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SCHEDULE OF EVENTS

Tuesday, April 1, 2008

7:30 - 9:00 a.m.	Poster Set Up	NSU 238
9:00 - 11:00 a.m.	Judging	NSU 238
Noon - 1:30 p.m.	Luncheon Guest Speaker: Chad Cook	NSU 238 A&B
1:30- 1:50 p.m.	Music Performance	NSU 238 C&D
1:30- 3:30 p.m.	Oral Presentations	NSU 310 NSU 312 Cedar Room
1:30 - 4:30 p.m.	Poster Session Open	NSU 238
3:30 - 4:30 p.m.	Award Reception	NSU 238
5:00 p.m.	Posters Removed	NSU 238

Chad Cook

Luncheon Guest Speaker

Chad graduated summa cum laude from UNK in 2003 with a B.S. in exercise science and was named the “2003 Exercise Science Student of the Year.” During his tenure at UNK, he was a member of Dr. Kate Heelan’s Human Performance Laboratory within the HPERLS department. His time with Dr. Heelan’s group provided an opportunity for active involvement in numerous research projects, ultimately leading to a first place finish at UNK’s Annual Student Research Day in 2003. Chad continued his educational and research pursuits at Kansas State University, graduating with an M.S. in human nutrition - emphasis in biochemistry. Currently, Chad is in the middle of his PhD training in nutritional sciences at the University of Wisconsin in Madison. His general research interests include: Metabolic disorders and energy metabolism in human obesity, and stable isotope techniques for “tracing” macronutrient metabolism. He has gone on to present his research at national meetings and seminars, and feels that his research opportunities at UNK truly ignited his passion for research and teaching. Chad is very excited to be coming home to his alma mater to share some thoughts about the importance of student research at the University of Nebraska at Kearney.

Performance

Music

Michael Walworth (1)

COPRESENTORS = **Jonathan Flanagan, Kelci Fulton & Katie Langenfeld**

ADVISOR = Darleen Mitchell

Transmission

New Music Ensemble performed at the College Music Society's National Conference in Salt Lake City. The topic of the presentation was improvisation in an undergraduate ensemble. The group demonstrated various improvisational techniques based on a short musical gesture, verbal scores, poetic images and graphic scores. NME encourages its members to explore their instrument's capabilities by trying different extended techniques to extract surprising and non-traditional sounds. These techniques can include anything a person can creatively think up to do with an instrument or found object, but some of the most common are the clicking of keys, playing inside of the piano with the hands or other objects, using violin bows on a host of objects which are not usually bowed. During rehearsals and performances the group focuses on listening to the other musicians and interacting and responding in such a way to spontaneously create an entire musical piece.

Fine Arts & Humanities

Music

Jon Dailey (2)

COPRESENTORS = **Music Business Students**

ADVISOR = James Payne

Researching Music Products

A group of music business majors at the University of Nebraska at Kearney desired to learn more about the business side of the music industry at the 2008 NAMM Show, an international music products trade show and market hosted by the National Association of Music Merchants, the International Music Products Association. At the Show, the students researched their individual interest areas in several ways. The students visited various exhibits in order to see and perhaps work with the products, visit with the sales representatives or technical development staff asking questions concerning the product or information desired, attend concerts and demonstrations of new products, and attend educational sessions given by NAMM or by NAMBI featuring well-known speakers and educators in the industry.

Communications

Ismael Torres (3)

COPRESENTORS = **JMC 420 Ad Campaigns Class**

ADVISOR = Ruth Brown

Analysis of Perceptions Regarding the Nebraska Pork Industry: A Campaign to Improve Image and Develop Trust

The perception that beef is king and corn is queen has left pork production as the court jester of the livestock industry in Nebraska. In the mind of Nebraskans, pork production is associated with odor, animal welfare and environmental issues. However, technological advances and a willingness to change has led to odorless, environmentally-, animal- and neighbor-friendly operations. That's part of what the JMC Ad Campaigns class learned in their primary and secondary research. The class is working with the Nebraska Pork Producers Association in Lincoln to create an integrated marketing communication campaign to increase: 1) rural Nebraskans' positive perceptions of the pork industry, 2) acceptance of the pork industry as a valued and valuable asset to Nebraska, 3) trust in Nebraska pork producers so that when issues arise rural Nebraskans are confident based on knowledge of the industry's previous track record.

Behavioral & Social Sciences

Criminal Justice

Ana Arroyo (4)

ADVISOR = Julie Campbell

Variations in Knowledge and Usage of the Nebraska Sex Offender Registry: A Demographic Analysis

Sex offender registries were designed to provide information to citizens about the sex offenders who live in their communities. The sex offender registry can be accessed through the internet, radio or newspaper. It offers members of the community information such as the name and address of an offender, a picture of the offender, and a summary of the offender's convictions. Unfortunately, many people do not take advantage of this service, perhaps because they do not know it exists or because they don't know how to access the information. The purpose of this study was to assess the interaction citizens had with the sex offender registry in one Midwestern community. The data was then analyzed with a particular attention paid to demographics such as gender, age, and status as a parent. All three independent variables appeared correlated with citizen habits in accessing the registry. These results are important, as all states utilize sex offender registries as a form of community notification and crime prevention, but little formal evaluation has been conducted.

JoAnn Englert (5)

ADVISOR = Julie Campbell

The Bystander Effect: An Examination of Demographic and Victim Variables

In 1964, Kitty Genovese was brutally stabbed to death outside her apartment building in Queens, New York. What perhaps made this crime so shocking was that no less than thirty-eight of her neighbors heard or saw the attack and did nothing.

This phenomenon, the Bystander Effect, occurs when no one comes to the aid of a person in an emergency or distress. The Bystander Effect is in fact real; however, why it occurs has yet to be fully explored. This research asks two questions: Do certain human demographics make some people more susceptible to inaction than others? Does it matter who the victim is and if they are involved in their own victimization? This research involved presenting subjects with scenarios involving three types of victims, each with different demographic characteristics and ranging levels of culpability. The data was then analyzed with particular attention focused on the demographics of the subject.

Geography

Brett Beinke (6)

ADVISOR = H. Jason Combs

The Distribution of Hunters in Nebraska

My research shows the spatial distribution of in-state hunting licenses issued in Nebraska for a single year at the county-level. This information portrays the number of hunters per county, not taking into account the hunters who file for a permit in a county other than the one they reside. The number of permits is compared to the number of people who live in each county to find the the areas of highest concentration.

Nick Brennan (7)

ADVISOR = H. Jason Combs

A Geographical History of Cabela's

This article examines Cabela's company history and the geography of store locations. Cabela's initially used a reverse hierarchical pattern, where a corporation starts small and then enters larger markets. The inverse of this is typical for much larger corporations who start in big cities and transfer into smaller cities once the corporation is established. This article also delves into the history of Cabela's to see why it is based on a reverse hierarchical pattern. Throughout this essay the various reasons for the distribution of Cabela's is explained, along with the economic impact of hunting and fishing in the United States.

Jason Garris (8)

ADVISOR = H. Jason Combs

Landscape Change Due to Fire and Drought in Chadron, Nebraska

The combination of wildfires and drought can have a devastating impact on a landscape's vegetation. Such is the case after several fires near Chadron, Nebraska in the summer of 2006. A prolonged drought in western Nebraska provided the perfect conditions to fuel several fires that started in the area. This research uses both satellite and aerial imagery to determine the changes that fire and drought had on the vegetative landscape south of Chadron.

Chris Hennessy (9)

ADVISOR = H. Jason Combs

Is the Great American Desert Coming Back to Life?

The Sand Hills cover 19,300 square miles, the majority of which are located in north central Nebraska. This paper examines the preventative measures employed by ranchers and land managers to prevent this region from becoming active sand dunes once again. Range land management and water conservation are proactive means to prevent desertification. Potentially, the Sand Hills region will become active sand dunes even if preventative measures are taken. This research assesses the measures land owners and conservationists are employing to combat desertification and drought in the Sand Hills.

Jamie Knuth (10)

ADVISOR = Steele Becker, Emaritus

Invasive Species in Nebraska's Harlan County Reservoir

The Harlan County Reservoir is located in South Central Nebraska, along the Republican River. Due to the continuity of drought conditions in the past few years, the surface-water area of the reservoir has experienced a shrinking trend. The area abandoned by the reservoir is now encroached by invasive species. These species are known to have the ability to disrupt and destroy a balanced

ecosystem. Some of the invasive species that were found in Harlan County Reservoir include Phragmites, Saltcedar (*Tamarix* sp), and Russian Olive (*Elaeagnaceae angustifolia* L.). Cottonwood Trees (*Populus deltoids*), which are native to Nebraska, have also encroached onto the exposed lakebed. In this study, aerial photographs were used to monitor the invasive species that have encroached upon the reservoir land for the period from 2003 to 2006. Field work was conducted during the summer of 2007 to identify various invasive species. Using Geographic Information System (GIS) and image processing, the area encroached by the invasive species was determined for each year during the study period. The size of the area ranged from 3,712 (28%) to 5,925 acres (45%). This rate of encroachment has dramatically impacted the regional ecosystem. This study is significant in building awareness to future problems associated with invasive vegetation in the Harlan County Reservoir area. Combined with previous studies performed at the Harlan County Reservoir, opportunities for continued research should be significantly enhanced.

Jacob McGlade (11)

ADVISOR = H. Jason Combs

Obesity Behind the Wheel

This research paper examines adult obesity rates at the state-level for the entire United States. Several cultural traits help explain the distribution of adult obesity rates. These cultural traits include: fast food restaurant percentages, vehicle miles traveled, and commuting statistics. Additionally, states and/or regions with lower adult obesity rates have a number of common characteristics. Results are displayed via choropleth maps that distinctly demonstrate the highest and lowest adult obesity rates in the country.

Joel Roos (12)

ADVISOR = H. Jason Combs

Geography's Role in the Kosovo Conflict

The late 20th century conflicts between ethnic

Albanians and Serbians in Serbia were significantly influenced by geography. The human, historical and political geography of the area fostered an environment which made ethnic conflicts inevitable. The demographics of the area, the political dissolution of post Cold War Yugoslavia and the historical context of the territory all shaped the conflict. This research examines the geographic context of the conflicts in order to explain them effectively.

History

Peter Longo (13)

ADVISOR = Mark Ellis

UNK Football Early Years: The Development of a Program, 1905-1929

This project examined the development of the University of Nebraska at Kearney's football program, specifically between the early years of 1905-1929. It details the gradual rise of the program and its overall impact on UNK's college atmosphere. Additionally, it discusses the successes of each team during this early era, making special notice of the effects of the legalization of the forward pass. Also noted is the eventual stability of the program despite numerous early coaching changes and, finally, how the school gradually began spreading its newfound athletic prowess to other parts of Nebraska as well as outside the boundaries of the state. Arguably, the success and popularity of football at UNK played a critical role in establishing the foundation of UNK's athletic department.

Political Science

Brooke McGee (14)

ADVISOR = Peter Longo

An Analysis of Supreme Court Justice Antonin Scalia's Jurisprudence and Opinions and Their Implications for Future Justices

The two recent Supreme Court appointments of Roberts and Alito generated considerable political debate. The civic discourse related to these new Justices centered on often-debated judicial philosophies. While the debate was healthy for the

Republic, a glimpse of the future can be garnered by a careful examination of the long-sitting Scalia. Uncovering the messages from Scalia's opinions will offer an understanding of what a judicial movement to the right will provide. This project analyzed Justice Antonin Scalia's decisions in substantive areas including abortion, the environment, and religion. A thorough assessment of his decisions will serve as a model for potential like-minded justices when they render decisions on controversial policy issues in the future. This project examined the cases directing the balance of power to the states; implications that are drawn from the cases determining the balance between national and state power; and lessons the evidence provides for future public policies.

Liz Petto (15)

ADVISOR = Peter Longo

The Changing Constitutional Culture of Japan: Threats in Asia Pacific and the United States-Japan Security Alliance

The United States and Japan's contrasting militaristic stances become problematic when the issue of the existing security alliance between the two nations is addressed. After WWII the United States drafted a new, anti-war constitution for Japan. Article 9 of the Japanese Constitution "... forever renounce[s] war as a sovereign right of the nation and the threat or use of force as means of settling international disputes." Conversely, the United States gives a large amount of deference to the military, maintaining war as a "sovereign right of the nation." On a political basis the two nations are close allies, however, such constitutional discrepancies account for distance between them. In the wake of the 60-year anniversary of Japan's Constitution and 55 years since the alliance with the U.S., Japan is confronted with challenges to maintain the critical alliance with America as well as pursue actions and policies that remain consistent with Japanese interests.

Psychology

Brooke Bartak (16)

ADVISOR = Krista Fritson

The Effects of Media on Body Image

Several studies suggest that media has a negative influence on body image. Our research hypothesizes that body satisfaction levels will decrease after viewing slide shows of fashion models, especially in women. As this study did not yield significant results, questions can be generated about possible desensitization effects to the media.

Keller Batterman (17)

ADVISOR = Krista Forrest

Evaluating Evidence Ploys in Interrogation Transcripts: A Comparison of Mock and Jury Eligible Jurors

Mock jurors and jury eligible individuals read police interrogations embedded with evidence ploys or lies linking the suspect to murder. We compared deception, coercion, and justifiability ratings across participants. Although ratings of deception were similar, compared to mock jurors, jury eligible individuals rated evidence ploys as more coercive and justifiable.

Sara E. Brady (18)

ADVISOR = Richard Miller & Theresa Wadkins

Impact of Social Support and Social Support Networks on Life Crises

Social support protects people from the adverse effects of stressors. Expatriates must seek support from other sources if their former network is not available. Thirty-two expatriates from Mallorca, Spain answered questions about demographics, perceived family, friends, and community support, individualism/collectivism, and support received during a life crisis. Results are discussed.

Sara E. Brady (19)

COPRESENTOR = Kylee J. Hoffmaster

ADVISOR = Joseph Benz

Physical Attractiveness of Natural and Cosmetically Altered Female Waist-to-Hip Ratios

In humans, the female secondary sexual trait, waist-to-hip ratio (WHR) 0.7 is more attractive than other WHRs. We investigated the perceptions of natural versus cosmetically altered body types in either 0.7 or 0.9 WHR. Regardless of body alteration, 0.7 was rated as significantly more attractive than 0.9 WHR.

Dani Butterfield (20)

ADVISOR = Richard Miller

The Effects of Mortality Salience on Group Entitativity

The present experiment focused on how strongly individuals felt about their group affiliations after being reminded of death. Participants in the experimental group were given a mortality salience manipulation (MS). Although the experiment showed no significance of mortality salience on reasons people affiliate with groups, there were other significant findings.

Rockey Esterreich (21)

ADVISOR = Robert Rycek

Elementary School Reform Models

As several major meta-analysis indicate, the most successful whole-school reform models for elementary schools generally limit the autonomy of the teacher and instead provide predetermined, sometimes even entirely scripted lessons for teachers to implement. It was observed that in the cases where such reform-models were considered to have failed, the reason given was that teachers were reluctant to "buy in" to the model. Thus, in this study, we sought to examine elementary teachers' perceptions of such models. It was reasoned that if teachers were generally opposed to such rigid models, an attempt at widespread implementation would inevitably fail. Three distinct reform model

representations were constructed in order to represent three distinct philosophical perspectives concerning the teacher's role in the educational process. Elementary teacher across Nebraska were then asked to rate each model according to various criteria.

Abigail Harris (22)

ADVISOR = William Wozniak

Source Credibility and Belief in a Paranormal Phenomenon

We manipulated the perceived credibility of the author of an article concerning a paranormal event, in a 2 (credible vs. not credible) x 2 (young vs. old) design. There were no significant changes in belief in the phenomenon. We discuss the results in context of attitude change and paranormal beliefs.

Chris Hein (23)

ADVISOR = Richard Miller

Music Performance with Interference

This study adapted and combined two separate studies, one on speech and selective attention, and another on music and various types of interference. The purpose of this research was to find out whether or not the selective attention findings in the study by Treisman (1964) on speech would also have some of the same effects in music performance as well. In particular, I focused on the effects of the difference of voice between an attended channel and an unattended channel. I imitated this study in music by using a different instrument to act as a different voice for interference. What was found was a significant main effect of the interaction between the type of interference and the type of instrument used. This supports the idea that musicians are better able to ignore musicians playing other instruments than they are to ignore musicians playing the same instrument.

Satoko Hoshino (24)

COPRESENTOR = **Tahra Brown**

ADVISOR = Robert Rycek

The Effect of Parenting Style on Identity

Development in American, Japanese, and Hispanic Cultures

This study examines the relationship between parenting style and identity status in different cultures. American parents were more authoritative, whereas Hispanic parents were more authoritarian and Japanese parents were more permissive. Japanese had significantly more achieved identity development than either American or Hispanic students.

Christa A. Linden (25)

ADVISOR = William Wozniak

Testing and Study Tips Effects on Retention

The testing effect is the improved performances on a later retention test arising from an earlier test. Most research on the testing effect has been done with materials such as words lists, and the general finding has been that the benefits of testing are greater when the initial test is a recall (production) test rather than a recognition test. Our experiment was a replication of the testing effect. Additionally, we looked at how the testing effect may interact with activities that the student may do before reading text to be remembered. Also, we investigated whether pretesting or reading study tips may enhance the testing effect. Our results revealed that the testing effect had no effect on the overall exam score. Overall, reading a list of facts was more beneficial than test taking activity prior to the final exam.

Lanay Manker (26)

ADVISOR = Joseph Benz

What Makes Aggressive Humor Funny?: The Relationship Between Testosterone and Aggressive Humor Appreciation

Multiple studies have suggested a link between adult levels of testosterone and male aggression. Others have implicated a connection between aggression and humor preferences in which high-aggression subjects rate aggressive cartoons as funnier than low aggression subjects. No current studies, however, examine how testosterone and humor preferences

might work together. Therefore, the purpose of this study is to examine the possible correlation between testosterone levels and appreciation of aggressive humor. It was hypothesized that individuals with higher levels of testosterone would find aggressive humor to be funnier than those with lower levels of testosterone. Participants were asked to provide a saliva sample, watch a brief video clip from the movie Jackass, and answer a questionnaire regarding the clip's humor content. Salivary testosterone levels were analyzed and compared with individuals' questionnaire responses. Significant differences in humor appreciation were found between sexes; however, the hypothesis was not supported within sex.

Lanay Manker (27)

ADVISOR = Krista Fritson

The Relationship Between Stress and Spirituality in College Students

Stress can negatively impact both physical and psychological health. Research has suggested that buffers to stress exist, including social support networks, health promoting behaviors, religion, and spirituality. The current study explored the possible correlation between stress and spirituality in undergraduate college students. Participants completed a spirituality inventory and a stress inventory. A negative relationship was predicted, in which lower levels of stress would be associated with higher levels of spirituality, suggesting that spirituality might be an effective buffer to stress. A significant negative relationship was not found, therefore, the results did not support the hypothesis.

Bryan Mueller (28)

COPRESENTOR = **Andrew Tuttle**

ADVISOR = Krista Fritson

Effects of Athletic Participation and Motivation on Mood

Exercise and involvement in recreational sport has consistently demonstrated reduced levels of depression. However, when involvement is in elite

levels of sport (i.e. intercollegiate varsity athletics) we believed that additional pressures would lead to higher levels of depression than non-athlete peers. Instead, results showed exercise and sport endured and non-athletes had higher levels of depression.

Lindsay Nielsen (29)

ADVISOR = Richard Miller

Gender Differences in the Perception of Rudeness

This study examined gender differences in the perception of rudeness. Sex of the stimulus person and sex of the rater were manipulated and ratings of rudeness on several different behaviors, e.g., spitting, were measured. In several instances men rated men more negatively and women rated other women more negatively.

Sara Ottun (30)

ADVISOR = Richard Miller

Relationship Between Quality of Family Mealtimes and Self-Efficacy

The present research explored the possibility of family mealtimes being a source for modeling interactions that may promote mastery of some behavior, such as academic issues. This study was developed to determine the effect of the quality of conversation at family mealtimes on general self-efficacy and academic self-efficacy. The hypothesis was that a significant positive relationship would be evident between quality of family mealtime discussions and self-efficacy, in general and academically. The results indicated a significant positive relationship between quality of family mealtime discussions and academic self-efficacy. Also, significant results were obtained between quality of family mealtime discussions and general self-efficacy. Participant's who had a positive perception of their overall family mealtime were more likely to have higher general and academic self-efficacy. This suggests that family mealtimes may be an opportunity for parents to enhance their children's self-efficacy.

Tiffanie Pinkal (31)

COPRESENTOR = **Keller C. Batterman**

ADVISOR = Krista Fritson

Personality Characteristics and Drug Use

This study examined the relationship between the Big Five Personality Characteristics and reported drug use. Participants completed a Big Five Personality survey and a Drug Use Inventory. The present study explored the relationship between scores on the neuroticism scale of the Big Five Personality Test and likely-hood of drug use. Results show that there is no significant relationship between the neuroticism Big Five Personality category and drug use. Upon Further examination, it was found that none of the Big Five Personality characteristics had any significant relationship with drug use.

Andrew S. Tuttle (32)

ADVISOR = William Wozniak

Effects of Testimony Admissibility on Memory

In criminal trials, assessment of eyewitness testimony is crucial. After reading two eyewitness accounts and reading jury instructions concerning admissibility of testimony, participants recalled items from the testimonies, and then rated whether each item was admissible or inadmissible. Participants were proficient in recall, but not as successful in determining admissibility.

Sociology

Jenny L. Northrup (33)

ADVISOR = Suzanne Maughan

Toward a Postmodern Understanding: An Analysis of Comic Book Culture

As comic books are pulled from the margins of society and pushed into the light of mass, postmodern pop-culture, their impact on society becomes increasingly important. The purpose of this research is to illustrate the similarities in cultural themes found within both facets of comic book culture: comic books and comic book conventions, and relate those to the focus of postmodernism on

image as a means of gaining knowledge. A content analysis and interview were performed as well as attending a comic book convention to find these themes. As the themes were shown to be strikingly similar, it leads to the assumption that comic book culture may influence and be influenced by real world culture as readers may be using the images within comic books to learn or reinforce what they currently know about their culture.

**Natural
&
Physical Sciences**

Biology

Michiko Abe (34)

ADVISOR = Julie Shaffer

*Characterization of the Oral Secretion from *Nicrophorus marginatus*, *Nicrophorus carolinus*, and *Nicrophorus tomentosus**

Burying beetles are known to produce oral secretions containing antimicrobial compounds. My research was to identify and characterize the proteinaceous compounds of the oral secretions from burying beetles. Oral secretions were collected June and July, 2007 from *Nicrophorus marginatus*, *Nicrophorus carolinus*, and *Nicrophorus tomentosus*. The oral secretions from the three collected species were compared for antimicrobial activity using a Microtox Model 500 Analyzer. Protein concentrations were identified using a BCA Assay. Dialysis and gel electrophoresis were used to identify the role peptides might play in antimicrobial activity. All three species produce antimicrobial oral secretion but *N. marginatus* produced the highest concentration of protein in its secretion. After the samples were diluted to equal protein concentrations, *N. tomentosus* exhibited the highest antimicrobial activity. These data also showed that *N. carolinus* exhibited the greatest variation in antimicrobial activity. It was also shown

that peptides do not seem to be the antimicrobial agent. Antimicrobial activity is most likely due to enzymes present in the secretion, although this will need to be studied further.

Shusaku Akahane (35)

ADVISOR = Julie Shaffer

*Effects of Temperature on the Production of Antimicrobial Compounds in *Nicrophorus marginatus* and *Nicrophorus carolinus**

Burying beetles are insects that are known to produce antibacterial compounds in their saliva. Both males and females can produce the compounds to protect the carcass from microbial attack. This research is designed to examine the effect of temperature on antimicrobial secretion. The beetles were placed in five different chambers set to 4°C, 10°C, 15°C, 25°C, and 30°C, and their secretions were collected after three days. Secretion protein was quantified using a BCA Protein Assay Kit and antimicrobial activity was identified using a Microtox Model 500 Analyzer. The data for *Nicrophorus marginatus* shows the highest antibacterial activities at lower temperatures (4-10°C), and *Nicrophorus carolinus* shows the highest antibacterial activities at higher temperatures (25°C). The beetles also produced the highest concentrations of protein at these temperatures. This research is important to identify the optimum temperature for antimicrobial compounds and to identify the temperature effect on the activity of *N. marginatus* and *N. carolinus*. It tells which temperature the *Nicrophorus* species exhibit the greatest antimicrobial activity and produce the largest amount of protein.

Michael Christ (36)

ADVISOR = Tamara Smith

Variations in Glucocorticoid Levels of Dominant-Aggressive Behavioral Patterns in Domestic Horses

Aggressive behavior has increasingly become an area of interest to investigators and is currently

being studied in many mammalian species, including humans. The aim of this study is to observe the correlation between hierarchical dominance and basal stress hormone levels (cortisol) in a non-reproductive herd of domestic horses. Recent studies have shown that individual differences in stress response reflect differences in hierarchical dominance in social animals. Animals provided with a way of releasing aggressive behavior (referred aggression) and the most dominant and aggressive individuals (under acute stress conditions) often present the lowest levels of stress hormones under normal (control) conditions. We tested this through controlled studies in horses. Early findings, both behavioral and hormonal (fecal cortisol levels), support the prediction that horses provided with an outlet for referred aggression, either through natural social structure and/or induced housing/feeding structure, show lower basal levels of stress hormones.

Kylee Gardner (37)

ADVISOR = Kimberly Carlson

*Differential Gene Expression Related to Mortality in Large Caged Populations of *Drosophila melanogaster**

Aging is characterized by a steady decline in an organism's ability to perform life-sustaining tasks. Genetically related populations of organisms undergo aging at a similar rate, but the genes underlying this process have not been extensively studied. Transcriptome analysis via cDNA microarrays were performed to determine the differentially regulated genes underlying mortality in large caged populations of *Drosophila melanogaster*. Three cages of 10,000 flies were established and samples were collected at 0 (control), 10, 30, 60, and 90% population mortality. Total RNA was extracted from the females and cDNA microarray analyses performed. The results indicate 295 significantly changed genes in comparisons to the 0% mortality control. Of these, 205 were found to be significantly differentially expressed across all time points. Clustering analysis was applied to the 205 significant genes to

determine their expression patterns over time. This research will provide insight into the mechanistic regulation of aging across populations.

Jason Gfeller (38)

ADVISOR = Wyatt Hoback

Using Ladybird Beetles, Hippodamia convergens, for Student Inquiry Experiences

Using Ladybird Beetles, *Hippodamia convergens*, for Student Inquiry Experiences. Convergent ladybird beetles, *Hippodamia convergens*, are available from commercial suppliers and can be used in the classroom for student investigations.

We tested three potential laboratory exercises using these beetles. In the first, we tested *H. convergens* ability to feed on vestigial wing fruit flies, *Drosophila melanogaster*. Under our laboratory conditions, the beetles did not feed. Second, we examined defense secretions by these insects. Third, we examined the ability of these beetles to flip themselves over after being placed on their backs. In this experiment, *H. convergens* was readily able to right themselves and there was no correlation between time to return to their feet and either mass or length. These experiments can be adopted for classroom investigations of beetle behavior and can be tied to state and national education standards for biology and mathematics.

Monica Horkey (39)

ADVISOR = Keith Geluso

Natural History of the Big Brown Bat (Eptesicus fuscus) at a Summer Roost in Southwestern Nebraska

In Nebraska, the big brown bat (*Eptesicus fuscus*) occurs across the state throughout the year. To date, little is known about the timing of seasonal movements between summer and winter roosts. I examined seasonal activity of big brown bats at a roost site in southwest Nebraska. Every 3 weeks, I captured bats by placing mist nets around the roost site. I captured a total of 191 bats exiting the building, with the largest numbers in July, August, and September. The majority, 72% of individuals,

were females. At this roost, females were heavier than the males both before and after hibernation. Body masses were significantly heavier in autumn than spring for both sexes. I observed that summer roosts are occupied in Nebraska from late April to mid October. Knowing when bats use roosts will reduce the negative conflicts between bats and humans and aid human in ethically excluding bats from buildings.

Lacey M. Keeten (40)

ADVISOR = Wyatt Hoback

Behavioral Observations of a Female Parasitic Wasp (Melittobia digitata) with Melangaster, Virilus, and Sarcophagid Pupa

Melittobia digitata (Hymenoptera: Eulophidae) are commercially sold as “WOWbugs” to be used in classroom exercises. These wasps are small, stingless, parasitoids with strong sexual dimorphism; they naturally attack wasp and bee pupae. In classroom exercises, sarcophagid pupae are often used as hosts. We examined host acceptance of other fly pupae by testing *M. digitata* with pupae of the relatively large *Drosophila virilis*, and the normal laboratory fruitfly, *Drosophila melanogaster*. Ten cultures of each different species of fly were observed to determine the number of offspring produced and their sex ratio. We predicted that as the host size increases more food is allotted for the larvae and more offspring are produced. Our experiments provide opportunity for a novel classroom exercise using readily available species.

Austin S. Nuxoll (41)

ADVISOR = Paul Twigg

Gene Expression Assays of Lignin Biosynthesis in Switchgrass Stems

Switchgrass is characterized as a warm-season perennial grass. It is able to tolerate diverse environments having a range that extends from Quebec to Central America. Switchgrass has the potential to have a great impact on bioenergy. Cell wall lignin presents a problem because it cannot be fermented. My project was designed to examine the level of lignin biosynthetic gene expression in

switchgrass stems, varying in ages and strains, by semi-quantitative PCR. The levels of caffeic acid-O-methyltransferase, cinnamyl alcohol dehydrogenase, and cinnamoyl-CoA reductase are all important for the lignin pathway to continue, and will inform us about how much lignin is being synthesized. RNA has been extracted from all of the samples and assays of gene expression are currently being performed. This project was supported by NIH grant P20 RR016469 from the BRIN program of the National Center for Research Resources and the University of Nebraska-Kearney Department of Biology.

Scott Reifschneider (42)

ADVISOR = Julie Shaffer

Using Sub-Therapeutic Antibiotic Levels to Develop Antibiotic Resistance in E. coli

Antibiotics, such as tetracycline, are the most effective tool used by healthcare professionals to fight microbial disease since their introduction to modern medicine. However, many bacteria are becoming resistant to antibiotics due to long term exposure at sub-therapeutic levels. This is a result of careless healthcare, consumer, and agriculture practices which apply either unneeded or insufficient antibiotics. Tetracycline can be used in sub-therapeutic levels in media as a stressor to select for the development of resistant strains of bacteria. This study will test the time needed for a nonresistant bacterial strain to develop resistance to a particular antibiotic. I hypothesize that bacteria will become resistance to the bacteriostatic effects of tetracycline after only 7 days of culture. This will be analyzed by the Kirby-Bauer method, and quantified by ANOVA.

Tyson Spanel (43)

ADVISOR = Keith Geluso

Composition and Abundance of Small Mammals in Three Habitats Associated with Agricultural Fields in Central Nebraska

Throughout the last two centuries in the Great Plains,

most native prairies have been converted to agricultural fields. Between fields, other habitats exist such as roadside ditches and shelterbelts. Species that once inhabited native prairies, including small mammals, have either adapted to these relatively new environments or become scarce, only residing in small isolated patches of remnant prairie. This study examined the composition and abundance of small mammalian species in three habitats (cropland, roadside ditches, and shelterbelts) associated with agricultural practices in central Nebraska. I used Sherman live-traps to capture individuals, with equal numbers of traps in each habitat every night of the study. My study resulted in the capture of eight species; The white-footed deermouse (*Peromyscus leucopus*) and North American deermouse (*Peromyscus maniculatus*) were most abundant. The prairie vole (*Microtus ochrogaster*) was a common species in roadside ditches. Other common species captured were the house mouse (*Mus musculus*), the western harvest mouse (*Reithrodontomys megalotis*), and the northern short-tailed shrew (*Blarina brevicauda*). I also set traps in 2 different kinds of shelterbelts; one kind made entirely of redcedar and the other deciduous (a mixture of hardwood tree species). My study demonstrates that habitats associated with the periphery of agricultural fields, such as roadside ditches, serve as refuges for some prairie-adapted species, while other habitats, such as wooded shelterbelts, support mammalian species not formally associated with native prairies in the Great Plains.

J. Paul Zahller (44)

ADVISOR = Tamara Smith

Can You Dig It? Foraging Behavior in the Western Hognose Snake

The western hognose snake (*Heterodon nasicus*) possesses a distinguishing wedge-shaped snout that is used for digging. *Heterodon nasicus* also has a highly evolved chemosensory system to identify and recover prey. Although prey chemical discrimination and the digging mechanism have been described, no scientific observations have been made to determine how *H. nasicus* use their fossorial foraging adaptations to pursue prey

underground, if at all. This research assessed whether foraging using burrowing in the *H. nasicus* occurs and if it is mediated by the chemical cues from specific prey. To examine this, a variety of prey were placed at various depths below the substrate (sand, soil, combo) and the snake behaviors were observed and recorded using a time-lapse camera system. These recordings were used to score a variety of foraging behaviors. We observed foraging behavior of snakes in response to chemical concentration and preferential choice response to amphibian prey odor.

Chemistry

James Bird (45)

ADVISOR = Frank Kovacs

Site-Directed Mutation of Switchgrass Ascorbate Peroxidase into Monomeric Form: Mutagenesis and Characterization

Ascorbate peroxidase, also known as APX, is an enzyme found in switchgrass. Although APX has been characterized from other plants, the switchgrass version (sgAPX) remains almost completely uncharacterized. Our goal here has been to characterize and alter the oligomeric state of sgAPX. Other APXs have been shown to function as a dimer. Here we demonstrate that sgAPX also functions as a dimer in its wild type. Also, using the structure for the pea APX, we have predicted mutation sites that appear to disrupt the dimer interface by placing like charges together. We have found that a mutation of the glutamate 112 to lysine causes a shift to the monomeric form of sgAPX.

Scott Erickson (46)

ADVISOR = Frank Kovacs

Initial Characterization of Switchgrass Ascorbate Peroxidase Toward Aromatic Substrates

Switchgrass, *Panicum virgatum*, was selected by the United States Department of Energy as a crop to be studied for alternative fuel development. The use of switchgrass in this regard has increased interest in characterizing the biochemical processes

involved in its growth and development. Switchgrass ascorbate peroxidase (sgAPX), an enzyme important in removal of harmful peroxides formed during O₂ metabolism, was the focus of this study. In addition to an ascorbate binding site, sgAPX is believed to have a second binding site that binds aromatic substrates for subsequent oxidation. The goal of this study was to characterize the specific activity of sgAPX and the activity toward the aromatic substrate 2,2'-azino-di-3-ethyl-benzthiazoline-[6]-sulfonic acid (ABTS). Michaelis-Menten kinetics for ABTS demonstrated that it will be a useful substrate to probe the structure/function relationship in the alternate binding site.

Matt Ingersoll (47)

ADVISOR = Christopher Extrom

Solid-State Intermediates in the Solvothermal Preparation of Nanocrystalline CuInSe₂

For some time, the chalcopyrite semiconductor CuInSe₂ (CIS) has been a leading thin-film material candidate for incorporation in high-efficiency photovoltaic devices. Reported nanocrystal preparations involve solvothermal processes in which constituent elements or their salts are heated in a solvent. While mechanisms in amine solvents have been proposed, no experimental evidence of the reaction pathway or intermediates has been reported. In concurrent identical reactions, we reacted CuCl₂, InCl₃, and Se in refluxing triethylenetetramine, stopping reactions after different time intervals between 5 minutes and 24 hours. Solid-state products were isolated and characterized by micro-Raman and X-ray diffraction (XRD) spectroscopy. The observation of multiple solid-state species has outlined a reaction pathway for the solvothermal preparation of CIS. Within a few minutes of reactant mixing, Cu_{1.8}Se(s) forms and over 24 hours, this reacts with α -Se(s) and soluble In species to form CIS. The sequence of Raman spectra show: 1) the emergence of α -Se and Cu_{1.8}Se signals at 230 and 255 cm⁻¹, respectively; 2) the slow disappearance of Cu_{1.8}Se as the CIS signal (172 cm⁻¹) grows; and 3) the shifting of the α -Se signal to lower frequency and its

disappearance as the CIS signal grows to its maximum intensity. The copper deficiency of the Cu_{1.8}Se appears to be crucial for CIS production. CIS could not be prepared under these conditions from reaction of Cu₂Se, InCl₃, and Se unless additional Cl⁻ was present. The rate-determining step is likely to be the reaction of the Cu_{1.8}Se intermediate with a soluble In species such as InSe₂. Previous reports had assumed that in this mechanism, copper remained soluble as a [Cu(amine)_n]⁺ complex.

Anatole Mirasano (48)

ADVISOR = Christopher Extrom

The Effect of Annealing Process on Cu (In_{1-x}, Gax) Se₂ Films Prepared by Solvothermal Process

CuInSe₂ (CIS), Cu(In_{1-x},Gax)Se₂(CIGS) and Cu(In_{1-x},Alx)Se₂ (CIAS) are some of the leading thin film materials presently being heavily researched due to their solar cell applications. Today, the CIGS films are the most efficient with a record of 19.6%. CIS and CIGS thin films can be prepared using two different methods: the magnetron sputtering of CuIn precursors followed by vacuum selenization in a heating chamber; and by spin coating nanocrystalline samples previously prepared by a solvothermal process, directly onto a substrate. The annealing process consists of uniformly heating a compound, This process is done at a temperature high enough to help recrystallizing the compound. Then the temperature can safely be dropped to the room temperature. In the case of CIGS films the annealing was used to clean the layer from impurity. The annealing process shows in all the samples an increase of the intensity of CIS, CIGS or CGS and the reduction or disappearance of CuSe or Cu₂Se from the layer. So the annealing process not only helped improve the layer, but also eliminated some unwanted compound and helped increase the presence of CIS, CIGS and CGS.

Kyle Myers (49)

ADVISOR = James Roark

Diels-Alder Synthesis of Exo-Norbornene-cis-5,

6-Dicarboxylic Anhydride for Organic Chemistry Laboratory Instruction

A technique for the Diels-Alder synthesis of endo-norbornene-cis-5,6- dicarboxylic anhydride and its stereoisomer, exo-norbornene-cis-5,6-dicarboxylic anhydride, is explained. To prove that each stereoisomer was made in the experiment and to distinguish between the two molecules, the characteristic long range coupling affects seen in the H¹-NMR spectra of bridged six member ring molecules are used. A method for the separation of the two molecules is also explained. This technique can be used as a tool to instruct organic chemistry students in the Diels-Alder reaction and how to use NMR techniques to prove the stereochemistry of the products involved in such reactions.

Danielle Policarpio (50)

ADVISOR = Jon Thompson

Development of an Aerosol Albedometer

Aerosol particles suspended in the atmosphere can range in size from 0.01 - > 10 μm. Aerosols can adversely affect human health, degrade visibility, and potentially alter earth's radiative balance. This presentation will describe development of a new technique for the measurement of aerosol albedo at 532 nm. Aerosol albedo is the ratio between aerosol scattering coefficient (k_{scat}) and extinction coefficient (k_{ext}) and is an important parameter which helps predict whether a given aerosol cloud will lead to warming or cooling of the atmosphere. In this work, we have explored the use of cavity ring-down spectroscopy (CRDS) for measurement of aerosol extinction coefficient. Simultaneously, the light scattered from the probe beam was collected by an integrating sphere and used to determine scattering coefficient through calibration with He, air, CO₂, and 1,1,1,2,- tetrafluoroethane (SUVA or R-134a). This feature of the method is unique, as aerosol scattering and extinction can be measured simultaneously on the exact same sample. The cavity ring-down method offered limits of detection of 0.7 Mm⁻¹ while detection limits of 2.7 Mm⁻¹ was achieved on the scatter channel. We have applied

this method to the determination of albedo of several polystyrene size standards, laboratory generated soot surrogates, and atmospheric particles at our location. This highly sensitive method is capable of monitoring particulate pollution, visibility changes, or may find use tracking changes in optical properties of aerosols as they are processed chemically in the atmosphere.

Computer Science & Information Systems

Casey Glatter (51)

ADVISOR = Sherri Harms

Investigation of Data Mining Techniques for Drought Monitoring and Prediction in the Great Plains Regions

Weather stations throughout the United States have been collecting metrics including temperature and humidity for decades. This historical data can prove useful in locating patterns of climate conditions in certain parts of the U.S. and in determining how these patterns might affect weather elsewhere. For example, one might want to know if a La Nina weather pattern in the Pacific Ocean is likely to precede drought in the Great Plains region. Knowing this kind of information can benefit many people, especially those in the agriculture industry. The ultimate goal of our research is to develop a data mining and knowledge discovery tool that will enable the prediction of drought conditions and assess the consequential landscape and vegetation response at regional scales based on ocean-atmosphere- land interactions and their relationships with drought. The first step is to investigate which data mining methods work best for drought prediction. This project looked at several classification and regression data mining algorithms, using the Waikato Environment for Knowledge Analysis (WEKA) tool. We tested selected algorithms on weather station data from seven states (Nebraska, South Dakota, Montana, North Dakota, Colorado, Wyoming, and Kansas), using early spring data to predict weather conditions two weeks later. We found that the Nnge algorithm, a nearest-neighbor method for generating rules using non-

nested generalized exemplars, had the best results for classification. The M5Rules algorithm, which obtains rules from model trees built using the M5' tree inducer algorithm, had the best results for regression. Future work will use these results to create an application that will allow a user to input current climate conditions of a specific area to predict drought/vegetation stress up to two months in the future in specific regions of the U.S.

Dustin Lineweber (52)

ADVISOR = John Hastings

Representation and Perception of Visual Data as Audio

Despite massive computing power being readily available in small, handheld forms, there is not yet a product to help communicate visual environments to the blind. The focus of this research was exploring methods to represent video in audio forms that still allow the user to interpret them, via headphones, as the original visual data. Both auditory spatial clues and frequency ranges were utilized to communicate pixel positions and amplitude conveyed the relative brightness. A working prototype has been developed to demonstrate one of the envisioned techniques at a 15 by 15 resolution. In testing, high-contrast, low-resolution data was clearly conveyed via this method, suggesting that this approach may have applications which could benefit the blind in certain situations.

Ry Lowry (53)

ADVISOR = John Hastings

Game Development: An Approach to Promote Creativity and Generate Interest

Game development is an exciting and interesting way for students to learn about Computer Science. To help students get started, we abstracted the complexity of the physics and networking portions of game development, which makes game development easier for new students. The physics engine makes use of various primitive shapes that hide the complexity of collision detection, thereby

allowing students to focus on designing their virtual world, rather than implementing the complicated laws within it. The communications system also hides the complexity of network communications, and provides students with a simple to use message passing system. This allows students to treat networking like a conversation, making the process of transferring data over the network more intuitive. By making these aspects of development less daunting, our approach allows new students to experience the creative excitement and satisfaction that comes with creating games in the Computer Science field, without overwhelming them.

Cameron Push (54)

COPRESENTORS = Brandon McAllister & Kyle Williams

ADVISOR = Sherri Harms

Basketball Playing Robots

This project presents the results of a one-on-one basketball playing robot competition. The objectives of this project were 1) understand the interplay between the physical design of a robot and the mental capacity of the robot in solving a problem; 2) experiment with various physical designs as well as mental, or algorithmic designs; and 3) compare the robotic designs by having them compete against one another. For this competition, we designed robots that competed against one another in a simulated basketball court. The robot that scored the most points during a game won. The tournament was round-robin based, and the robot that won the most rounds won the tournament. The robots were built from Lego Mindstorms NXT kits, and were programmed using the Lejos Java-based API. Each robot had to fit inside a 10 in by 10 in square (with the option of expanding after the start of the match) in order to be eligible to compete. The robots had to be less than 18in tall and could use any Lego parts and Lego Mindstorms NXT sensors. In the end, the outcome of this competition seemed to suggest that a well designed robot and simple algorithm were of greatest importance. We will continue to experiment with these robots by competing in the Midwest Instructional Computing

Symposium (MICS) robotic competition held in LaCrosse, WI, on April 11th.

Matthew Taylor (55)

ADVISOR = Xuli Liu

Detection of Similar Code Over Multiple Binary Sources

Companies in the computer science industry rely on source code as the primary method of building programs, and disassembly is a key method of reconstructing lost or unavailable source code. Disassembling binary code into a more readable form such as assembly language is a task easily accomplished by a machine, while the interpretation of these instructions requires a human mind due to the complexity and large number of ways any given task can be accomplished. This research determines and outlines a series of techniques which can be used to automatically identify similar sections of code between programs, allowing a comparison between a target program and a reference program to highlight similar areas of code. These automated techniques allow the user to spend their time more efficiently, focusing on areas of interest without spending a significant amount of time identifying areas of code which are irrelevant to their current task.

Kyle Williams (56)

ADVISOR = Sherri Harms

Health Website

A website for Dr. Heelan in the Health and Sports center to showcase programs to make Nebraska a more physically active state. The website uses such technologies as AJAX, PHP, CMS, and JAVASCRIPT.

Physics & Physical Science

Wilfredo Cabrera (57)

ADVISOR = Liubov Kreminska

SiStudy of Temperature-Concentration Range of Nematic Phase of IR-806

Lyotropic chromatic liquid crystals have liquid crystalline properties in certain range of concentrations and temperatures. We investigated a temperature-concentration range for an infrared dye IR-806, which has a particularly important application in manufacturing efficient light polarizers. We checked the liquid crystal state of the solution of the dye using polarizing microscope. Once the mixture has liquid crystal properties, we observed nematic textures at crossed polarizer and analyzer due to birefringence. Other wise, a dark field was observed. We prepared mixtures of dye IR-806 and deionized water in wide range of concentrations .1%-10%. We mapped the range of concentrations and temperatures when IR- 806 dye has liquid crystal properties.

Grant Saltzgaber (58)

ADVISOR = Michael Larsen
Rain Distribution

It is commonly accepted that the amount of rainfall measured in one place will be the same throughout a close vicinity. This may or may not be true. To test this idea an array of thirty rain gauges will be placed on the top of Bruner Hall of Science at the University of Nebraska at Kearney. This array will be set up in a rectangular form with each gauge five feet apart. This data will help in discovering if this assumption is correct.

Aaron Steele (59)

ADVISOR = Michael Larsen
Light Propagation Through Clouds Using Monte Carlo

Monte Carlo is a method of simulating physical and mathematical systems, when it is impossible or illogical to compute an exact solution using traditional methods. We used a Monte Carlo computer program, written in Java, to simulate the propagation of photons as they interact with clouds. The current belief is that the distribution of cloud particles is perfectly random, yet a level of uncertainty remains due to the inability to interpret

the results of direct measurements. Our simulation attempts to address this problem by means of simulating the physical processes that occur when light enters a cloud. Using the Beer-Lambert Law, scientists can determine the concentration of the cloud particles, based on the amount of light observed at the Earth's surface, and apply this to various tasks, including correction of satellite images. Through manipulation of the Monte Carlo algorithms used to determine the spatial distribution of the particles, and a comparison of the irradiances produced, a better understanding can be achieved about the true distribution of cloud particles and how they will affect the Beer-Lambert Law.



Business & Technology

Accounting & Finance

Heather Hansen (60)

ADVISOR = Steven Hall
Predicting Corporate Takeovers in the High-Tech Industry

This research was to determine if accounting numbers are predictive of corporate takeovers in the high-tech industry. There was reason to suspect that the results of previous prediction studies may not apply to this newer industry. As society becomes increasingly dependent upon technology, it is important to understand the role of accounting in the high-tech industry. 192 firms from the high-tech industry were randomly chosen. All common financial ratios were used as independent variables in a backwards- stepwise binary logistic regression. Data from 1996-2005 was used. The result was that the regression created a model able to predict the likelihood of corporate takeovers in the high-tech industry. The most significant predictor of

takeovers in this industry is cash flows from financing activities/assets. Cash flow numbers, as opposed to income statement numbers in other industries, seem to be more predictive, and further studies must be done to learn more about this relationship.

Joselyne Williams (61)

ADVISOR = Steven Hall

Accounting Numbers, Financial Distress and High Tech Firms

The purpose of this paper is to determine whether accounting numbers are able to predict financial distress in the high-tech industry. Accounting information has been shown to be useful in predicting financial distress in the past. Some of the reasons to think it might not be useful for high-tech firms: there is considerable volatility of the High-Tech Industry, many firms report no income for several years, there is little debt, and what debt there is is often from a major shareholder or board member. Backwards stepwise binary logistic regression was applied to a random sample of two hundred high-tech firms. The model included a dependent variable indicating whether or not there is a going-concern audit opinion in the following year and thirty-five independent variables. Regression procedure results in a model with four variables ranging in significance from .000 to .068. The quick ratio, change in sales, change in net income and cash flow were all found to be significant. The quick ratio is a commonly used ratio in financial analysis. The quick ratio had predictive significance in this model of .000. The higher the ratio, the lower the probability of receiving a going-concern opinion one year later. The change in sales and change in income prove to be predictive of distress in high-tech companies. If sales and income increase in the current year, a going-concern opinion is less likely one year later. The cash flow variable indicates the firm's ability to raise cash. The greater the cash in one year, the greater the likelihood of a going-concern opinion one year later. Results indicate that accounting numbers are predictive of financial distress in the high-tech industry. Although the capital structure is different

and the industry is very volatile this study verifies that accounting information is useful in the high-tech industry.

Family Studies & Interior Design

Shayna Fruit (62)

ADVISOR = Sylvia Assay

The Winds of Change: Domestic Violence in Romania and Moldova

Domestic violence is a leading cause of injury and death to women worldwide (OSCE, 2001). Although much is known about domestic violence in most countries, there are gaps in the research in Eastern Europe. The purpose of this study was to examine the attitudes of youth within the Evangelical churches in Romania and Moldova. This qualitative study was conducted using semi-structured interviews with 51 youth, ages 19 to 29 who were active members in Evangelical churches throughout Romania and Moldova. Although research finds younger generations of people in Eastern Europe have more in common with their elders than in the west (Tilley, 2002), new developments have begun to change the life conditions of young people in post-communist countries where they are becoming vehicles for social reform (Wallace, 1998). Findings from this study indicate that youth are more vocal and willing to initiate change than the older generations from these countries.

Marketing & Management Information Systems

Sonya Lange (63)

COPRESENTOR = **Steph Janda**

ADVISOR = Greg Broekemier

Level of Demand for Upscale, Community and Family Oriented Restaurants in a Rural Community

According to PR Newswire (2006), there are approximately 935,000 restaurants across the nation. The restaurant economy will surpass \$1.3 trillion in 2007. Restaurants are becoming more

creative, ethnic, and exotic. Restaurants are now offering exciting culinary experiences while dining, as well as up-to-date technology that enhances patrons' experiences. Americans' current preferences are for restaurants that offer more menu options with a wider variety. Research on a proposed upscale, community and family oriented restaurant in a rural Midwestern community, which would provide such variety, was conducted by a team of undergraduate marketing research students. The research client plans to create a new and different approach towards international cuisine. The research study estimates the level of support from the area for the proposed restaurant. Data were collected by using a telephone survey of randomly selected area residents, monitoring an additional children's survey, and completing a subset of the study utilizing a judgment sample. The results were used to determine support from the current market, the satisfaction of residents with the current restaurant selection in the area, menu preferences, demographics of probable customers, preferences for the atmosphere of the proposed restaurant, and how to best involve and support the community. A local business client will use the information provided to develop a marketing plan for the proposed new restaurant in the area. Results of this study will assist in critical decision making concerning the further development of the client's proposed restaurant. The results may also be of value to entrepreneurs contemplating the establishment of new restaurants in similar areas.

Ashley Sadd (64)

COPRESENTOR = **Stein Elting**

ADVISOR = Greg Broekemier

Technology Store Usage on a College Campus

Although college technology stores in the United States represent an \$11 billion annual retail market and serve 17 million college students, few empirical studies of this segment of the retail industry have been reported. Research on technology store usage was conducted by a team of undergraduate marketing research students to help address this issue and aid the local campus technology store in

its marketing efforts. This research study determined the level of awareness and knowledge regarding a technology store held by faculty, staff, and students of a rural Midwestern college campus. Using an electronic survey, data regarding purchase behaviors, store awareness, and satisfaction levels toward the technology store were collected from 7,235 faculty, staff, and students. An electronic questionnaire was administered to the rural Midwestern college campus through the University's e-mail system using Opinio survey software. The sampling frame for this research project was drawn from a rural Midwestern college campus e-mail database. From this database, invitations to participate were sent to all students, faculty, and staff to insure that all members of the target population were contacted. 1,272 e-mail surveys were completed while the response rate for the project was 18% from a total of 7,235 faculty, staff, and students e-mailed. A local college technology store will use this information to develop a marketing plan to draw more customers, as well as measure their success with current customers. Results of this study will aid in critical decision-making regarding future promotional efforts of the technology store on the rural Midwestern college campus. Other college technology stores may also find information from this study of value.

Education

Health, Physical Education, Recreation & Leisure Studies

Alison Glidden (65)

ADVISOR = Greg Brown

Peptide YY Levels in Young Women: Correlations with Dietary Macronutrient Intake and Blood Glucose Levels

PYY is a hormone that influences hunger and satiety but the extent to which macronutrient intake, fasting blood glucose and cholesterol concentrations are related to PYY concentrations is unknown. Methods: Thirty-one college-aged women with no known chronic diseases were assessed for body

composition, three day dietary intake, blood glucose, cholesterol, and serum PYY concentrations. Results: Fasting serum PYY concentrations were related ($P < 0.05$) to BMI ($r = -0.565$), % body fat ($r = -0.831$), fat mass ($r = -0.758$) dietary energy intake ($r = 0.447$) protein intake ($r = 0.538$), carbohydrate intake ($r = 0.466$), and fat intake ($r = 0.412$). Fasting serum PYY concentrations were not related to LDL cholesterol, triglycerides or fasting plasma glucose concentrations. Conclusions: These data suggest that fasting serum PYY concentrations are inversely related to body composition and positively related to dietary macronutrient composition, but are not related to fasting plasma glucose or cholesterol concentrations.

Craig Smith (66)

ADVISOR = Greg Brown

Peptide YY Levels in Young Women: Correlations with Aerobic Fitness & Resting Metabolic Rate

PYY is a hormone that is secreted from the duodenum in response to food intake and low PYY concentrations are related to obesity. However, the relationship between aerobic fitness, resting metabolic rate and fasting serum PYY concentrations are unknown. Thirty-one healthy, college aged women were assessed for body composition, aerobic fitness (VO_{2max}), resting metabolic rate (RMR), and fasting serum PYY concentrations. Serum PYY concentrations were inversely related ($P < 0.05$) to BMI ($r = -0.565$), percent body fat ($r = -0.831$), fat mass ($r = -0.758$) and RMR (kcal/day; $r = -0.369$). Serum PYY concentrations were positively related ($P < 0.05$) to VO_{2max} (ml/kg/min; $r = 0.655$) and RMR when expressed relative to body mass (kcal/kg/day; $r = 0.547$). These data suggest that in young women fasting serum PYY concentrations are inversely related to body composition and resting metabolic rate and positively related aerobic fitness and RMR when measured relative to body mass.

Craig Smith (67)

ADVISOR = Samuel Lopez

The Effects of Ankle Bracing on Proprioceptive Responses in Healthy, College Athletes During Summer Conditioning

The effect of ankle bracing on the functional stability of a non-pathological ankle has not been widely researched. Research in this area can lead to safer conditioning practices that actually help increase proprioception levels and limit sports injuries. This study investigated any differences in proprioception levels when subjects did or didn't wear ankle bracing when tested before and after summer conditioning. Subjects were collegiate football athletes with non-pathological ankles engaged in summer conditioning. The athletes were assessed using a functional testing grid and a proprioception level was assessed. Participants either wore ankle braces or didn't wear ankle braces. Subjects were tested again for variances five weeks later. The results didn't show any significance between those who braced and those who didn't. Though no differences between the groups were found, the data provides a starting point for research into the effects of bracing on athletes.

Teacher Education

Anja Eichel (68)

ADVISORS = Cheryl Young & Donna Montgomery

Math Interventions for a Student with Autism

The purpose of this study was to evaluate the effectiveness of math interventions for a 13-year old boy diagnosed with autism. The Touch Math Curriculum, a research-based instructional strategy using touch points and instructions based upon real life experiences, was implemented over the course of six weeks. Discrete trial training was used to mark the student's progress toward independence. The student researcher recorded the level of assistance needed to accomplish given tasks in the areas of one-to-one correspondence and coin identification. Results of the study revealed that the intervention consisting of hands-on materials provided by Touch Math led to an improvement in

one-to-one correspondence. The student's ability to identify coins increased more through the implementation of real-life experiences than the use of Touch Math materials.

Graduate Studies

Biology

Anjeza Pashaj (69)

ADVISOR = Kimberly Carlson

Changes in GST Gene Expression in Large Caged Populations of Drosophila melano-gaster

Drosophila melanogaster is a model organism for studying the genetics of aging, in which the results are directly applicable to humans. Multiple theories exist concerning the aging process. One of these is the association of aging with an increase in oxidative stress and free radical production. To circumvent this process, detoxification enzymes are employed. One such family of detoxification enzymes is the glutathione S- transferases (GSTs). GST genes are found in all organisms, with orthologs in humans and *D. melanogaster*. The hypothesis for this study is that aging is the result of a decrease in the transcription and translation of the GST genes over time. To test this hypothesis, large caged populations (15,000) of *D. melanogaster* will be sampled over a period of 89 days and the levels of GST mRNA analyzed. This project will provide insight into the mechanistic regulation of aging as a result of GST expression.

John Riens (70)

ADVISOR = Wyatt Hoback

Population Status and Potential Threats to the Platte River Caddisfly (Ironoquia plattensis)

The Platte River caddisfly, *Ironoquia plattensis* is an unique trichopteran species endemic of the central

Platte River region of Nebraska. An assessment was conducted at six historical locations where populations were known to exist. The six historical locations were revisited during the period of known adult emergence (September 20th through October 5th). Wet meadow banks were searched for larval casings, as well as emerged adults. When caddisflies were located, vegetation composition, substrate, bank slopes, and other relevant environmental characteristics were recorded. Only five of the six previously known locations contained this species and four of these sites had low numbers, and were heavily impacted by habitat alterations including changes in river flow and the presence of exotic vegetation and exotic fish. From current information, the Platte River caddisfly is one of the rarest insects in the world, and should be strongly considered for protection under the Endangered Species Act.

Angela Wang (71)

ADVISOR = Kimberly Carlson

Viruses Endogenous to Populations of D. melanogaster

Drosophila melanogaster is a model organism used in many aging studies and genetic experiments due to ease of manipulation. Experiments have suggested various factors affecting *D. melanogaster*'s longevity. One of those factors is the viruses endogenous to *D. melanogaster*, and studies have shown that these viruses affect the longevity and fecundity of *D. melanogaster*. In this experiment we investigate whether viruses are contained in the frass of *D. melanogaster* and if different populations contain different viruses. To test this, two populations of *D. melanogaster* are used and their frass will be suspended in DI water and put onto food media for *D. melanogaster*. *D. melanogaster* from population one will be subjected to its own frass and frass from population two to see if longevity is affected, same with population two. This will provide initial results to whether there is something in the frass that is affecting longevity of *D. melanogaster*

Business Administration

Gayatri Kashyap Kocherlakota (72)

ADVISOR = David Palmer
ICICI Bank and Its Services

ICICI (Industrial Credit Investment Corporation of India) was established in the year 1955 as a Financial Institute to provide loans to the Indian Industry. It was established with a sole aim to improve the economy of India. ICICI, at the time of its set up was not a bank. It acted as a financial Institute and later on it emerged as ICICI Bank in the year 1994. From 1990's ICICI started diversifying its products and services. In 1999 ICICI became the first Indian company to be listed in NYSE from Non Japan Asia region. The bank provides various products depending on the Individual needs. They are involved in Banking Operations, Home loans, Credit cards, Business Loans etc. In Banking they have different products. There are various accounts like Normal Savings Accounts, Student Accounts, Power Pay Accounts, NRI (Non resident Indian account), and Senior Citizen accounts. It is the Second Largest bank in India with total assets of Rs. 3446.58 billion (US\$79 Billion) on March 31 2007. It is the most valuable bank in terms of market capitalization and it is ranked as third amongst all the companies listed in Indian Stock exchanges. ICICI bank has a network of 950 branches and 3500 ATM's in India and in 17 countries. It provides a wide range of products to all the customers through various channels and it always tried to be in par with the International Standards. The main objective of my paper is to analyze ICICI bank in terms of its organization and services. The paper will be discussed in four sections. In the first section, the History and Origin of the bank is outlined. The second and third sections are devoted to the organization and services of the bank and its operations within India and Internationally. The future of the Bank is presented in the fourth section.

Counseling & School Psychology

Joni Christensen (73)

ADVISOR = Max McFarland
A Comparative Study: U.S. vs. International School Psychology Training Programs

Training of school psychologist has evolved greatly. Content has shifted from the beginning of school psychology as a profession to where it is today. More and more international training programs are evolving, which provides an opportunity for conducting a comparative study. It is therefore the purpose of this study to determine to what extent is school psychologist training and programs in the United States comparative to school psychology training and programs internationally. The specific research questions to be addressed will include: (a) Are training programs within the United States and International programs consistent in content areas? (b) Is there a difference between credit hour requirements for programs in the United States and Internationally? (c) What type of degree is offered (i.e. masters, specialist, or doctoral)? (d) Are there prerequisites to the programs such as language proficiency, a college degree, or an entrance exam?

Jamie Ellsworth (74)

COPRESENTOR = **Karen Wille**
ADVISOR = Robin Sobansky
Investigation of the Efficacy of an Intensive Summer School RtI Approach to Improve Reading Skills of Elementary School Students

During summer vacation children identified as at-risk in reading achievement often experience decline in these important skills. Previous research has demonstrated that students who experience the most declines include those that are economically disadvantaged and English language learners. The purpose of this research project is to investigate the impact of a research-based intensive summer school (ISS) intervention on the reading performance and social adjustment of elementary school children identified at high risk for poor reading achievement. The project will investigate the effectiveness of an

RtI approach wherein students are selected to participate based on CBM data indicating the presence of significant delays in basic reading skills. These students will be monitored throughout the ensuing academic year to evaluate the impact of the ISS and its ongoing benefits toward students' overall reading progress and social adjustment. The intervention students will be compared to control group participants at three time points.

Shannon Helgoth (75)

ADVISOR = Max McFarland

Roles and Functions of School Psychologists: A Global Perspective

There are many benefits for studying and researching international school psychology. Some of these benefits are learning from one another, deepening our cultural views, and expanding the knowledge base from the research generated. School psychology has become a profession known all around the globe and understanding the characteristics, training, roles, responsibilities, challenges, and research interests of school psychologists is increasingly important as the profession continues to develop in many countries (Jimerson, Graydon, Curtis, & Staskal, 2007). The purpose of this study is to discuss the findings on preparation of school psychologists and their roles/functions in 43 countries around the world using a meta-analysis performed on 43 articles compiled in *The Handbook of International School Psychology* (Jimerson, Oakland, & Farrell, 2007). There were many surprising findings. One of these findings was more countries (approximately 85%) had entry level of school psychologists as Master's Degree compared with approximately 12% Bachelor's Degree entry level. Another finding was that Bachelor's Degree school psychologists assumed significantly more roles/functions ($M = 6.4$) compared with Master's ($M = 4.6$), $p < .05$. Finally, Master's Degree school psychologists placed significantly ($p < .05$) more emphasis on consultation and testing/evaluation roles while Bachelor's Degree school psychologists placed significantly ($p < .05$) more emphasis on counseling,

prevention, and program development.

Catherine Hock (76)

COPRESENTORS = **Michael Bishop & Mira Sabbah**

ADVISOR = David Hof

2008 Kent Estes Justice for All Conference

Graduate student members of Chi Sigma Iota, an international counseling honor society, and students in the Department of Counseling and School Psychology have prepared a poster describing the process of planning and executing a statewide advocacy conference targeted for helping professionals. The poster will describe the resources helpful in developing the conference, the process of securing funding sources, people needed for implementation, and a timeline for developing and implementing the activity. The goals of the Kent Estes Justice for All Conference are to increase participants' awareness of specific social advocacy strategies in working with underserved populations, help participants learn to empower their clients and/or students, and to help participants apply information and experience to their specific professional areas by creating an interactive experience that allows participants to apply gained knowledge for use in their own settings.

Abby Huber (77)

ADVISOR = Max McFarland

An Evaluation of the University of Nebraska at Kearney School Psychology Training Program

The purpose of this study is to evaluate the efficacy of the UNK School Psychology program based upon the perceptions of interns and graduates in regards to the eleven School Psychology Leadership Domains and Functions in schools. This is seen as a necessary replicated evaluation in order to maintain a proactive training program, keeping the skills and knowledge taught in correlation with both the expectations of practice and the standards for training by NASP.

Bethany Hyatt (78)

ADVISOR = Max McFarland

Meta-Analysis of Early Childhood Mental Health Interventions

This presentation will include data from a meta-analysis of 24 studies presenting 120 mental health outcome measures. The presentation will focus on information related to the best target for early intervention and the most efficacious site for relationship between SDC with bone health (McGartland, 2003). The purpose of the current study is to determine the association between SDC and bone mineral density in young women, ages 16-24 years. Sixty-five females, ages 16 to 24, were assessed for body mass, body height, body composition, bone mineral density, SDC frequency, and average daily SDC. Associations between SDC with bone health will be analyzed using Pearson correlation coefficients.

Molly Lungrin (79)

ADVISOR = Max McFarland

What Education Students at UNK Know About Response to Intervention

My research study consists of a survey, which has been administered to upper classmen Education Majors at the University of Nebraska at Kearney to see what their level of awareness and perceived level of importance is in regards to the Response to Intervention process being utilized in public schools across Nebraska. I want to see if Response to Intervention is being taught in education classes at UNK, and if future educators feel prepared to participate in the Response to Intervention Process when they begin teaching.

Jessica Markvicka (80)

ADVISOR = Max McFarland

Increasing Student's Responsiveness to Reading Assignments

Researchers have shown that students' perceptions of mathematics assignments could be improved by interspersing additional briefer, easier problems

(e.g., Logan and Skinner, 1998). However, when this research was extended to reading tasks, significantly more students selected the control passage as requiring less time to read, but no differences were found for preference, choice, or effort selections (Martin, Skinner, & Neddenriep, 2001). This research was conducted by interspersing brief, easy paragraphs within the experimental reading passage. The purpose of this study was to extend the research by interspersing brief, easy pages within an experimental reading passage. Third-grade students read out loud both a control passage and a similar experimental passage that contained additional interspersed brief (i.e., 10 words), easy (i.e., first-grade reading level) pages. Students then selected the passage that would require the least effort and time to read. They also indicated which passage they liked most (preference) and the passage they would like to read again (choice).

Hannah Wegner (81)

COPRESENTOR = Krystal Posey

ADVISOR = Max McFarland

Student Perceptions of Bullying in a Colorado School: A Second Year Follow-Up

This study is a second year follow-up which examined the efficacy of a bullying prevention program. Third, fourth, and fifth grade students in a Midwestern school were assessed prior to and after the implementation of the bullying prevention program. This study focused on student's perceived feelings of safety in different school settings in regard to gender and ethnicity. In addition, the study compared the perceived feelings of safety in the pretest to the posttest. Finally, the study examined the efficacy of the bullying prevention program in relation to indicators of bullying the various methods of bullying being assessed.

Health, Physical Education, Recreations & Leisure Studies

Megan Costello (82)

ADVISOR = Kate Heelan

Association Between Soft Drink Consumption and Bone Health in Young Females

The U.S. ranks first concerning soft drink consumption (SDC). The trend of SDC increased since the 1960s surpassing all other kinds of beverages; therefore, the health risks associated with SDC have become an important public health issue (Garcia-Contreras, 1999). In recent years, the scientific literature has suggested an inverse relationship between SDC with bone health (McGartland, 2003). The purpose of the current study is to determine the association between SDC and bone mineral density in young women, ages 16-24 years. Sixty-five females, ages 16 to 24, were assessed for body mass, body height, body composition, bone mineral density, SDC frequency, and average daily SDC. Associations between SDC with bone health will be analyzed using Pearson correlation coefficients.

Karen DeDonder (83)

ADVISOR = Scott Unruh

Confidence Levels of Certified Athletic Trainers in Regards to Female Athlete Triad Syndrome

This research deals specifically with the profession of athletic training and how comfortable the profession is with recognizing, seeking treatment and educating athletes on the female athlete triad syndrome. The female athlete triad syndrome is defined by the interrelation of three individual components: disordered eating, menstrual dysfunction and decreased bone mineral density. This syndrome can potentially be fatal or at least quality of life threatening. It is very important for certified athletic trainers to be very skilled and confident when dealing with the syndrome. An original instrument was created that inquired about the certified athletic trainer's personal confidence in dealing with each component individually and the

syndrome as a whole. The survey was sent out via email to 1,000 certified athletic trainers in the region. A paper copy was sent to those who did not respond via email.

Pamela Janulewicz (84)

ADVISOR = Kate Heelan

Replacement of Chairs with Fitness Balls in Elementary School Classrooms to Increase Daily Physical Activity

The number of overweight youth has increased dramatically over recent years, with physical inactivity as a main contributing factor. However, it has been suggested that implementing fitness balls in replacement of desk chairs into a classroom setting can increase muscular strength as well as cardiovascular fitness. The purpose of this study was to determine whether replacing classroom chairs with fitness balls increases daily physical activity among 4th grade students. Daily physical activity was measured using accelerometers for five days with 39 children (9.49 $\hat{\pm}$ 0.56 years). Classroom chairs were then replaced with fitness balls for three months. During the intervention, daily physical activity was measured for another 5 days. Minute-by-minute activity counts were uploaded and time spent in moderate-to-vigorous physical activity (MVPA) was determined for total daily physical activity as well as physical activity obtained during the school day between 8:00am and 3:00pm. Comparisons will be made between physical activity levels obtained while in classroom chairs and while using fitness balls.

Justin Rethorst (85)

ADVISOR = Scott Unruh

Differences in Job Satisfaction Among Collegiate Athletic Trainers

The purpose of this study is to determine if any differences in job satisfaction exist between athletic trainers employed at the different levels of the National Collegiate Athletic Association (NCAA). There is a need for research to determine if job satisfaction of athletic trainers is influenced by the

level of NCAA competition. A stratified random sample was to select the athletic trainers (n=384). They were sent an e-mail containing a link for completion of an online survey through the University of Nebraska-Kearney OPINIO system. The survey contained 10 demographic information questions and the 36 question Job Satisfaction Survey (JSS). A paper copy of the survey was sent to those who did not complete the survey online. Each participant was scored on overall job satisfaction and the nine subscales within the JSS, including satisfaction with pay, chances of promotion, supervision, fringe benefits, contingent rewards, operating conditions, co-workers, nature of work, and communication.

Oral Presentations – Room 310

Biology

- 1:30-1:45 **Christine Gilling**
ADVISOR = Kim Carlson
Stability of a Foreign Protein in Chimeric CVB3: Potential Vector for Gene Delivery
- 1:45-2:00 **Ben Swanson**
ADVISOR = Janet Steele
The Effectiveness of Policosanol as a Dietary Supplement for Reducing Total Cholesterol in Healthy Males

Chemistry

- 2:00-2:15 **Danielle Policarpio**
ADVISOR = Jon Thompson
Development of an Aerosol Albedometer

Communication Studies

- 2:15-2:30 **Laura McAtee**
ADVISOR = Rachelle Kamrath
Rhetorical Criticism-Communication Analysis
- 2:30-2:45 **Brandon Pettigrew**
ADVISOR = Rachelle Kamrath
Rhetorical Criticism-Communication Analysis

Computer Science & Information Systems

- 2:45-3:00 **Aaron Steele**
COPRESENTOR = **Jordan Van Winkle**
ADVISOR = John Hastings
Scalable Automatic Case Elicitation
- 3:00-3:15 **Mark Vavra**
COPRESENTORS = **Ry Lowry & Jed Fong**
ADVISOR = John Hastings
Recruiting Program

Oral Presentations – Room 312

Marketing

- 1:30-1:45 **Ben Allemann**
ADVISOR = Timothy Burkink
Cross Cultural Examination of Personal Care Products Usage Between Czech and Nebraskan College Students
- 1:45-2:00 **Kristan Barleen**
COPRESENTOR = **Megan Michaud**
ADVISOR = Greg Broekemier
Barriers to Becoming a Foster Parent in a Midwest Community
- 2:00-2:15 **Yuki Kawakami**
ADVISOR = Greg Broekemier
Home Remodeling
- 2:15-2:30 **Lana M. Lueck**
COPRESENTORS = **Andrea Laituri, Jessica Jones & Ben Allemann**
ADVISOR = Greg Broekemier
Level of Awareness and Usage of Organic Products, Homeopathic Products, and Health Supplements in a Rural Area
- 2:30-2:45 **Dana Wright**
COPRESENTORS = **Hillory Doerr & Samantha Osmotherly**
ADVISOR = Greg Broekemier
Demand for New Casual Fine Dining Restaurant in Medium Sized, Midwestern Community

History

- 2:45-3:00 **Bill Hayes**
ADVISOR = Vernon Volpe
Call to Save the Union: Recruitment in Nebraska Territory During the Civil War
- 3:00-3:15 **Ross Huxoll**
ADVISOR = Mark Ellis
The UNK Sports Collection
- 3:15-3:30 **Joshua Rice**
ADVISOR = Mark Ellis
The Savage Conundrum: American Christian Missions and the Pawnee Indians of Nebraska, 1836-1846

Oral Presentations – Cedar Room

History/Women's Studies

- 1:30-1:45 **Brooke McGee**
ADVISOR = Linda Van Ingen
A History of Women Attorneys in Nebraska: An Examination of Early Attorney Margaret Jane Carns

English

- 1:45-2:00 **Rachel Usasz-Keber**
ADVISOR = John Damon
The Prince and the Pauper: Societal Similarities Between the Silmarillion and Medieval Texts

Political Science/Women's Studies

- 2:00-2:15 **Brooke McGee**
ADVISORS = Joan Blauwkamp & Linda Van Ingen
An Analysis of Supreme Court Justice Antonin Scalia's Jurisprudence and Opinions and Their Implications for Ecofeminists and the Environment

Psychology

- 2:15-2:30 **Rachael Broadwell**
ADVISOR = Richard Miller
Locus of Control in Individuals with Eating Disorders
- 2:30-2:45 **Chris Hein**
ADVISOR = Richard Miller
Gender Differences in Reaction to Public Displays of Affection
- 2:45-3:00 **Anastashia Malcolm**
ADVISOR = Joe Benz
Effects of Temperament on the Premack Principle and Response Deprivation Theories of Reinforcement
- 3:00-3:15 **Jayme Jacobsen**
ADVISOR = Richard Miller
Examining Employee Resistance to the Implementation of a New Dress Code
- 3:15-3:30 **Anastashia Malcolm**
ADVISOR = Richard Miller
Focus of Control and Self-Monitoring Behavior in Relationship to Body Image Satisfaction and Body Image Distortion

ORAL PRESENTATIONS

Biology

Christine Gilling (86)

ADVISOR = Kimberly Carlson

*Stability of a Foreign Protein in Chimeric CVB3:
Potential Vector for Gene Delivery*

Group B, serotype 3 of Coxsackievirus (CVB3) is the leading cause of myocarditis and pancreatitis. The virus has evolved to form 5' terminal deletions making the virus non-virulent and stable, which make it a suitable candidate to be evaluated as a potential vector system for gene therapy delivery. The hypothesis was that a foreign protein could be stably expressed in tissue culture using CVB3 as a vector system. cDNA from CVB3/28 and mL-4 were used to construct a chimeric virus that was transfected into HeLa cells (control) and mouse heart cardiomyocytes (MHC; experimental). Chimeric virus was detected through passage 10 in MHC cells, was non-infectious, and retained the insert, suggesting this vector system may be an effective delivery system. HeLa cells deleted the insert and showed cytopathic effect when infected, suggesting virulent activity in these cells. Constructing CVB3 with gene inserts may contribute to gene therapies for diseases.

Ben Swanson (87)

ADVISOR = Janet Steele

The Effectiveness of Policosanol as a Dietary Supplement for Reducing Total Cholesterol in Healthy Males

Policosanol is a natural substance derived from sugar cane that is advertised for its lipid-lowering effects as a dietary supplement not evaluated by the FDA. The manufacturer's research suggests that

Policosanol® at doses of 5-40 mg/d has lipoprotein-lowering effects comparable to prescription statin drugs. In this single blind placebo controlled study, the lipoprotein-lowering effects Policosanol will be examined at a dose-dependency of 20 mg/d with the manufacturer's claim of 20-25 % reduction in low-density cholesterol (LDL-C). Subjects on monitored diets will be administered Policosanol® at the suggested dosage for six weeks. Participant's cholesterol will be checked via a CardioChek® blood test system. Base line LDL-C levels will be compared to levels at the end of eight weeks of Policosanol® administration. Results of this research may help determine what dietary supplements to use and what results to expect from cholesterol lowering alternatives that are not evaluated by the FDA.

Chemistry

Danielle Policarpio (88)

ADVISOR = Jon Thompson

Development of an Aerosol Albedometer

Aerosol particles suspended in the atmosphere can range in size from 0.01 - > 10 μm . Aerosols can adversely affect human health, degrade visibility, and potentially alter earth's radiative balance. This presentation will describe development of a new technique for the measurement of aerosol albedo at 532 nm. Aerosol albedo is the ratio between aerosol scattering coefficient (k_{scat}) and extinction coefficient (k_{ext}) and is an important parameter which helps predict whether a given aerosol cloud will lead to warming or cooling of the atmosphere. In this work, we have explored the use of cavity ring-down spectroscopy (CRDS) for measurement of aerosol extinction coefficient. Simultaneously, the light scattered from the probe beam was collected by an integrating sphere and used to determine scattering coefficient through calibration with He, air, CO₂, and 1,1,1,2-tetrafluoroethane (SUVA or R-134a). This feature of the method is unique, as aerosol scattering and extinction can be measured simultaneously on the exact same sample. The cavity ring-down method offered limits of detection of 0.7 Mm^{-1} while detection limits of 2.7 Mm^{-1} was

achieved on the scatter channel. We have applied this method to the determination of albedo of several polystyrene size standards, laboratory generated soot surrogates, and atmospheric particles at our location. This highly sensitive method is capable of monitoring particulate pollution, visibility changes, or may find use tracking changes in optical properties of aerosols as they are processed chemically in the atmosphere.

Communication Studies

Laura McAtee (89)

ADVISOR = Rachele Kamrath

Rhetorical Criticism-Communication Analysis

For over six decades, 16 miles of meticulous Nazi records were stored in the small town of Bad Arolsen, Germany. Information within included the identity of every holocaust prisoner, human experiment records, and death records among many other facts. Recently, the 11 nations overseeing these tightly guarded records recently ratified an agreement to hide them no longer. These records have been released for public review, making an even deeper understanding of the holocaust possible. This rhetorical criticism research presentation uses Dr. Susan Crane's theory of "Historical Consciousness" to analyze whether the Bad Arolsen archives have the potential to clarify all unanswered questions about this period in history. The research explores the compatibility of the theory, applies it to the Bad Arolsen Archives, and draws critical and social conclusions about the ugliest secrets of the Nazi regime.

Brandon Pettigrew (90)

ADVISOR = Rachele Kamrath

Rhetorical Criticism-Communication Analysis

In July, 2007 the NAACP performed a funeral service for one of the most taboo words in American culture, "nigger." Much like their previous burial of "Jim Crow" in 1944, the event was intended to symbolically eradicate racial language in our culture. The NAACP no longer formally

recognizes the term which poses a dilemma; if discursive space is closed within the African American socio-political landscape, who among us has the prerogative to discuss the term? This oral presentation uses Nikki Slocum-Bradley's Interpretation of Positioning model to analyze whether the NAACP's burial of "nigger" will affect discourse about the term in the United States. Through articulating Slocum-Bradley's model, applying it to the symbolic funeral, and drawing critical and social conclusions, the paper seeks to answer this question.

Computer Science & Information Systems

Aaron Steele (91)

COPRESENTOR = **Jordan Van Winkle**

ADVISOR = John Hastings

Scalable Automatic Case Elicitation

Case-Based Reasoning (CBR) is an artificial intelligence reasoning approach that applies previously acquired knowledge, stored in the form of cases (or prototypical scenarios) to a new problem. CBR systems are generally comprised of manually acquired cases, and are limited to very specific domains with resulting domain-dependent parameters. A more robust method of knowledge acquisition and reasoning is automatic case elicitation (ACE). An ACE reasoner learns from scratch by utilizing a process of trial and error, repeatedly attempting actions with no specific knowledge about the domain (e.g. rules or strategies), and adding the results of the chosen action to the knowledge bank. The performance of an ACE reasoner improves over time as the reasoner becomes more familiar with its environment. To date, ACE has been restricted to reusing cases at the same level of detail (i.e., the same dimensions when discussing space-based environments). Our work improves the robustness of ACE through a novel application of image recognition and manipulation techniques in a way which allows a reasoner to retrieve and apply knowledge acquired at a smaller, finer level to more complicated situations. Our approach when applied to the domain of Go, a two-dimensional board game, demonstrates that the ability to extrapolate

onto a larger environment can improve the performance of ACE by initially decreasing the complexity of the search space to a manageable level and allowing the reasoner to converge to a competent knowledge base in a domain for which a trial and error process would otherwise be too time consuming.

Mark Vavra (92)

COPRESENTORS = **Ry Lowry & Jed Fong**

ADVISOR = John Hastings

Recruiting Program

Several approaches to bringing back enrollment in computer science (CS) degree programs have been attempted, including using robots or games. One such attempt is Game Maker, which seeks to attract students to technology by allowing them to create their own game without having to know anything about programming. Although this environment has been successfully used by high school students, it is currently limited to the production of 2D one-player games and does not address an extremely popular form of gaming among today's youth, namely networked "shooter" games. This research addresses the limitations of the Game Maker environment through the creation of a new game development environment which provides multiplayer-networked functionality and in future versions will include 3D graphics. This work demonstrates a scalable, convenient and speedy approach to the production of multiplayer shooter games without the requirement that the user be well versed in computer programming.

English

Rachel Usasz-Keber (93)

ADVISOR = John Damon

The Prince and the Pauper: Societal Similarities Between The Silmarillion and Medieval Texts

"The Prince and the Pauper: Societal Similarities Between The Silmarillion and Medieval Texts" details the relationship elves and men share with noble and serf classes in medieval texts. Textual support is provided from The Silmarillion and a

variety of medieval texts in the areas of employment, recreational pursuits, power and authority, and kingdom structure.

History

Bill Hayes (94)

ADVISOR = Vernon Volpe

Call to Save the Union: Recruitment in Nebraska Territory During the Civil War

This paper will examine the recruitment of the major units that served from Nebraska Territory during the Civil War. It will look at how the recruitment was done with newspaper advertisements and militia units, what the mission of each unit was initially, and any controversies surrounding those units whether it be where they served or how they were used in the territory or beyond. It will also study what areas of the territory supplied the most troops and if politics hindered any recruitment in certain areas. This paper will show how an established territory of the United States responded to the Civil War and examine the efforts made to recruit and train troops to contribute to the Union war effort.

Ross Huxoll (95)

ADVISOR = Mark Ellis

The UNK Sports Collection

Donald K. Briggs, Kearney College's Sports Information Director for more than thirty years, donated more than 70,000 sports-related photographs to the Calvin T. Ryan Library in 1998. Mr. Briggs' collection provides an account of all sports-related activities at the institution from the early 1900s to the 1990s. Many of these previously unviewed photographs are being digitized, downloaded, and will eventually be accessible to the public via the Calvin T. Ryan Library's website. This research project will provide an easily accessible and lasting record of the University's history of sports.

Joshua Rice (96)

ADVISOR = Mark Ellis

The Savage Conundrum: American Christian Missions and the Pawnee Indians of Nebraska, 1836-1846

The 1830's-1840's were trying times for the Pawnee Indians. Weakened by hunger and stricken by disease, Pawnee society was wearing thin. All the while, white settlers were waiting to gobble up more Indian land. A critical debate divided many Americans. The West would become part of the US, but what of the Indians? Could Native Americans be converted to Christianity and Americanized, before it was too late? Some missionaries advocated settling the Indians first, others argued that settlement was a secondary concern, and that preaching the Gospel to the Indians was first priority. Thrown into this melee were John Dunbar and Samuel Allis, missionaries to the Pawnee. They could follow their mission; charge, civilize, settle, and save the Pawnee, or they could feed the Pawnee and try to shield them from the Lakota, directly challenging the US federal government.

History/Women's Studies

Brooke McGee (97)

ADVISOR = Linda Van Ingen

A History of Women Attorneys in Nebraska: An Examination of Early Attorney Margaret Jane Carns

The profession of law is both rigorous and prestigious. Traditionally, men have dominated the legal profession. However, women have contributed more to the profession of law than they have been previously credited. Nebraska women have contributed significantly to the study of law since the late 19th century, and continue to serve as lawyers, mediators, professors, and judges today. This paper has uncovered much of the early work of these women attorneys, by focusing on Mrs. Margaret Jane Burke Carns as a case study. Carns, a resident of Lincoln, Nebraska, was the first woman to be admitted to the American Bar

Association. By examining Carns' experiences in law school, contributions to her community through numerous organizations, and analyzing the cases that she presided over, a better and more general understanding of how women contributed to the profession of the law in early Nebraska will be more fully reached.

Marketing

Ben Allemann (98)

ADVISOR = Timothy Burkink

Cross Cultural Examination of Personal Care Products Usage Between Czech and Nebraskan College Students

This cross-cultural study examines affective, cognitive and behavioral responses towards personal care products by consumers in the United States and the Czech Republic. The research objectives included measuring usage patterns, evoked brands, promotion effectiveness and attitudes about personal care products. A survey was developed and translated into Czech. The surveys were administered via personal interviews. A Czech student participated in the Czech Republic interviews to aid in translation for non-English speaking respondents. Convenience samples of university students, including 43 Czech college students at Palacky University in Olomouc, Czech Republic and 49 American students at the University of Nebraska at Kearney participated in the study. Respondents were identified from campus commons areas in the Czech republic and from business classes and Study Abroad participants in differences between the two age groups. Preliminary results indicate that, compared to Czech students, American students use more personal health care products, are more brand orientated and have a larger evoked sets. Implications of the findings and directions for future research will be discussed.

Kristan Barleen (99)

COPRESENTOR = **Megan Michaud**

ADVISOR = Greg Broekemier

Barriers to Becoming a Foster Parent in a Midwest Community

The need for more foster parents is growing because of the increasing number of children in the foster care system. In the state of Nebraska there are 35.9% more children in foster care than there were ten years ago for a total of over 6,200 children. The problem lies in the fact that although the number of children is rapidly increasing, the number of people willing to become foster parents is not. This problem is especially seen in the city of Kearney in Buffalo County, NE. Nearly 40% of the population fit within the target profile for potential foster parents, yet there are approximately only thirty foster families in the city. To discover reasons for the lack of acceptance in this rural community, and others like it, research on the public's knowledge and attitudes regarding foster care was conducted by a team of undergraduate marketing students. Using a telephone survey, data regarding willingness to be a foster parent, common deterrents to becoming a foster parent, and perceived need for foster care within the area were collected from 250 households. Most people feel that there is a need for more foster parents but refuse to volunteer themselves. The purpose of the research is to aid a local foster care organization which will use this information to develop a marketing plan to attempt to increase the number of foster parents in the community and surrounding areas. Results of this study could also aid in critical decision making in determining the target market and promotion of foster care in similar communities.

Yuki Kawakami (100)

ADVISOR = Greg Broekemier

Home Remodeling

Today, home remodeling is needed by many home owners. Vertis Customer Focus 2006 Home Improvement study found that 56 percent of adults who are planning on doing a home improvement or

remodel project make the decisions and do the work themselves. This percentage is high and it depicts remodeling needs are high today. However, specific remodeling needs of consumers are not well known in a Midwestern community. A team of undergraduate marketing research students investigated remodeling needs in conjunction with a kitchen and bathroom remodeling company in a Midwestern community. First, secondary research was searched to find information about remodeling that already exists. After the secondary research, a questionnaire was developed and a telephone survey of 250 homeowners, randomly selected from a directory, was conducted. Data were then analyzed using SPSS statistical software. Results show that quality of products is the most important factor when people remodel their kitchens or bathrooms. Prices of products and reputation of products were also important to consumers. Respondents reported that when purchasing a home, having a remodeled kitchen and/or bathroom is somewhat important. Based upon these result, the local supplier of remodeling products can develop a more effective marketing strategy. The quality of remodeling products is important to people, so this supplier must clearly communicate the quality of products offered in its promotions. It was also discovered that the 35 to 49 year old age group would be the best segment to target with promotional efforts since this group had the highest percentage saying that they had remodeled a home in the past.

Lana M. Lueck (101)

COPRESENTORS = **Andrea Laituri, Jessica Jones & Ben Allemann**

ADVISOR = Greg Broekemier

Level of Awareness and Usage of Organic Products, Homeopathic Products, and Health Supplements in a Rural Area

Health supplements, organic products and homeopathic products have existed for many years. However, it is relatively recent that they have gained widespread popularity. Twenty years ago the FDA recognized that due to increased popularity of homeopathic products, more regulations were

needed to protect consumers. According to research by The Food Marketing Institute (2007), approximately 50% of all people eighteen and older regularly purchased organic products. Since little has been reported about the use of these products in rural Nebraska, research was conducted by a team of undergraduate marketing research students to address this needed information. This research study determined the level of awareness and attitudes regarding organic products, homeopathic products, and health supplements. The results helped a local health food store determine the community's awareness level of these products, the community's store perception, and the best appeals for future advertising aimed at these segments.

Dana Wright (102)

COPRESENTORS = **Hillory Doerr & Samantha Osmotherly**

ADVISOR = Greg Broekemier

Demand for New Casual Fine Dining Restaurants in Medium-Sized, Midwestern Community

Today, consumers are seeking more convenient, health-conscious dining options that provide variety. The restaurant industry is optimistic and growing; however, it is a volatile industry. Sound research is a critical aspect to enhance the likelihood of new ventures. Related to these trends in the restaurant industry, the purpose for this project was to provide assistance to entrepreneurs planning to open a new, casual, fine dining restaurant in a medium-sized, Midwestern community. Survey methodology was used to collect primary data for this project. The sampling frame for the research consisted of a list, purchased by the research clients, of households meeting the target market criterion. A questionnaire was created and administered to selected community residents using a telephone survey. The objectives that were researched included: determining the dining habits of consumers in the community, exploring local dining options and the satisfaction consumers have with those options, determining locals' perceptions of fine dining, identifying consumers' levels of comfort with casual

fine dining atmospheres, exploring the characteristics necessary to appeal to a professional audience, and determining if consumers would have interest in using a meeting room for events. SPSS was used to generate frequencies and percentages for the variables of the data collected, as well as to test for significant differences between age groups, various occupations, household types, and income groups. The research and conclusions were presented to the entrepreneurs of the new restaurant in hopes of providing them with the best knowledge possible to contribute to the success of their venture. Prospective restaurateurs may also find this study to be of interest.

Political Science/Women's Studies

Brooke McGee (103)

ADVISORS = Joan Blauwkamp & Linda Van Ingen

An Analysis of Supreme Court Justice Antonin Scalia's Jurisprudence and Opinions and Their Implications for Ecofeminists and the Environment

Justice Antonin Scalia, a consistently conservative member of the Supreme Court, has handed down judgments on environmental cases, usually resulting in decisions that environmental groups are against. Among these groups are ecofeminists-feminists who seek to end all oppression, as all oppressions of the natural world are inherently linked. In order to combat the system that oppresses the Other, ecofeminists believe that oppression must be fought on all fronts, among those oppressions are environmental issues. Using ecofeminist jurisprudence as a basis for comparison, this paper will seek to analyze the opinions of Justice Scalia on four cases, including Friends of the Earth, Inc. v. Laidlaw Environmental Services, Lujan v. Defenders of Wildlife, Massachusetts v. EPA, and Rapanos v. United States. These ecofeminist ideals will seek to criticize Scalia's opinions in these cases, and ultimately this paper shows how ecofeminists must continue to work diligently in order to combat Scalia's judgments.

Psychology

Rachael Broadwell (104)

ADVISOR = Richard Miller

Locus of Control in Individuals with Eating Disorders

This literature review examines a possible connection between locus of control and the development of eating disorders in females. The literature itself does not focus on locus of control specifically but makes reference to characteristics of the individuals with eating disorders that may indicate locus of control.

Chris Hein (105)

ADVISOR = Richard Miller

Gender Differences in Reaction to Public Displays of Affection

Male and female participants looked at 36 different pictures of Caucasian, African-American, and Asian, male-male, male-female, and female-female couples hugging, holding hands, or kissing and rated their level of comfort. Contrary to previous finding, females were more uncomfortable than men with same sex displays of affection.

Jayne Jacobsen (106)

ADVISOR = Richard Miller

Examining Employee Resistance to the Implementation of a New Dress Code

Employee resistance to change is a problem for many organizations trying to implement change effectively. Previous research indicated individuals with certain personality factors, an external locus of control, and a low openness to experience showed resistance to change. However, previous research has failed to look at these variables in terms of organizational resistance to change. The present research looks at these variables in the context of organizational change. Participants consisted of employees of an organization that recently implemented a new dress code. Significant

correlations were found indicating personality, locus of control, and openness to experience are associated with resistance to change. Suggestions for future research are discussed.

Annastashia Malcolm (107)

ADVISOR = Joe Benz

Effects of Temperament on the Premack Principle and Response Deprivation Theories of Reinforcement

Research in areas of establishing operations led to the development of theories of reinforcement. The Premack principle (probability of occurrence of behavior) and the Response Deprivation Hypothesis (restriction of occurrence) are two main theories. Temperament affects how an individual develops establishing operations and thus develops personal reinforcement theories.

Annastashia Malcolm (108)

ADVISOR = Richard Miller

Locus of Control and Self-Monitoring Behavior in Relationship to Body Image Satisfaction and Body Image Distortion

This study examined the effects of locus of control and self-monitoring on body image satisfaction and distortion. The difference between actual and perceived body image of 53 females was calculated. Self-monitoring did not affect body image distortion or satisfaction. Locus of control had a significant effect on overall body image satisfaction.

Department of Art & Art History Awards

UNK Art Society Undergraduate Student Art Exhibition Award Winners

Best of Show		Jeremy Eggleston	<i>Ambient</i>
On Canvas	Gold	Jaysie Ross	<i>Under My Umbrella</i>
	Silver	Jeremy Eggleston	<i>Spring</i>
	Bronze	Amy Erline	<i>Exit Sequence</i>
Ceramics	Gold	Katrina Florell	<i>Groomed</i>
	Silver	Katrina Florell	<i>5: Standing</i>
	Bronze	Alice Berryman	<i>Untitled 1</i>
Glass	Gold	Mark Halva	<i>Slash Grouping</i>
	Silver	Paul Engler	<i>Untitled (Blue)</i>
	Bronze	Paul Engler	<i>Untitled (Red)</i>
Graphic Design	Gold	Andrea Trew	<i>Monopoly Sponsored Habitat for Humanity Poster</i>
	Silver	J. Nathan Hansen	<i>Student Art Exhibition Poster 2007</i>
	Bronze	Anne McGovern	<i>Book Cover Spread</i>
On Paper	Gold	Kami Jorgensen	<i>Gray Still Life</i>
	Silver	Kasey Moon	<i>Between Two Worlds</i>
	Bronze	Shannon Runge	<i>Night Landscape</i>
Sculpture	Gold	Charles Schluckebier	<i>Lily and Ashley</i>
	Silver	Natalie Sindelar	<i>4D4M5 RIB</i>
	Bronze	Charles Schluckebier	<i>Myrah Foam</i>

UNK Art Society Undergraduate Student Participants

Rivkah Addy	Blair Bauer	Alice Berryman	Ashley Britton
Donna Deaton-Thompkins	Jeremy Eggleston	Paul Engler	Amy Erline
Nate Eskra	Katrina Florell	Jaime Flores	Claire Freeburg
Drew Gourley	Mark Halva	J. Nathan Hansen	Deonne Hinz
Kami Jorgenson	Amber Kosmicki	Brian Margheim	Anne McGovern
Kasey Moon	Jaysie Ross	Shannon Runge	Drake Sauer
Charles Schluckebier	Natalie Sindelar	Joe Szczepaniak	Andrea Trew
Rachel Vogel	Aaron Williams	Naomi Yonemoto	

Department of Art & Art History Awards

Students in the Art Department at the University of Nebraska at Kearney recently won a variety of AIGA, ADDY and UNK Art Society awards for studio art and design projects. “These awards represent a great accomplishment for our UNK art and design students,” said Richard Schuessler, UNK professor. “The success of receiving these awards from local and professional peers in the areas of studio fine arts, graphic design or advertising, not only recognizes the achievements of our students, but also the quality of the Art Programs at UNK.”

The America Institute of Graphic Arts (AIGA) is a professional association for communication design. The Nebraska chapter of AIGA sponsors an annual design competition for practicing artists, designers and students. Each year, the Nebraska AIGA chapter selects three design judges from across the United States to juror the competition for graphic design professionals and students.

In Fall 2007, the UNK VCD students won 23 AIGA Nebraska awards. Eric Nyffeler (of Columbus) received a gold for his Hydra Black Powder Fireworks poster. Anne McGovern (of Grand Island) took a gold award for her book cover illustration, and Brandon Oltman (of Cortland) won gold for his Kung Pow Paper Co. paper samples book.

Silver award winners include Eric Nyffeler (of Columbus) for packaging design, Ashley Stuhr (of Kearney) for her paper sample book, Jaime Flores (Kearney) for his direct mail, Brandon Oltman (of Cortland) for a poster, and Anne McGovern (of Grand Island) for poster design.

Bronze award winners include Brook Carpenter (of Alliance), 2 awards for Cassi Ellenwood (Kearney), Nate Hansen, Jennifer Karr, Anne McGovern (of Grand Island), 3 awards for Brandon Oltman (of Cortland), Joe Szczepaniak (of Omaha), 3 awards for Adam Torpin (O’Neil), and 2 awards for Andrea Trew (of Shelton).

The department also received a large number of 2008 Nebraska ADDY awards. The Nebraska Federation of Advertising sponsors the Nebraska- ADDY awards. The annual advertising and design competition is held for practicing advertisers, copywriters, marketing personnel, photographers, illustrators, designers and students. Entries receiving gold awards at the state competition are automatically forwarded to the Midwest District Competition. Gold awards at the district level are then entered in the national competition in Washington, D.C.

In February 2008, the UNK VCD students won 27 awards at the recent Nebraska Addy Awards. Eric Nyffeler (of Columbus), captured Best of Show plus 2 golds. Brook Carpenter (of Alliance)-silver, Cassi Ellenwood (Kearney)-silver, Anne McGovern (of Grand Island)-2 silvers, Brandon Oltman (Cortland)-2 golds and 6 silvers, Drake Sauer -silver, Ashley Stuhr (of Kearney)-2 golds and silver, Joe Szczepaniak (of Omaha)-gold and 3 silvers, Adam Torpin (of O’Neil) won 3 silver awards.

Also in the summer of 2007 Adam Torpin won the Art Department’s first “National Gold Addy” at Louisville, KY. Adam recently graduated in the fall of 2007 and is a graphic designer at oxide design in Omaha, Nebraska.

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