatherapy has positive health benefits for

physical as well as mental disorders. Due to this increasing evidence, healthcare institutions are beginning to incorporate aromatherapy as a relaxation intervention within patient populations, in particular, the mentally ill. Barriers for implementation of aromatherapy on many mental health hospital units include lack of interest from personnel, lengthy training sessions, and a knowledge deficit with regard to aromatherapy's ability to decrease anxiety and stress. It is indeed a useful tool for nursing units. With further exploration, research, and interviews with the staff, aromatherapy could be implemented as a non-pharmacological technique used to reduce the symptoms of anxiety and depression on a mental health unit. The purpose of this practice improvement project is to discover the staff's interest in obtaining training in aromatherapy with the aim to eventually incorporate it into the unit's programming for patients. Reasons as to why the unit does not already have aromatherapy implemented will also be investigated.

Rachel R. Preston (Kathy Twohy, Nursing) ECG Patch Placement and Defibrillation in the Cardiac Catheterization Setting

Cardiac catheterization is a method used for diagnostics and performing interventions to treat coronary and cardiac complications and diseases. Due to its invasive nature and potential for irritating the heart, catheterization can lead to life-threatening arrhythmias that would require defibrillation during resuscitative efforts. Literature regarding defibrillation during cardiac surgeries shows that external defibrillation using adhesive pads is more effective and safer than paddles as there is less disturbance to the sterile field. As cardiac catheterization is invasive and often procedural, the sterile environment is similar to that found in cardiac surgeries. While there are various positions for defibrillator pad placement, the position largely recommended in the United States is one in which the anterolateral pad is placed over the upper chest to the right of the sternum. It is recommended to place the other pad in an apical position on the left side of the body. The standard 5 lead ECG utilizes the right arm (RA), left arm (LA), right leg (RL), left leg (LL), and V1 lead placements for measuring the electrical activity in the heart, however the placement of the V1 and LL leads often conflict with proper defibrillator pad placement in the cardiac catheterization lab. In the event that a patient requires defibrillation, the nurses often find themselves needing to remove and reposition the V1 and LL leads in order to attach defibrillation pads. This wastes valuable time in an emergent situation, results in the loss of ECG readings for a period of time, and is wasteful of resources. The purpose of this practice improvement project is to

educate staff and standardize ECG patch placement in the catheterization lab and Cardiac Special Care so that patches are placed in such a way that ECG readings are still accurate and patches do not interfere with potential defibrillation efforts.

Lisa A. Ruprecht (Carrie Hoover, Nursing) Central Line-Associated Blood Stream Infections

Central line catheterization is becoming increasingly widespread. Central line catheterization, also called central venous catheterization, involves inserting a tube through the skin into a large vein. The catheter is then advanced until it reaches a larger vein near the heart. One of the major concerns with central line placement is acquiring a central line-associated blood stream infection (CLABSI). Consequences of central line-associated infections are a burden to both the patient and the hospital system, and this type of infection has a high morbidity and mortality rate. On average, the cost of caring for an individual with this type of infection is roughly $45,000. Mandated federal reporting requires that any CLABSI be reported, and consequently the healthcare facility may not receive Medicare reimbursement for any such Healthcare Associated Infection (HAI). CLABSIs and the resulting cost and complications are largely preventable. Considering that nurses are largely responsible for the continual management of central lines, it is crucial that staff nurses on all units are knowledgeable about the most current and effective central line management techniques in order to reduce complications. A review of the literature indicated that proper hand washing and aseptic technique, catheter site dressing type, cleansing solution, staff education, catheter management techniques, and using a team approach to central line management are all factors that can help prevent CLABSIs. The purpose of this practice improvement project is to determine the current best practice recommendations regarding central line management and educate current staff nurses about the findings, thereby reducing the incidence of CLABSI.

Kayla M. Stock (Roxanne Wilson, Nursing) Child and Adolescent Mental Health Public Health Priorities

Children and adolescents experiencing mental illness face complications when undiagnosed or untreated. In a public health setting, little is being done to promote mental wellness. If there is planned treatment, there are additional issues with continuity of care between school-based services and community-based services. Public health agencies are struggling with funding and need to focus their priorities on the most effective population

based care. This performance improvement project will focus on identification of evidence supporting public health primary preventative measures or early interventions. The project will include a review of population based conceptual models of care and further literature review identifying priority interventions. I will be able to make recommendations, founded in research, that can guide the future of mental health promotion and mental illness treatment for children and adolescents in Stearns County.

Kelsey M. Swenson (Carrie Hoover, Nursing) Clostridium Difficile

Clostridium Difficile (C.diff) is the number one hospital acquired infection. It is linked to 14, 000 American deaths per year. It can potentially cause a spectrum of disease: diarrhea, dehydration, kidney failure, bowel perforation, toxic mega-colon and even death. Risk factors associated with C.diff are antibiotic exposure, 65 years and older, prior hospitalizations, long term care facilities and multiple co-morbidities. C.diff cases have risen across the country over the last 10 years. CDC reports that national rates are about 7.0/10,000 patient days. One suburban hospital in the Midwest has a rate that has been increasing each year and finished above their goal of 8.0/10,000 patient days in 2012, with a rate of 13.06/10,000 patient days in 2012. Previous efforts to decrease the rate of C.diff has been with EVS cleaning, equipment cleaning, Hand Hygiene, Antibiotic Stewardship, Enteric precautions, bleach for C.diff, etc. However, the hospital rate of infection continues to be very high. We hypothesize the practice issue related to a very high C.diff rate is related to lack of staff education on the two types of C.diff: colonized which gives a false positive and should NOT be treated, and active which is symptomatic and should be tested/treated. The other practice issue we see is lack of understanding demonstrated when it comes to utilizing the C.diff protocol for what to test and when. To address these practice issues, I will be creating an educational handout for the units' “5 minute huddles” and utilizing current evidence based research I will assist to re-write the C.diff testing protocol.

Jena L. Wiehoff (Roxanne Wilson, Nursing) "Time-Out" for EMS: Practice Improvement for Trauma Team Members in the Emergency Department

When a trauma patient arrives to the emergency department at any given hospital, the pre-hospital provider (typically an EMS paramedic) is required to report to a registered nurse the situation and actions already taken for the patient arriving. However, barriers to communication are present in this situation where

stress is high and action is being taken immediately. Often times the entire healthcare team caring for the patient is not aware of the situation upon the patient's arrival. During the stress of arrival activity, different messages may be conveyed due to the transfer of information from and to multiple providers. The "Time-Out for EMS" policy would allow the paramedic to communicate the patient's history in SBAR (situation, background, assessment/action, and recommendation/response) format to all members of the trauma team for 30-60 seconds without interruption. In doing this, all healthcare professionals involved would be provided the same information without distraction as well as experience significantly reduced communication barriers.

Mai See Xiong (Kathy Twohy, Nursing) Improving Patient Safety and Nurse Satisfaction through Additional Hourly Rounding Methods

Call lights are an important communication link between patients and their caretakers. Patients often put on call lights when needing pain medication, assistance to the bathroom, positioning assistance, etc. When call lights are overused, this can cause increase demands and stress on caretakers. At one Minnesota hospital, one of the main initiatives to improve Patient Experiences is to reduce the occurrence of call lights. This reduction in call lights would be an indication that patient needs are being met in a timely manner, even before they ask. An important aspect to decreasing call light occurrences in hospital units is through implementation of hourly rounding. A study in 2006 found that hourly rounding significantly reduced patient call light usage. Patient and staff satisfaction were also noted to be higher than usual when the environment was changed to staff being proactive in meeting patient needs rather than reactive. This improvement project is to introduce additional implementation methods for hourly rounding on a hospital unit that may further decrease the frequency of patient call light usage.

Theater

Katherine E. Takata (Mark Hennigs, Kaarin Johnston, Theater) Quilters Lighting Design

My poster presentation will be focused on my senior project, which was the lighting design for the Theater Department's musical Quilters. I will explain the process I went through in creating my lighting design in a way similar to how I presented my senior project at the Regents/Trustees' Undergraduate Research Dinner and be present to answer any questions about my design.

Henrita Academic Building 107, CSB

Peace Studies

Julie M. Bode (Ron Pagnucco, Peace Studies) The Yambiro Project

> The Yambiro Project is a non-profit partnership between the College of St. Benedict students and the Women's Cooperative (8 women) in Otavalo, Ecuador. This non-profit project allows the women of the indigenous Yambiro community to be economically self-sufficient as they put their embroidery skills to use.

Henrita Academic Building 128, CSB

Political Science

Victoria K. Adofoli (Christi Siver, Political Science) STATES REGULATION OF SEXUAL ACTIVITIES

> Why do states vary in their regulation of sexual activities, including prostitution, commercial sex and sex trafficking? Why, in states that seem highly progressive on social issues and gender equality, are there differences in regulation of sexual activity? There are a few plausible explanations. Perhaps it is the cultural and society values embedded within the institution or state. It could be the influence of interest groups and feminist movements. It could also be the fear and spread of disease epidemic such as the HIV, STDs that would lead a state to regulate differently. I plan to examine both qualitative and quantitative data by comparing states that have legalized and banned prostitution and commercial sex and their responses in term of regulations. Does a state rank in gender equality impact the state's behavior? I will use the independent variables to test Scandinavian countries because they are internationally as progressive and respectful to gender equality. This is important because regulation of sexual activity is a representation of the state's priorities in terms of gender equality.

Bridget N. Barry (Seth Greenfest, Political Science) Barriars to Reforming Medicare

> I will examine the political and structural barriers to healthcare reform, and the conditions under which healthcare reform can be achieved. I expect that political partisanship, the participation of medical interest groups and the percentage of the Global Domestic Product (GDP) spent on healthcare all have an impact on the

inability of American policy makers to achieve healthcare reform. A decrease in political partisanship, participation of medical interest or lobbying groups and a decrease in the percentage of GDP spent on healthcare will lead to an environment where policymakers can more adequately pass healthcare reform. This is important to study because America's healthcare system becomes a bigger problem while it is not being fixed, and reforming our healthcare system has significant humanitarian and economic consequences.

Caitlin J. Boran (Seth Greenfest, Political Science) Comparing and Contrasting Indigent Defense Variations Between Jurisdictions

This presentation examines the variations between support and resources for public defenders across jurisdictions (public defense systems) and how extensive those variations are. The current systems of indigent defense lack consistency throughout different jurisdictions and differ in many areas, meaning that people often receive varying degrees of representation. I evaluate the public defense policies and offices of Minnesota and Texas to provide insight into which state provides more support for their public defense system, either the government employed public defenders of Minnesota or the indigent public defenders of Texas. I consider the effect of government support and social ideas on the overall profession of public defense. I expect the results to demonstrate that there are important variations of support and resources that public defenders receive based on which jurisdiction they fall under.

Caitlin J. Boran, Bridget F. Cummings, NA NA, NA NA (Kay Wolsborn, Political Science) A Qualitative Case Study of the 2014 Graves Campaign

This project proposes a qualitative case study of the 2014 Graves campaign, with special attention to factors considered important in previous research on Congressional campaigns. Rather than participating directly in this campaign, we will use scholarly observations of campaign decisions in order to complete our research project without directly affecting the outcome. Since Graves ran unsuccessfully in 2012 and is running again, we plan to study the campaign strategy changes he will make for the new election. We will follow his election for this case study in order to get rich data. Our research question would be, "What changes do candidates who have run in the past and are running again make to their campaign strategy?"

Tyler C. Bright (Seth Greenfest, Political Science) Inequalities in the Legal System

This project examines whether resources such as money, access to multiple lawyers, and knowledge of the legal system effects case outcomes. This project will take a look at how companies benefit from having better knowledge and access to resources compared to the individuals who are suing them. These resources may help companies win cases where they are being sued by people who do not have as much or even close to as much as they do. In these cases, many resources may translate to a win for companies. This project will show how the attitude of a courtroom can change when a major corporation is being sued by an individual.

Brandon G. Brist (Christi Siver, Political Science) Law Enforcement or Military Act: Counter Terrorism choices

In a post 9/11 world where terrorism is a fear for many nations, states must make the choice of confronting terrorism as a law enforcement or a military act. In order to best understand the security of states against terrorism and the efforts they take to confront and punish terrorism, we must analyze how and why states choose to fight terror as they do. I plan to test different explanations for state decisions on combating terrorism and explore the implications of those decisions. States that have a strong judicial system often prefer to use this to their advantage and confront terrorism as a law enforcement issue while those states that do not choose to confront terrorism with militaristic force. Using states that are prevalent due to being targets of terrorism in recent years we may be able to determine what affects their chosen method of confrontation may have on their international security. The means by which a state confronts their threat determines the effectiveness of safety and security and may be able to provide evidence that one method is superior to the other in order to create a safer international environment.

Megan Connolly (Seth Greenfest, Political Science) Paternal Child Custody Laws in Minnesota and California

This project examines the relationship between child custody laws and the decision to grant custody to unmarried fathers. There has been a change in custody law in that it is not automatically assumed that the mother gains custody of the children. Each state, as will be demonstrated by examining Minnesota and California, have different steps and laws in order for an unmarried father to be determined the “legal” parent of their children. I research and evaluate the laws passed for Minnesota and California, but also look at stances on child custody as a whole across the United States. I consider the differences in child custody from the 20th

century where women almost always gain custody of the children to the 21st century view where the children and third parties take a role in deciding which parent is the right fit for the children. The importance of this project is to bring awareness to current unmarried fathers that child custody is changing. Child custody is becoming more focused on which parent is better capable at raising the child, not on the parent's gender.

Bridget F. Cummings (Seth Greenfest, Political Science) The Governor's Tactic

My research will examine whether Governors use executive orders more when their party is a minority in the state legislature. I first explore existing research that demonstrates the relationship between executive orders issued by Presidents and the political parties in the legislature. I then relate this existing research to the state government. I construct a research design that looks at executive orders issued by Minnesota Governors. This research will look at how many orders were issued in relation to the political party controlling the legislature during a Governor's term. This project will add to the larger body of knowledge about how state governments work. It gives insight into how Governors have acted and how one might predict a Governor will behave.

Sarah M. DeWitt (Seth Greenfest, Political Science) Child Protection Laws

This paper will examine to what extent do parents of a sick child have control over their medical care, and the extent to which the government is able to protect endangered children. The paper will use a variety of court cases as well as a database with articles about parental rights and responsibilities in the law and child medical neglect, in order to examine which entity is a better fit for exercising the medical care of minors. I will compare the variation of child welfare laws dealing with medical neglect between two states and analyze the way the differences affect minors. I will consider cases in which religious freedom is exercised and the arguments for when it is denied. The paper will show the variation between two states concerning parental responsibility for their child's medical needs, adding to our understanding of child medical neglect and when the law should intercede.

Joe J. Dingmann (Christi Siver, Political Science) Explaining Causes of Insugent Success

Insurgency and rebel groups have been a major factor in political revolutions and rebellions. Some groups have succeeded in overthrowing government regimes, while others have not. Why do

some rebel groups succeeded at achieving their goals while other groups do not? I test three factors that, based on the existing literature, seem to be necessary to allow a rebel group to succeed: environmental conditions favorable to the movement, resources that can be used to incentivize members to join, and popular support for the group's ideology.

Ryan T. Doogan (Kay Wolsborn, Political Science) Single Sex Schools in Minnesota

My project examines the impact of single-sex classes on student achievement at private high schools in Minnesota. Does the absence of the opposite sex make students more likely to attend college, achieve higher test scores, and/or increase their GPA?

Natalie R. Herron (Christi Siver, Political Science) Why are Women Utilized in Terrorism?

Why do terrorist organizations utilize women? According to existing literature, terrorist organizations may utilize women in different ways for different reasons. The particular utilization of interest is women in combat positions. The conventional wisdom to explain the phenomenon is that: it is easier for women to get to their target because they are not generally profiled as terrorists, an egalitarian idealism of the organization, the necessity of needing to bring women on board, and the benefit of using martyred women as propaganda. As part of this research puzzle I plan to investigate the reasons behind terrorist organizations' use of women, and if women's terrorism is fundamentally different than men's. I will investigate this puzzle by interviewing leaders and members of the organizations that have used women in combat to figure out why each group chose to employ women. Then I would further investigate the effects of having the women in these positions on the target groups of the organizations.

Nathaniel K. Hofman (Seth Greenfest, Political Science) Precursors to the Uniform Commercial Code

This project shows the relationship between the demands for uniform trade laws and the passage of the Uniform Commercial Code, adding to our understanding of how new policies become law. This project will synthesize a broad rage of scholarly articles that mention the need for interstate trade regulation by the federal government. What this paper adds to the current research is a research-supported demonstration that the Uniform Commercial Code was an inevitability in the United States and the roots of its passing stem back to scholars before the twentieth

century. I analyze the written work of economists, business managers, historians, and business law professionals before the passing of the Uniform Commercial Code in 1951. My results will show that the federal government, by petition of the people it serves, inevitably would create some form of interstate trade regulatory system.

Hannah Houts (Christi Siver, Political Science) Governments and Non-governmental organizations in the Developing World

Relationships between non-governmental organizations (NGOs) and governments in developing nations are important because of the undeniable ability they have to shape society and governmental policy. In this presentation I will explore why government cooperation with NGOs is either successful or unsuccessful. Additionally, I will describe the impacts of increased democratization, civil society involvement, as well as problems of accountability between governments, donors, and NGOs. I will use civil society influences and accountability problems as independent variables to test my hypothesis. Finally, I hypothesize that NGO-government cooperation will be successful when NGOs are able to operate semi-autonomously from governments and donors, and when civil society views NGO activity positively.

Jennifer A. Husen (Christi Siver, Political Science) Family Planning Initiatives Across Various Countries in Regards to Overpopulation

Overpopulation is a serious danger that impacts every living being on the planet. Countries across the globe have responded to overpopulation in a variety of ways depending on the amount of governmental funding and societal values within the country. Family planning plays a crucial role in combating overpopulation, and different countries have utilized family planning to various degrees depending on these variables. The Netherlands, India, and Niger are examples of countries that have experienced a wide range of success in implementing family planning measures aimed at preventing overpopulation. The objective of this research is to understand how funding and societal values influence the overpopulation crisis.

Benjamin G. Hutterer, Tyler J. Brown, Chloe L. Smith (Kay Wolsborn, Political Science) Educational Opportunity and Incarceration Recidivism Rates

Does the availability of educational opportunities in prisons reduce recidivism rates? We propose to compare correction facilities with a more education-based approach to facilities with

little or no emphasis on education. We hypothesize that, “If correction facilities take a more education-based approach, then recidivism rates will decline.” We review a study by Mitchell Jancic titled “Does Correctional Education Have an Effect on Recidivism?”, and examine results from “The Effect of Prison Education Programs on Recidivism” from the Journal of Correctional Education”. We extend that research to focus on prisons in Minnesota- both male and female, adult, and medium security prisons.

Cody H. Jacobson Hanson (Kay Wolsborn, Political Science) The "Hot Potato" Dilemma

Why do international actors (such as NGO's or states) choose not to intervene in states participating in massive human rights violations? What is necessary for military intervention?

Kayla A. Karst (Seth Greenfest, Political Science) Banning the Insanity Defense on a State Level, is it Constitutional?

Four U.S. states have banned the insanity defense, shifting the burden of proof to the defense if mental incompetency is argued. This project intends to delve into why each state has abolished the insanity defense. I plan on examining court cases that took place after the acquittal of John Hinckley who attempted to assassinate President Reagan. I consider the impact of the Hinckley case to be influential by starting a trend of reforming and abolishing the defense. Through this project, we can gain a better understanding of whether the act of banning the insanity defense is constitutional or not, because abolishing the defense may violate the Due Process clause of the Fourteenth Amendment.

Gabriel B. Karstrom (Christi Siver, Political Science) Cooperation Among States with Conflicting Interests

Through my presentation, I ask why countries with conflicting interests seek cooperation with one another. Issues that I plan to test to explain this include increased land borders, economic gains, and appearance on the international level. These variables help to portray the motives of the behaviors of a nation and explain as to why countries may seek cooperation with one another, despite having conflicting interests. I will test these explanations by examining the relationship between Russia and the United States during the Cold War and their combined interest in India. This research is important because it attempts to paint an image for future relationships in dealing with countries such as the United States and China.

Erin Kelso, Laura Fox, Emma Tacke (Kay Wolsborn, Political Science) Incumbent Advantage in the 2012 Bachmann-Graves Congressional Race

> Our research examines incumbents' advantages over their challengers, specifically addressing the 2012 Michele Bachmann and Jim Graves Congressional race. We compare this race to Bachmann's previous races and examine factors that might affect incumbent advantage. These factors include the 2012 MN State amendment proposals and Bachmann's 2012 Presidential bid and might explain why Bachmann won by a margin smaller than other incumbents. The research could be applied to future races in which incumbents are challenged.

Phil B. Kittock (Christi Siver, Political Science) Narcotrafficking in Latin America: Why is it Prevalent in Some Countries but not in Others?

> This research design seeks to understand why narcotrafficking organizations are prevalent and successful in some states, but not in others. By using a few states design, I will look at former Spanish colonies in Latin America and attempt to find the differences that explain, for example, why narcotraffickers are prominent in Colombia but not in Chile. Factors such as corruption, insurgency, and economic security are evaluated in terms of their relevancy to the topic. Understanding the factors that lay a foundation for narcotics organizations can inform federal and international counter-narcotics policy. By understanding what factors allow these groups to be successful, politicians will have a greater knowledge of what steps need to be taken to address the problems associated with the illicit drug trade.

Hannah E. Klinnert, Rachel E. Koehler (Kay Wolsborn, Political Science) Taking time to Talk: How Presidential Candidates Win the White House

> We propose a qualitative analysis of the 2016 Presidential campaign to respond to the research question, Are talk show appearances by Presidential candidates essential to winning the White House?

Courtney A. Kramer (Seth Greenfest, Political Science) Civilian Courts versus Military Tribunals: A Research Model

> This project seeks to answer the question "Under what conditions is a suspected terrorist tried in a military tribunal versus a federal criminal court?" I begin with a definition of what military tribunals are and how they were used historically after World War

II to try military personnel from Germany and Japan. Following this is a discussion of military tribunals and their formation after the events on 9/11 to try suspected terrorists. The experiment I set up uses previous court cases of suspected terrorists in military tribunals and civilian courts to explain why some suspects are tried in military tribunals, while others are tried in civilian courts. I expect my results to show that defendants will be tried in military tribunals if the following parameters are met: they are not United States citizens; the act (or committed act) was done on American soil; and the case involves sensitive information pertaining to military actions. An examination into the use of military tribunals is crucial as the United States further tries suspected terrorists from the wars in Iraq and Afghanistan and seeks the best way to try suspects.

Natalia S. Kruse (Seth Greenfest, Political Science) The Role of Religious Law in Judicial Decision-Making

This project examines the effects of religious systems of law on judicial decision-making in the United States. Although some states have introduced prohibitions of the use of religious law in court, religious law may be applied in judicial decision making in certain legal situations. While there is an expansive amount of information on subconscious factors in judicial decision making among the research on religious law in judicial decision making, there also exists a gap in analyzing the extent to which religious law affects judicial decision making. Through my research design, I address this gap. I devise and evaluate a long-range survey to a set of state judges and federal judges. The survey includes various questions regarding the judges' personal policy thoughts on the influence of religious systems of law. This survey will help measure the extent to which religious systems of law impact judicial decision-making. This project is important because it addresses the gap in research on the impact of religion on judicial decision-making.

Justin M. Markon (Kay Wolsborn, Political Science) Current events and their influence on public opinion and public policy

After September 11, 2001, the American people sought greater terrorism oversight, and politicians created the Patriot Act. Since the shootings in Newtown, CN, politicians across the country have pushed for greater gun-control measures. Are the legislative actions after high profile events consistent with public opinion, or can elected officials err when making new policy?

Jenna R. Maus (Christi Siver, Political Science) Failures and Successes of Post-Conflict Reconstruction

> My research question for the project is "why do some peace settlements created post-conflict fail and others succeed?" The variables I will explore include the nature of the conflict, domestic conditions in the disrupted state, nature of the end of hostilities, nature of the peace agreement, and democratic intervention. I will compare and contrast these variables using various explanations in search of finding commonalities which will provide insight on my question.

Kyle R. Murray (Seth Greetfest, Political Science) National Security and Warrantless Cell Phone Tracking

> Abstract:
>
> Cell phone service providers, corporations, shopping malls, police departments, and national security apparatuses--all have the ability to track, record, and analyze your cell phone data. This project attempts to answer how, when, by who, and why this is done. This project aims to provide reasoning for citizens and consumers alike to limit access to others from the personal information tracked through cell phone activity. The focus of this article will examine conditions in which the government claims unwarranted tracking of cell phones is justified, and under what conditions cell phone tracking can be done.
>
> I expect that cell phone traces will occur at a higher rate when the government makes national security claims. By measuring incidences of cell phone tracking such as court filings, memos from the Department of Homeland Security, developments in the war on terror as reported by news sources (both foreign and alien reports/threats), as well as cases involving the daily lives of American citizens. This project will provide a more clear understanding about rights and protections for cell phone users under the Fourth Amendment.

Devin P. Nanik (Seth Greenfest, Political Science) The Electoral College

> This project examines, studies, and understands the electoral college and the winner takes all electoral votes system. It searches for an answer if the Electoral College is beneficial to the United States, or if there is a better system the country could use for electing a president.

Luke S. Newgaard (Seth Greenfest, Political Science) Correlation Between Concealed Carry and Crime Rates

> This project will help answer the question of whether there is correlation between concealed carry permits and crime rates in the states of Minnesota and Texas. This project will show variation between state laws and crime rates. The process of obtaining a concealed carry permit will be evaluated in both states to see who is applying for these licenses. I propose a dataset of concealed carry permits in Minnesota and Texas to compare to the crime rates of each state. This project is important because it will move towards clearing up issues we have in the United States today.

Kaileigh B. Nicklas (Christi Siver, Political Science) Reseasrch Design Poster

> I will be analyzing why manga and anime is used by artists in Japan to make highly political statements that are typically covered up by the rest of Japanese society. I examine a few cases where manga and anime has addressed environmentalism/industrialization, feminism, and ethnic issues and the impact that this artform has on current and rising generations. This issue is especially striking in that even though manga and anime is a tool of the public against the Japanese government, the government has started to use manga and anime to draw in foreign interest and generate a new branch of successful tourism which could undermine its political significance.

Kinsey A. Norton (Christi Siver, Political Science) Le Monde Francophone: Post French Colonialism in Africa

> Why do so many formerly colonized French States particularly in Central and West Africa still struggle to develop democracies? As part of this research design, I will use a qualitative approach and compare a variety of post colonial African countries on a political, economic, social, and developmental levels. As part of my research I will compare formerly colonized French states with those of the other dominant colonial power, Great Britain, and see if the former colonial power matters in this situation possibly due to significant differences in ideology or the way that governments had been set up during the imperialistic era.

Jacqueline Perez (Kay Wolsborn, Political Science) Testing requirements and the level of diversity in higher education

I explore why private universities in Minnesota have made SAT and ACT test scores optional in their admission process. Does a change in the admissions requirements produce a change in the level of diversity?

Charles S. Peterson (Seth Greenfest, Political Science) Administrative Agencies and the United States

This presentation will outline how administrative agencies were formed and what their role is in the United States. How do administrative agencies come into play? Do they have a role in the legislative process or simply with implementation? What are they allowed to do as to implementation? Another piece of this project will be comparing administrative agencies and seeing how implementation between the two works. For the purpose of this presentation I will look into court cases and lawsuits brought against both OSHA and the EPA. Seeing what kind of suits are brought up and how they are handled will show me the effectiveness of administrative agencies.

Benjamin R. Precourt, Robbie M. Stocker, Ethan L. Hellier (Kay Wolsborn, Political Science) The Effect of Social Media on Political Campaigns

We propose an examination of the effect of social media on the Republican Presidential candidates' campaigns in 2008 and 2012. Twitter, Facebook, and Instagram have a growing role in the publicity, public relations, and message-sharing in elections at all levels of government. Our project would analyze the potential consequences or benefits of high-engagement social media campaigning for political candidates. We would measure the how Facebook, Twitter, and campaign webpage activity (shares, likes, retweets, and comments) affect campaign fundraising, volunteer organization, and election results.

Samuel J. Raths (Seth Greenfest, Political Science) A comparison of Judicial decisions on civil rights to the reactions of the people.

Are judges more conservative than the citizens of the United States? If this is the case we will see liberal and moderate citizens acting out in protest against court rulings on civil rights but if the courts are an accurate representation of the will of the people as they should be then we will see acceptance of decisions by the majority. This will occur because the courts will be aligned with the majority in their decisions. I will examine the reactions of the people by looking at newspapers from the time of the civil rights decisions and comparing their reaction to the decision of the

courts. I will also include an examination of other case studies done on the political leanings of judges. I expect the results will show that the judiciary are indeed more on the conservative side despite multiple landmark rulings by the supreme court.

Yasas Ratnayake (Christi Siver, Political Science) An Unusual Case of Rapid Postwar Development: Sri Lanka

Civil war brings with it death, destruction,and countless other acute negative social effects that linger on for ages. Many nations that have experienced civil war in recent history have found many obstacles that hinder their development after the conclusion of war. Yet, there are exceptions to this general pattern. The South Asian island nation of Sri Lanka has staged an unprecedented recovery from a bloody 30 year ethnic conflict that took thousands of lives and caused devastating damages to the land. Since the conclusion of the war, Sri Lanka has experienced historic levels of economic growth backed by an ambitious development drive that mainly revolves around large-scale infrastructure development projects. This comparative research project will attempt to answer the puzzle: why has Sri Lanka experienced high levels of economic growth compared to other nations recovering from civil war? The study will rely on a comparative method that combines a single country case study approach with a Most Similar Systems Design that compares several similar cases of post-civil war recovery. This project would contribute to the existing literature by offering a perspective from a unique case in the subject of civil war. The case of Sri Lanka may expose important factors that should be taken into consideration when dealing with postwar reconstruction, reconciliation, and development.

Joshua M. Rebholz (Seth Greenfest, Political Science) Hide and Seek: An examination of the SEC and White Collar Crime

For this project I examine the SEC's process of dealing with white collar crime and the various types of crime contained in this category. This project will include research on the steps of prevention of the crime the SEC takes, the litigation process when crime is discovered and how the nature of the crimes effect the overall ruling and punishment given.

Jesse C. Rogers (Seth Greenfest, Political Science) Clean Water Act and the Pebble Mine

My paper will analyze environmental lawsuits in the context of the EPA’s Clean Water Act Section 404 for the permitting and regulatory process of large-scale mining development in the

Bristol Bay region, for dredge and fill permit applications in navigable waterways. I will analyze the EPA's and Army Corps of Engineer's roles, responsibilities, procedures, and authority under the Clean Water Act. This paper explores environmental regulations and their relationship to the permitting process for future mines. Future mining prospects will find it more difficult to get their permit applications approved because of more barriers in stricter mining regulations. Stricter mining regulations will mean more time and difficulty for mining companies in getting their permits for dredged and fill material disposal sites approved before any future development occurs. A project's location will also affect its chances of development. Future mines in compliance with federal and state laws are more likely to get their permit applications turned down if their mining location is in a fragile environment and diverse ecosystem.

Paul D. Rymanowski (Christi Siver, Political Science) Where does Organized Crime come from?

Why do organized crime syndicates form? What factors allow them to rise in power? Perhaps it is the inability of a strong state to realize and combat the threat. It could be that some organizations are better at keeping their activities secret. Or, it could simply be that some criminal organizations have more resources at their disposal. According to the IMF, the amount of revenue garnered from illicit activities tied to criminal organizations is around 1-1.5 trillion dollars, around 2-4 percent of the world gross domestic product. This massive amount of illegal capital represents a huge problem for governments and law enforcement, and it is essential to find ways to understand this threat. This research design looks at The Chinese Triads, Mexican Drug Cartels, and the Yakuza in Japan. I identify each group's early history, and the political, economic, and social climate that gave strength to their rise to power. Using this research, I will attempt to find certain factors that are similar between each case study to better understand why some organized crime syndicates can grow.

Aaron M. Sagedahl (Seth Greenfest, Political Science) Executive Orders

This project will look to better understand the conditions which an Executive Order, issued by the President of the United States, is either successfully or unsuccessfully implemented. I plan to study this question by observing an example from each side of the question, the successful implementation of an Executive Order and the unsuccessful implementation of an Executive Order. It will be necessary to evaluate and analyze each example in order to

understand the contrasts between the two different cases and to better grasp what made each example successful or unsuccessful. I expect that the implementation of a President's Executive Order heavily depends on the amount of political support the President has when issuing the order.

Garith D. Scherck (Christi Siver, Political Science) States and The Granting of Autonomy

The purpose of this research design is to understand why states grant autonomy to breakaway regions under their control. In various regions around the world, states have granted different levels of autonomy to regions under their control. This is evident in China, Spain, and the Nagorono-Karbakh autonomous region among others. Through the use of preexisting scholarly material, I will examine the theoretical explanations to answer why states grant autonomy. Furthermore, I will propose research based on a few states analysis to identify factors that contribute to the granting of autonomy. Through this proposed research, a better and more advanced understanding of the rationale for state decision making in regards to autonomy will be addressed.

Margaret E. Schill (Seth Greenfest, Political Science) When to Recuse: The Judicial Conundrum Plaguing the Courts Today.

This paper studies Supreme Court justices and recusal, and the ethics that accompany judicial disqualification. In particular, I explore the conditions under which a district judge compared to a Supreme Court judge will recuse him or herself. With the aid of data concerning past justice recusals and by examining the most recently famous non-recusal case, Cheney v. United States, I expect that a judge needs to recuse him or herself whenever a conflict of interest is present that compromises his or her impartiality. This topic is important because it is a common problem in the courts today. There is no current system in place telling justices to recuse themselves, and many people see that is corrupt because of impartiality constraints.

John W. Schwend (Seth Greenfest, Political Science) Guns: Who Controls Them?

This project examines the changing interpretations of the Second Amendment. This project will look at court cases that have dealt with gun control to determine how the judicial branch has interpreted the Second Amendment. Additionally, this project will evaluate public opinion on gun control by looking at statements made by political groups for or against gun control. I

anticipate finding a link between political ideology and one's opinion on gun control. The opinions on the Second Amendment will also be influenced by the recent shootings that have taken place, like those in Aurora, CO and Newtown, CT. This project will discover how the Second Amendment should be interpreted in the future and what actions should be taken in regards to gun ownership.

Katie L. Spoden (Christi Siver, Political Science) Presidential Paradox: Nationally Elected Woman Leading Disempowered Women

In my research I aim to answer the question, why are women elected as national leaders in countries where there are serious inequalities between men and women? I expolre this question by looking at the elections of Ellen Johnson Sirleaf in Liberia and Michelle Bachelet in Chile. My dependent variable is the election of a woman president in a male dominated political society while I look at the independent variables of incorporation of gendered norms into campaign materials; specifically highlighting masculine traits and women's unique traits in their individual campaign strategies. Exploring the elections of women national leaders in countries with greater gender inequality will add to the limited amount of scholarly research on women as presidents and the role gendered cultural beliefs play in elections. A woman leading disempowered women is important to the study of gender inequality and how it can be resolved in the twenty-first century.

Shelby N. Stang (Christi Siver, Political Science) Nuclear Holdouts: Nuclear Nonproliferation Treaty Non Signatories

Nuclear proliferation is a major issue facing today's world. The consequences of unmonitored nuclear development and nuclear possession are nearly boundless. The world tried to deter some of these consequences while drafting the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). This international treaty's goals were to prevent the spread of nuclear weapons and weapons technology, to promote cooperation in the peaceful uses of nuclear energy, and to further the goal of achieving nuclear disarmament and general and complete disarmament. Opened for signatures July 1, 1968, the NPT took effect in 1970.
Since then, a total of 190 parties have joined the treaty. Of those, five states are recognized as nuclear weapons states: the United States, Russia, the United Kingdom, France, and China. These states, coincidentally, being the five permanent members of the United Nations Security Council. However, there are four non-signatories of the NPT – India, Israel, North Korea, and Pakistan. North Korea acceded to the treaty in 1985. However, they never

came into compliance and eventually withdrew in 2003. The case of Israel, while strongly believed to possess nuclear weapons, is difficult due to their policy of opacity regarding their nuclear weapons program. India and Pakistan, on the other hand, have both never signed the NPT and are known to possess nuclear weapons. I will be examining the question: why is it that these two, otherwise compliant, states have decided to not partake in the NPT?

Patrick N. Sullivan, Joseph A. Reamer (Kay Wolsborn, Political Science) Is the Death Penalty worth the cost?

Our project proposes a comparison of death penalty trials vs. non-death-penalty trials – specifically the average cost per death penalty trial vs. the average cost of a non-death-penalty trial. The research focuses on normal jury courts and excludes findings of not guilty, non-jury trials, and courts of special jurisdiction.

Shawn M. Tangen (Seth Greenfest, Political Science) The Political Circumstances Behind the Enactment of State Tort Reform

This project examines the conditions under which states adopt major tort reform. I focus on states because U.S. tort law is primarily based in state law, and the majority of tort cases are filed in state courts. Generally, states adopt major tort law reform under certain political circumstances. I examine the most significant state tort reforms that have been enacted in the United States between 1980 and 2010. I primarily consider the political factors leading to tort reform but also consider other factors that might affect a state's decision to enact tort reform including the price of insurance premiums in the state, the dominant political ideology in the state, if a neighboring state has enacted tort reform, and the amount of civil case filings in the state. I expect that states adopt tort reform when Republicans have a majority in the state legislature and the governor supports tort reform. This project will help one understand the importance of political parties in shaping tort reform and the importance of a single election on this issue.

Kathrine E. Tillman (Christi Siver, Political Science) Success and Failure of Multiculturalism

My research design will address the question of why multiculturalism succeeds in some states but fails in others. Multiculturalism is a form of pluralism in which multiple cultures of historical communities live within the boundaries of the state. In my design I will test the role of language, religion, education,

and ancestry as explanations for the state of multiculturalism in various countries. I will test these quantitatively by creating a survey questioning the importance of each of the variables in being a member of the country surveyed to be given to a representative random sample. The survey results will provide evidence on the attitudes of the population towards multiculturalism. Additionally I will examine laws and citizenship requirements and the quantity of such laws to better understand the role of the government in the success of multiculturalism. Both the survey and the study of the laws will be done with a selected number of case study countries from all over the world. Whether or not multiculturalism succeeds in a country and the factors that influence this success are important to study. The way cultures and historical communities interact impact the stability and unity of a country.

Alex H. Trebatoski (Christi Siver, Political Science) Revolutionary Spread

My puzzle is on why revolution in one country seems to spark off similar revolutions in its neighbors. In the literature on revolutions, several variables seem to be important: common desire for democracy, common social media usage, and shared lack of government legitimacy. To test these independent variables I will interview people who were leaders in the Arab Spring in order to find what ideas sparked the revolutions in each country. Then I want to apply a data based approach to proving that these ideas were spread between the countries. This method will be similar to the one used by Michael Coppedge and Daniel Brinks in their 2006 article on the third wave of democracy. This research is important because it gives key insight as to if revolution in on nation can spread to it neighbors, which has clear security implications for nations near others in revolution; but it also gives use insight into what feelings and trend may start of revolutions.

Peter M. Vakulskas (Seth Greenfest, Political Science) To Tweet Or Not to Tweet

This project examines the relationship between First Amendment protection and the use of social media and under what conditions speech can be limited. This project looks at prior cases involving students receiving punishments in school for their use of social media. I evaluate court cases to look for why punishments were considered to be constitutional, while in other cases, the courts held that the punishments were unconstitutional. I consider the opinions of judges and school board authorities to identify what type of social media speech that the First Amendment does not

protect. This research is important because it deals with a controversial area in regards to the Constitution and the continuing high use of social media. I expect that the U.S. Constitution does not protect speech that is considered to be disruptive to a school setting and speech that infringes upon others rights.

Amberly E. Warner (Christi Siver, Political Science) Causes of Privitization

Why do states privatize social security benefits? The conventional wisdom holds that states that privatize social security typically do so because they embrace a New Right and/or neoliberalist ideology. However, this view overlooks several potentially significant factors. It fails to examine implications of race, gender, age, and class and whether or not individual attitudes influence states' decisions. Furthermore, the conventional wisdom focuses too much on the classic ideological dichotomy of individualism vs. collectivism, rather than recognizing a wider, more complex range of beliefs about what the roles of the state and the market should be in regards to social security benefits. Finally, potential institutional explanations, such as regime type and pressures from international organizations, are ignored. To shed light on the puzzle in question, my proposed design would involve case study research of the numerous changes and reforms that the Chilean social security system has undergone since the 1970s and the influences behind these changes.

Peggy M. Yang (Christi Siver, Political Science) Why invest in developing countries?

My project will address the question: Why do investors invest in some developing countries over other developing countries? The variables that I will use to evaluate this question are how well can developing countries provide a business-friendly environment for investors, how policies developing countries set for investors contribute to their choices of where to invest, political stability, trade openness, and type of labor force that will optimize profit for investors. I will test these variables by using a few-country study approach in order to compare how foreign direct investment (FDI) determines where to invest. It is important to address this research question because studies have shown that FDI in developing countries increases that country's economic growth compared to countries without FDI. Therefore, by finding patterns of FDI determinants, developing countries that see FDI as a benefit can invest in new ways to attract international investors.

Henrita Academic Building HAB 107, CSB

Peace Studies

Alexander T. Celeste, Patrick M. Buller (Ronald Pagnucco, Peace Studies) Peer Mediation in United States High Schools

> This paper discusses the start of peer mediation programs in high schools. It goes on to discuss Avalon School as an example of an existing peer mediation program in a high school. From there it discusses some details of certain elements of Avalon's peer mediation program, including looking at the alternative options. It concludes with comments on what this information tells us about future generations' ability to positively resolve conflicts and where the reader can go from here.

Hudda O. Ibrahim (Hudda Ibrahim, Peace Studies) Maternal Mortality In Segag

> Maternal mortality rate has been one of the hardest obstacles mothers in Africa are facing today.
> Women in Segag, a small village in the Somali zone of Ethiopia, particularly bear the brunt of labor complications. Due to lack of prenatal care, skilled labor attendants and reliable transportation, women in that remote area have no access to medical facilities and, thus die of several complications such as bleeding, fistula, infection, malnutrition during pregnancy and vitamin deficiency.
>
> The solution to those above cited problems is that government to build hospitals and clinics accessible to expectant mothers, provide access to education, train obstetricians, and enhance sanitary conditions.

Great Hall great hall, SJU

Biology

Paige L. Olson (Marcus Webster, Biology) Does Nature Make Us Healthier? An Evidence Based Review

> In recent years, a body of research has been dedicated to examining the connections between human health and nature. Past research conducted suggests the hypothesis that exposure to physical or virtual nature can improve physical, mental, and social health in humans. Studies supporting this hypothesis have been reviewed and categorized into five main categories: physical health, mental health, social health, stress recovery, and developmental health in children. The empirical evidence

examined offers judicious assurance that natural environments or representations of such can be effective in improving human health. This review presents the beneficial health effects of nature in order to encourage future research of the links between human health and nature, as well as encourage the use of "nature" to improve human health.

Environmental Studies

Tasha M. Arignamath (Derek Larson, Environmental Studies) Native Grass: Finding Alternatives to Turf Grass on College Campus

Extensive lawns have become a cultural phenomenon and they are commonly seen throughout the United States. College campuses have integrated lawns as part of their culture and to attract new students. This green grass not only offers its beauty but also raises the issue of health of the environment due to the heavy usage of pesticides, water, fertilizers and machinery required for maintenance. The alternative to intensive grass is investing in native grasses, which require less intensive usage of water and chemicals. The barriers of implementing native grass are primarily cost and aesthetic concerns.

Krista Barzen-Hansen, Alice Closmore, Patrick Deal, Jean Lavigne, Ethan Evenson, Nathan Geislinger, Bridget Gohmann, Eleanor Gray, Madeline Hansen, Emily Krulc, Michael Lockwood, Per Lundmark, Tyler Martin, Devin Massopust, Ryan Meyer, Courtney Millaway, Paige Olson, Reed Osell, Jascha Pettit, Stephanie Pinkalla, Aaron Remer, Alexa Rinde, Michael Sandager, Erin Schley, Maura Schumacher, Emily Stawarski, Joan Van Grinsven, Mary Wood (Jean Lavigne, Environmental Studies) GIS Poster Session

Students taking the Geographic Information Systems course will present their mapping projects. Several projects feature new maps of campus areas, while others focus on regions of Minnesota or further afield.

Benjamin J. Berthiaume (Derek Larson, Environmental Studies) How Old Can Be Efficient?: Renovating Campus Buildings to Achieve Energy Efficiency

Renovating older buildings to reach sustainable energy standards while maintaining their historical value is difficult to achieve. By analyzing the research of energy organizations and historic preservation organizations as well as results of case studies it is possible to find a solution to this problem. Renovation solutions will differ depending on the features and materials of each individual building, but options such as installing daylighting

systems, insulated window shades, and chilled beam cooling systems can successfully help buildings reach sustainable energy standards while maintaining historical value. These renovations can be applied to campus buildings to help higher education institutions achieve energy efficiency.

Eric W. Bienek (Derek Larson, Environmental Studies) Improving Recycling at CSB/SJU: Student Behavior As Key

CSB/SJU can improve student recycling behavior, which currently results in throwing away 690 tons of waste and recycling 425 tons per year. By comparing universities throughout the country that waste much less per capita and have higher overall recycling rates, we can identify initiatives that CSB/SJU can implement to improve our recycling and cut waste. Some of the best practices that help change student recycling behavior are providing information, recycling bins at high traffic areas, high consumption events, and commingled recycling for convenience. Implementing these practices could place CSB/SJU among the best recycling schools and save 200 to 300 tons of waste per year which equates to $8800 to $13,200 per year in landfill tipping fees.

Eric W. Bieniek (Jean Lavigne, Environmental Studies) Solar Minnesota: Barriers to Residential Photovoltaics

Minnesota has failed to harness its potential for solar energy and the benefits associated with this renewable form of energy. The United States in general is underperforming in the adoption of residential photovoltaic systems because of economic, political and social factors that create barriers. Financial help from government incentives, hybrid photovoltaic systems that help with home heating and cooling systems, higher electricity rates and lower photovoltaic installation costs can help reduce payback rates and expand application among Minnesota residencies. By determining the most significant barriers that prevent people from installing photovoltaic systems on their houses, this paper identifies the most effective changes that need to be made for the photovoltaic market to grow. The most important issue halting residential adoption is the overall price of a system, which is currently causing people to stick with consumption of electricity generated from natural gas and coal. Lowering average costs in any way should theoretically reverse this trend. By implementing more photovoltaic systems on residences, people will save money in the long-run and reduce harmful environmental impacts. Future research should look at the feasibility of including built-in PVs in initial home construction, night and shading concerns, and

other advances that improve efficiencies and could lower payback rates.

Anne C. Burnes (Derek Larson, Environmental Studies) Campuses trading coal for gas: Not so fast.

College campuses consume .1% of all energy consumed in the United States in order to operate. Nearly all of this energy comes from sources that cause environmental degradation, and will eventually run out if consumption rates do not drastically change. In order to meet the long term goals of institutions of higher education colleges and universities need long term energy sources that are sustainable and cause less harm to the environment. Many campuses are converting from coal powered systems to using natural gas, and are billing the switch as a more sustainable form of energy. A literature review of data on the impact of switching from coal to natural gas was conducted. Natural gas is no better than coal for combating global warming, and can only be a temporary solution to meeting our energy needs.

Whitney A. Canton (Jean Lavigne, Environmental Studies) DEEPWATER HORIZON OIL SPILL: LONG-TERM EFFECTS ON SHRIMPING

On April 20, 2010, the Deepwater Horizon oil spill, or better known as the BP oil spill spewed large amounts of crude oil into the Gulf of Mexico, harming entire ecosystems. The spill had large effects on shrimp environments, shrimp sales, shrimpers' livelihoods and also on human health through consumption of shrimp. The one mile depth at which the oil spill occurred is unique and different from any previous oil spill, so many of the long-term effects are unknown. After the oil spill there was not enough action taken towards restoring the environment, compensating the fishermen or in preventing harm to humans consuming the seafood. Continued monitoring of Gulf ecosystems is needed, and BP should continue to compensate large businesses and small shrimp farmers until they are fully paid. Finally, the FDA needs to reevaluate their acceptable levels of contamination within shrimp to make them specific to the Deepwater Horizon oil spill.

Benjamin T. Carlson (Jean Lavigne, Environmental Studies) Lending a Farm Hand: Assessing the Challenges Facing Beginning Farmers in Minnesota

Technological advances and mechanization in agriculture have increased farm productivity, but have also decreased the need for

farm labor, leading to fewer farmers on larger, conglomerated operations. This produces negative effects on the environment and rural communities, such as decreased use of soil conservation practices and decreased rural social capital. One way to counter this trend is to increase the number of farmers on the land; however, beginning farmers face significant entrance barriers. The first part of this study asks which of these barriers are the most limiting, and the second part asks whether beginning farmer educational and networking programs can help to increase the number of farmers in Minnesota. In order to answer these questions, I conducted interviews of beginning farmers, reviewed prior research, and analyzed county-level geographical statistics relevant to Minnesota agriculture. Through this, I concluded that access to land is the biggest entrance barrier for beginning farmers in Minnesota, and that farmer networking organizations can help to alleviate this problem.

Alex J. Chocholousek (Jean Lavigne, Environmental Studies) Making the "Fruited Plains" Fruitful

One of the most threatened ecosystems on earth, the prairies of the Great Plains of the United States are in desperate need of conservation. Since 1850, agro-economic incentives have pushed land users to plow away the prairie, leaving losses as great as ninety-nine percent in some areas. Increased levels of runoff, topsoil loss, waterway pollution, and a massive release of previously stored carbon into the atmosphere have resulted. Current prairie conservation techniques generally focus only on ecological diversity and integrity. While these are vital to prairie existence, an economic incentive is necessary to motivate landowners to conserve prairie. I investigated how various management techniques such as fire, grazing and haying, might provide an economic payback for private prairie managers without sacrificing ecological integrity. I conducted my research using technical reports on management techniques as well as interviews with prairie managers. I found that while grazing and haying can provide significant profit, they are labor intensive and only marginally effective ecologically. In order for a prairie to flourish, fire is a necessary part of the management regime. To make up for a lack of payback in fire management, policy-based incentives such as Conservation Reserve Programming, conservation easements, and conservation tax credits are necessary to motivate landowners to conserve and expand native prairie.

Alice R. Closmore (Jean Lavigne, Environmental Studies) Bird Down: An analysis of bird-safe building in the Twin Cities

Anthropogenic causes kill around 3 billion individual birds a year. With windows and other built environments contributing to a third of these deaths, it is important to address how bird-window collisions can be mitigated. I conduct a literature review, and interview experts on the topic of bird-window collisions to establish the current state of research, tried and potential solutions, and resistance to bird-safe solutions. There are many strategies used to mitigate collisions such as window decals, bio-mimicry, window films, and external add-ons but the current most effective is UV reflective solutions. I conclude that i) the most effective solutions are infeasible because of low demand and ii) the most feasible are aesthetically displeasing. There needs to be more research by window manufacturers, more demand from builders and developers, and ultimately more education on the built environment's impact on bird populations.

Megan E. Coleman (Jean Lavigne, Environmental Studies) Are We Being Too Clean? Evaluating Triclosan in the Environment

The antimicrobial agent triclosan has recently become a common ingredient for a variety of manufactured goods ranging from cosmetics, soaps, to cutting boards and medical devices. It is an ingredient in 75% of liquids soaps and there is a total of 1 million pounds produced annually in the United States. Triclosan was first added to hospital surgical scrubs in the 1970s after it was discovered to act as an endocrine disruptor in bacterial cells. The increased production of antibacterial products has raised concern after concentrations of triclosan were starting to show up in human blood and urine as well as in some United States waterways. Studies have shown correlations between triclosan concentrations and the probability of humans to have allergies, cancer, or antibiotic resistance. Other experiments have shown a decrease in muscle control in animals as well as the photo transformation of triclosan, in certain aqueous conditions, to harmful dioxins. In order to further assess these concerns, I interviewed University of Minnesota Civic Engineer William Arnold, College of Saint Benedict Professor of Chemistry Dr. Michael Ross, and Assistant Lab Manager of Saint Paul's Wastewater Treatment plant. Combined with some secondary research, I was able to conclude that additional consumer education and governmental intervention need to take place so that triclosan doesn't cause more harm than benefit.

Carlos Dabu (Jean Lavigne, Environmental Studies) Campus Social Sustainability: Not Just About the Green

Abstract: With the demands for highly skilled and qualified workers by the world's most influential companies and organizations, institutions of higher education act as gateways for planting socially responsible individuals into the workforce for generations to come. However, the campus sustainability movement has been far too focused just on the environmental and economic aspects of sustainability without fully incorporating the social part of it. Although the campus sustainability movement has significantly progressed in the last few decades, with the emergence of different organizations and the commitments made by colleges and universities around the country, social sustainability has been unequally represented and left out. By examining the history of the movement, interviewing people about what socially sustainable initiatives schools are accomplishing today, and critiquing the Sustainable Tracking Assessment Rating System, I was able to observe that there is a lack of a focus on social issues that can be addressed in institutions of higher education across the nation. The STARS program does a good job in giving some structure for colleges and universities to become more socially sustainable, but the program needs to be further improved to help achieve this goal.

Briana C. Daniels (Derek Larson, Environmental Studies) Greening The Turf: Sustainable College Football Programs

In the United States the first collegiate football game occurred on November 6, 1869 between Princeton and Rutgers Universities. Over the next several decades the sport grew and so did the fan base. Every college football game attracts thousands of fans come to watch the game and also consume beverages and food through concessions and tailgating. Left over food and the products that once held the food create hundreds of pounds of waste each game. The waste generated at each game costs money to properly dispose of offsite as well as harmful to the local environment. With proper waste and recycling programs implemented into football stadiums the amount of waste ending up in landfills can be diverted.

Perry L. Forbes (Derek Larson, Environmental Studies) College Food Services: Solutions to the Waste Problem.

The food services sector on college campuses has been proven to be a large producer of waste, from the amount of food that is wasted daily to the garbage that is hauled away and sent to land fills. How can colleges reduce the amount of organic waste produced and save money at the same time? The answer is simple, implement sustainable measures that will pay for itself as the

college saves money. To find the solutions to this reoccurring problem, various case studies and interviews will be used to show that sustainable solutions can be implemented. Some of these sustainable measures include composting organic waste, buying local food and growing produce on campus to supplement dining halls.

Christian T. Forster (Jean Lavigne, Environmental Studies) The Road in Our Water: Polycyclic Aromatic Hydrocarbons in Stormwater Run Off

Polycyclic Aromatic Hydrocarbons (PAHs) are carcinogenic chemicals produced from the incomplete combustion of fossil fuel. Through human activity involving cars and roads, the chemicals get into stormwater and pollute the environment. From there, they can cause serious health problems in aquatic life like fish and invertebrates, and can cause health problems like cancer in humans. The question my thesis attempts to answer is, "What are the best ways to decrease the effects of PAH laden stormwater on the environment?" In order to decrease the effects of stormwater PAHs, we need to prevent new contamination, mitigate existing contamination, and clean up polluted areas. My research includes academic sources detailing the origins of PAH pollution, health effects, and potential solutions to the PAH problem. Additionally, I have done personal interviews with Richard Bohannon, Professor of Theology and Environmental Studies at St. John's University, and Al Innes, correspondent with the Great Lakes Coal Tar Reduction Program. Through my research I have found that coal tar bans are the best prevention method, bio retention cells or rain gardens provide good sources of mitigation, and the removal of sediment and bio-remediation are the most successful pollution cleanup strategies.

Nathan L. Geislinger (Derek Larson, Environmental Studies) Trayless Dining on College Campuses: Aid to Carbon Reduction.

The use of trays in dining halls is proven to result in food, energy, and water waste. The food waste linked to using trays produces additional greenhouse gases when sent to landfills. All the water that goes into making that food and to washing the trays is also wasted, as is the energy put into making the food to run washing machines for trays. Why do many colleges still have trays when a significant percentage of colleges have switched to trayless dining and realized significant savings in money, food waste, and water use? Analyses of case studies shows a decrease of food waste of 25% or more, as well as a half a gallon of water saved per person from not having to wash the trays. These results can be applied to

St. John's University and can lead the Refectory to a more sustainable trayless dining hall.

Emily L. Hayne (Derek Larson, Environmental Studies) Plugging-in to Sustainability: Electricity Conservation in Residence Halls

College student's electronic-driven lifestyles contribute to the energy demands on college campuses that consequently affect economic security and natural environmental resources. Even though higher-education institutions are responsible for promoting energy conservation on campus there are other factors such as external incentives and internal motivations that influence students' electricity consumption. Research on college energy consumption and analysis of alternative energy initiatives on campuses reveals methods that can be applied to first year dormitories at the College of Saint Benedict and Saint John's University in order to promote sustainable energy consumption.

Emily T. Krulc (Derek Larson, Environmental Studies) Lose the Green Grass: Sustainable Landscape Development on College Campuses

Unsustainable turf grass lawns can no longer be the norm on college campuses. As innovative and influential societal leaders, campuses can proactively reshape the way students and institutions relate to the land by landscaping with native plants. Case studies from representative American campuses demonstrate what has already been done to reform landscapes. Analysis of the methods used at these campuses yields a landscape design model for a central Minnesotan college campus that is sustainable, attractive and well-received by students and the community.

Weston C. Lake (Jean Lavigne, Environmental Studies) Houses for a sustainable future: Net-Zero Energy Homes are the most viable option to lower energy consumption.

The residential sector uses almost 41% of all the total energy consumption in the United States. If we continue on this trend, not only will our fossil fuel resources soon be depleted, there are thousands of toxins being released into the atmosphere each second. There must be a change in the way homes are designed in order to lower the total energy consumption. There are a variety of ways to achieve this goal, these include: housing developments, LEED standard, Energy Star, and Net-Zero Energy Homes. Each approach will be viewed as a possible solution to the current problem., weighing in both the positive and negative aspects. The best option would be Net-zero energy homes; this approach will

virtually eliminate all of the energy consumption that homes currently use. This problem will be solved over time and has a very bright future. As these technologies become more available and cheaper, the possibilities of homes becoming energy free are closer than ever.

Michael J. Lockwood (Jean Lavigne, Environmental Studies) Keen on Quinoa: An assessment of the Viability for Growing Quinoa in the United States

Quinoa has grown in popularity, but the market price has also grown because South America is the only major producer and exporter of quinoa. However, it can be grown in other countries, including the United States. The purpose of this thesis is to determine where in the United States quinoa can be grown and whether it is economically viable to grow it. I conducted a literature review of quinoa as well as conducted interviews with quinoa researchers and experts in the United States. This included examining quinoa production in the United States, potential production areas based on the geographical distribution of quinoa's growing requirements, and options for producing it. The results show that quinoa production is a viable option for specific parts of the country like the Pacific Northwest, because this region can meet the crop's growing requirements. In addition, agricultural practices such as crop rotation and crop integration or mechanical uses for cultivation and harvesting are viable options. The United States can viably produce quinoa, but is limited to certain parts of the country. Further information is needed on the amount of quinoa produced and whether it can replace other established crops such as wheat.

Per J. Lundmark (Derek Larson, Environmental Studies) Land of Sky Blue Waters: Conserving Minnesota's Water Resources on College Campuses

The ease of access to freshwater in Minnesota has led to waste of this precious resource. Through domestic water conservation efforts citizens can become more aware of the impacts their water choices have on the word. Domestic water usage should be the focus of preliminary efforts because domestic water use is the most personal of individuals' water contact. As a state abundant with freshwater resources, it is Minnesota's responsibility to be an example of a steward of freshwater. It is through a synthesis of multiple domestic water conservation efforts on Minnesota campuses that conservation efforts can be expanded and become commonplace in the community.

Timothy D. Markoe (Derek Larson, Environmental Studies) Wind Vs. Solar: Making The Right Renewable Energy Choice For Your College

> Fossil fuel consumption and the associated carbon impacts are major concerns among college campuses in the United States. Campuses are using excessive amounts of fossil fuels, whether it is carelessly consumed without even knowing or consciously expended because the college is unable to access renewable sources of energy. Both wind and solar energy offer alternatives to help reduce the carbon impact of college campuses by reducing the use of fossil fuels. How can campus leaders decide between renewable energy options to maximize the return on the investment in adopting sources like wind and solar?

Lucas M. Menden (Derek Larson, Environmental Studies) Reducing and Reusing Campus Food Waste

> This project aims to find the most practical and successful ways for college campuses to reduce and reuse the food waste they produce. Examples will be given for ways to reduce and dispose food waste as well as what to do with uneaten food in school cafeterias. These examples come from projects that have already been implemented by college campuses around the United States. The projects that best fit college campuses in Minnesota will be presented.

Ryan M. Meyer (Jean Lavigne, Environmental Studies) Conservation Tillage: Practices to Mitigate Soil Erosion

> Farmers are losing soil faster than it can be regenerated from intensive agriculture practices such as moldboard plowing and chisel plowing. The loss of soil has negative effects on both the farmer and the environment. The farmer can experience a crop yield loss from losing topsoil, and aquatic environments can be degraded from sedimentation. One way that farmers can decrease the rate of soil erosion is through conservation tillage practices such as no-till, ridge-till, and strip-till. Conservation tillage practices leave 30% or more crop residue in the field. In my research, I conducted a literature review and interviewed experts and farmers who have experience with conservation tillage practices. To determine which conservation tillage practice is the best option in Minnesota for decreasing soil erosion I looked at several factors including soil erosion, fuel usage, labor requirements, weed control, and moisture in spring. Conservation tillage practices are a more sustainable way for farmers to till their fields because they offer benefits such as reductions in the five

factors listed above. Protecting soil for farmers is important because soil is their livelihood.

Collin J. Motschke (Jean Lavigne, Environmental Studies) Redoing the Loo: An Ecological and Economic Analysis of Alternative Toilet Designs

The conventional flush toilet is the developed world's default method of human excreta removal. Despite its prevalence, ecologists maintain that this appliance is becoming one of the most wasteful household instruments. It uses excessive amounts of potable water, requires energy-intensive treatment technology, and creates a considerable amount of pollution. In this thesis, I explore and analyze alternative toilet designs including the ultra low flush, the incinerating toilet, and the composting toilet. I assess each technology in terms of ecological soundness and economic viability, within the context of a residential setting in the United States. In order to evaluate each technology's merits and disadvantages, I examine criteria including water usage, energy usage, cost of installation, cost of operation, and cost of maintenance. My investigation serves as an informative guideline for current and future homeowners seeking an alternative to the conventional flush toilet. To find relevant information, I completed a literature review and conducted interviews with alternative toilet owners and producers. I discovered that, while the ultra low flush toilet is the most affordable and the most comfortable transition from the conventional flush toilet, the composting toilet is the most ecological and economical alternative technology.

Paige L. Olson (Jean Lavigne, Environmental Studies) Preserving Minnesota's Legacy: Effectively Managing Eutrophied Lakes

In the past 100 years, the state of Minnesota has undergone major land use changes and population increases. As a result, many of Minnesota's lakes have experienced steep nutrient increases due to increased shoreline development, and increased runoff carrying fertilizers and livestock excrement. These larger nutrient abundances often lead to a water quality condition referred to as eutrophication. Eutrophication in turn results in expansive algal blooms, reductions in available oxygen, loss of recreational activities and aesthetic values, and overall water quality degradation. Despite efforts to improve the water quality of lakes, particularly within 50 miles of Minneapolis and St. Paul, many lakes are still plagued with eutrophication causing a variety of ecological, environmental, and social effects. Only two lakes have recovered and been de-listed from the Minnesota Pollution Control Agency's List of Impaired Waters. Five lake case studies

with successful and unsuccessful management plans will be reviewed to determine how to most effectively manage lakes for eutrophication. Areas of success and areas of improvement will be discussed to create recommendations for improvements in current lake management plans.

Reed E. Osell (Derek Larson, Environmental Studies) Grass-Fed Beef: How Sustainable Approaches To Campus Food Are Beneficial To All

One major concern college sustainability advocates today is food sourcing. Unlike our grandparents' generations, most of our food is no longer sourced locally. The current industrial method of meat production may be more efficient but it does not incorporate environmental costs of the way food is processed into the final price. This project explores the differences between grain-fed beef and grass-fed beef as potential meat supplies for college dining services. It argues that a college campus that sources its beef through local grass-fed beef farmers is not only more sustainable than one that consumes conventional beef, but will also encourage healthier and more ethical eating choices.

Nina Oyakawa (Jean Lavigne, Environmental Studies) Investigating the Decline in Average Life Expectancy in Okinawa

Okinawa, the southernmost prefecture of Japan used to be the islands of the longest lived people in the world. However, more recently Okinawans have been experiencing poor health status that is threatening their longevity. Life style and diet used to be the key factors making people to live long: people were working on farms to make their daily living which was very frugal and environmentally sustainable, and eating nutritious food that they grew themselves in that environment. These days, changes in their life style through several factors that are complexly intertwined, such as historical events and shifts in industry and diet, have produced a lifestyle dependent on fast-food. Okinawa today also has a poor economic status that has been created by tertiary industry, and has experienced documented declines in the health status of the population. After reviewing the complex history and economic situation of Okinawa, I conclude that it is impossible to go back to the previous lifestyle; however, it is still important to improve people’s health status in ways that are feasible and suitable to their environment, taking advantage of its characteristics.

Jascha J. Pettit (Jean Lavigne, Environmental Studies) Sustainable Wastewater Systems: Using Microorganisms to Treat Wastewater While Generating Biofuel

Sustainable cost/efficient biofuel production is perhaps the simplest solution in reducing the use of and dependency on fossil fuels. Achieving efficient biofuel production, while simultaneously improving the sustainability of municipal wastewater systems, is possible with the use of microorganisms. Our current methods for treating wastewater are not cost-efficient or sustainable and will worsen with growing and changing population dynamics. Many wastewater systems are outdated, consume excessive power, use expensive chemicals, and treatment creates a concentrated sludge that continually needs to be disposed of. In my research I expect to find new approaches that can sufficiently replace existing technologies for treating wastewater, while creating renewable biofuel energy sources and improving sustainability. I have found that biogas systems are a great addition to wastewater treatment plants under certain conditions and that they should be pursued to a greater extent. I have also found sufficient evidence that tertiary water from wastewater treatment plants can be a quality growth medium for third and fourth generation biofuels and other valuable products. The interest in alternative wastewater treatment facilities is both for economic and sustainability reasons. Making sure that both are applied is important in future success.

Aaron B. Remer (Jean Lavigne, Environmental Studies) Putting Overfishing to Good Use: Combating Invasive Lionfish

During the mid-1980's Pterois volitans and Pterois miles, also known as lionfish, were introduced into the Atlantic Ocean off the coast of Florida. Since that time, lionfish have spread along the Atlantic Coast and throughout the Caribbean, dominating the waters around the Bahamian Archipelago. Lionfish pose a significant threat to Caribbean and Atlantic ecosystems due to their voracious appetites, rapid breeding, diverse habitats and ranges, as well as a lack of native predators. It is important that invasive lionfish are managed through a combination of localized removal efforts, education, and increased populations of native grouper species. Also, creating an economic incentive to remove lionfish is a necessary course of action to reduce the effects that lionfish have on native ecosystems. Research has found that harvesting lionfish in localized regions by groups of 4-5 divers can significantly reduce the number of lionfish after only a few rounds of harvesting. Also, in areas such as the Exuma Cays Land and Sea Park, native grouper populations are high and have maintained a low number of lionfish compared to other invaded areas. While localized harvesting and augmented grouper populations can present possible solutions to help mitigate the lionfish impact,

lionfish will persist in their invasive range; hopefully, these efforts can reduce the damage done to important ecosystems.

Michael E. Sandager (Derek Larson, Environmental Studies) 50 Shades of Green: What Prospective Students Really Want in College

How do perspective students chose where to go to college? This question is one asked constantly by both the students themselves and college admissions officials. In a world becoming more environmentally aware is it important for colleges to promote their sustainability? How effective are colleges in informing perspective students who are interested in sustainability? This study focuses on how schools use the internet to distribute information on campus sustainability. A selection of schools were chosen using a set of criteria including school size, institutional type, and sustainability commitments. Then the website of each school was evaluated and emails were sent to admissions to determine the effectiveness of each schools communication. In conclusion there is a wide variety of answers but there are resources that students can utilize if they are interested in sustainability.

Erin M. Schley (Derek Larson, Environmental Studies) A Ticket to Paradise: Unpacking Sustainable Study Abroad Programs

Study Abroad programs are increasingly becoming more and more popular with U.S. undergraduate students. As this trend continues the impacts of their international education will also increase in both severity and volume. It is more imperative than ever that higher educational institutions merge their efforts to incorporate sustainable international education into their campus sustainability plans. Through extensive research into the literature surrounding sustainable study abroad programs a series of strategies that both individual students and institutions can utilize in order to minimize the impacts of their study abroad programs while maximizing their educational benefits were identified. The College of Saint Benedict and Saint John's University are on their way towards more sustainable study abroad programs. Through research and personal interviews with institution faculty, instructors, and students a set of proposed recommendations for future advancements in international education sustainability, along with a general overview of what the institutions efforts have been thus far, have been compiled.

Katie L. Spoden (Derek Larson, Environmental Studies) Fossil Free Finances: Divestment and College Endowments

This project explores the reasons colleges and universities with stated environmental values invest in the fossil fuel industry. Despite the pervasive effects of climate change and the over 600 signatories of the American College and University Presidents' Climate Commitment, there are financial barriers and administrative resistance to eliminating fossil fuel investments from college endowments. This study compares the contemporary divestment movement to the South African apartheid divestment movement in the 1980s, which proved to be more symbolic than economically damaging. This project includes an analysis of the investment practices of 34 different colleges and universities divided between three categories of school size (small, medium, large), three categories of endowment size (bottom 25 percent, median, top 25 percent), and whether the college or university has or has not signed the President's Climate Commitment. It includes a case study of the College of Saint Benedict (CSB) and the barriers for divestment from fossil fuels it faces. The project concludes with a strategy for coalitions of colleges and universities to begin to represent the values of the President's Climate Commitment with their college endowment dollars.

Emily R. Stawarski (Jean Lavigne, Environmental Studies) What's for Dinner: Choosing the Sustainable Option for Atlantic Salmon Farming

Choosing sustainable food options is quickly becoming an important consideration for those buying groceries. Fish, particularly salmon, is an area that requires special attention when deciding what is sustainable and healthy. Over-fishing the ocean is becoming a rapidly increasing problem. With 90% of the world's main large consumable fish supply exhausted, an alternative is necessary. In my thesis, I compare three main types of Atlantic salmon farming. They are traditional water-based, traditional land-based and genetically modified land-based farming. Traditional water-based farming allows the salmon to grow in pens placed in bodies of water. Both traditional land-based and genetically modified land based farming allow the salmon to grow to market size in large monitored tanks of water on land. In order to conduct this assessment of sustainability, I did a literary review of peer-reviews journal articles. I also conducted interviews with the fish managers at Byerly's and Walmart in St. Cloud Minnesota. As a method to determine the sustainability of Atlantic salmon farming, I compared the three types of farming based on environmental impacts, health impacts and the economic viability of each type. Based on my research I conclude that water-based farming is not sustainable, due primarily to the negative environmental impacts it creates. Both traditional and genetically modified land-based salmon farming

have a comparable level of sustainability. Because genetically modified salmon have a reduced survivability rate and high, traditional land-based salmon farming is more sustainable. When determining the best salmon for consumption it is important to look for land-based salmon that is marked sustainable or responsibly sourced or raised.

Joan C. Van Grinsven (Jean Lavigne, Environmental Studies) The Grass Can Always Be Greener: Pathways to Sustainable Campus Landscaping

Colleges and universities strive for perfect lush green lawns to aid in attracting new students with a pristine first impression of the school's lawns and landscaping. Many of these students do not understand that large amounts of synthetic chemicals, water, and labor that go into making the landscaping "perfect" are unsustainable. Universities are one of the largest users of potable water in the urban landscape, but they are also leaders of innovative solutions to move toward more sustainable landscaping. The sociological expectations of colleges have begun to shift toward more sustainable practices, and there have been improvements in cost effective solutions that campuses can accommodate to their own goals to create more sustainable landscaping. For my research, I completed a literary review of landscaping practices at colleges and universities. I also interviewed grounds management and sustainability directors at four different colleges. I have discovered that many colleges are beginning to implement more sustainable practices. These practices generally include changing the landscaping in one aspect or another. I conclude that with the variety of solutions available, colleges are able to cater these solutions to fit their own specific problems and goals. In addition, numerous available incentives will allow colleges to improve their sustainability, and to market themselves to prospective students.

Lauren E. Walburg (Jean Lavigne, Environmental Studies) Fake Flakes: An analysis of the effects of snowmaking at ski resorts

Artificial snowmaking is a strategy that most ski resorts are beginning to embrace to combat the effects of global climate change. However, there are many large issues involved with the process of snowmaking such as energy consumption and water use. Artificial snow can also cause changes and decreases in alpine vegetation, and is associated with many health concerns. There are multiple methods that ski resorts should use to make snowmaking more economical and environmentally friendly, especially in regards to water use and energy consumption. In order to conduct this research I did a literature review, as well as

conducted several case studies of ski resorts of different size. I found that the methods to improve snowmaking are varied. Larger changes include updating snowmaking systems to make them more energy and water efficient, as well as switching to reservoir systems instead of taking water from alpine streams. Smaller changes include monitoring snowmaking systems for inefficiencies such as air or water leaks and fixing these issues. I concluded that ski resorts should make efforts to improve snowmaking, but these efforts will vary based on the size of the resort and the amount of money they are willing to spend on snowmaking.

Mary L. Wood (Jean Lavigne, Environmental Studies) Let's make it rich: Vermicomposting dairy manure in Stearns County, Minnesota

Lactating dairy cows produce about 120 pounds of manure every day, which results in about 1.5 million tons of manure annually in Stearns County, the leading dairy county in Minnesota. The concentrated dairy manure is typically stockpiled, applied to crops, or captured for energy. The quantity of manure in confined areas on large dairy operations exceeds the land's ability to absorb the nutrients, causing environmental problems such as air and water pollution. Vermicomposting, or worm composting, reduces the overall quantity of organic material and creates a nutrient rich material for plants to grow healthier and stronger. Vermicomposting dairy manure is a potential manure management treatment practice on dairy farms in Stearns County, Minnesota. For this research, I investigated two case studies from California and upstate New York where vermicomposting dairy manure has proved to be a successful industry and used the gathered information to determine the feasibility of a vermicompost operation in central Minnesota. The Minnesota climate seems to be the largest barrier in the success of a vermicompost operation in Stearns County due to the small temperature range that the Eisenia fetida, red wiggler worms, require to survive.

Mai C. yang (Derek Larson, Environmental Studies) Campus Culinary Services and the Carbon Footprint of Food

Carbon dioxide is a primary greenhouse gas but many people are unaware of the carbon footprint of their food. Many popular foods can be found at super markets out of season, including corn, rice, coffee, and bananas. Examining the carbon footprint of food distribution networks may help us find alternative ways to reduce the carbon impact of our diets. A case study of CSBSJU dining services looks in depth at how to reduce the carbon footprint corn,

rice, coffee, and bananas as common campus foodstuffs. To reduce the carbon footprint and maintain the variety of foods provided at both dining facilities, switching to local farmers or to farmers who can provide products with the least carbon footprint would be the best option.

Jie Zhang (Jean Lavigne, Environmental Studies) What Made The Forests Red? The Future of Whitebark Pines in the American West

Abstract:
In the American West, there are large numbers of trees in the woods that look red, and many of them are turning grey, especially at higher elevations. Most of the trees dying are Whitebark Pines (Pinus albicaulis) which is a subalpine five-needle conifer. They are slow growing trees that survive in harsh environments where it is difficult for most tree species to grow. The branches of Whitebark Pines have twisted and windsculpted forms, and are a symbol of wilderness in America West. Currently, tremendous numbers of Whitebark pines are dying by turning red/grey. There are several reasons: Mountain Pine Beetle (Dendroctonus ponderosae) attacks have increased because of global warming; blister rust is caused by invasive fungi disease; and the suppression of fire caused by human activity. In 2010, I had chance to visit Wind River Range of Greater Yellowstone System, I was impressed by the beautiful old Whitebark Pine Forest, and also amazed by the amount of trees that we are losing. Thus, in this research, I will investigate whether there is a way to save the Whitebark Pine forest. This research considers ways to deal with the beetles and tree disease, and also provides suggestions for forest restoration. Moreover, this research also discusses whether human beings, as well as the ecosystem, will be able to adapt if Whitebark Pine forests keep declining.

Peter Engel Science Center 369, SJU

Biology

Elizabeth C. Grega, Emelia R. Hauck, Jessica J. Lindemyer, Robert D. McCarthy, Emily F. McGrath, Kirsten M. Montray, Reanna L. Nelson, Sarah A. Schmitt, Scott B. Sprenger, Martin M. Vu (James Poff, Biology) Biological Illustration 2013 Exhibition

Students enrolled in Biological Illustration prepare a porfolio of pieces demonstrating the use of different media in preparing representations of biological subjects. This exhibition presents selected works from the technique portfolios and projects of the

students enrolled in Biological Illustration 2013. A wide variety of subject matter and techniques is represented.

Quadrangle 349, SJU

Communication

Jane C. Gengel (Emily Berg Paup, Communication) Carrie Chapman Catt's Crisis

Carrie Chapman Catt delivered a speech entitled "The Crisis" to the National American Woman Suffrage Association (NAWSA) in September of 1916. With the United State's presidential seat up for grabs, the country teetering on the edge of war, and American's questioning the meaning of "citizenship", Catt crafted her rhetoric to draw on each of these elements in an attempt to not only remobilize a stagnant movement but also to persuade a broader audience. This paper is an examination of her rhetorical strategies to persuade her fellow suffragists and the larger population to bring the vote to women. Aspects this paper shall analyze are her interwoven pieces of evolution, a narrative of progression, and both masculine and feminine speech. Carefully taking into account the current context, Catt turned anti-suffrage arguments on their head and reevaluated the meaning of citizenship. Her unique rhetorical style gave way to a new form of combined masculine and feminine argument interlaced with evolution and progression.

Quadrangle 353, SJU

Communication

Nicholas K. Donovan, Scott Hegg, Alysha Schmidt, Rochelle Taus Dumdie (Karyl Daughters, Communication) Workplace through the Lens of Organizational Communication

The presentations will include case study analysis of real organizations looking at topics including organizational socialization, emotion, and diversity in the workplace.

Kevin J. Jennissen, Nick A. Homen, Tara E. Grosso, Courtney P. Bloomfield, Alicia M. Renstrom (Karyl Daughters, Communication) What Are We?: Perceptions and Meanings of Relationship Labels

Students will present results from a study conducted in COMM368: Love, Sex, and Comittment. The results include qualatative and quantitative analyses of a survey of CSB/SJU

students looking at perceptions and meanings associated with common relationship labels.

Angel A. Key (Terence Check, Communication) Facing the Voters: Political Campaign Communication in Local Elections.

This presentation examines the role of political campaign communication in local elections. The presentation will describe the context of a campaign in St. Joseph, Minnesota, and discuss the importance and impact of face-to-face communication in mobilizing and informing voters. The presentation will also describe the challenges faced in confronting voter cynicism, and how various campaign communication tactics were utilized to confront this skepticism.

Quadrangle Alumni Lounge, SJU

Biology

Cody Groen J. Groen (Steve Saupe, Biology) Analysis of Endangered, Threatened, and Special Concern Specimens in the CSB/SJU Bailey Herbarium

In response to a request made by the Minnesota Department of Natural Resource, a systematic research project was completed in the CSB/SJU Bailey Herbarium. The project was meant to assess the records in the Bailey Herbarium to compile background information for the MN DNR to use as reference in their attempt to reassess plant species in Minnesota that are being reassessed to create an updated list of species of concern (Endangered, Threatened, or Special Concern). Along with providing these data to the MN DNR, analysis was done to provide information about the endangered flora and fauna that has grown around the campuses of the College of Saint Benedict and Saint John's University.

Chi L. Le, Megan Levis (Stephen Saupe, Biology) Comparison of Airborne Fungal Spores in Campus Buildings across St. John’s University during June and July 2012

Over the summer of 2011, mold was found growing in Peter Engel Science Center (PE). This study aimed to evaluate the air quality of the building with specific regard to investigating what effect the attached greenhouse elicits on levels of airborne fungal spores. We also sought to compare variation of airborne fungal spores

across campus buildings on St. John's University over June 2012. The results will be presented.

Stephanie A. Noyes, Hannah M. Von Arb (Kristina Timmerman, Biology) Preferred Vegetation Characteristics of the Southern Flying Squirrel

The Southern Flying Squirrel (Glaucomys volans) is a nocturnal sciurid that has been shown to be an indicator of mature forest health. Limited research has been conducted on this species, especially at the northern border of its documented range. The present study was designed to evaluate the habitat preferences of the Southern Flying Squirrel within the Saint John's Arboretum in Collegeville, MN. Twenty five Sherman live traps were set up in a 5x5 grid in 3 separate locations within the Arboretum between May and July 2012. Traps were opened for 4 consecutive nights for 3 weeks and checked the following mornings. Squirrel captures were characterized, ear-tagged, and released. Vegetation characteristics (tree and shrub species, shrub count, tree height, tree diameter at breast height, down woody debris length and diameter, average canopy cover, and average herbaceous cover) of a 10 meter radius circle around the trap tree were collected. Data were analyzed by means of a general linear model ANOVA. A total of 40 individual squirrels were captured between all 3 plots (23 males and 17 females). It was found that flying squirrels in the St. John's Arboretum tend to be captured more often in areas with higher herbaceous cover ($p = 0.02$), taller adjacent trees ($p = 0.013$), and a higher number of surrounding shrubs ($p = 0.017$). Density of down woody debris, average diameter of surrounding trees, and trap tree species approached significance and therefore warrant further research with a larger sample size. Over the course of this study, there was significant interaction with non-target species that frequently interrupted data collection. Future studies may obtain a larger data set if this could be minimized.

Katharine Nystrom, Alex Hanson (Jennifer Schaefer, Biology) The Mayo Innovation Scholars Program Experience

The Mayo Innovation Scholars Program pairs a team of undergraduate science and business students with an MBA project manager to assist Mayo Clinic Ventures in the assessment of new product submissions by Mayo researchers. This program provides research opportunities for undergraduate science and business students while providing leadership development and research opportunities for MBA students.

Brittany M. Peterson, Jessica R. Woelfel (David Mitchell, Biology) Expression of Two Archaeal Lactate Dehydrogenases

Members of the three major domains of organisms (bacteria, eukaryotes, and archaea) all possess the enzyme lactate dehydrogenase (LDH) which catalyzes a reversible oxidation/reduction reaction central to respiration and metabolism. Much is known about the eukaryotic versions of this enzyme, but how it appeared and evolved in archaeal organisms adapted to live in extreme environments is unknown. PURPOSE: The purpose of this study was to purify and characterize biochemical properties of archaeal LDHs (from Methanothermobacter thermautotrophicus and Methanosarcina acetivorans) grown in E. coli. Comparisons with the biochemical capabilities of vertebrate LDH enzymes may aid in understanding how proteins adapt or evolve in living organisms. METHODS: A mixture of SOB media and Ampicillin was inoculated with a single E. coli colony and grown overnight at 37°C with shaking. The following morning, the overnight culture was added to a larger flask of SOB and Ampicillin. Once the culture reached an optical density (OD) of 0.3-0.4 at 600nm, it was induced with Isopropyl β-D-1-thiogalactopyranoside (IPTG) and grown at 37°C with shaking. After the culture reached an OD near 1.0 at 600nm, the culture was centrifuged to pellet cells. Cells were then lysed using CelLyticTM (Benzonase Nuclease and Protease Inhibitor were also added) and centrifugation. Supernatant was analyzed using SDS-PAGE and purification was attempted using ProfinityTM IMAC Resin column. RESULTS: To optimize cell growth, 1 µL of Ampicillin and 500 µL of IPTG (100mM) was added to 50mL flasks of media. Among lysing techniques tested, CelLyticTM combined with protease inhibitor and benzonase nuclease worked best. However, even after optimizing growth conditions and lysing procedures, not enough protein was recovered for purification. It was postulated that the E. coli may have recognized the archaeal LDH as foreign and packaged it into inclusion bodies, rendering LDH incapable of being extracted. This theory was supported when the inclusion bodies of the remaining pelleted cells were lysed with additional CelLyticTM treatments that resulted in a greater recovery of LDH. Unfortunately, there was insufficient time in the research fellowship to finish purification of this protein. CONCLUSIONS: E. coli may recognize archaeal LDH as foreign and package it into inclusion bodies. To most effectively extract archaeal LDH from E. coli, multiple treatments of CelLyticTM combined with protease inhibitor and benzonase nuclease should be used to lyse cell as well as inclusion bodies. Future research should employ ProfinityTM IMAC Resin columns to attempt to purify archaeal LDH recovered from E. coli inclusion bodies.

Brandon G. Plante (Jeanne Lust, Biology) Study of Catheter Deployed Pulmonic Heart Valves

> The study was done on sheep and involved the testing of a new catheter deployed pulmonic heart valve. The data used to determine effectiveness of the new valve included: ease of deployment, structural integrity of the valve, survival of the animal, and quality of life after implantation.

Andrew D. Shelquist (Bill Lamberts, Biology) Social Behavior in Conspecific Sharks: Grouping vs. Aggregation

> My research focuses on the social behavior that certain shark species exhibit, and possible explanations for these behaviors. I will discuss the difference between grouping and aggregating in sharks and other species, and provide possible predictions about what we can expect of these elusive creatures.

Hieu T. Van (Stephen Saupe, Biology) The distribution of idioblasts in different parts of the variegated Dieffenbachia seguine leaf

> Idioblasts are specialized cells in the leaves and stem of the common house plant, Dieffenbachia seguine or "dumb cane." They contain needle-shaped crystals of calcium oxalate, called raphides. Gary Coté (2009) found that idioblasts distributed significantly differently between the margin and the internal section of the leaf. However, there was no significant difference, for any idioblast type, in distribution between any two internal sections, any two outer sections, or any two marginal sections. To understand more about the distribution of idioblasts in different parts of the variegated D. seguine leaves, we repeated Coté's procedure on the white part and green parts of the leaves. We hypothesized that there would be more in green areas because of greater amounts of chloroplasts supplying more nutrients. There were 1.50 idioblasts per square millimeter in green and 0.88 per square millimeter in white areas. This difference was significant ($p < 0.05$). These results will be discussed.

Mathematics

Aaron Anthony, Benny Bissonette, Reid Bjorklund, Kayla Bolland, Margaret Free, Lauren Furmanski, Jackie Galindo, Abby Hendricks, Jamie Hoffman, John Jaeger, Chris Lesch, Haley Lynch, Zach Muehlenbein, Dung Nguyen, Kalleigh Nicklas, Ingrid Pfefferle, Kyle Pundsack, Chris Shay, Joe Trenzeluk, Hieu Van, Elle Wallbrun,

Jacqueline Tousley, Alecea O'Connor, Bridget Adelmann (Bret Benesh, Mathematics) Testing Global Temperatures: Data from NASA

Students from the Probability and Statistical Inference class will give poster presentations on their class projects. Most of these projects involved doing hypothesis testing on global temperatures using data from NASA.

Sociology

Joslyn P. Brugh, Steve Watanaskul (Sheila Nelson, Sociology) Honolulu's Sex Trade

What is it about the population and organization of Honolulu that makes it a target for sex trade? In a partnered study, this project will explore the case of Honolulu, HI and determine the sociological reasons for the prevalence of sex trade.

Fine Arts Presentations:

Art

Schedule

2:00 - 2:30 PM	
BAC C108	Brigitta C. Johnson (Carol Brash, Art) Mary's Role in Renaissance Paintings

Abstracts

Johnson: Marian images are prevalent throughout the history of art, but are especially abundant during the Renaissance in both Northern Europe and Italy. By examining images of popular depictions of Mary and Jesus from both regions, I will compare and contrast how the images differ in not only style, but also emotional impact, and symbolism.

Theater

Schedule

2:00 - 2:20 PM	
BAC Colman Theater	Nicole K. Neuwirth (Mark Hennigs, Theater) Creating the atmosphere for Little Shop of Horrors
2:30 - 2:50 PM	
BAC Colman Theater	Katherine E. Takata (Mark Hennigs, Theater) Quilters: A Lighting Design
3:00 - 3:30 PM	
BAC Colman Theater	Katie B. Kenfield, Kate E. Takata (Mark Hennigs, Theater) It's like Comic-Con!: Our Experience at USITT
3:00 - 3:40 PM	
BAC Colman Theatre	Katie B. Kenfield (Mark Hennigs, Theater) Theater Internships 101: What it's like to play ball at the Children's Theatre Company
4:00 - 4:45 PM	
BAC Colman Theater	Joey J. Hamburger (Kaarin Johnston, Theater) Blind Date: Honor's Thesis

Abstracts

Neuwirth: Recap and evaluation of the lighting design created for Little Shop of Horrors this past fall

Takata: My presentation will be a portfolio review of my senior project, the lighting design for Quilters. I will outline the process from analyzing the script, creating a concept statement, pre-cueing, collaborating with the director and other designers, attending rehearsals, working with the master electrician to hang and focus the plot, collaborating with the stage manager, and writing cues. Afterward, I will explain the choices I made in my design and take questions from my professors and peers.

Kenfield, Takata: Between riding a motorcycle 20 feet in the air, chatting with Fred Armisen's dresser, playing with the latest lighting gizmos and gadgets, and networking with some of the best in the field, USITT is a technical theater person's dream. We'll be sharing our unique experiences at this four day conference and just how beneficial it is to attend for any student who aspires to pursue a career in technical theater.

Kenfield: I spent a significant portion of this semester serving as the Stage Management Intern at the Children's Theatre Company in Minneapolis on their production of Jackie and Me. Through this presentation I will discuss my experiences as a member of the stage management team from day one of prep week through opening night, how I have benefited from the experience in its entirety as a CSBSJU student, and how others interested in pursuing professional theater may obtain internships while still balancing academia.

Hamburger: Graduating with a theater major the question is constantly asked, “What are you going to do with that?” I don’t know how to answer that question, other than say, “Do theater.” When I tell my parents I want a career in comedy they think that’s my opening line. Having written and performed comedic theater and stand up at a professional level for the past three years, I have seen evidence of a profitable career. Over the next several months I am going to create and tour a one-man comedy show, Blind Date with Joey Hamburger, which is a compilation of different characters talking about relationship, love, and hate. The tour will consist of three performances in Minnesota and Chicago. Through this process I want to demonstrate the work it takes to create a successful show at the same time gaining more insight into writing, touring, and measures of success in the performing world. This project will combine my work within the Theater major with my studies as a member of the E-Scholar program.

Humanities Presentations:

Communication

Schedule

2:00 - 2:10 PM *Quad 349*	Rebecca L. Dymit (Aric Putnam, Communication) Representation in the Harlem Renaissance
2:10 - 2:20 PM *Quad 349*	Margaret C. Holm (Emily Paup, Communication) A Mother's Duty Presented in Personae: Mary Fisher's Plea at the 1992 National Republican Convention
3:00 - 3:15 PM *Quad 349*	Margaret C. Holm, Sydney A. Klinker (Erin Szabo, Communication) Gender Portrayal in the Top Three Prime Time Television Crime Dramas
3:00 - 4:30 PM *Gorec 120*	Angela M. Dols, Brenna L. Horn, Biruk A. Demissie, Yunya 1. Liu (John Merkle, Communication) Reel People Better Together: CSB-SJU
3:20 - 3:35 PM *Quad 349*	Cassandra M. Jones, Jane C. Gengel (Erin Szabo, Communication) Cross- Genre Gender Portrayals: A Content Analysis of Country, Pop, and Rap Music Videos
3:40 - 3:55 PM *Quad 349*	Alison Toering C. Toering, Lisa Fenske (Erin Szabo, Communication) Representation of non-caucasian models in Women's Fashion Magazines
4:00 - 4:10 PM *Quad 353*	yadan /. Zhang (Terence Check, Communication) Phone Banking as a Campaign Media Tactic: An Analysis of the "Vote No" Campaign.
4:10 - 4:20 PM *Quad 353*	Anthony D. Origer (Terence Check, Communication) Face Off: The Importance of Face-to-Face Communication in Political

Campaigns

4:30 - 4:45 PM
Quad 353

Daniel K. Wolgamott (Terrance Check, Communication) The Power of Campaign Communication: Zachary Dorholt's Race for State House.

Abstracts

Dymit: Following Reconstruction and the First World War, there were many contrasting ideas as to the role of Black Americans in society and within the race itself; particularly in regard to the relationship between individual expression and debt to the collective in black art. This study is an examination of the direct effect this public discourse had on black artists and their audiences during the 1920's and how it impacted the construction of race. To illustrate the rhetorical significance of this tension, I will examine two texts: Home to Harlem, a novel by Claude McKay, and Body and Soul, a film by Oscar Micheaux, as well as several contemporary reviews of the texts. These texts demonstrate the forced response of the black artist to his racial constraints.

Holm: In her 1992 address, "A Whisper of AIDS," at the National Republican Convention in Dallas Texas, Mary Fisher touched many viewers' emotions as she spoke on the issue of HIV and the AIDS virus. Through a detailed analysis of a mother's plea, this essay explains how she embodied and used multiple personae to create awareness, tolerance, and unity to ultimately gain support for her mission: the safety and longevity of future generations. Because of persona's ability to expose genuine motives, undergo deliberation from other scholars, and pull on the emotions of all audiences, an analysis of personae offers a unique resource for rhetorical exploration.

Holm, Klinker: Stereotypical gender portrayals are prevalent in media today. The crime drama genre of television appears to especially portray stereotypical gender roles. According to Cultivation Theory, frequent viewing of crime dramas can create perceptions within viewers that these stereotyped gender roles are common and expected throughout society. The following content analysis looks at the extent to which stereotypical gender roles are present within the top three prime-time crime dramas. Results concluded that women are underrepresented in prime- time crime dramas, men are often portrayed as stronger and dominant, and women are portrayed as nurturing and hyper-sexualized. These findings show that prime-time dramas still depict stereotypical gender portrayals within a team setting where all members should, theoretically, play an important part. Suggestions for future research are offered.

Dols, Horn, Demissie, Liu: "Reel People Better Together: CSB-SJU" is a documentary created by the student group Interfaith Leaders (IFL) that explores religious diversity on our campuses through the stories of real people.

Jones, Gengel: This research explores the portrayal of males and females in music videos from the genres of country, pop, and hip hop in order to determine whether or not gender roles from previous research persist. Based on a sample size of 8 videos from each genre (24 videos total), we observed a wide range of criteria, including the gender of the lead and supporting characters, instances of objectification such as sexually explicit clothing and touching behaviors of each gender, and dominant or submissive behaviors of each gender for each video. We found that our data is mostly consistent with previous findings in that women are still underrepresented in lead roles, take on roles based on appearance rather than talent, and are sexualized, but not all our findings were consistent. The implications of our study through the lenses of Social Cognitive Theory, Cultivation Theory, and Objectification Theory suggest that these images are perpetuated and continue to be enforced or expected for women in society, and that the effects can be harmful to girls who desire to model themselves after the expectations in the videos.

Toering, Fenske: In the United States, women's fashion magazines can be purchased on nearly every street and found in a large portion of homes. These fashion magazines portray the ideal of feminine beauty for the millions of diverse women who read them. The majority of models used in advertisements for these magazines are Caucasian and they portray the Caucasian ideal of beauty. Yet, according to the 2010 census, just over 34% of the U.S. population identifies as non-white. Flipping through any of these magazines it is easy to see that models with colored skin are shown less frequently, in exotic poses or with very Caucasian features; whereas Caucasian men and women seem to dominate nearly every advertisement space for nearly every product.

This project was a content analysis of the portrayal of ethnic diversity in women's fashion magazine advertisements. The two top selling women's fashion magazines in the U.S. were analyzed for this report for the months of September and October 2012. We hypothesized that models of color would be portrayed according to current Caucasian stereotypes (the "Caucasian ideal"), and Caucasian females would be the primary ethnicity in these advertisements. Based on our research, the predominance of Caucasian models in the two leading U.S. women's fashion magazines shows there continues to be an inaccurate divide of ethnic portrayal. Possible consequences of this inaccurate portrayal include negative body image, lack of self-worth and the creation of a cultural standard that defines Caucasian beauty as the normal beauty.

Zhang: Phone mobilization was one of the most significant tactics the "Vote No" campaign utilized in its successful effort to defeat the marriage amendment last November. My observations as a volunteer for Minnesotans United For All Families corroborates the results from Nickerson's research that phone calls with good quality can be a cost effective way to raise awareness of the campaign as well as mobilizing voters.

Origer: This paper examines the importance of face to face contact in local political campaigns. This presentation will describe the author's experiences working with State House candidate Jeff Howe, and how his campaign tactics functioned to minimize political cynicism.

Wolgamott: My work on the campaign to elect Zachary Dorholt to the Minnesota State House of Representatives demonstrates the varying power of different forms of campaign communication. My project highlights the importance of civic engagement in local elections, as the campaign empowered volunteers to use political campaign communication to make a critical difference in an electoral outcome.

English

Schedule

2:00 - 2:10 PM *Quad 349*	Rebecca L. Dymit (Aric Putnam, English) Representation in the Harlem Renaissance
4:00 - 4:45 PM *BAC Colman Theater*	Joey J. Hamburger (Kaarin Johnston, English) Blind Date: Honor's Thesis

Gender & Women's Studies

Schedule

2:00 - 2:30 PM *BAC C108*	Brigitta C. Johnson (Carol Brash, Gender & Women's Studies) Mary's Role in Renaissance Paintings
3:00 - 3:15 PM *Quad 349*	Margaret C. Holm, Sydney A. Klinker (Erin Szabo, Gender & Women's Studies) Gender Portrayal in the Top Three Prime Time Television Crime Dramas

3:20 - 3:35 PM
Quad 349
Cassandra M. Jones, Jane C. Gengel (Erin Szabo, Gender & Women's Studies) Cross- Genre Gender Portrayals: A Content Analysis of Country, Pop, and Rap Music Videos

3:40 - 3:55 PM
Quad 349
Alison Toering C. Toering, Lisa Fenske (Erin Szabo, Gender & Women's Studies) Representation of non-caucasian models in Women's Fashion Magazines

4:00 - 4:45 PM
BAC Colman Theater
Joey J. Hamburger (Kaarin Johnston, Gender & Women's Studies) Blind Date: Honor's Thesis

Abstracts

Hispanic Studies

Schedule

Abstracts

History

Schedule

2:00 - 2:30 PM
BAC C108
Brigitta C. Johnson (Carol Brash, History) Mary's Role in Renaissance Paintings

2:10 - 2:20 PM
Quad 349
Margaret C. Holm (Emily Paup, History) A Mother’s Duty Presented in Personae: Mary Fisher’s Plea at the 1992 National Republican Convention

Philosophy

Schedule

2:00 - 2:20 PM *Quad 346*	Kate C. Johnson (Jean Keller, Philosophy) The Breakdown of Care
2:00 - 5:00 PM *Quad Q346*	Rita Allen, Cole Armitage, Megan Coleman, Rebecca Haile, Nick Hamel, Chris Heitzig, Dakota Huseth, Natalie Keane, Margaret LoBianco, Jack Michurski, Cole Minkel, Joe Nelson, Britt Ortmann, Lukas Ramsey, Abel Salazar, Josef Schlemper, Ben Schwamberger, Josh St. George, Alyssa Terry, Nick Thornton, August Tournay, Brian Waldron, Tanner Wright, Chendan Yan (Dennis Beach, Philosophy) Philosophy Department Presentations

Abstracts

Johnson: The moral theory referred to as care ethics claims that the essential elements of relationships and dependencies between individuals have moral significance. Care ethics strives to sustain and promote the welfare of these relationships by working to encourage both the well-being of the individual providing the care, often known as care-givers, and the individuals who are receiving the care, known as care-receivers. Care ethics often defines the term "care" as the practice and work which seeks to meet the needs of all individuals in these relationships and social networks, including both the self and others. In her work titled Moral Boundaries, Joan Toronto finds that the moral theory of care ethics has come to be typically privatized in western society. In her work, she outlines the moral boundaries and political dynamics of care relations. For example, Toronto often refers to the idea of care work, as work that is typically meant to benefit the social elite and already privileged members of society, work that is primarily women and minorities preform. In her discussion of care, Toronto breaks care down into several phases, including: caring about, taking care of, care-giving and care-receiving. Using, Tronto's phases of care, I will be evaluating how care has broken down in both the public and the private spheres of current western society, employing examples which I have gathered from my work as an intern at both Anna Marie's Alliance and Gray Plant Mooty Law Firm. For example, during my work as a women's support advocate at Anna Marie's Alliance one of the most prominent examples I experienced of the breakdown of care-receiving occurred when one of the residents decided to leave the shelter to return home to her abuser. Her decision to leave the shelter prominently displayed an instance in which an individual receiving care refused the services being provided. Although this example is only of several which will be examined to illustrate the various ways in

which care is breaking down, it is my hope to conclude with a revised proposition of care and how care could be better provided to encourage the well-being of all individuals involved in these important relationships.

Allen, Armitage, Coleman, Haile, Hamel, Heitzig, Huseth, Keane, LoBianco, Michurski, Minkel, Nelson, Ortmann, Ramsey, Salazar, Schlemper, Schwamberger, St. George, Terry, Thornton, Tournay, Waldron, Wright, Yan: Internship Presentation: Kate Johnson. Grant Plant Mooty Law Firm and Anna Marie's Alliance: Law, Social Services and Feminist Ethics.

Ancient Greek Culture & Thought Presentations.
(Each presentation will summarize and teach the main arguments of important secondary literature about Ancient Greece.)

• August Tournay, Brian Waldron, & Chris Heitzig: How Philosophers Saved Myths, by Luc Brisson.
• Megan Coleman, Abel Salazar & Cole Minkel: Greeks and the Irrational, by E.R. Dodds.
• Rita Allen, Josh St. George & Josef Schlemper. The Children of Athena, by Nicole Loraux.
• Britt Ortmann, Maggie LoBianco & Ben Schwamberger: Philosophy as a Way of Life, by Pierre Hadot.
• Chendan Yan, Natalie Keane & Alyssa Terry. The Fragility of Goodness: Luck and Ethics in Greek Tragedy and Philosophy, by Martha Nussbaum.
• Rebecca Haile, Nick Hamel, & Lukas Ramsey: Cunning Intelligence in Greek Culture and Society, by Marcel Detienne and Jean-Pierre Vernant.
• Tanner Wright & Joe Nelson: The Use of Pleasure (History of Sexuality, Volume 2), by Michel Foucault.
• Dakota Huseth, Cole Armitage & Jack Michurski: A War Like No Other: How the Athenians and Spartans Fought the Peloponnesian War, by Victor Hanson.

Theology

Schedule

1:00 - 1:30 PM	
BAC 104A	Laura C. Hey (Kari-Shane Davis Zimmerman, Theology) Criticisms of "The Jesus Seminar": Why a Lens of Faith is Necessary When Using Reason to Examine Scripture
3:00 - 4:30 PM	
Gorec 120	Angela M. Dols, Brenna L. Horn, Biruk A. Demissie, Yunya 1. Liu (John Merkle, Theology) Reel People Better Together: CSB-SJU

Abstracts

Hey: In this presentation, I will show that within the scholarly quest for the historical Jesus, one must cautiously approach the methodology employed by the Jesus Seminar, as the person of Jesus Christ cannot be examined solely through the lens of reason.

Natural Sciences Presentations:

Astronomy

Schedule

2:00 - 2:30 PM
PEngl 373 — Mary E. Sweet (Jennifer Schaefer, Astronomy) The control of crawling movement by interneuron circuits of the Drosophila larva

Abstracts

Sweet: The organization of the human brain is extremely complex. Therefore, scientists have relied upon model organisms like the fruit fly Drosophila melanogaster for nervous system studies, because these organisms are less complex and can be experimentally manipulated with genetic tools. In this study, we focus on fruit fly larval crawling behavior and how it can be altered by the manipulation of subsets of neurons that may be involved in generating crawling behavior. Eight subsets were tested and all of them were found to limit normal larval crawling behavior to some degree. The elucidation of these subsets will help us to better understand potential roles of neuron subtypes in neural circuits of the human brain.

Abstracts

Biology

Schedule

2:00 - 2:10 PM
PEngl 375 — Joseph D. Dooher, Ryan A. Schuth (Stephen Saupe, Biology) VARIATION OF PHOTOSYNTHESIS IN DIFFERENT DARK TREATMENTS

2:00 - 2:30 PM
PEngl 373 — Mary E. Sweet (Jennifer Schaefer, Biology) The control of crawling movement by interneuron

	circuits of the Drosophila larva
2:00 - 2:20 PM *PEngl 244*	Andrew T. Humbert (Bret Benesh, Biology) Testing a New Combination Therapy for Patients with Relapsed/Refractory Multiple Myeloma
2:10 - 2:20 PM *PEngl 375*	Emily T. Krulc, Maura A. Schumacher (Stephen Saupe, Biology) Effects of Gravitropism in Cucumber Seedlings
2:20 - 2:30 PM *PEngl 375*	Cory D. Anderson, Dylan Anderson (Stephen Saupe, Biology) Mung Bean display of Negative Gravitropism
2:30 - 2:40 PM *PEngl 375*	Caleb J. VandeWege, Sarah Yang (Stephen Saupe, Biology) Gravitropism and Phototropism in P. Sativum
2:30 - 2:40 PM *PEngl 375*	Cory D. Anderson, Dylan Anderson (Stephen Saupe, Biology) Mung Bean display of Begative Gravitropism
2:30 - 3:00 PM *PEngl 373*	Kelcey L. Kryzer (Clark Cotton, Biology) Cardiac Rehabilitation: The Road to Recovery
2:40 - 2:50 PM *PEngl 375*	Alexa R. Goetsch, Ali M. Niesen (Stephen Saupe, Biology) PHOTOTROPIC CURVATURE OF A RADISH PLANT ANALYZED BY A TIME LAPSE MOVIE
2:50 - 3:00 PM *PEngl 375*	Cody J. Groen, Chris J. Bach (Steve Saupe, Biology) Time Lapse Photography of Phototropism in Maize (Zea mays)
3:00 - 3:10 PM *PEngl 375*	Amanda C. Whebbe, Kelly J. Hanlon (Stephen Saupe, Biology) Analysis of Rate of Curvature in Cucumber Plant Stems due to Gravitropism via TimeLapse Video

3:00 - 3:20 PM
PEngl 373

Lonnica J. Johnson, Joe J. Dick (Gordon Brown, Biology) Invasive Shrubs and Alien Worms: the nutritional ecology of the nightcrawler, Lumbricus terrestris.

3:20 - 3:40 PM
PEngl 375

Michael J. Culshaw-Maurer (Steve Saupe, Biology) The Effects of Spout Diameter on Sap Yield in Maple Syrup Production

Abstracts

Dooher, Schuth: Studies have shown that leaves are affected by exposure to a dark treatment. Dark treatments result in early aging of leaves. This means that leaves slowly loose their ability to photosynthesize due to the degradation of pigments in the absence of light (Weaver and Amasino 2001; Mishev et al. 2011). This has important implications for general knowledge about plant's reaction to a changing environment.

The purpose of this experiment is to examine the rate of photosynthesis in mung beans that receive varying amounts of dark treatment. This will allow us to determine how quickly photosynthetic components of the leaves are inhibited by the absence of light. We hypothesize that photosynthetic rate will be inversely related to level of treatment.

Our experiment will have 4 treatments with a single control group. Each group will be composed of four mung bean plants. These plants will be grown in the St. John's green house for two weeks before measurements are taken. All developmental needs, such as water and fertilizer, will be kept uniform between groups. The control group will be left in the green house and allowed to experience normal day-to-day light and dark periods. The four treatments will consist of six, twenty four, forty eight, and seventy two hours of dark treatment. This treatment will be carried out in a container void of light, but open to gas exchange. Immediately after treatment is complete, rate of photosynthesis will be measured using the Li6400. The Li6400 measures photosynthetic rate by measuring rate of carbon dioxide absorption in the plant. The Li6400 will be set to a temperature of 25C, a flow rate of 300 mol s-1, and a CO2 concentration of 400 mol mol-1 with a full scrub. The measurements will be taken at photosynthetically active radiances of 1600, 1400, 1200, 1000, 800, 600, 400, 200, 100, 50, and 0 mol m-2s-1. We are currently in the growing phase of the experiment and will be able to discuss results on scholar ship and creativity day.

Humbert: Multiple myeloma, an incurable B-cell lymphoma, is the second most prevalent hematological disorder in the U.S. It affects nearly 20,000 people annually. There has been little development of successful new treatments for patients with multiple myeloma in the past few decades which is of particular concern given the majority of patients die within 5 years of diagnosis and that many of the current treatments result in high adverse effects. Angiogenesis has proven to be an important factor in the progression of multiple myeloma, thus targeting angiogenesis is believed to improve patient outcomes. This new combination therapy looks to target agents of angiogenesis (in particular Vascular Endothelial Growth Factor (VEGF)) to prevent cancer progression. The combination treatment used in this phase II clinical trial includes two drugs currently used together, lenalidomide and dexamethasone, paired with a new drug bevacizumab. Both lenalidomide and bevacizumab have been shown to inhibit VEGF though through different mechanisms. The combination of these drugs is believed to yield greater VEGF inhibition which in turn will prevent the progression of multiple myeloma and have more successful outcomes for patients. The statistical analysis study will include basic summary statistics to describe the demographics, confidence intervals using the Wilson score method to determine response rates and toxic responses to the treatments, survival analysis to determine overall survival and progression free survival rates, and an exploratory analysis using biological endpoints (VEGF, interleukin-6, macrophage inflammatory proteins) to determine any correlations between response and survival rates with these biomarkers.

Krulc, Schumacher: The purpose of our experiment was to study the response to gravity of a cucumber seedling through a time lapse video. This phenomenon, known as gravitropism, occurs when plants seek to orient themselves vertically. The shoot of a plant will grow upwards, against gravity while the roots of a plant will orientate themselves downwards, growing with gravity. We decided to use cucumber seedlings due to previous experiences with their hardiness and quick growth rate. After allowing for about two weeks growth time, the seedlings were large enough to clearly exemplify the effects of gravity.

Anderson, Anderson: MUNG BEANS DISPLAY OF NEGATIVE GRAVITROPISM

Dylan Anderson and Cory Anderson, Biology Department, St. John's University, Collegeville, MN 56321

The purpose of this lab was to investigate the effect of gravitropism in plants. We choose to observe and measure the rate of curvature, due to gravitropism, in Mung Bean plants in a 15 hour period. Gravitropism is a plant's natural response to gravity in growth causing the stem to grow up against the pull of gravity (negative gravitropism) and the roots to grow down, with gravity (positive gravitropism). Cell elongation is stimulated on the downward side of the stem by auxin. This growth hormone causes

the plant to bend, due to the pooling of auxin on the gravity vector stimulating growth in the stem, allowing the plant to grow up. We hypothesized that the Mung Bean plants, when laid parallel to the earth's surface, would curve up towards a 90 degree angle perpendicular to the earth's surface/ table's surface.

First we planted three test Mung Bean plants to measure the amount of time needed for germination and growth to occur to get them to useable size for our experimental video. We first planted our plants before long weekend (5 day break) and we were able to conclude that it would take between three and five days to grow the bean plants in the dark to get them to a useable size for our gravitropism video. We grew the beans in the dark to reduce the size of the cotelydens so they would not hamper our view of the stem curvature when filming. After long weekend we planted five pots each containing three of the Mung Bean seeds. We grew them in the growth chamber in complete darkness. After five days we picked our best looking bean plant to use in the filming of our video. We then set up a digital camera to take a photo every 30 seconds in the plant film room. Then we laid our plant parallel to the table top, turned on the camera, and made sure we focused the camera on the sight we thought would have the greatest curvature. We let the camera run for 15 hours of filming in the light. After the 15 hours were up we went back to the plant film room to collect our pictures.

We observed that gravitropism had in fact taken effect on the Mung Bean plants in the 15 hour cycle allotted for filming. In the beginning of the video the Mung Bean plant shows a very strong rate of horizontal to vertical curvature due to negative gravitropism. With that being said towards the end of the video we observed a very weak rate of horizontal to vertical curvature due to the bean plant being vertical position with the earth. These data, and observations supported our hypothesis and showed that gravitropism did in fact occur in the 15 hour period given for growth. The Mung Bean plant achieved the effects of negative gravitropism, growing perpendicular to the table top/earth's surface.

This suggests that the video made in this lab can be used to predict the rate of curvature for Mung Bean plants. The data are collected by comparing time and measuring the angle of the bean plant in ImageJ software. These data are then graphed and a line of best fit can be calculated to show the rate of curvature of Mung Bean plants. The rate of curvature was .3686 degrees per minute, the rate plateaued at 300 minutes, where is reached its 90 degree mark. The plant then started to fishtail back and forth between varying degrees. This we took as, phototropism because the plant had already righted itself vertically, and it being in a lighted room, was now seeking the most advantageous light for growth. We can conclude that gravitropism is essential for healthy plant growth, and is an evolutionary adaptation that keeps many plants in optimal position to obtain nutrients and light.

VandeWege, Yang: The purpose of this lab was to grow plants and use them to create and analyze a time lapse movie in regards to different plant growth abilities. We also wished to measure the rates of gravitropic and phototropic curvature in the plants. For our time-lapse project we chose to use pea plants (Pisum sativum) which can be grown easily and fairly quickly in the laboratory setting. We grew multiple plants and chose the healthiest individuals to use in our movie production. We set up two different time lapse image capture stations in order to observe both phototropism and gravitropism. Both gravitropism and phototropism relate to the plants ability to bend toward a light source or straighten itself when not vertical. Our hypothesis was that the plants would bend toward the light if the light source were placed in a different orientation, and the plants would grow up if placed on their sides with a normal light source above them.

For the observation of gravitropism and phototropism in pea plants we planted eight canisters with three peas each. When the peas began to grow we thinned each canister down to one plant each. After we had grown them for 10 days they were large enough for us to begin recording our time lapse video. We recorded these phenomena in a dark room in order to prevent other light sources from affecting the peas. We recorded the gravitropism in the pea plants by placing two pea plant canisters on their sides under a standard lamp as a light source and observing their growth. For phototropism we set two pea plant canisters in a dark chamber with a light source located to the right of the plants, oriented horizontal to the plants, or at a ninety degree angle from the plants' stems. We used a digital camera to record our time-lapse video for gravitropism and a digital web cam for the phototropic plants. Each set up was prepared so that the cameras would take a picture every minute for a 24 hour time span. After gathering the data images, we created and analyzed the videos.

The video images showed the pea plants growing towards their light source, with the gravitropic plants curving upward and the phototropic plants curving toward. The time lapse images were used to evaluate the amount and rate of curvature of the peas throughout the 24 hour period. The video clips were edited to use every tenth frame and were played at half speed in order maximize visualization of the plant's growth and increase video quality. The phototropic peas responded well to the light source, with three main leaf features tilting 62.55 degrees, 70.79 degrees, and 93.65 degrees toward the light source. Average curvature, or tilt change, of the pea plants was 75.66 degrees with an average tilt of 0.051 degrees per minute. For the gravitropic peas the average rate of curvature was 0.106 degrees per minute, curving from 152.14 degrees (almost horizontal) to -16.74 degrees from straight up.

In conclusion, our hypotheses appear correct in that the pea plants curved upward toward the light source when placed on their sides and tilted toward the light source when the light struck from one side. The pea plants responded both gravitropically and phototropically depending on

their orientations and the orientations of the light sources. The rates of curvature were different for the pea plants for the different environments, with the gravitropic peas responding faster, 0.106 degrees/min vs. 0.051 degrees/min. Further study could determine whether gravitropic responses would be consistently faster than phototropic responses, or if our data were a result of the specific leaves measured or the individual plants.

Anderson, Anderson: A short video of a mung bean plant displaying negative gravitropism will be presented.

Kryzer: The CentraCare Heart and Vascular Center at the St. Cloud Hospital plays a key role in diagnosing patients with cardiac disease as well as rehabilitating patients who have suffered a heart attach and undergone angioplasty of bypass. During my internship, I was able to work in the stress lab, as well as the inpatient and outpatient cardiac rehabilitation center. My presentation will include a brief overview of heart anatomy and physiology, followed by detailed accounts of my observations and the techniques and skills I learned in these clinical settings. The purpose of this presentation is to share the experience that I had at the CentraCare Heart and Vascular Center and the knowledge I gained during my time there.

Goetsch, Niesen: PHOTOTROPIC CURVATURE OF A RADISH PLANT ANALYZED BY A TIME LAPSE MOVIE

Alexa Goetsch & Ali Niesen, Biology Department, College of Saint Benedict/ St. John's University, Collegeville MN 56321

The purpose of this project was to create and analyze a time lapse movie to measure the rate of phototropic curvature of a specific plant. A time lapse video was used in order to capture the slow moving phenomenon that cannot be captured by the naked eye. By taking multiple pictures over a specific amount of time, one is able to see how the plant responds and is able to measure the rate of phototropic curvature.

The phenomenon we studied was the phototropic curvature of a radish plant. Phototropism is a growth response to light. A plant that grows toward a light source is known as a positively phototactic plant while a plant that grows away from a light source is known as a negatively phototactic plant. Most plants are positively phototactic and grow towards a light source when their chemical auxin reacts in its cells and elongates them. The plant then curves toward the light source due to its light-liking hormone auxin. The auxin hormone is located in areas of the plant that are in the darkness which causes the areas in the light to curve while the rest of the plant is growing in size. Auxin also decreases the pH, making the plant more acidic and easier to break down bonds in the cell. The breaking of bonds affects the cellulose in the cell walls and causes

strength of the wall to decrease and eventually curve towards the light source.

We studied this phenomenon by planting three radish containers to film for our time lapse movie. Three radish seeds were placed in each of the three film containers for growth. Fertilizer and soil was added appropriately and they were watered for approximately two weeks to reach germination for our movie. They were thinned to only one seed each and the most successful plant was used for the movie when the stem was two inches in height. Before filming the movie, the radish plant was vertically up and down and there was no curvature seen in the stem. We then placed the radish plant in a dark room that was unoccupied for eight hours. There was a constant light source present that was one foot away from the radish plant. A digital camera took a picture of the radish plant every thirty seconds for eight hours. When we returned to the radish plant, there was evident curvature and the results of the pictures taken supported our phenomenon. We then analyzed our movie using ImageJ to measure the degrees of curvature that the plant exhibited over time. The degrees were then used to create a graph that showed the rate of curvature verses time of our radish plant.

The results of curvature supported our phenomenon of phototropism. We can conclude that radish plants exhibit positive phototropism and that curvature of the stem will occur towards a light source.

Groen, Bach: A time lapse video was created and analyzed of phototropism in etiolated maize seedlings. Phototropism is the response of a plant, the form of growth, towards a light source. Plants were treated in an enclosed dark-box to filtered red light and blue light, respectively. It was hypothesized that maize plants treated with filtered red light would exhibit less reaction to light than those treated with blue light. Images were uploaded to Image Analysis software, and movement was measured for both sets of plants. Our hypothesis was not supported. It was found that maize plants exhibit phototropism responses to both red light and blue light.

Whebbe, Hanlon: The purpose of this study was to observe the effects of the gravitropism phenomenon on cucumber plant seedlings, as well as to determine the rate of curvature (degrees/minute) of the seedlings' stems. Gravitropism is the phenomenon exhibited by plants and many fungi in which the organisms' growth responds to gravity. In our case, plant seedlings laid on they sides should exhibit gravitropism by growing upwards, at approximately a ninety-degree angle.

In order to complete this study, four sets of two cucumber seeds were plants in film canisters. The cucumber seeds were packaged by the Farmer and Seed Nursery Co. in 2011. The seeds were germinated in after about two days under growth lights and were grown for another five days afterwards. Once the seedlings had sprouted only their cotyledons and

were about an inch above the top of the film canister at their tallest point, two seedlings were placed on their sides and held in position by ring clamps. Using a Nikon Coolpix digital camera, photos of the two cucumber seedlings were taken every thirty seconds for fifteen hours, or 900 minutes. These photos were compiled into a time lapse film, which was then analyzed via the Image J program. The angle of curvature, from the base of the seedling to the tip of the hypocotyl, was measured at various intervals using Image J for both seedlings. The curvature (degrees) was averaged between the two seedlings and plotted against time (minutes) and a best-fit trend line was added to the plot.

Our results show that, on average, the cucumber seedlings had grown 81.53 degrees upward after 900 minutes. The rate of curvature, which was determined from the slope of best-fit trend line of the average curvature (degrees) versus time (minutes), was found to be 0.0844 degrees per minute. Moreover, the correlation coefficient, R2, of time and average curvature was 0.78067, a fairly high correlation. This indicates that the seedlings moved at a relatively stable rate. However, according to Figure 1, the seedlings moved more quickly earlier on, and after about 300 minutes, the rate slowed. This likely occurred because, according to the phenomenon of gravitropism, plants generally "want" to grow upwards, towards a light source. Therefore, after the seedlings neared a ninety degree increase, the rate of growth slowed down, as the seedlings were almost growing completely upward.

Our results suggest that cucumber plants clearly exhibit gravitropism. Moreover, they also suggest that cucumber seedlings will grow and move about 0.08 degrees per minute upward when placed on their sides. Furthermore, our results seem to indicate that plants, at least cucumber plants, will grow display gravitropism growth only until their apical meristems are pointing directly upwards, or rather, if they are placed on their sides, they will only grow upwards about 80 to 90 degrees. This is likely due to the fact that, usually, a plant's light source, whether that is the sun or grow lights, is directly above the plants.

Johnson, Dick: We wanted to determine whether the nightcrawler, a native of Europe, exhibited higher growth rates when consuming litter of two locally common invasive shrubs (European buckthorn and Tatarian honeysuckle). We fed nightcrawlers diets of locally collected leaf litter consisting of 0%, 15%, 45%, 75%, or 100% invasive litter by mass. After three weeks, we determined the relative growth rate of earthworms feeding on each mixture, and compared these growth rates using analysis of variance.

Culshaw-Maurer: In any maple syrup production, the maximization of sap yield is critical in maintaining a profit margin and keeping the production in business. While many uncontrollable aspects such as soil quality and weather play major roles in sap yield, there are many aspects that can be altered to maximize yield. One such aspect is the diameter of

the spouts tapped into the trees. Traditional spouts are 7/16" in diameter, but an alternative 5/16" spout is used in some cases. Several studies have demonstrated that in vacuum systems, spout diameter has little effect on sap yield, while fewer studies have been done on gravity systems, such as the system in St. John's Arboretum. Traditional knowledge suggests that a smaller diameter spout will yield less sap per spout, as the smaller cross-sectional area will tap into less xylem carrying the sap. My study is two-fold, with the main portion being dedicated to examining the sap yield in the full scale of the Arboretum's production by measuring sap yields in large collecting barrels. Additionally, a small-scale study will be conducted using side-by-side taps on single trees, with a 7/16" tap and a 5/16" tap on each tree. Results will be discussed.

Chemistry

Schedule

1:00 - 2:00 PM	
ASC 104	Haosen Wang (Brian Johnson, Chemistry) Synthesis and Characterization of A Biomimetic Model of the Tricopper Binding Site of Multicopper Oxidases
2:00 - 2:20 PM	
PEngl 244	Andrew T. Humbert (Bret Benesh, Chemistry) Testing a New Combination Therapy for Patients with Relapsed/Refractory Multiple Myeloma

Abstracts

Wang: This research employs the principles of bioinorganic modeling, simplifying the extraneousstructures of the molecule being mimicked and focusing only on the active components of the large biological molecules. Specifically, this project attempts to mimic the structure and reactivity of tri-copper active sites found in Multi-copper Oxidises, such as Laccase andCeruloplasmin, that bind with oxygen and reduce it to water. After experimenting with various other structures that failed to mimic the active sites, we selected another potential ligand, 1,3,5-tri(2-pyridylmethyltriazole)-2,4,6-triethyl benzene, abbreviated Ltapma, to be the Cu binding scaffold for this research to bind with three Cu(I) ions and then to bind with oxygen molecules. This project devised new procedures to synthesize and purify alkyne 13 and Ltapma. Cu binding and oxygen binding were attempted, and data shows evidence of binding but more data need to be collected before we could arrive at a decisive conclusion on their binding patterns.

Computer Science

Schedule

2:00 - 2:20 PM
PEngl 244
Andrew T. Humbert (Bret Benesh, Computer Science) Testing a New Combination Therapy for Patients with Relapsed/Refractory Multiple Myeloma

2:30 - 2:50 PM
PEngl 244
Christopher J. Roering (Sunil Chetty, Lynn Ziegler, Computer Science) Coding Theory-Based Cryptography: McEliece Cryptosystems in Sage

3:00 - 3:20 PM
PEngl 244
Benjamin D. Seefeldt (Michael Heroux, Computer Science) A Degree of Freedom Manager for Multiphysics Simulation with Performance Analysis

3:30 - 3:50 PM
PEngl 244
Brandon T. Hildreth (Mike Heroux, Computer Science) The Performance of Data Segmentation on a NUMA Parallel System

4:00 - 4:20 PM
PEngl 244
Jacob Hemstad (Michael Heroux, Computer Science) Optimizing Parallel Computing for Non-Uniform Memory Access Machines

4:30 - 5:00 PM
PEngl 244
Anthony R. Ohmann (Imad Rahal, Computer Science) Efficient Plagiarism Detection: IPPDC

Abstracts

Roering: Unlike RSA encryption, McEliece cryptosystems are considered secure in the presence quantum computers. McEliece cryptosystems leverage error-correcting codes as a mechanism for encryption. The open-source math software Sage provides a suitable environment for implementing and exploring McEliece cryptosystems. Using our Sage implementation, we explore McEliece cryptosystems and methods of attacking its encryption.

Seefeldt: Parallel programming allows for the efficient solving of many problems, including those in the domains of physics and engineering. One

particular set of problems relies upon the use of the finite element method to solve partial differential equations. Panzer provides a set of software tools to solve large problems in this domain utilizing the power found through large numbers of processors. As part of these solutions, a large, distributed grid must be uniquely
numbered and indexed. This problem is further complicated by the varying sizes, shapes, and patterns present on the grid. The degree of freedom manager solves this problem through the use of a compelling algorithm which is applicable to a wide number of different applications. Additionally, performance concerns later in the use of the degree of freedom are also important to consider when ordering elements locally, and can have a dramatic effect on the speed of later steps. This algorithm is an extremely effective way to leverage powerful data structures and communication primitives found in Trilinos.

Hildreth: Parallel computing is an ever growing field in computer science that is used in everything from cross-discipline research to consumer goods, and because of this it is important to study the efficiency of parallel systems and methods. This talk will examine storage and execution techniques of matrix vector operations involved in the Conjugate Gradient Method on a parallel, non-uniform memory access (NUMA) aware system. In order to fully take advantage of the NUMA memory system, various attempts of segmenting the data are explored. This idea of segmenting becomes complicated when we perform matrix vector computations. Because our data is evenly divided among the various regions of memory, the multiplicative vector must be carefully constructed so as to minimize non-local memory accesses for any given thread. Because accessing the multiplicative vector is the most expensive part of the computation, several designs for this vector are examined.

Hemstad: The advent of multicore parallelism arose because of the diminishing returns of producing single core chips with increasing clock speeds. Power consumption and quantum effects put a hard limit on how small and fast we can make chips--so the obvious thing to do is use more than one. This is parallel computing at its most basic, using more than one computing element to solve a problem. There are countless variations on that simple theme, one of the most basic is having multiple cores and a shared pool of memory. As it turns out, one cannot simply add more cores and memory without costs. One way to minimize these costs is a design strategy known as non-uniform memory access (NUMA). It mitigates other design costs by building the system so each core has fast access to parts of the memory and slow access to the rest. This presents interesting design problems to try and keep data needed by a processor in memory it can access quickly. I will be discussing how I structured matrix vector multiplication to be optimized for a non-uniform memory access environments.

Ohmann: Vast amounts of information available online make plagiarism increasingly easy to commit, and this is particularly true of source code. The traditional approach of detecting copied work in the course setting is manual inspection. This is not only tedious but will typically miss code plagiarized from outside sources or even from an earlier offering of the course. Systems to automatically detect source code plagiarism exist but tend to focus on small submission sets. One such system that has become a standard is MOSS (measure of software similarity).

We present a system called IPPDC for Intelligent Parallel Plagiarism Detection using Clustering which is empirically shown to outperform MOSS in detection accuracy. By utilizing parallel processing and document clustering, our system is also capable of maintaining detection accuracy and reasonable runtimes even when using extremely large data repositories.

Mathematics

Schedule

2:00 - 2:20 PM *PEngl 244*	Andrew T. Humbert (Bret Benesh, Mathematics) Testing a New Combination Therapy for Patients with Relapsed/Refractory Multiple Myeloma
2:30 - 2:50 PM *PEngl 244*	Christopher J. Roering (Sunil Chetty, Lynn Ziegler, Mathematics) Coding Theory-Based Cryptography: McEliece Cryptosystems in Sage
4:30 - 5:00 PM *PEngl 244*	Anthony R. Ohmann (Imad Rahal, Mathematics) Efficient Plagiarism Detection: IPPDC

Abstracts

NATS

Schedule

2:00 - 2:20 PM *PEngl 244*	Andrew T. Humbert (Bret Benesh, NATS) Testing a New Combination Therapy for Patients with Relapsed/Refractory Multiple Myeloma

Abstracts

Nursing

Schedule

2:00 - 2:20 PM
PEngl 244
Andrew T. Humbert (Bret Benesh, Nursing) Testing a New Combination Therapy for Patients with Relapsed/Refractory Multiple Myeloma

2:30 - 3:00 PM
PEngl 373
Kelcey L. Kryzer (Clark Cotton, Nursing) Cardiac Rehabilitation: The Road to Recovery

Abstracts

Nutrition

Schedule

2:30 - 3:00 PM
PEngl 373
Kelcey L. Kryzer (Clark Cotton, Nutrition) Cardiac Rehabilitation: The Road to Recovery

3:40 - 3:55 PM
Quad 349
Alison Toering C. Toering, Lisa Fenske (Erin Szabo, Nutrition) Representation of non-caucasian models in Women's Fashion Magazines

Abstracts

Physics

Schedule

2:00 - 2:30 PM
PEngl 167
Andrew J. Yost (Todd Johnson, Physics) Calibration of linearity comparing piezo voltage and laser frequency change using the hyperfine structure of rubidium-87.

Abstracts

Yost: The method of saturated absorption spectroscopy was used to observe the hyperfine structure of one of rubidium-87's excited states. Each frequency of light carries its own discrete amount of energy. If this light's energy matches the difference between two energy states in an atom, the atom will absorb the light and excite to the higher state. In this experiment, a diode laser was tuned to match the energy difference between rubidium-87's energy states, 5S □ 5P. One component used to change the laser's frequency was to change the voltage applied to a piezo crystal. To perform a calibration of linearity comparing the piezo voltage to the laser frequency change, the measured frequency splittings between absorption lines and the known values were compared.

Social Sciences Presentations:

Accounting & Finance

Schedule

1:00 - 1:15 PM *Simns 310*	Gregory M. Thelen (Warren Bostrom, Accounting & Finance) How do today's lending practices differ from those in place before the 2008-2009 mortgage crisis?
1:00 - 1:15 PM *Simns 310*	Erin C. Lanz (Warren Bostrom, Accounting & Finance) The Effect of Economic Conditions on Acquisition Premiums
1:00 - 1:15 PM *Simns 310*	Yifei Huang (Warren Bostrom, Accounting & Finance) The Relevance of Leverage Ratios and Capital Structure on Commodity Companies' Credit Ratings
1:00 - 1:15 PM *Simns 310*	Edwar D. Mielke (Warren Bostrom, Accounting & Finance) Switzerland has limited executive compensation: Is America next?
1:00 - 1:15 PM *Simns 310*	David G. Gurewitz (Warren Bostrom, Accounting & Finance) The Affects of Sarbanes Oxley Act on Audit Related Fees
1:00 - 1:15 PM *Simns 310*	Matt D. Hauer (Warren Bostrom, Accounting & Finance) Governmental vs. Public Company Audit Quality
3:00 - 3:15 PM *Simns 310*	Kevyn R. Smith (Warren Bostrom, Accounting & Finance) How a Collective Bargaining Agreement can Impact an Organization's Success
3:00 - 3:15 PM *Simns 310*	Daniel S. Swanson (Warren Bostrom, Accounting & Finance) Analyzing similarities in the many corporate fraud cases

3:00 - 3:15 PM *Simns 310*	Maojie Sun (Warren Bostrom, Accounting & Finance) How fraud affect company's sharing price?
3:00 - 3:15 PM *Simns 310*	Jamal S. Reid (Warren Bostrom, Accounting & Finance) “What is the most common type of corporate fraud?”
3:00 - 3:15 PM *Simns 310*	Yixi Chen (Warren Bostrom, Accounting & Finance) Frequency of Fraudulent Reporting under GAAP and IFRS
3:00 - 3:15 PM *Simns 310*	Daniel T. Pesek (Warren Bostrom, Accounting & Finance) Detection & Prevention of Fraudulent Accounting Activities
5:00 - 5:15 PM *Simns 310*	Alex T. Hengel (Warren Bostrom, Accounting & Finance) How will entity formations change if the corporate tax rate is lowered?
5:00 - 5:15 PM *Simns 310*	Alexandra L. Sundlof (Warren Bostrom, Accounting & Finance) Impact of stock-based compensation on performance
5:00 - 5:15 PM *Simns 310*	Charlie P. Ward (Warren Bostrom, Accounting & Finance) Socially Responsible Investing
5:00 - 5:15 PM *Simns 310*	Shazreh Ahmed (Warren Bostrom, Accounting & Finance) MN Tax reform proposal – Lower taxes equals more business
5:00 - 5:15 PM *Simns 310*	Kevin P. Blackley (Warren Bostrom, Accounting & Finance) A study of the long-term advancement and salary impacts of leaving public accounting at various levels.
5:00 - 5:15 PM	

Simns 310	Erin M. Sattervall (Warren Bostrom, Accounting & Finance) A study on using segment information to predict goodwill impairment
7:00 - 7:15 PM	
Simns 310	Andrew J. de St. Aubin (Warren Bostrom, Accounting & Finance) Healthcare Reform- Change is Coming in Bundles
7:00 - 7:15 PM	
Simns 310	Collin R. Baker (Warren Bostrom, Accounting & Finance) How do sustainability costs affect higher education?
7:00 - 7:15 PM	
Simns 310	Thu Trang T. Tran (Warren Bostrom, Accounting & Finance) The Grameen Bank Micro Finance Institution Model and its applicability in the context of South Africa.
7:00 - 7:15 PM	
Simns 310	Steve F. Steichen (Warren Bostrom, Accounting & Finance) Effect of Obamacare on Business
7:00 - 7:15 PM	
Simns 310	Xiaoqi Tian (Warren Bostrom, Accounting & Finance) Additional costs for companies to fill an international position with an expatriate
7:00 - 7:15 PM	
Simns 310	Thalia S. Thurston (Warren Bostrom, Accounting & Finance) The Impact of Global Outsourcing

Abstracts

Thelen: The United States recently underwent a financial crisis and a big part of that was the mortgage industry. Banks were giving mortgages to consumers who were not qualified to receive these loans and who eventually could not pay back their mortgages. No one questioned the integrity of these loans because it initially created a boom in the economy. It became clear that lending standards that bank's had were not protecting the consumers and because of that, were greatly harming our economy. My research will explore how lending standards have changed since the mortgage crisis of 2008 and 2009.

Lanz: When one is interested in acquiring a company a purchase price must first be determined. The purchase price is determined considering a

number of factors, but is primarily based on the enterprise value of the company being acquired and a premium. The enterprise value is the hypothetical amount needed by the acquiring individual or company to purchase every share of each type of stock and all outstanding debt. The amount over this value, the premium, takes into account goodwill—the intangible benefits that will come through the acquisition. My research will explore how the determination of this premium will change in relation to economic conditions.

Huang: Credit ratings are forward-looking opinions about credit risk. Maintaining a particular rating level provides benefits to a firm, such as commercial paper access or access to a broader bond investor pool. A firm's leverage ratios and capital structure are commonly considered by professionals as the main factors that will trigger either an upgrade or downgrade. The purpose of the research is to explore how the changes in commodities companies' leverage ratios and capital structures affect changes in credit ratings, and what factor has the most relevance to the changes, using financial analyses and rating agencies' guidelines.

Mielke: My research for this project centers on the question: Are top executives really worth all that money? A new bill in Switzerland just passed, giving shareholders the right to vote on compensation packages for executives. Would shareholders of American companies vote to increase executive pay? Would this bill thwart our capitalistic economy? In my research I hope to find a correlation between company performance and compensation, dive into popular compensation plans, and finally provide a feasible solution to properly pay executives based on their companies' performance.

Gurewitz: Recent corporate scandals such as Tyco, WorldCom, and Enron shook the public investor's confidence tremendously. As a result Congress passed a new law called the "Sarbanes Oxley Act." This act requires public companies to comply with numerous rules, guidelines, and regulations. This Act, implemented in 2002, also had a great impact on accounting firms. These firms now had to ensure themselves that their clients were adhering to the increased compliance rules while fairly stating their financial statements. My research will explore how this act impacted accounting firms, not only in their due diligence within their audits, but with how their audit related fees increased as well.

Hauer: Governments hold public companies to very high standards in regards to their financial statements. These statements must be rigorously audited with strict standards. Government entities on the other hand are audited using a different set of standards than public companies. My research will explore if government audits are receiving as high quality audits as public companies.

Smith: In 1970, the National Basketball Association (NBA) finally recognized the Nation Basketball Players Association (NBPA) as a legitimate union, and negotiated a collective bargaining agreement. This agreement is a contract between the NBA and the NBPA that outlines the rules on how teams contract their players. These rules have a significant impact on the success of the team. My research will use the NBA as a case study to show how the rules competitive balance and how other unions can learn from how the NBA's agreement is set up.

Swanson: Fraud has been a large issue with public companies in the recent years. These fraud cases happen for various reasons. Many times, these fraud cases use similar tactics and thus have similar outcomes. My research will explore the similar why's and how's of these fraud cases and determine which occur most frequently. Examples of the fraud cases include Enron, WorldCom, and Tyco.

Sun: My research question is how fraud affect Company's sharing price. Since the concept of materiality is particularly crucial in the field of accounting, there is a need to include materiality level in order to evaluate how much a fraud can affect company's sharing price. Therefore my research will focus on some smaller/medium fraud and compare the fraud costs to the revenue and look at the sharing price when the fraud was disclosed, and now I am thinking to make a scatter chart and gather my data together, and see at what range/level a fraud can affect company's sharing price.

Reid: Collusion can normally be defined as a secret agreement between two or more parties for a fraudulent, illegal, or deceitful purpose. Knowing this, my research sets out to discover the most prevalent form of collusion that corporations commit, while highlighting how audit teams commonly discover the many ways fraud is committed. This goal will be accomplished through the examination of various financial statements, audit reports, court findings, and news reports.

Chen: In evaluating and auditing financial statements accounts, accountants and auditors often need to exercise a lot of professional judgments. All these judgments create room for intentional overestimation, underestimation, or fraud. A rule based accounting system has elaborate rules on what is allowed and what is not. In contrast, a principle based accounting system has less detailed guidance and require more judgments. GAAP is more of a rule-based accounting system while IFRS is a principle-based accounting system. It is interesting to find out whether people would commit more financial reporting fraud if they are given additional freedom of judgment. My research would focus on the frequency of fraudulent reporting under the two systems. This can be measured relatively easily by looking at the financial statement restatement rates of large corporations that either adapt GAAP or IFRS. I

would also look into the types of financial statement accounts that incur restatement most often. By identifying the effects on fraudulent reporting under GAAP and IFRS, one can get an idea of pros and cons of principle-based and rule-based accounting systems. My research would likely have implication on the convergence project of GAAP and IFRS for determining whether or not we should maintain more GAAP rules.

Pesek: Accounting fraud has been a relevant topic over the past few decades as the accounting community continues to make strides to reduce its occurrence. There are three different types of accounting fraud: Asset Misappropriation, Bribery & Corruption, and Fraudulent Financial Statements. Of these, asset misappropriation is by far the most common but fraudulent financial statements are the most expensive and are capable of causing the most harm to companies and their stakeholders. My research will first analyze five companies that have committed fraud in the past and look for measurable similarities. These measurable similarities will include: Type of fraud, true independence of auditors, independence of board members, and comparing cash flows, to revenue and income. My hope is to determine some common characteristics of fraudulent accounting activity in order to be better able to identify and prevent it in the future.

Hengel: The taxation of a business entity varies based on the legal formation of that company. Some entities are taxed directly – such as corporations, whereas other entities shift their income to their owners who are then taxed – such as partnerships, limited liability companies, and sole proprietorships. With President Obama's desire to lower the corporate tax rate from 35% to 28%, in conjunction with the increase in the highest individual tax rate to 39.6%, some flow-through entities may switch their business formation to take advantage of the lower corporate tax rate. My research will explore the likelihood of this transformation, as well as the potential impact it may have on the federal government's ability to raise revenue.

Sundlof: Public companies may choose to offer compensation to employees in the form of stock in the company. This is called stock-based compensation, and typically executives at the company have a higher percentage of this type of compensation than other employees. The idea behind stock-based compensation is that it provides an incentive for employees to perform better since they have a personal financial interest in the company. My research will explore how stock-based compensation affects a company's performance, if at all. In researching this question, I will gather data from companies' 10-Ks and proxy statements. The results of my research could be helpful for decision-makers within public companies who are contemplating the value of offering stock-based compensation.

Ward: The primary purpose of publically traded companies is to maximize shareholder wealth. Oftentimes this comes with a price such as destruction of the environment, human rights violations, unjust labor practices, or even unsafe products. Many investors do not take time to research the companies they invest in because they are only concerned with seeing financial returns. However, there are companies which are deemed to be socially responsible, meaning that they are concerned with achieving financial returns and social good. My research will analyze the returns of socially responsible companies vs. those that aren't and compare those returns to the S&P 500 Index as a whole to see if socially responsible investing is profitable.

Ahmed: MN currently has one of the highest corporate income tax rates in the country at 9.8%. This may be a deterrent towards companies wanting to invest in MN's economy. Corporate income tax only accounts for 3% of the total state revenue, therefore my research would focus on lowering the corporate tax rate for business owners and highlight the effects it will have on the economy. In my proposal the compensating revenue for the state would be achieved by broadening the sales tax. Currently services and clothing are not taxed in MN. My research would further model the broadening of the sales tax and how that can compensate for the lost revenue in corporate tax. In both these cases, I will emphasize what effect the change in rates will have on the total taxable base and it will conclude if this tax reform will be favorable or unfavorable for the state.

Blackley: Many accountants start their careers in public accounting and most plan to stay for a short amount of time. There has been much debate on when the right time is to leave public accounting. Leaving public accounting at various times has advantages and disadvantages. My research will focus on the transition phase out of public accounting as well as the salary impact of leaving at various levels.

Sattervall: Goodwill impairment is a major concern in the corporate world and can lead to large losses on companies' financial statements. These losses can impact not only companies, but can greatly affect current and future investors as well. If impairment could be predicted investors could make wiser investing decisions and companies could potentially avoid recording material losses. My research will analyze whether financial statement users can use segment information provided in financial statements in order to predict goodwill impairment and will determine which factors within the segment information are of the most importance.

de St. Aubin: Over the last sixty years healthcare costs as a percentage of a person's income have more than quadrupled. Historically, payment for medical services was either through fee-for-service or capitation.

Capitation provides a lump sum of care for each individual. This puts all the responsibility on the provider to keep costs low, which resulted in a lower quality of care for patients. Fee-for-service is what most people are familiar with today. Providers are paid for services performed from an insurance company, the government, or the individual receiving the care. However, this has lead to inefficiency in the care process and is considered the main contributor to the rising costs of healthcare. Healthcare organizations hope to blend these payment methods together and receive payment in the form of bundles. Bundle payments would pay for all the care relating to a specific treatment or condition. My research will explore whether bundle payments will increase patient care and decrease patient costs. Also, I will research when companies should recognize the revenue received from a bundled payment.

Baker: Universities continue to commit and support the sustainability movement. My research will be identifying sustainability costs of different universities and comparing that to university revenues to find out the true investment/ratio of sustainability. I will use this information to identify trends affecting the costs of higher education.

Tran: In the battle against poverty, Micro Finance Institutions have made enormous positive progress in developing countries such as Bangladesh, India, Indonesia, Chile, etc. Since Muhammad Yunus won the Nobel Peace Prize in 2006 with the Grameen Bank Model, more and more attention had been paid to studying the impacts of MFIs on disadvantaged communities. However, scholars, governments and non-profit organizations have had a hard time evaluating MFI 's success due to their impacts in both quantitative and qualitative terms. Using the framework proposed by Maria Otero and Elisabeth Rhyne, I will examine Grameen Bank Model's success and its applicability in the context of South Africa.

Steichen: In 2010 President Obama passed a bill known to the public as Obamacare. The goal of this bill is to make sure all Americans are covered by health insurance. It tries to accomplish this goal by requiring all businesses to provide health insurance to all of its employees. It also lowers the health insurance costs to individuals by prohibiting insurance companies from raising prices for people based on gender or pre-existing conditions. My research will explore the effect of Obamacare on businesses from a financial perspective. Some business will only be minimally affected, while others could potentially be put out of business by the requirement to provide health insurance to their employees.

Tian: As business environment has become more global, companies set up facilities in different foreign countries in order to remain competitive. In this regard, an increasing number of employees are sent by companies on overseas assignments for various lengths of time; we refer to these

people as expatriates. However, by taking into consideration tax equalization, cost of living expenses, health insurance, etc., such overseas assignments can potentially generate additional costs for companies. My research will explore the amount of such additional costs for companies to fill an international position with an expatriate.

Thurston: Over the past 3 decades, a major shift has occurred around the world. Now, national borders to trade, investments, and production are diminishing as we experience major advances in transportation and telecommunication technology. Many important business functions such as, accounting, customer support, web design, computer programming, and manufacturing, are being outsourced internationally. My research will explore the impact of offshore outsourcing on the U.S. economy. Additionally, I seek to find out whether long-term outsourcing practices are beneficial or detrimental to an economy by comparing the economies of countries, which outsource heavily to those that rarely outsource.

Economics

Schedule

Abstracts

Education

Schedule

Abstracts

Entrepreneurship

Schedule

4:00 - 4:45 PM	
BAC Colman Theater	Joey J. Hamburger (Kaarin Johnston, Entrepreneurship) Blind Date: Honor's Thesis

Abstracts

Exercise Science and Sport Study

Schedule

2:30 - 3:00 PM	
PEngl 373	Kelcey L. Kryzer (Clark Cotton, Exercise Science and Sport Study) Cardiac Rehabilitation: The Road

to Recovery

Abstracts

Global Business Leadership

Schedule

Abstracts

Military Science

Schedule

Abstracts

Peace Studies

Schedule

3:00 - 4:30 PM
Gorec 120 — Angela M. Dols, Brenna L. Horn, Biruk A. Demissie, Yunya 1. Liu (John Merkle, Peace Studies) Reel People Better Together: CSB-SJU

Abstracts

Dols,

Political Science

Schedule

2:00 - 3:00 PM
Simns G40 — Eric Schilling (Scott Johnson, Political Science) A Case Study of Minnesota Senator Amy Klobuchar and London Member of Parliament Emily Thornberry

2:00 - 3:00 PM
Simns G40 — Ian R. Goldsmith (Scott Johnson, Political Science) Welfare Work Requirements: The Undeserving Drug User

2:00 - 3:00 PM
Simns G40 — Madeline R. Page (Scott Johnson, Political Science)

	Climate Policy and American Federalism: Gridlock as a determinant for progress amidst stagnation
2:00 - 3:00 PM *Simns G40*	Mary N. Baumgard (Scott Johnson, Political Science) The Fall and Rise of the Violence Against Woman Act: An Examination of Gridlock and Modern Congresses
2:00 - 3:00 PM *Simns G40*	Patrick J. Cron (Scott Johnson, Political Science) A Hierarchy of Needs: Economic Necessities vs. Environmental Luxury
2:10 - 2:20 PM *Quad 349*	Margaret C. Holm (Emily Paup, Political Science) A Mother's Duty Presented in Personae: Mary Fisher's Plea at the 1992 National Republican Convention
2:30 - 2:40 PM *Main 320*	Adam M. Liske (James Read, Political Science) "Promoting Growth in Rural Emergency Medical Services"
2:50 - 3:00 PM *Main 320*	Justin M. Markon (James Read, Political Science) "High-Speed Commuter Rail in Minnesota"
3:00 - 3:10 PM *Main 320*	Rachel E. Mullin (James Read, Political Science) "Feeding for Success: School Lunch Programs in Sudan"
3:10 - 3:20 PM *Main 320*	Kunihiro Shimoji (James Read, Political Science) "Base Politics and Decision Making Structure in the U.S.-Japan Alliance"
3:20 - 3:30 PM *Main 320*	Anna M. Cron (James Read, Political Science) "Limiting Civilian Casualties Caused By Drones."
3:30 - 3:40 PM *Main 320*	Erin M. Kelso (James Read, Political Science) "A Path to Citizenship for Undocumented Immigrants"

3:40 - 3:50 PM *Main 320*	Ashley M. Bukowski (James Read, Political Science) "Mental Health in the Minnesota Prison System"
3:50 - 4:00 PM *Main 320*	Chloe L. Smith (James Read, Political Science) “Education: the solution to recidivism”
4:00 - 4:10 PM *Main 320*	Cody A. Drolc (James Read, Political Science) “Juvenile Justice in South Dakota”
4:00 - 4:10 PM *Quad 353*	yadan /. Zhang (Terence Check, Political Science) Phone Banking as a Campaign Media Tactic: An Analysis of the "Vote No" Campaign.
4:10 - 4:20 PM *Quad 353*	Anthony D. Origer (Terence Check, Political Science) Face Off: The Importance of Face-to-Face Communication in Political Campaigns
4:20 - 4:30 PM *Main 320*	Sarah K. Young (James Read, Political Science) “Implementation of Mandatory Community Service as Part of High School Graduation Requirements."
4:30 - 4:40 PM *Main 320*	Ryan T. Doogan (James Read, Political Science) “Open Enrollment for Alabama”
4:30 - 4:45 PM *Quad 353*	Daniel K. Wolgamott (Terrance Check, Political Science) The Power of Campaign Communication: Zachary Dorholt's Race for State House.

Abstracts

Schilling: Determining which Theory of Representation Best Explains Differences on Representation Style

Goldsmith: Welfare Work Requirements: The Undeserving Drug User

Page: Climate Policy and American Federalism: Gridlock as determinant for progress and stagnation?

Baumgard: The Fall and Rise of the Violence Against Woman Act: An Examination of Gridlock and Modern Congresses

Cron: A Hierarchy of Needs: Economic Necessities vs. Environmental Luxury

Liske: Abstract: Rural EMS experiences a unique set of difficulties and challenges that are not present in larger, urban agencies. Despite the rapid growth and improvements in EMS agencies nationwide since the late 1960s, rural systems have failed to grow and incorporate new methods and means of providing EMS care. Providing a means to expand the abilities of rural EMS is paramount to providing better and more compete EMS and medical care in rural area.

Markon: Abstract: The planned Northern Lights Express rail line between Duluth and Minneapolis is gaining speed, but without more funding, it may be stopped in its tracks. This letter to Rep. Rick Nolan is a petition that more attention be paid to this growing form of mass transit.

Mullin: Abstract: Through the simple implementation of school lunch programs in Sudan, school attendance rates can be dramatically increased, particularly amongst girls, and general family nutrition levels can be improved.

Shimoji: Abstract: This memo proposes a new process for decision-making for U.S. military bases in Japan, one that includes the participation of local communities like the Okinawa prefecture in base siting decisions.

Cron: Abstract: In the last decade, drones have become a critical device in the war against terrorist and militant organizations internationally. Although they are well-known for the advantages they offer, there are moral and human right implications they pose as well that are often overlooked. The predicament with drones is that they are used to protect human rights, but at the same time their use jeopardizes human rights. This unmanned aerial warfare does more harm than good as it kills more faultless civilians than corrupt leaders who threaten the U.S. My proposal will consist of a solution that offers compensation for drone victims including the federal government accepting responsibility of harming the innocent.

Kelso: Abstract: In its 231 years as a nation, the United States has welcomed over 50 million immigrants, though not always with open arms. Anti-immigrant sentiment has plagued the U.S. with every wave of newcomers but, most recently, with the nearly 11 million undocumented immigrants living in this country today. In my public policy memo, I will

be addressing the problem of our broken immigration system, particularly in the deplorable situation faced by undocumented immigrants and their children currently living in the shadows of American society. My solution involves immediate permanent residency and a path to citizenship for undocumented immigrants with no criminal record.

Bukowski: Abstract: Mental illness has been increasingly on the rise since the 1960's, but little health care has been provided in order to care for the inmates. Even with advancements in medical care, care for the mentally ill, especially in prisons, has decreased from six mental health hospitals, some holding 2,000 patients at their height, to only two of them still open and just holding under twenty beds. This decrease is primarily due to spending cuts, which shut down most of the mental health hospitals, and the belief that many mentally ill inmates can receive care in regular prison facilities. However, this is not that case. Many times, inmates with mental illness often have a harder time in prison because they are not receiving the adequate care that is required to deal with mental illness. Minnesota needs to reopen many of its mental health facilities so mental illness can be handled correctly.

Smith: Abstract: This policy memo will recommend that the state of Illinois adopt an education policy for prison inmates that enables them to earn bachelor's degrees, and that promises to diminish the rate of recidivism by prisoners who have served their terms.

Drolc: Abstract: The status quo of South Dakota's procedure is dangerous. To allow juveniles to face un-severe penalties does not teach a lesson that needs to be learned at a young age. For those who are convicted of less-serious crimes my recommendation is for them to serve some sort of time and then pay the fine or community service deed that is required by the court. The court must take retribution seriously in order to be an effective criminal justice system.

Young: Abstract: It is my proposal that ISD#709 of Duluth, MN require its high school graduates and GED recipients to complete a mandatory community service requirement of forty hours as part of their graduation and GED expectations.

Doogan: Abstract: A Policy Memo that proposes an Open Enrollment Policy for Public Schools in the State of Alabama

Psychology

Schedule

3:00 - 3:15 PM
Quad 349
Margaret C. Holm, Sydney A. Klinker (Erin Szabo, Psychology) Gender Portrayal in the Top Three Prime Time Television Crime Dramas

3:20 - 3:35 PM
Quad 349
Cassandra M. Jones, Jane C. Gengel (Erin Szabo, Psychology) Cross- Genre Gender Portrayals: A Content Analysis of Country, Pop, and Rap Music Videos

3:40 - 3:55 PM
Quad 349
Alison Toering C. Toering, Lisa Fenske (Erin Szabo, Psychology) Representation of non-caucasian models in Women's Fashion Magazines

Abstracts

Service Learning

Schedule

Abstracts

Sociology

Schedule

3:00 - 3:15 PM
Quad 349
Margaret C. Holm, Sydney A. Klinker (Erin Szabo, Sociology) Gender Portrayal in the Top Three Prime Time Television Crime Dramas

3:00 - 4:30 PM
Gorec 120
Angela M. Dols, Brenna L. Horn, Biruk A. Demissie, Yunya 1. Liu (John Merkle, Sociology) Reel People Better Together: CSB-SJU

3:20 - 3:35 PM
Quad 349
Cassandra M. Jones, Jane C. Gengel (Erin Szabo, Sociology) Cross- Genre Gender Portrayals: A Content Analysis of Country, Pop, and Rap Music Videos

3:40 - 3:55 PM
Quad 349
Alison Toering C. Toering, Lisa Fenske (Erin Szabo, Sociology) Representation of non-caucasian models

in Women's Fashion Magazines

Abstracts

Interdisciplinary Presentations:

Asian Studies

Schedule

3:00 - 3:30 PM *HAB 128A*	Cindy L. Gonzalez (Richard Bohr, Asian Studies) Xinjiang China and its Muslim Uighurs
3:30 - 4:00 PM *HAB 128A*	Frederick Jones (Richard Bohr, Asian Studies) The Evolution of the Japanese culture: Its modern setbacks and Options to fix it
4:00 - 4:30 PM *HAB 128A*	Abby M. Peterson (Richard Bohr, Asian Studies) Guan-Yin The Bodhissatva of Mercy
4:30 - 5:00 PM *HAB 128A*	Taylor Peterson (Katie Vogel, Asian Studies) Utilizing Museums to Safeguard China's Intangible Cultural Heritage: Bridging the Gap between Local Community Heritages, State Party Safeguarding Methods, and International Efforts
4:50 - 5:20 PM *HAB 128A*	Pisenny Xiong (Richard Bohr, Asian Studies) Japan and Working Immigrants

Abstracts

Gonzalez: Xinjiang is an autonomous region located in the northwestern part of the People's Republic of China. China for the most part classifies itself as an officially-atheist communist country nevertheless the Xinjiang region which in fact is part of China classifies itself as predominately Muslim. China also classifies itself as having one central government in Beijing and for many years the central government has tremendously distrusted the mostly Sunni Muslim Uighurs living in Xinjiang. The mistrust has come from recent treads in Muslim terrorism attacks in the U.S and the Middle East. It has been known that the Uighurs and other Central Asians of the Islam faith have practiced a fairly tranquil style of Islam. Nevertheless the great pressure that the Chinese government has placed on this minority has caused the radicalization of some young Uighurs causing separatism attempts to take place in the region. These attempts have the country of China worried as well as other nations. The presentation's goal is to educate attendees of who the Uighur's of China

are and the reasons for their separatism attempts. The presentation will also explore the self of identity the Uighurs have developed throughout the years and the types of separatism attempts they have undergone.

Jones: I will be looking at some aspects of Japanese history that has led to the modern Japanese culture and some of its issues in today's day and age. I will look at multiple aspects of Japanese culture, including self-reliance, national pride, and group mentality, and how its place in Japanese history has led to social problems, such as racism, population issues, and other social pressures. While pointing out these connections, I hope to give possible solutions to certain issues the plague Japan today.

Peterson: Looking into the Asian culture and the Asian art community specifically, I will be examining and analyzing the Guan-Yin bodhisattva, famous as being the deity of mercy throughout China, Japan, and India. I will be looking into the physical appearance as well as the gender transformation through time and cultures. Through this analysis, I hope to identify the reasons behind this artifact lasting through so many cultures and generations, never fading in importance.

**Please email a copy of this abstract to Dr. Richard Bohr, chair of the Asian Studies Department.
Thank you.

Peterson: Utilizing Museums to Safeguard China's Intangible Cultural Heritage: Bridging the Gap between Local Community Heritages, State Party Safeguarding Methods, and International Efforts
Safeguarding intangible cultural heritage is a relatively new idea in the field of heritage works. Global awareness of the definition and importance of intangible heritage rapidly increased after the UNESCO Intangible Cultural Heritage Conference was held in 2003. This is especially so in China. While the concept of intangible cultural heritage has been more firmly established, the actual process and methods of safeguarding it are still a large topic of international debate. I will examine the issues and debates of safeguarding methods and analyze what they mean for China's intangible cultural heritage. I will also analyze China's current safeguarding practices and present a proposal for integrating Chinese museums into those practices. My hope is to increase the awareness of the importance of China's intangible cultural heritage and offer insights into the ongoing issues and debates of the safeguarding process.

Xiong: Japan is a country that has achieved many things in its history, but now Japan is facing several crises that can hurt Japan in the long run if not dealt with. Japan's business is trying to maintain a strong economy in a globalizing world, protect its national culture, and depopulation, and now with the damage from March 11 in 2011. One solution is attracting more immigrants to help work and live in Japan will help rebuild Japan,

but is this the best option for Japan? Looking at how Japan handles immigrants who come for work and reside in Japan, and how the public feels about immigrants, and Japan's other options, Japan will not be able to handle the increase in immigrants as a solution, but as something to improve on in the relations between native Japanese and immigrants.

Campus Ministry

Schedule

3:00 - 4:30 PM
Gorec 120 Angela M. Dols, Brenna L. Horn, Biruk A. Demissie, Yunya 1. Liu (John Merkle, Campus Ministry) Reel People Better Together: CSB-SJU

Abstracts

Center for Global Education

Schedule

Abstracts

Environmental Studies

Schedule

3:00 - 3:20 PM
PEngl 373 Lonnica J. Johnson, Joe J. Dick (Gordon Brown, Environmental Studies) Invasive Shrubs and Alien Worms: the nutritional ecology of the nightcrawler, Lumbricus terrestris.

Abstracts

Experiential Learning & Community Engagement

Schedule

2:30 - 3:00 PM
PEngl 373 Kelcey L. Kryzer (Clark Cotton, Experiential Learning & Community Engagement) Cardiac Rehabilitation: The Road to Recovery

3:00 - 4:30 PM

Gorec 120	Angela M. Dols, Brenna L. Horn, Biruk A. Demissie, Yunya 1. Liu (John Merkle, Experiential Learning & Community Engagement) Reel People Better Together: CSB-SJU
4:00 - 5:00 PM *Main TRC Board Room*	Galen R. Himrich, Briana D. Abrahamson, Mary E. Erickson, Matia C. Twedt, Meghan C. Helmbrecht, Kayla C. Becker, Sergio Aguilera, Kody J. Williams (Adia Zeman, Experiential Learning & Community Engagement) Senior Bonner

Abstracts

Himrich, Abrahamson, Erickson, Twedt, Helmbrecht, Becker, Aguilera, Williams: The senior Bonners of the class of 2013 will individually review his/her experiences in the Bonner Program over the past four years. Each Bonner will give a brief description of his/her community involvement through his/her work study as well as experiences with community service. After the individual presentations, the senior Bonners will then speak on a panel and ask each other questions about each others' experiences. This will be opened up to the audience for questions. The presentation will concluded with a video created by the senior Bonner class.

Institute for Women's Leadership

Schedule

1:00 - 5:00 PM *BAC A116*	Katie E. Tillman, Katie L. Kuehn (Heather Nicole Saladino, Institute for Women's Leadership) Gendered Language Use
2:10 - 2:20 PM *Quad 349*	Margaret C. Holm (Emily Paup, Institute for Women's Leadership) A Mother’s Duty Presented in Personae: Mary Fisher’s Plea at the 1992 National Republican Convention
3:00 - 3:15 PM *Quad 349*	Margaret C. Holm, Sydney A. Klinker (Erin Szabo, Institute for Women's Leadership) Gender Portrayal in the Top Three Prime Time Television Crime Dramas

3:20 - 3:35 PM
Quad 349
Cassandra M. Jones, Jane C. Gengel (Erin Szabo, Institute for Women's Leadership) Cross- Genre Gender Portrayals: A Content Analysis of Country, Pop, and Rap Music Videos

3:40 - 3:55 PM
Quad 349
Alison Toering C. Toering, Lisa Fenske (Erin Szabo, Institute for Women's Leadership) Representation of non-caucasian models in Women's Fashion Magazines

Abstracts

Tillman, Kuehn: The Hynes Scholars, a sophomore women's leadership cohort with a focus on gender and leadership through the IWL, conducted a survey on gender and language use. Following this survey we sponsored a table to present our information and bring gendered language use to students attention.

Latino/Latin American Studies

Schedule

3:40 - 3:55 PM
Quad 349
Alison Toering C. Toering, Lisa Fenske (Erin Szabo, Latino/Latin American Studies) Representation of non-caucasian models in Women's Fashion Magazines

Abstracts

MapCores

Schedule

Abstracts

Office of Academic Review and Curricular Advancement

Schedule

Abstracts

Office of Education Abroad

Schedule

Abstracts

Sustainability

Schedule

Abstracts