Mathew Burton & Seth Harris  
Mentor: Erik Larson

**A Proposed Stratigraphic & Karst Reconnaissance of the Hiawatha National Forest**

The proposed aim of this study will be to perform reconnaissance on both the surficial karst features and stratigraphy of the upper Michigan peninsula, giving particular regard to the limestones of the Silurian, Engadine group and the paleolake levels of Lake Algonquin and Lake Nippising. The bulk of the field research will be done in the Hiawatha National Forest, while further analysis such as petrography, stable isotope, and XRD will be conducted later in the summer and into the fall. This research will be collaboration between Shawnee State University, Sam Houston State University, and the U.S. Forest Service.

Sydney Moos, Brittany Culver, & Cara Coy  
Mentor: Ryan Walker

**Carpal Tunnel Syndrome**

Carpal Tunnel Syndrome (CTS) is a common and inhibiting pathology that affects daily activities. Flexibility is a common impairment that patients with CTS suffer. There are many different treatment approaches to increase flexibility and two common methods were evaluated. When comparing static stretching to Proprioceptive Neuromuscular Facilitation (PNF), we hypothesized that static stretching would be more efficient in increasing flexibility.

Chasity Iles  
Mentor: Brian Richards

**Conformity and Attraction**

This is a social psychology experiment investigating whether the effects of conformity would even extend to people's judgments about intimate behaviors (e.g., how much they would enjoy kissing another person) within a context where conformity should be unlikely (an anonymous online environment). One experimental group received bogus feedback that other participants had given the hypothetical romantic partner very high ratings. In contrast, a second group received bogus feedback that other participants had given the profile lower ratings. Finally, a third group (control) did not receive information about peer ratings. Participants then provided their own ratings of the profile. Participants responded to personal questions such as: “If I were single, then I would enjoy kissing this person” (1 = Strongly Disagree; 9 = Strongly Agree). When done with female participants, conformity played a role in their ratings of the males, as expected. We will be doing the experiment with male participants next.
Destini Copas, Wessly Runyon, & Taila Hodge  
Mentor: Ryan Walker

**Contract-Relax or Static Stretching: Which techniques increases ROM more in patients with Plantar Fasciities due to limited gastrocnemius muscle range of motion?**

The plantar fascia supports the medial longitudinal arch and stabilizes the foot in supination during the push-off phase of gait. A tight gastrocnemius and soleus pulls the heel superior leading to excessive pronation of the foot. This excessive tension on the plantar fascia will initiate inflammation; this is known as plantar fasciitis. Stretching of the tight plantar flexors of the ankle will decrease the amount of superior translation of the calcaneus which will decrease the pull on the plantar fascia. Little is known about which technique will be the most beneficial at increasing the excursion of the gastrocnemius and soleus. The study that is proposed examines the effectiveness of both contract-relax and static stretching. This experiment focuses on stretching techniques for the gastrocnemius and soleus which would yield results that would represent the most effective conservative treatment option for patients with plantar fasciitis.

Cailin Lowe  
Mentor: Brian Richards

**Effects of Debt on Charitable Giving**

Individual debt is at an all-time high in the United States. For example, average household credit card debt is currently $15,611. This is something that affects a huge amount of people, yet the psychological consequences of being in a state of debt are understudied. Although certainly a cause of individual distress, we propose that being in a state of debt creates a negative ripple effect that spreads across communities and even the world by reducing the likelihood of prosocial behavior such as charitable giving. To test this hypothesis, the following study compared people’s giving behavior when their debt was on their mind as opposed to not salient.

Natasha Knoechelman  
Mentor: Brian Richards

**Familiarity and Attraction in the Context of Online Dating**

A great deal of research suggests that increases in mere familiarity can increase interpersonal attraction. However, in the context of online dating profiles, we found the opposite effect as women’s attraction to men decreased after viewing their profile a second time $t(77) = -3.62, p = .0005$. In recognition of the growing importance of online interactions for romantic relationships, this study may have uncovered an important qualification to the familiarity breeds attraction effect.
Brooke Tolle, Mark Schibi, & Alison Yunker  
Mentor: Ryan Walker

Headaches? Can Be Caused By...
We have developed a hypothetical research project comparing the effects of biofeedback and cervical stretches in the reduction of tension type headaches. We hypothesized that stretching would have a more beneficial result in reducing the intensity and frequency of tension headaches. There is much more to be learned by our presentation. We will explain what tension headaches are, the cause of them, and what other interventions can be performed to help.

Christopher Dunn & Eugen Noble  
Mentor: Brian Richards

Influence of Music on Perceptions of Aggression
The purpose of this research was to explore how exposure to violent music influences perceptions of aggression. Using SurveyMonkey®, participants were randomly assigned to one of two groups. The participants who were assigned to be in the Music Present Group listened to a clip from a violent rap song, answered a few questions regarding the music, and then read a short scenario depicting a confrontation between two men. Participants who were assigned to be in the Music Absent Group did not listen to the music clip prior to reading the scenario. Participants in this group only read the short scenario. Both groups answered a series of questions following the reading of the scenario. Overall, the effects of music on perception of aggression was not significant. However, following exposure to the music, female participants rated the aggression significantly less wrong compared to the females in the Music Absent Group.

Elaine Clay & Tyler Lang  
Mentor: Ryan Walker

Lateral Epicondylitis
Lateral Epicondylitis (LE) is an injury commonly sustained from overuse of the elbow. A common impairment due to LE is decreased grip strength with increased pain. Two possible methods of treatment include taping/bracing and a proprioceptive neuromuscular technique known as active contract-relax. Our research led us to believe that by combining taping/bracing with interventions such as active contract-relax, optimal functional strength will be obtained.

Schuyler Jones, Jaycee Cox, & Joshua Jackson  
Mentor: Ryan Walker

Patellofemoral Pain Syndrome
Patellofemoral Pain Syndrome (PFPS) is a broad term that describes many complications arising from the anterior portion of the knee. This abnormality puts stress on the joint and ultimately wears
down articular cartilage causing anterior knee pain. In order to help aid the strengthening process to ease this pain, researchers are pushing for a collaboration of strengthening exercises paired with a proprioceptive aid such as biofeedback or KT tape. We conducted a study to determine the best aid for those with PFPS.

Keyana Ward  
Mentor: Georgeann Kamer

**Periodontal Disease Research**

Periodontal Disease is a common health issue. Many people with this problem do not realize they have the disease until their gingival condition is at a severe stage. Detecting this disease requires knowledge of the symptoms. The primary cause of periodontal disease is accumulation of products of plaque biofilm, and there are several conditions that can increase accumulation. This health condition is a priority, because the disease will not only lead to severe oral health concerns, it may also aggravate other health issues a patient may possess. It is possible to reverse the disease, as well as prevent it. This process will require patients to visit the dental office for treatments. Also to prevent or reverse the disease will require additional at home treatments. Hopefully this research will educate others to take a step to better their own oral health.

Samantha Rietschlin  
Mentor: Crystal R. Sherman & Scott Douthat

**Satisfaction with Sexual Health Care among Adults over Age 50**

Sexual health is an important aspect of maintaining overall health, but is oftentimes overlooked in the assessment and care of older and middle-aged adults. This is partly due to stereotypes and cultural stigmas, as well as personal attitudes and beliefs. Some primary care providers, as well as patients, may feel uncomfortable talking about it, but the reality is that it remains an important topic as patients age. The purpose of this study is to determine if health care consumers, aged 50 and over, report satisfaction with the way that their primary care providers acknowledge, address, and treat their sexual health issues. Data will be collected from a small sample of 20 patients, using a descriptive correlational design.

Jessica Edingfield  
Mentor: Brian Richards

**Social Comparisons Driven by Social Media: Influence on Relationship Satisfaction?**

Will reading posts about others' happy relationships sink our satisfaction with our own loved ones? Social media usage continues to grow throughout the world. This additional social dimension may function in similar ways to the offline social world. It has long been observed in social psychology that individuals make judgments about themselves and their lives that are largely influenced by social
comparison (comparing themselves to others). This study investigated the influence of online posts about romantic relationships on individuals’ judgments regarding their satisfaction with their own romantic relationships.

**Ali Ball, Abby Hopkins, & Katie Miller**  
Mentor: Ryan Walker

**Subacromial Impingement**  
This poster presents a comparison of eccentric strengthening versus slow reversal proprioceptive neuromuscular facilitation in the treatment of patients with subacromial impingement syndrome.

**Daniel Van der Mallie & Jeffrey Matteson**  
Mentor: Brian Richards

**The Effects of Worry on The Perception and Attractiveness of Augmented Reality Products**  
Our poster will be exploring the counterintuitive results of utilizing 177 respondents through a website known as Mturk, from a study performed through the Social Sciences Department. In this study the participants rated their level of attraction to a fictional augmented reality product; after being asked to reflect on their feelings that they have experienced when they feel worried. For our initial prediction, the individuals that were asked to reflect on their feelings they experienced while worrying or seeking out escapism, would use augmented reality technology. However, we found the opposite of our prediction, which resulted in a seemingly high level of indifference to the products known as highly escapist, that is simply advertised to the technical specifications of the fictional device. Within our poster we will be exploring the possible implications of this study for marketing augmented reality technologies.

**Kristin McRoberts, Andrew Swayne, & Chris Stangle**  
Mentor: Ryan Walker

**Traditional Vs. Agressive Conservative Treatments of Greater Trochanteric Pain Syndrome**  
This poster presents a proposed study to compare the lasting effects of traditional physical therapy treatments in comparison to a more aggressive approach. The goal of this study was to determine if more aggressive treatments will have greater effects and ultimately lead to less surgical procedures for greater trochanteric pain syndrome.