Scholars Day Program Addendum

**Session I: Poster Presentations**

2:10 – 2:50 p.m.

**Location:** College Center Portico (North Circle)

**Janae Jones**

Dr. Derald Wentzien

*How Have Hate Crimes Driven by Race and Sexual Orientation in America Changed Over the Past 10 Years?*

The Federal Bureau of Investigation defines a hate crime (also known as a bias crime) as a criminal offense committed against a person, property, or society that is motivated, in whole or in part by the offender’s bias against a race, religion, disability, sexual orientation, or ethnicity/national origin. This is the difference between a hate crime and any other crime. My research will be gathered from across the entire country. I want to learn how hate crimes have changed over the past 10 years and my research will focus on the crimes committed based on race and sexual orientation. My data only allows me to analyze hate crimes from 2007-2017. By studying the entire United States, I have a better chance of recognizing change or lack thereof. My research will compare the number of incidents, victims, and known offenders year by year to make any increase or decrease obvious.

Keywords: Hate, Crime, Incidents, Race, Sexual Orientation, Increase, Decrease

**Session II: Poster Presentations - Addendum**

3:00 – 3:40 p.m.

**Location:** College Center Portico (North Circle)

**Abigail Byler, Omasan Uyebi, William Dawson**

Mentor: Dr. Kathleen Curran

*Squirrel Feeding Behavior*

In this experiment, we hope to determine the ability of gray squirrels to distinguish a superior food choice over an inferior food choice based on the weight of the nut that they are selecting. Squirrels will be presented with a choice between a nut of higher quality and a nut of lesser quality. By observing which nut the squirrel is drawn to first and which one it ultimately selects we will be able to determine if they are actively choosing the more nutritious nut or if it is purely arbitrary.

**Osama Mahmoud, Austin Lonski, Megan Delawder, Lisa Agyeman, Alyssa Klabe**

Mentor: Dr. Kathleen Curran

*Squirrel Feeding Behavior*

The Gray squirrel or Sciurus carolinensis, is native to the eastern and midwestern United States. These species of squirrel exhibit the same scatter-hoarder behavior as many of its family members in the Sciurus family. This research seeks to determine if gray squirrel discriminate between food based on its quality. Specifically, the difference in size nuts will be looked at by placing two different sized nuts at a designated location and observing the behavior of a single gray squirrel. The process to identify discriminatory behavior towards weight was carried out by placing a metal nut inside a walnut and placing it in proximity at an assigned location to a regular lighter weight nut. It can be predicted that the squirrels will be
inclined to pick heavier and larger nuts than smaller and lighter ones as they contain more meat for the same amount of effort and risk of retrieving the nut.

Anthony Anastasi, Khadijah Bland, Landon Hall, Katelyn Null, Sadie Sanclemente
Mentor: Dr. Kathleen Curran

Ovipositioning in Bean Beetles

Bean beetles (Callosobrucus maculatus), lay their eggs on legumes. The survival of their eggs depends on many factors including the size, availability, and composition of the beans they are laid on. The choices a female bean beetle makes when laying her eggs greatly affects her offspring’s survival, as well as female offspring fertility. When depositing their eggs, a female beetle has to remember that the chosen bean will be the larvae sole source of food and water during development as the larvae cannot migrate. The main objective of this study is to observe and analyze the oviposition choices of the female bean beetle in diverse situations. These choices were mainly examined by using three experiments that aimed to demonstrate the female bean beetles changes in oviposition through exposure to various amounts of beans on which to lay eggs and increased access to different bean species like mung, lima, and cow.

Session III: Poster Presentations
3:50 – 4:30 p.m.

Location: College Center Portico (North Circle)

Lily Enge
Mentor: Dr. Derald Wentzien & Danielle Archambault

Using a Linear Programming Model to Generate Tutoring Schedules for MA180

Tutoring services offered at Wesley College are a great resource for students. In some cases, students who need appointments are unable to do so due to lack of availability or overbooked times. This researcher will use a linear programming model to optimize the availability of math tutors for students in Applied Math Concepts (MA180). Since Mathematics, specifically MA180, is the most commonly requested tutoring, this researcher will survey students currently enrolled in MA180 to determine their preferred times for tutoring. Then, this researcher will use Excel to set up and solve a linear programming problem to optimize the availability of the math tutors. This research will assist Tutoring Center administrators to create tutor schedules that accommodate students preferred tutoring times.

Closing Ceremonies
4:45-5:30 p.m.
College Center 206
Student Volunteers
Adams, Kaitlyn
Arthur, William
Bailey, Sarah
Bolden, Rachel
Cedeno, Jenny
Colagiovanni, Carmella
Crowley, Keshia
DiRocco, Sheila
Dromgoole, Molly
Dupree, Jordyn
Ferrell, Cassandra
Ferry, Kylie
Gibbs, Amil
Gross, Sharron
Halstead, Sharee
Holsinger, Danielle
Hulick, Nicole
Ironkwe, Grace
Johnson, Joseph
Johnson, Nhi-jee
Jones, Samantha
Knott, Sidney
McCarthy, Siah
Mikhail, Ilyasov
Miles, Precious
Mitchell, Jacob
Mullins, Katelyn
Olivieri, Alyssa
O’Sullivan, Lauren
Padgett, Courtney
Palmer, Kelly
Primrose, Pteris
Smallwood-Corcoran, Savanna
Smith, Breanne
Taylor, Chiara
Thomas, Shaniel
Tilley, Justice
Torres-Landeros, Aisli
Weems, Haneefa
White, Deonika
Williamson, Trinity