



# 2017 Spring Fiat Lux

A showcase of Florida Southern College  
student scholarship, creative works, and research.

Thursday April 20, 2017

6:00– 8:30 pm

Branscomb 201, 202  
Christoverson Building  
Honeyman Pavilion  
Melvin Art Gallery



## Fiat Lux Presentation by Student Last Name

Room	Time	Type of presentation	First	Last	Major	Title
BR 202	6:00-6:15	Performance	Kortney	<b>Adcock</b>	Theatre Arts-Musical Theatre	"Before and After You" A Senior Project
Honeyman Pavilion	6:00 - 7:00	Poster	Mackenzie	<b>Anderson</b>	Marine Biology	Diet of the Bonnethead Shark ( <i>Sphyrna tiburo</i> ) in Middle Tampa Bay, FL
CH 209	7:15 - 7:30	Oral	Samantha	<b>Arroyo</b>	Biology	Effects of Abiotic Stress on DNA Methylation in <i>Brassica rapa</i> and <i>Arabidopsis thaliana</i>
CH 207	7:15 - 7:30	Oral	Elise	<b>Barnes</b>	Exercise Science	Strengthening Muscular Imbalances in Collegiate Level Ballerinas
CH 208	7:45 - 8:00	Oral	Tyler	<b>Beckman</b>	Religion	God Is A Warrior, And So Can We Be
CH 108	7:15 - 7:30	Oral	Tyler	<b>Benthal</b>	Political Science	Dangers of Autonomous Cars
Honeyman Pavilion	7:15 - 8:15	Poster	Alex	<b>Bockhorst</b>	Marine Biology	Pore Distribution Comparison Between the Bonnethead Shark ( <i>Sphyrna tiburo</i> ) and the Sharpnose Shark ( <i>Rhizoprionodon terraenovae</i> )
CH 111	7:30 - 7:45	Oral	Sierra	<b>Bores</b>	Theatre Arts-Musical Theatre	The Search For Signs of Intelligent Life In The Universe
BR 201	6:30 - 6:45	Oral	Katie	<b>Brittain</b>	Biology	A Parasite Survey of the Lizards on Andros Island, Bahamas with the Discovery of a New Species of Trematode
Melvin Art	6:00 - 7:00	Creative Art	Siobhan	<b>Buckley</b>	Art- Studio Art	Ethereal
Honeyman Pavilion	7:15 - 8:15	Poster	Erin	<b>Burrows</b>	Business Administration	Evaluation of the Construction of the Amendment I of the Constitution Concerning Freedom of Religion
CH 207	6:00 - 6:15	Oral	Stephanie	<b>Carrillo</b>	Exercise Science	Making Tactical Personal: An Analysis of the Relationship of Exercise and the Occupational Demands of Lakeland Firefighters



## Fiat Lux Presentation by Student Last Name

CH 209	6:00 - 6:15	Oral	Sarah	<b>Cole</b>	Nursing	The Persistence of <i>Staphylococcus aureus</i> on Hospital Curtains
CH 206	6:30 - 7:00	Oral	Shannon	<b>Coody</b>	Chemistry	Toward the Synthesis of Stachybotrin D
CH 108	7:45 - 8:00	Oral	Pedro	<b>Cuervo</b>	Political Science	Fantastic Break-ins and How to Stop Them
CH 207	8:00 - 8:15	Oral	Jose	<b>De Sario</b>	Political Science	Enhancing Drugs in Sports
CH 112	7:15 - 7:30	Oral	Bradley	<b>Denault</b>	Political Science	Street Talk: The Effects of Heroin Abuse on Families
Melvin Art	6:00 - 7:00	Creative Art	Katelyn	<b>Disbro</b>	Art- Graphic Design	Seattle Sea Lions
Honeyman Pavilion	7:15 - 8:15	Poster	Peter	<b>Donovan</b>	Psychology	The Effect of Post-Identification Feedback Evidence and Peripheral Trial Information Jury Decision Making
Melvin Art	6:00 - 7:00	Creative Art	Amanda	<b>Eberle</b>	Art- Graphic Design	Asteria
Honeyman Pavilion	6:00 - 7:00	Poster	Peter	<b>Edgar</b>	English	Avalon Groves
CH 209	6:45 - 7:00	Oral	Keifer	<b>Exum</b>	Political Science	What's the Plan? Examining Mulberry's Economic Future
CH 207	6:15 - 6:30	Oral	Sonya	<b>Fry</b>	Biology	Analysis of Global Methylation Patterns in the DNA of <i>Drosophila melanogaster</i> after Exposure to Aluminum Chloride
CH 207	7:45 - 8:00	Oral	Kourtney	<b>Gavin</b>	Exercise Science	The Impact of Stroke Efficiency on Self-Reported Shoulder Pain in Collegiate DII Swimmers
Melvin Art	6:00- 7:00	Creative Art	Austin	<b>Guhl</b>	Art- Graphic Design	Echo Nautical Adventures
Honeyman Pavilion	6:00 - 7:00	Poster	Steven	<b>Hancock</b>	Computer Science	DriveTracking: A Mobile App for Monitoring Driver Quality



## Fiat Lux Presentation by Student Last Name

CH 206	5:30-6:00	Oral	Lauren	<b>Harris</b>	Biology	Generation of TYRO3 Receptor Tyrosine Kinase Clones to Study Interactions with SH2 Domain Proteins in the Retinal Pigment Epithelium
CH 207	6:45 - 7:00	Oral	Nicole	<b>Harrison</b>	Exercise Science	Robotic Rehabilitation Treatment influences Vertical Jump, Active Straight Leg Raise Performance, and Range of Motion in Division II Athletes
Honeyman Pavilion	7:15 - 8:15	Poster	Jordan	<b>Howard</b>	Psychology	Game on! The Influence of Computer Simulations on the Understanding of Cancer-based Therapies
CH 208	7:15 - 7:30	Oral	Robert	<b>Huffstickler</b>	Political Science	Analyzing Public Healthcare Policy Solutions in Lakeland, Florida
CH 208	6:45 - 7:00	Oral	Hailey	<b>Jenkins</b>	Political Science	Underfunded, Under-appreciated, but Indispensable : Reforming Public Defense in the United States
Honeyman Pavilion	6:00 - 7:00	Poster	Baylee	<b>Jenkins</b>	Psychology	The Effect of Eyewitness Identification Procedures on Jurors' Perceptions
Honeyman Pavilion	7:15 - 8:15	Poster	Summer	<b>Jones</b>	Psychology	Pre-Admonition Suggestion and its Effects on Mistaken Eyewitnesses
BR 201	7:30 - 7:45	Oral	Jenna	<b>Karr</b>	Marine Biology	Age and Growth of <i>Rhizoprionodon terraenovae</i>
CH 209	6:30 - 6:45	Oral	Zachary	<b>Kessler</b>	Economics and Finance	Innovating Taxation: The impacts of a Federal Transfer Tax
Honeyman Pavilion	6:00 - 7:00	Poster	Paige	<b>Koetter</b>	Biology	Determining the Genetic Relatedness of Varying Rosa Species By DNA Barcoding
CH 112	7:45 - 8:00	Oral	Anisha	<b>Koilpillai</b>	Political Science	World War 3? Examining the Precarious Situation Between NATO, the Baltic States, and Russia
Honeyman Pavilion	7:15 - 8:15	Poster	Alexis	<b>Le Grand</b>	Psychology	Pre-Admonition Suggestion and its Effects on Mistaken Eyewitnesses





## Fiat Lux Presentation by Student Last Name

BR 202	7:05 - 7:20	Performance	Tyler	<b>Long</b>	Music-Performance	Birdsong as a Foundation for 20th Century Composition
BR 201	6:00 - 6:15	Oral	Alexandra	<b>Lutz</b>	Psychology	The Effect of Magazine Ads as a Supplement for Learning Biological Material
Honeyman Pavilion	6:00 - 7:00	Poster	Alexandra	<b>Lutz</b>	Psychology	The Effect of Confederate Clothing and Gender on Change Blindness
Honeyman Pavilion	7:15 - 8:15	Poster	Ashley	<b>McNeil</b>	Psychology	Visualization as a Tool to “ad” Knowledge of Neurotransmitter Function
CH 207	7:30 - 7:45	Oral	Monika	<b>Mielecki</b>	Psychology	The Effects of Stability Balls and Music on Self-stimulating Behaviors in Children with ASD
Honeyman Pavilion	6:00 - 7:00	Poster	Robert	<b>Modrall</b>	Computer Science	BuckStop Order Application
Moc Theatre	7:30 - 7:45	Oral	Sera	<b>Moore</b>	Elementary Education	Xenophobia in the American Classroom: How is it Affecting the Students?
BR 202	6:50 - 7:05	Performance	Kaely	<b>Mouring</b>	Music-Performance	Birdsong as a Foundation for 20th Century Composition
Honeyman Pavilion	7:15 - 8:15	Poster	Lillian	<b>Mulligan</b>	Computer Science	On Call Scheduler
CH 209	6:15 - 6:30	Oral	Victoria	<b>Nicolodi</b>	Biology	The Effect of Atrazine Exposure on Global DNA Methylation Patterns in Drosophila Melanogaster
Moc Theatre	7:45 - 8:00	Oral	Michel	<b>Ntagungira</b>	Political Science	Racial Disparity in the Criminal Justice System
Honeyman Pavilion	6:00 - 7:00	Poster	Alyssa	<b>Parisi</b>	Psychology	Retention of Appealing Landscape Photographs in Children with and without Dyslexia
Honeyman Pavilion	6:00 - 7:00	Poster	Alyssa	<b>Parisi</b>	Psychology	Forced-choice Preference and Recognition of Photographs in Children with Dyslexia
CH 209	8:00 - 8:15	Oral	Sunil	<b>Persaud</b>	Political Science	Water Crisis in Southern Florida



## Fiat Lux Presentation by Student Last Name

Honeymon Pavilion	7:15 - 8:15	Poster	Tabitha	<b>Powell</b>	Psychology	College Rape Myth Acceptance: Does Sexual Assault Training Help?
BR 201	8:00 - 8:15	Oral	Elise	<b>Pullen</b>	Marine Biology	Maternal Offloading of Mercury in the Bonnethead shark ( <i>Sphyrna tiburo</i> ).
BR 201	6:45 - 7:00	Oral	Vincent	<b>Ragusa</b>	Computer Science	Genetic Algorithms for Applied Path Planning
Honeymon Pavilion	7:15 - 8:15	Poster	Jordan	<b>Rassmann</b>	Mathematics	Identifying the Static Kick Point in a Golf Shaft
CH 209	7:45 - 8:00	Oral	Robert	<b>Reimertz</b>	Political Science	The Effect of Drug Addiction and Abuse on West Virginia
CH 206	7:45- 8:00	Oral	Laura	<b>Riley</b>	Chemistry	Activity of Geraniol and Carvacrol during Lipid Oxidation in Food oil-in-water Emulsions
BR 201	7:45 - 8:00	Oral	Amy	<b>Rooker</b>	Biology	Epidemiology of Salmonella typhimurium in Caenorhabditis elegans under different socio-environmental conditions
BR 201	7:15 - 7:30	Oral	Haley	<b>Seward</b>	Psychology	The Relationship between Self-serving Bias and Levels of Narcissism in Preschoolers and Children with Dyslexia
Honeymon Pavilion	6:00 - 7:00	Poster	Haley	<b>Seward</b>	Psychology	The Relationship between Academic Factors and Personality Traits and Scores on the GRE
Honeymon Pavilion	6:00 - 7:00	Poster	Haley	<b>Seward</b>	Psychology	The Relationship between Preschoolers' Perception of Emotion and Gender Stereotyping
Honeymon Pavilion	6:00 - 7:00	Poster	Haley	<b>Seward</b>	Psychology	The Relationship between Self-serving Bias and Levels of Narcissism in Preschoolers and Children with Dyslexia
Honeymon Pavilion	7:15 - 8:15	Poster	Austin	<b>Smith</b>	Athletic Training	The Impact of an Acute Therbo Robotic Treatment on Fastball Pitch Velocity in Division II Collegiate Baseball Pitchers



## Fiat Lux Presentation by Student Last Name

Honeymon Pavilion	6:00 - 7:00	Poster	Leyna	<b>Stemle</b>	Marine Biology	An Ongoing Study of the Striped Mud Turtle ( <i>Kinosternon baurii</i> ) At Circle B Bar Reserve in Central Florida
CH 111	7:15 - 7:30	Oral	Carey	<b>Stevens</b>	Religion	Faith Formation Brick by Brick
CH 206	6:00 - 6:30	Oral	Jenna	<b>Strobel</b>	Chemistry	Synthesis of bis(4-pyridyl)methane
Moc Theatre	7:15 - 7:30	Oral	Austin	<b>Suarez</b>	Political Science	Lake Okeechobee Overflows and the Florida Coastline
CH 112	7:30 - 7:45	Oral	Kelan	<b>Sullivan</b>	Political Science	Governmental Cybersecurity
CH 111	7:45 - 8:00	Oral	Haley	<b>Taylor</b>	English	Myth-taken Identity: Margaret Atwood and Carol Ann Duffy's Feminist Revisionist Mythology
CH 208	6:15 - 6:30	Oral	Danika	<b>Thiele</b>	Communication-Advertising and Public Relations	Genetically Modified Statutes: the Commercialization of GMOs in America
CH 208	6:30 - 6:45	Oral	Zoe	<b>Trout</b>	Communication-Advertising and Public Relations	Millennials Changing the World? A Look at the Relationships between College Students' Values, Dreams of Travel, and the Desire to Make a Difference
CH 206	7:15 - 7:45	Oral	Brett	<b>Walker</b>	Biochemistry and Molecular Biology	Identification of Scramblase Protein Involved in Phosphatidylserine Exposure in Photoreceptor Outer Segments to Induce Phagocytosis by the Retinal Pigment Epithelium
BR 201	6:15 - 6:30	Oral	Bryanna	<b>Wargat</b>	Marine Biology	An Investigation of the Dominant, Small Freshwater Fish Species of Circle B Bar Reserve, Lakeland, Florida
CH 208	7:30 - 7:45	Oral	Audrey	<b>Waters</b>	English	<i>No Vacancy</i> and the Birth of a Novel



## Fiat Lux Presentation by Student Last Name

---

CH 108	7:30 - 7:45	Oral	Mordechai	<b>Wellish</b>	Political Science	Yemen: The Houthi Conflict and the Case for Intervention
CH 209	7:30 - 7:45	Oral	Alex	<b>Weot</b>	Biology	Sediment Coring and Future Analysis of the Ecological History of Andros Island
CH 208	8:00 - 8:15	Oral	Samantha	<b>Wetz</b>	English	How the Mighty Fall: An Examination of the Luciferian Arc in Arthurian Legend
BR 202	6:15 - 6:25	Performance	Abigail	<b>Workman</b>	Music- Music Education	Florida Southern College Woodwind Quintet
BR 202	6:25 - 6:50	Performance	Megan	<b>Yingst</b>	Music- Music Education	Pipa History and Ensemble Showcase
CH 207	6:30 - 6:45	Oral	Matthew	<b>Young</b>	Biology	Morphological and Molecular Examination of Mites to Potentially Discover a New Species
CH 208	6:00 - 6:15	Oral	Destiny	<b>Zunic</b>	Criminology	The Effects of Social Media and Self-Esteem on the Fear of Missing Out (FoMO) and Delinquent Behavior





## Fiat Lux CREATIVE ART Presentations by Student Last Name

---

All Creative Art Presentations take place in  
MELVIN ART GALLERY

<b>Time</b>	<b>Display #</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
6:00-7:00	1	Siobhan	Buckley	Art- Studio Art	Ethereal
6:00 - 7:00	2	Katelyn	Disbro	Art- Graphic Design	Seattle Sea Lions
6:00 - 7:00	3	Amanda	Eberle	Art- Graphic Design	Asteria
6:00 - 7:00	4	Austin	Guhl	Art- Graphic Design	Echo Nautical Adventures

## Fiat Lux ORAL Presentation Schedule- By Room and Time

---

<b>Christoverson 206</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
5:30- 6:00	Lauren	Harris	Biology	Generation of TYRO3 Receptor Tyrosine Kinase Clones to Study Interactions with SH2 Domain Proteins in the Retinal Pigment Epithelium
6:00 – 6:30	Jenna	Strobel	Chemistry	Synthesis of bis(4-pyridyl)methane
6:30 - 7:00	Shannon	Coody	Chemistry	Toward the Synthesis of Stachybotrin D
<b><u>BREAK</u></b>				
7:15- 7:45	Brett	Walker	Biochemistry and Molecular Biology	Identification of Scramblase Protein Involved in Phosphatidylserine Exposure in Photoreceptor Outer Segments to Induce Phagocytosis by the Retinal Pigment Epithelium
7:45- 8:00	Laura	Riley	Chemistry	Activity of Geraniol and Carvacrol during Lipid Oxidation in Food Oil-in-Water Emulsions

## Fiat Lux ORAL Presentation Schedule- By Room and Time

Christoverson 207	First	Last	Major	Title
6:00- 6:15	Stephanie	Carrillo	Exercise Science	Making Tactical Personal: An Analysis of the Relationship of Exercise and the Occupational Demands of Lakeland Firefighters
6:15- 6:30	Sonya	Fry	Biology	Analysis of global methylation patterns in the DNA of <i>Drosophila melanogaster</i> after exposure to aluminum chloride
6:30- 6:45	Matthew	Young	Biology	Morphological and Molecular Examination of Mites to Potentially Discover a New Species
6:45- 7:00	Nicole	Harrison	Exercise Science	Robotic rehabilitation treatment influences vertical jump, active straight leg raise performance, and range of motion in Division II athletes
<b><u>BREAK</u></b>				
7:15- 7:30	Elise	Barnes	Exercise Science	Strengthening Muscular Imbalances in Collegiate Level Ballerinas
7:30-7:45	Monika	Mielecki	Psychology	The Effects of Stability Balls and Music on Self-stimulating Behaviors in Children with ASD
7:45-8:00	Kourtney	Gavin	Exercise Science	The Impact of Stoke Efficiency on Self-Reported Shoulder Pain in Collegiate DII Swimmers
8:00-8:15	Jose	De Sario	Political Science	Enhancing Drugs in Sports

## Fiat Lux ORAL Presentation Schedule- By Room and Time

<b>Christoverson 208</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
6:00- 6:15	Destiny	Zunic	Criminology	The effects of social media and self-esteem on the fear of missing out (FoMO) and delinquent behavior
6:15- 6:30	Danika	Thiele	Communication - Advertising and Public Relations	Genetically Modified Statutes: the Commercialization of GMOs in America
6:30- 6:45	Zoe	Trout	Communication - Advertising and Public Relations	Millennials Changing the World? A Look at the Relationship between College Students' Values, Dreams of Travel, and the Desire to Make a Difference
6:45- 7:00	Hailey	Jenkins	Political Science	Underfunded, Under- appreciated, but Indispensable : Reforming Public Defense in the United States
<b><u>BREAK</u></b>				
7:15- 7:30	Robert	Huff- stickler	Political Science	Analyzing Public Healthcare Policy Solutions in Lakeland, Florida
7:30-7:45	Audrey	Waters	English	<i>No Vacancy</i> and the Birth of a Novel
7:45-8:00	Tyler	Beckman	Religion	God Is A Warrior, And So Can We Be
8:00-8:15	Saman- tha	Wetz	English	How the Mighty Fall: An Examination of the Luciferian Arc in Arthurian Legend

## Fiat Lux ORAL Presentation Schedule- By Room and Time

---

<b>Christoverson 209</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
6:00- 6:15	Sarah	Cole	Nursing	The Persistence of <i>Staphylococcus aureus</i> on Hospital Curtains
6:15- 6:30	Victoria	Nicolodi	Biology	The Effect of Atrazine Exposure on Global DNA Methylation Patterns in <i>Drosophila Melanogaster</i>
6:30- 6:45	Zachary	Kessler	Economics and Finance	Innovating Taxation: The impacts of a federal transfer tax
6:45- 7:00	Keifer	Exum	Political Science	What's the Plan? Examining Mulberry's Economic Future
<b><u>BREAK</u></b>				
7:15- 7:30	Sam-antha	Arroyo	Biology	Effects of Abiotic Stress on DNA Methylation in <i>Brassica rapa</i> and <i>Arabidopsis thaliana</i>
7:30-7:45	Alex	Weot	Biology	Sediment Coring and Future Analysis of the Ecological History of Andros Island
7:45-8:00	Robert	Reimertz	Political Science	The effect of Drug addiction and Abuse on West Virginia
8:00-8:15	Sunil	Persaud	Political Science	Water Crisis in Southern Florida

## Fiat Lux ORAL Presentation Schedule- By Room and Time

<b>Christoverson Moc Theatre</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
7:15- 7:30	Austin	Suarez	Political Science	Lake Okeechobee overflows and the Florida coastline
7:30-7:45	Sera	Moore	Elementary Education	Xenophobia in the American Classroom: How is it Affecting the Students?
7:45-8:00	Michel	Ntagungira	Political Science	Racial Disparity in the Criminal Justice System
<b>Christoverson 108</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
7:15- 7:30	Tyler	Benthal	Political Science	Dangers of Autonomous Cars
7:30-7:45	Mordechai	Wellish	Political Science	Yemen: The Houthi Conflict and the Case for Intervention
7:45-8:00	Pedro	Cuervo	Political Science	Fantastic Break-ins and How to Stop Them
<b>Christoverson 111</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
7:15- 7:30	Carey	Stevens	Religion	Faith Formation Brick by Brick
7:30-7:45	Sierra	Bores	Theatre Arts- Musical Theatre	The Search For Signs of Intelligent Life In The Universe
7:45-8:00	Haley	Taylor	English	Myth-taken Identity: Margaret Atwood and Carol Ann Duffy's Feminist Revisionist Mythology
<b>Christoverson 112</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
7:15- 7:30	Bradley	Denault	Political Science	Street Talk: The Effects of Heroin Abuse on Families
7:30-7:45	Kelan	Sullivan	Political Science	Governmental Cybersecurity
7:45-8:00	Anisha	Koilpillai	Political Science	World War 3? Examining the Precarious Situation Between NATO, the Baltic States, and Russia

## Fiat Lux ORAL Presentation Schedule- By Room and Time

<b>Branscomb 201</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
6:00- 6:15	Alexandra	Lutz	Psychology	The Effect of Magazine Ads as a Supplement for Learning Biological Material
6:15- 6:30	Bryanna	Wargat	Marine Biology	An Investigation of the Dominant, Small Freshwater Fish Species of Circle B Bar Reserve, Lakeland, Florida
6:30- 6:45	Katie	Brittain	Biology	A Parasite Survey of the Lizards on Andros Island, Bahamas with the Discovery of a New Species of Trematode
6:45- 7:00	Vincent	Ragusa	Computer Science	Genetic Algorithms for Applied Path Planning
<b>BREAK</b>				
7:15- 7:30	Haley	Seward	Psychology	The relationship between self-serving bias and levels of narcissism in preschoolers and children with dyslexia
7:30-7:45	Jenna	Karr	Marine Biology	Age and Growth of <i>Rhizoprionodon terraenovae</i>
7:45-8:00	Amy	Rooker	Biology	Epidemiology of Salmonella typhimurium in <i>Caenorhabditis elegans</i> under different socio-environmental conditions
8:00-8:15	Elise	Pullen	Marine Biology	Maternal offloading of Mercury in the bonnethead shark ( <i>Sphyrna tiburo</i> )

## Fiat Lux PERFORMANCES by Time

---

All Performances take place in  
BRANSCOMB 202

<b>Time</b>	<b>First</b>	<b>Last</b>	<b>Major</b>	<b>Title</b>
6:00- 6:15	Kortney	Adcock	Theatre Arts- Musical Theatre	"Before and After You" A Senior Project
6:50- 7:05	Kaely	Mouring	Music- Performance	Birdsong as a Foundation for 20th Century Composition
6:15- 6:25	Abigail	Workman	Music- Music Education	Florida Southern College Woodwind Quintet
6:25- 6:50	Megan	Yingst	Music- Music Education	Pipa History and Ensemble Showcase
7:05- 7:20	Tyler	Long	Music- Performance	Birdsong as a Foundation for 20th Century Composition



## Fiat Lux POSTER Presentation Schedule by Student Last Name

---

All poster presentations take place in  
HONEYMAN PAVILION

Time	#	First	Last	Major	Title
6:00 7:00	1	Mackenzie	Anderson	Marine Biology	Diet of the Bonnethead Shark ( <i>Sphyrna tiburo</i> ) in Middle Tampa Bay, FL
7:15 - 8:15	2	Alex	Bockhorst	Marine Biology	Pore Distribution Comparison Between the Bonnethead Shark ( <i>Sphyrna tiburo</i> ) and the Sharpnose Shark ( <i>Rhizoprionodon terraenovae</i> )
7:15 - 8:15	3	Erin	Burrows	Business Administration	Evaluation of the Construction of the Amendment I of the Constitution Concerning Freedom of Religion
7:15 - 8:15	4	Peter	Donovan	Psychology	The Effect of Post-Identification Feedback Evidence and Peripheral Trial Information Jury Decision Making
6:00 - 7:00	5	Peter	Edgar	English	Avalon Groves
6:00 - 7:00	6	Steven	Hancock	Computer Science	DriveTracking: A Mobile App for Monitoring Driver Quality
7:15 - 8:15	7	Jordan	Howard	Psychology	Game on! The Influence of Computer Simulations on the Understanding of Cancer-based Therapies
6:00 - 7:00	8	Baylee	Jenkins	Psychology	The Effect of Eyewitness Identification Procedures on Jurors' Perceptions
7:15 - 8:15	9	Summer	Jones	Psychology	Pre-Admonition Suggestion and its Effects on Mistaken Eyewitnesses
6:00 - 7:00	10	Paige	Koetter	Biology	Determining the Genetic Relatedness of Varying Rosa Species By DNA Barcoding
7:15 - 8:15	11	Alexis	Le Grand	Psychology	Pre-Admonition Suggestion and its Effects on Mistaken Eyewitnesses

## Fiat Lux POSTER Presentation Schedule by Student Last Name

6:00 - 7:00	12	Alexandra	Lutz	Psychology	The Effect of Confederate Clothing and Gender on Change Blindness
7:15 - 8:15	13	Ashley	McNeil	Psychology	Visualization as a Tool to “ad” Knowledge of Neurotransmitter Function
6:00 - 7:00	14	Robert	Modrall	Computer Science	BuckStop Order Application
7:15 - 8:15	15	Lillian	Mulligan	Computer Science	On Call Scheduler
6:00 - 7:00	16	Alyssa	Parisi	Psychology	Retention of Appealing Landscape Photographs in Children with and without Dyslexia
6:00 - 7:00	17	Alyssa	Parisi	Psychology	Forced-choice Preference and Recognition of Photographs in Children with Dyslexia
7:15 - 8:15	18	Tabitha	Powell	Psychology	College Rape Myth Acceptance: Does Sexual Assault Training Help?
7:15 - 8:15	19	Jordan	Rassmann	Mathematics	Identifying the Static Kick Point in a Golf Shaft
6:00 - 7:00	20	Haley	Seward	Psychology	The Relationship between Academic Factors and Personality Traits and Scores on the GRE
6:00 - 7:00	21	Haley	Seward	Psychology	The Relationship between Preschoolers’ Perception of Emotion and Gender Stereotyping
6:00 - 7:00	22	Haley	Seward	Psychology	The Relationship between Self-serving Bias and Levels of Narcissism in Preschoolers and Children with Dyslexia
7:15 - 8:15	23	Austin	Smith	Athletic Training	The Impact of an Acute Therbo Robotic Treatment on Fastball Pitch Velocity in Division II Collegiate Baseball Pitchers
6:00 - 7:00	24	Leyna	Stemle	Marine Biology	An Ongoing Study of the Striped Mud Turtle ( <i>Kinosternon baurii</i> ) At Circle B Bar Reserve in Central Florida

## Fiat Lux Spring 2017

---

**Student:** Adcock, Kortney

**Major:** Theatre Arts- Musical Theatre

**Faculty mentor(s):** Roll, Christianne

**Presentation Type:** Performance

**Presentation Time:** 6:00- 6:15

**Room:** BR 202

**Title:** "Before and After You" A Senior Project

**Abstract:** I will be showing a prerecorded performance of my musical theatre senior project. I created the concept for the show, putting together 10 songs to form a story of a woman who longed for love, found love, had her heart broken and realized in the end that she will emerge stronger from the heartbreak. I performed in and created the production with help from a wonderful production team and cast, as well as support and guidance from Dr. Roll.

**Student:** Anderson, Mackenzie

**Major:** Marine Biology

**Faculty mentor(s):** Franks, Bryan

**Co-author(s):** Sarah Rheinsmith, Samantha Rucker, Elise Pullen, Alex Bockhorst, Jenna Karr and Bryan Franks

**Presentation Type:** Poster, 1

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** Diet of the Bonnethead Shark (*Sphyrna tiburo*) in Middle Tampa Bay, FL

**Abstract:** We assessed the diet of bonnethead sharks (*Sphyrna tiburo*) captured within Middle Tampa Bay, Florida from May-August in 2015 and 2016. Diet was quantified using stomach contents obtained from 42 individuals (2015: n=13; 2016: n=29) and prey items were identified to lowest taxonomic level, counted, weighed, and when possible measured. Diet was analyzed both with and without plant/algal material as a dietary component using 3 indices: % occurrence, % IRI, and a modified %IRI. Cumulative prey curves showed additional sampling may be needed to accurately assess the diet of sharks in the population. Almost all shark stomachs (98%) contained at least one animal prey item and 83% contained some seagrass or algae. Shark diets were dominated by Crustacea, mainly portunid crabs and specifically *Callinectes* spp.. This was followed by Chelicerata with *Limulus polyphemus* having the 2nd highest %O, %IRI, and modified %IRI for animal species in the diet. There was no difference in prey species richness with regard to body length. Previous research has not shown *L. polyphemus* as more than a trace component in the diet of bonnethead sharks suggesting regional prey differences within this species. Further study is needed to elucidate the feeding ecology of this population specifically with regard to the seemingly low nutritional value horseshoe crab playing an important role in the diet.

## Fiat Lux Spring 2017

---

**Student:** Arroyo, Samantha

**Major:** Biology

**Faculty mentor(s):** Morvillo, Nancy; Eric Kjellmark

**Presentation Type:** Oral

**Presentation Time:** 7:15 - 7:30

**Room:** CH 209

**Title:** Effects of Abiotic Stress on DNA Methylation in *Brassica rapa* and *Arabidopsis thaliana*

**Abstract:** DNA methylation is the best understood mechanism of epigenetic change. These changes occur outside the genetic code, yet can have an effect on gene expression and have the potential to be passed on to progeny. Abiotic stresses, or non-living factors that are part of the environment, have been shown to alter the epigenetic patterns of organisms' DNA. Previous studies involving plants, such as *Arabidopsis thaliana*, that were exposed to certain environmental stressors resulted in hypermethylation in gene that also were observed to exhibit altered gene expression. This study aims to analyze the methylomes of *Brassica rapa* and *Arabidopsis thaliana* plant samples exposed to different abiotic stressors during cultivation, such as different nutrient deficiencies, drought, and high light stress.

**Student:** Barnes, Elise

**Major:** Exercise Science

**Faculty mentor(s):** Terrell, Sara

**Presentation Type:** Oral

**Presentation Time:** 7:15 - 7:30

**Room:** CH 207

**Title:** Strengthening Muscular Imbalances in Collegiate Level Ballerinas

**Abstract:** Ballet is a demanding sport which is based upon the careful balance of athletic performance and aesthetic appeal. Many of the movements originate from the lower body and, as such, so do the majority of injuries. In fact, 69-90% of injuries occur in the lower extremities, with an average of 54% of injuries being recurrent. This study aims to implement a preventative care exercise intervention based on the common muscular imbalances seen in dancers in order to decrease injury likeliness. Twenty (n=20) collegiate dancers will participate in an exercise intervention occurring two days a week for a total of eight weeks. These sessions will focus on decreasing muscular imbalances, specifically the weaker internal hip rotators (IHR). The IHR range of motion (ROM) will be measured using goniometers prior to the intervention and again after the intervention. A T-Test statistical analysis will be used to measure the difference observed and compare the pre and posttest values of the IHR. Anticipated Significance: Since strengthening the IHR has been shown to improve the overall ROM of this area, a significant difference should be seen between pre and posttest values with the posttest values presenting a greater ROM.

## Fiat Lux Spring 2017

---

**Student:** Beckman, Tyler

**Major:** Religion

**Faculty mentor(s):** Willis, Waite; Sarah Harding, Brian Hamilton, Frank Johnson

**Presentation Type:** Oral

**Presentation Time:** 7:45 - 8:00

**Room:** CH 208

**Title:** God Is A Warrior, And So Can We Be

**Abstract:** This research project focuses on violent scripture and the thoughts of theologians to defend the Just War theory.

**Student:** Benthall, Tyler

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 7:15 - 7:30

**Room:** CH 108

**Title:** Dangers of Autonomous Cars

**Abstract:** Once thought of a science fiction, driverless cars are now becoming a reality. And with the new reality comes new dangers and obstacles that must be overcome to ensure the safety of the driving public. As of now there are 33 companies developing autonomous car technology (CBInsight, 2016). Some of the big names working on this technology include Tesla, Ford, BMW, Google, and Audi. With Google's limited area testing of driverless cars they have reported 18 accidents. Tesla's autopilot feature has been involved in numerous crashes and resulted in two fatalities in 2016. One in China and the other in Florida (Lambert, Electrek, 2016). With the number of autonomous cars expected to reach 10 million by 2020 something must be done in order to insure the safety of those driving on our roads (BusinessInsider, 2016).

## Fiat Lux Spring 2017

---

**Student:** Bockhorst, Alex

**Major:** Marine Biology

**Faculty mentor(s):** Franks, Bryan

**Co-presenter(s):** Joseph Copenhagen

**Presentation Type:** Poster, 2

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** Pore Distribution Comparison Between the Bonnethead Shark (*Sphyrna tiburo*) and the Sharpnose Shark (*Rhizoprionodon terraenovae*)

**Abstract:** Ampullae of Lorenzini are the organs that allow sharks to detect the electrical signals of both other predators and prey. The bonnethead and sharpnose sharks have both different head morphologies and different diets, meaning that the distribution of these pores will most likely be different. To count these pores, we skinned and backlit each head, and averaged the counts of each group member. We believe that the bonnetheads will have more pores on their ventral side, and more pores overall. Our research compared two species while finding significant difference between them and previously published literature.

**Student:** Bores, Sierra

**Major:** Theatre Arts- Musical Theatre

**Faculty mentor(s):** Bawek, Paul

**Presentation Type:** Oral

**Presentation Time:** 7:30 - 7:45

**Room:** CH 111

**Title:** The Search For Signs of Intelligent Life In The Universe

**Abstract:** In this one woman show I put together a group in order to make opportunities for us performing arts students who don't have opportunities available at our fingertips. Making opportunities for yourself is the first step in musical theatre, we're aiming to make our dreams become reality!

## Fiat Lux Spring 2017

---

**Student:** Brittain, Katie

**Major:** Biology

**Faculty mentor(s):** Langford, Gabriel

**Co-author(s):** Bridgette Ward

**Presentation Type:** Oral

**Presentation Time:** 6:30 - 6:45

**Room:** BR 201

**Title:** A Parasite Survey of the Lizards on Andros Island, Bahamas with the Discovery of a New Species of Trematode

**Abstract:** The Anolis lizard ecomorphs of the Caribbean and Bahamian islands are a well-established example of both adaptive radiation and convergent evolution. However, due to a lack of parasite biodiversity surveys on these islands, it is unclear if the parasite fauna hosted by these lizards follow similar evolutionary pathways. This study attempts to determine if the parasites hosted by *Anolis spp.* display strict host specificity, which would indicate speciation events in-step with their hosts, or if the parasites have little specificity and are broadly distributed among the various lizard species. In 2015 and 2017, lizards were captured by hand and dissected within 24 hours of capture in three locations on Andros Island, Bahamas. First, an external exam was conducted to look for ticks and mites, then blood smears were taken to search for blood protozoans. Next, feces were collected to check for coccidians, and finally all organs and body cavities were examined for endoparasites. Parasites and hosts were preserved in appropriate solutions and brought back to the Parasitology Lab at Florida Southern College. Preliminary results found the ground-trunk lizard, *Anolis sagrei*, to host nearly all species of parasites found in this study, whereas the treetop lizard, *Anolis smaragdinus*, hosted relatively few parasite species. We propose that this pattern is due to the parasites intermediate hosts being ground-dwelling insects which would be more likely to be consumed by ground-trunk lizards. Overall, our preliminary results suggest that the parasites of Anolis lizards display moderate levels of host specificity, thus some species may have speciated with their hosts, while others are generalists.

## Fiat Lux Spring 2017

---

**Student:** Buckley, Siobhan

**Major:** Art- Studio Art

**Faculty mentor(s):** Otremsky, William; Sam Romero

**Presentation Type:** Creative Art, 1

**Presentation Time:** 6:00- 7:00

**Room:** Melvin Art Gallery

**Title:** Ethereal

**Abstract:** My works are an exploration of light and color through the abstraction of artificial environments. By taking images that are obscured through motion distortion in indoor settings (convenience stores, office spaces etc.), I am able to simplify and enhance the unnatural colors and forms to create works that transcend the natural world. These together create an ethereal atmosphere that could not exist in reality and invite the viewer to explore this new realm.

**Student:** Burrows, Erin

**Major:** Business Administration

**Faculty mentor(s):** Hardin, Cindy

**Presentation Type:** Poster, 3

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** Evaluation of the Construction of the Amendment I of the Constitution Concerning Freedom of Religion

**Abstract:** Since the United States Constitution was enacted in 1787, its interpretation has evolved as relevant debates have changed with the time period. One of the common disagreements in Constitutional interpretation is what the authors intended for the statement in Amendment I, "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; ..." Through an evaluation of commentary concerning the interpretation of the Constitutional statement on freedom of religion, extracted from different periods of time to demonstrate the evolution of both strict and loose interpretations, an understanding of how the nation's views have developed is established. This basis will be supplemented with case studies that exemplify court decisions on the constitutionality of incidents concerning religious discrimination and government association. After a careful and balanced analysis of Constitutional interpretations, it is concluded that the understanding of the constitutional authors' intentions has evolved due to changes in the social norms in the United States, which can be interpreted and understood when considering the impactful events happening in each time period. Ultimately, what is the overarching construction in this time will change as the state of American affairs change.



## Fiat Lux Spring 2017

---

**Student:** Carrillo, Stephanie  
**Faculty mentor(s):** Terrell, Sara  
**Presentation Type:** Oral  
**Presentation Time:** 6:00 - 6:15

**Major:** Exercise Science  
**Room:** CH 207

**Title:** Making Tactical Personal: An Analysis of the Relationship of Exercise and the Occupational Demands of Lakeland Firefighters

**Abstract:** Though firefighting requires individuals to complete strenuous activity, it is rare to see resistance training programs established in the workplace that prepare firefighters for these tasks. Often, firefighters spend prolonged periods of time virtually inactive before they are sent on a call that necessitates physically demanding work. There is an absence of research that dictates the most appropriate training apparatus or program that best prepares firefighters for occupational demands. The purpose of this presentation is to assess the physical demands placed on firefighters and determine what exercises, if any, can improve ease of movement and reduce the risk of injury in firefighters.

**Student:** Cole, Sarah  
**Faculty mentor(s):** Gasper, Brittany; Linda Foley  
**Presentation Type:** Oral  
**Presentation Time:** 6:00 - 6:15

**Major:** Nursing  
**Room:** CH 209

**Title:** The Persistence of *Staphylococcus aureus* on Hospital Curtains

**Abstract:** While healthcare professionals are working in hospitals, they have a tendency of opening and closing the curtains during the care of their patients. The patients and their families frequently touch the curtains as well. Current studies have shown that the transfer of bacteria from hands to the curtains and vice versa is possible. Despite the possibility of hospital curtains being a mode of infection transmission, a study by DeAngelis and Phakoo (2013) showed that 53% of hospitals surveyed did not have a policy for cleaning or changing their curtains. Therefore, research can be expanded by comparing the time of persistence of bacteria—such as *Staphylococcus aureus*—on different types of curtains that are available for use in the hospital. This presentation will talk about the results of the research completed regarding the persistence of *Staphylococcus aureus* on five different hospital curtain materials. This information can be used to determine if certain materials decrease the time of persistence of bacteria more than others. Furthermore, the results could implicate a need for change in the policies and procedures regarding hospital curtains to help decrease nosocomial infection rates within hospitals.

## Fiat Lux Spring 2017

---

**Student:** Coody, Shannon

**Major:** Chemistry

**Faculty mentor(s):** Bromfield Lee, Deborah

**Presentation Type:** Oral

**Presentation Time:** 6:30 - 7:00

**Room:** CH 206

**Title:** Toward the Synthesis of Stachybotrin D

**Abstract:** Stachybotrin D is a secondary metabolite derived from a sponge fungus. It is a non-nucleoside reverse transcriptase inhibitor of wild type HIV-1 and 5 NNRTI resistant strands. For this reason, Stachybotrin D, which is in the phenylspirodrimane family, has received attention in our research group. The approach to the natural product used a convergent synthesis strategy, where we break structure into three components: a phenyl backbone containing a cyclic amide, a diterpenoid derivative in which a furanyl ring added to the phenolic component and incorporation of the stereochemistry. The work presented here will focus on the addition of a bicyclic component via a of the structure. Other group members focused on the synthesis of the other components of the synthesis strategy. In addition to the synthesis of the fragments, an aim in our group is greener synthetic strategies especially those that could later even be utilized in teaching laboratories. This retrosynthesis incorporates a modified Grignard and protecting steps which were modified to incorporate greener synthesis methods. The study will compare the original methods to modified methodologies that include microwave synthesis and macro reticular polystyrene based ion exchange resins.

**Student:** Cuervo, Pedro

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 7:45 - 8:00

**Room:** CH 108

**Title:** Fantastic Break-ins and How to Stop Them

**Abstract:** Over the past several months, vehicle break-ins have become an epidemic on Florida Southern's campus. I will explore different ways to make our campus streets safer. Several different approaches can be used to address the problem that exists at our school, but I will attempt to describe the most cost effective and realistic ways that can be used to tackle this issue.

## Fiat Lux Spring 2017

---

**Student:** De Sario, Jose

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 8:00 - 8:15

**Room:** CH 207

**Title:** Enhancing Drugs in Sports

**Abstract:** This Public Policy Presentation will analyze and provide a solution for the effects and health risk in professional athletes due to the use of drugs (Steroids) for enhancing performance in sports. Anabolic steroids have been used and abused for many decades by those into sports and fitness who are trying to augment their anabolic and androgenic potential. The use of anabolic steroids is common among bodybuilders, athletes, and fitness "buffs" who claim that these drugs give them a competitive advantage, promote the sense of well being and invincibility, and improve their physical performance. On the other hand, there may be pressure as well to use these drugs in some individual or team sports due to the "fear" or "assumption" that normal training will not be enough to succeed or keep up with the bests. Although this drugs (steroids) give an "advantage" to athletes, it actually gives a huge disadvantage on their health instead.

**Student:** Denault, Bradley

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 7:15 - 7:30

**Room:** CH 112

**Title:** Street Talk: The Effects of Heroin Abuse on Families

**Abstract:** Despite the long-fought "war on drugs" commissioned by lawmakers over the past several decades, it appears that overdose deaths, especially those involving heroin, are increasing. According to reports from the National Institute on Drug Abuse, annual heroin overdoses have been increasing at a rapid rate every year since 2010, with nearly 12,000 deaths related to heroin overdoses being recorded in 2014 alone. This is more than six times the number of recorded deaths in 2001, with trends showing that these numbers are likely to continue to increase in the coming years. These national statistics, though startling, still, cannot explain the affects heroin has on everyday people on society.

## Fiat Lux Spring 2017

---

**Student:** Disbro, Katelyn

**Major:** Art- Graphic Design

**Faculty mentor(s):** Romero, Sam; Eric Blackmore

**Presentation Type:** Creative Art, 2

**Presentation Time:** 6:00 - 7:00

**Room:** Melvin Art Gallery

**Title:** Seattle Sea Lions

**Abstract:** The Seattle Sea Lions is a fictional team to join the National Hockey League for the 2017- 2018 season that I created for my senior thesis. It is located in Seattle, Washington, where the brand features elements of hockey, the city of Seattle and players through the use of photography, icons and a limited color palette.

**Student:** Donovan, Peter

**Major:** Psychology

**Faculty mentor(s):** Quinlivan, Deah

**Presentation Type:** Poster, 4

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** The Effect of Post-Identification Feedback Evidence and Peripheral Trial Information Jury Decision Making

**Abstract:** Post-Identification Feedback (PIF) is a phenomenon that occurs when an eyewitness lineup administrator gives the witness information regarding their identification decision. PIF impacts witnesses' retrospective judgments, such as certainty (Stebly, Wells & Douglass, 2014), and can artificially inflate perceived reliability of a mistaken witness. PIF is problematic, but it is possible that if jurors can recognize the influence PIF has on eyewitness's' certainty, they can alter the extent to which they use the identification in their decision-making. Already, researchers are asking that jurors be allowed to see videos of the eyewitness identification procedure in case PIF has occurred. However, it is also possible that these videos might create a secondary transfer of certainty; a juror who sees an eyewitness being told that they chose the correct person might be themselves affected and thus erroneously more confident in the witness' testimony. To test how jurors might be affected by PIF on an eyewitness, this study will utilize a 2 (no feedback, feedback) x 2 (no instructions, instructions) x 2 (Trial Type: eyewitness only, additional trial information). Participants will read half of a trial transcript, watch a randomly assigned video of an eyewitness making an identification selection, finish the rest of the trial transcript, and then make verdict decisions and answer questions about how they perceive the eyewitness' retrospective confidence.

## Fiat Lux Spring 2017

---

**Student:** Eberle, Amanda

**Major:** Art- Graphic Design

**Faculty mentor(s):** Romero, Sam; Erick Blackmore

**Presentation Type:** Creative Art, 3

**Presentation Time:** 6:00 - 7:00

**Room:** Melvin Art Gallery

**Title:** Asteria

**Abstract:** Asteria is an Intergalactic cruise line designed for my senior Graphic Design Thesis. Asteria is an all hand illustrated brand which utilizes 2D animation.

**Student:** Edgar, Peter

**Major:** English

**Faculty mentor(s):** Schaad, Gerri; Jeffrey Zines

**Co-presenter(s):** Kaitlynn Hoffman, Kelsi Shanks, Caitlin Harper

**Co-author(s):** Lacey Nayden

**Presentation Type:** Poster, 5

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** Avalon Groves

**Abstract:** Over the past year, student workers at the McKay Archives Center have analyzed a manuscript acquired by the Archives in order to put together a comprehensive history of the people, events, and locations that inspired and created it. The manuscript, an investment proposal for a tract of land in Orange County, FL, was likely created around 1926; it outlines a business enterprise belonging to some of the most influential people in early Orlando's history. Avalon Groves, as it was named, and the Orlando Orange Groves Company, its parent company, were surrounded by money, influence, and (as we discovered in the course of our study) scandal. The students employed by the Archives have put together historical data ranging from journalism and history books to articles of incorporation to put together a picture of the events and influences surrounding the company, the Orlando of the late Twenties, and of Central Florida when it was still dominated by swamps and citrus.

## Fiat Lux Spring 2017

---

**Student:** Exum, Keifer

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 6:45 - 7:00

**Room:** CH 209

**Title:** What's the Plan? Examining Mulberry's Economic Future

**Abstract:** Just as small countries must fight for relevance in the global economy, so too must small cities and towns diligently pursue economic growth here in the United States. Mulberry, a small town of around 4,000 people located just outside of Lakeland, is one such community. Officially considered the “Phosphate Capital of the World” and home to the Badcock Furniture empire, Mulberry has enjoyed relatively stable levels of economic success and employment for nearly a century. However, the migration of the phosphate industry away from Polk County and into neighboring counties threatens the area’s economic future—many local businesses exist to serve the larger phosphate industry, and the past stability of the industry in the area has produced a local economy that is not as diversified as it should be. To make matters worse, the city seems to lack a coherent and actionable plan to promote economic growth moving forward. In this presentation, we will seek to understand the exact nature of the problem that Mulberry faces, explore the dominant schools of thought on local economic development, and look at some possible solutions to put the city on a path toward a bright and stable economic future.

## Fiat Lux Spring 2017

---

**Student:** Fry, Sonya

**Major:** Biology

**Faculty mentor(s):** Morvillo, Nancy

**Presentation Type:** Oral

**Presentation Time:** 6:15 - 6:30

**Room:** CH 207

**Title:** Analysis of Global Methylation Patterns in the DNA of *Drosophila melanogaster* after Exposure to Aluminum Chloride

**Abstract:** Alzheimer's disease (AD) is an irreversible degenerative brain disorder that causes deterioration of memory, thinking, and motor skills. AD is currently ranked the sixth leading cause of death in the United States, which warrants a large amount of research. Past research has established the pathology of Alzheimer's disease; however, more recent AD research has been focused on determining the factors that lead to its onset. Current research has shown a correlation between aluminum exposure and cognitive impairment in aluminum pot-room workers and further revealed that exposed workers showed altered global DNA methylation patterns. This paper analyzed the global methylation patterns in the DNA of the model organism, *Drosophila melanogaster*, after exposure to either 80, 160, 240, or 320mg/kg of aluminum at 3 different life stages: larva only, full life cycle, and adult stage only. Analysis was conducted by extracting the DNA of the *D. melanogaster* and performing colorimetric analysis of the amount DNA methylation for each of the fly cultures via Southern Blotting. The goal of the experiment was to investigate connection between aluminum exposure and altered DNA methylation patterns, with the purpose of confirming the effect of environmental factors on the onset of Alzheimer's disease.

## Fiat Lux Spring 2017

---

**Student:** Gavin, Kourtney

**Major:** Exercise Science

**Faculty mentor(s):** Terrell, Sara; Mick Lynch

**Presentation Type:** Oral

**Presentation Time:** 7:45 - 8:00

**Room:** CH 207

**Title:** The Impact of Stroke Efficiency on Self-Reported Shoulder Pain in Collegiate DII Swimmers

**Abstract:** Shoulder injuries are the most prevalent injuries seen amongst elite competitive swimmers, thus the name "swimmer's shoulder". The overhead use of the arm in swimming is vast, as they train about 24 hours/week. The impact of stroke efficiency on self-reported shoulder pain in collegiate competitive swimmers is not yet fully understood. The purpose of this study is to determine the impact of stroke efficiency on self-reported shoulder pain in collegiate competitive swimmers. This study will assess 10-15 swimmers from the Florida Southern College swim team. A nine-week study during high volume training with a transition into a taper period before a conference meet will be conducted in order to assess shoulder pain on a weekly basis. The schedule will include participation in all practices as required by the coaches. Two questionnaires will be used during this study. The "Sport and Symptom Survey Form" (pre-test) will be used to gain history of the participant, and the Penn Shoulder Score (post-test) will be given on a weekly basis to assess shoulder pain. The participants will wear the device, "Tritonwear", at least once a week in order to record data on yardage done per day as well as data on stroke efficiency. It is expected that this nine-week study will show if stroke efficiency has an effect on self-reported shoulder pain in collegiate swimmers.

**Student:** Guhl, Austin

**Major:** Art- Graphic Design

**Faculty mentor(s):** Romero, Sam; Eric Blackmore

**Presentation Type:** Creative Art, 4

**Presentation Time:** 6:00 – 7:00

**Room:** Melvin Art Gallery

**Title:** Echo Nautical Adventures

**Abstract:** Echo provides nautical adventures catering towards people wanting to immerse themselves in sea life. Dives start at a low depth like the Chuuk islands, you can then make your way a little deeper at the Great Barrier Reef, and finally ending up 36,000 ft bellow at the bottom of the Mariana Trench.



## Fiat Lux Spring 2017

---

**Student:** Hancock, Steven

**Major:** Computer Science

**Faculty mentor(s):** Roberson, Christian

**Co-presenter(s):** Dave Fulp and Taylor Zinninger

**Presentation Type:** Poster, 6

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** DriveTracking: A Mobile App for Monitoring Driver Quality

**Abstract:** This work focuses on creating an app that is designed to give users the ability to rate the performance of other drivers. Specifically, users, through the DriveTracking app, will be able to record, rate and review license plate number of vehicles that drive poorly in their vicinity. Thus, allowing other users to research the reliability and safety of a specific driver based on their license plate. DriveTracking has major application in monitoring the quality of transportation network companies and their drivers. As major business, such as Uber and Lyft, employ a wide range of drivers without skill check or liability on the companies end, it becomes increasingly important for users to understand the capabilities of each driver they may utilize through a transportation network company. Therefore, this app will enable users to both review and monitor drivers to determine safety and reliability as well as monitor friends, children or even company motor pools in an effort to increase overall safety for both the user and driver.

**Student:** Harris, Lauren

**Major:** Biology

**Faculty mentor(s):** Shelby, Shameka

**Presentation Type:** Oral

**Presentation Time:** 6:00- 6:30

**Room:** CH 206

**Title:** Generation of TYRO3 Receptor Tyrosine Kinase Clones to Study Interactions with SH2 Domain Proteins in the Retinal Pigment Epithelium

**Abstract:** The retina is comprised of cone and rod photoreceptors that must be maintained in order to preserve visual acuity. Daily light exposure to the photoreceptor outer segments (OS), leads to photo-oxidative stress. To combat this damage, the Retinal Pigment Epithelium (RPE) phagocytizes spent OS. Disruption of OS phagocytosis leads to the accumulation of debris, which blocks blood flow to the retina, eventually resulting blindness. Previous studies demonstrated the requirement of Mer Receptor Tyrosine Kinase (MERTK) and subsequent protein interactions for OS phagocytosis. Recent studies suggest that TYRO3, a familial protein to MERTK, can compensate in the absence of MERTK. Therefore, we hypothesized that TYRO3 may bind to similar proteins that bind to MERTK. To test similar interactions between MERTK, TYRO3, and SH2 domain proteins, various clones of TYRO3 were generated, and SH2 domain proteins were overexpressed and purified via affinity chromatography and gel-filtration chromatography. A truncated Tyro3 was successfully cloned into pDONR and recombinantly overexpressed. Interactions between TYRO3 and SH2 domain proteins were identified via Ni-NTA pull-down assays. This work will further identify necessary components of the RPE phagocytic mechanism, which will be instrumental in identifying future retinal disease genes and understanding the impact on proteins that may be involved in Age-related Macular Degeneration.

## Fiat Lux Spring 2017

---

**Student:** Harrison, Nicole

**Major:** Exercise Science

**Faculty mentor(s):** Terrell, Sara

**Presentation Type:** Oral

**Presentation Time:** 6:45 - 7:00

**Room:** CH 207

**Title:** Robotic Rehabilitation Treatment influences Vertical Jump, Active Straight Leg Raise Performance, and Range of Motion in Division II Athletes

**Abstract:** Therapeutic robotic arm technology is becoming more widely used as a rehabilitation device to lengthen muscles, by applying repeated pressure to a specific area. When muscles are overworked, they can become tight, which decreases the range of motion and the athlete's ability to perform at their highest potential. The robotic arm can directly stimulate one spot on the muscle, or travel along the muscle. For this study, a traveling robotic treatment will be used to investigate the effect of a single traveling robotic therapeutic treatment on power and range of motion in male and female athletes. Thirty (n=30) Division II athletes will complete an active straight leg raise, vertical jump, and goniometry assessment of the hip and knee, before and immediately following a 60-minute traveling robotic arm treatment. The treatment will be performed on the bilateral quadriceps, hamstrings, and gastrocnemius muscles. DATA . A T-test statistical analysis will be performed to assess the significance of the results and compare the pre- and post-treatment data. This study is an expansion of previous research conducted to figure out the best intervention of the robotic arm therapy.

## Fiat Lux Spring 2017

---

**Student:** Howard, Jordan

**Major:** Psychology

**Faculty mentor(s):** Smith, Patrick

**Presentation Type:** Poster, 7

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** Game on! The Influence of Computer Simulations on the Understanding of Cancer-based Therapies

**Abstract:** Although the topic of cancer is commonly acknowledged within the health psychology community, the actual awareness of how cancer spreads (and how cancer treatment works) is less understood. In clinical settings, new technology-based strategies have been developed to better familiarize one with the science behind cancer physiology. Re-Mission 1, developed by HopeLab Industries, is a computer game that can be used by pediatric cancer patients to educate and prepare them for what they will experience both with cancer progression and from treatment (Tate, Haritatos, & Cole, 2009). Pediatric patients who play this game were found to have improved motivation and self-understanding of their illness (Kato, Cole, Bradlyn, & Pollack, 2008). Seeing the success of Re-Mission 1, HopeLab Industries developed Re-Mission 2, which is a series of six different games, including Re-Mission 2: Nanobot's Revenge. The purpose of the present study was to see if Re-Mission 2 leads to understanding of cancer physiology in the same way as Re-Mission 1 and to assess the generalizability of the educational benefits of Re-Mission to other populations (i.e., college students). Furthermore, another purpose of this study was to compare the effectiveness of text-based materials and game-based materials in terms of their educational value. References Kato, P.M., Cole, S.W., Bradlyn, A.S., & Pollock, B.H. (2015). A video game improves behavioral outcomes in adolescents and young adults with cancer: A randomized trial. *Pediatrics*, 122(2), e305-e317. Tate, R., Haritatos, J., & Cole, S. (2009). Hopelab approach to Re-Mission. *International Journal of Learning and Media*, 1(1), 29-35.

## Fiat Lux Spring 2017

---

**Student:** Huffstickler, Robert

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 7:15 - 7:30

**Room:** CH 208

**Title:** Analyzing Public Healthcare Policy Solutions in Lakeland, Florida

**Abstract:** Lakeland Regional Health remains Lakeland, Florida's only major hospital and its largest healthcare system. The LRH Medical Center exists as a 849-bed comprehensive tertiary referral hospital, operates a Level II Trauma Center, a Level II Neonatal Intensive Care Unit, the Bannasch Institute for Advanced Rehabilitation Medicine, and the state of Florida's busiest single site Emergency Department. Additionally, it is ranked number 11 of all Florida hospitals and has earned numerous awards. The not-for-profit healthcare system's medical center lies on land owned by the city of Lakeland, who has leased the land to LRH since 1987. The growing lease payment has escalated from under 2 million per year to an astronomical 13.6 million dollars a year, equivalent to half the revenue created by the city's property taxes. The rising costs associated with the lease payments from the city are eroding Lakeland Regional Health's unprofitable services for uninsured and indigent patients. One of the nation's busiest emergency rooms, the inability to provide unprofitable services would result in even more emergency room visits and lower quality healthcare and wait times for Lakeland residents. This paper seeks to create policy solutions to the public health crisis in Lakeland, Florida as well as addressing philosophical questions that arise with this local controversial topic.

## Fiat Lux Spring 2017

---

**Student:** Jenkins, Hailey

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 6:45 - 7:00

**Room:** CH 208

**Title:** Underfunded, Under-appreciated, but Indispensable : Reforming Public Defense in the United States

**Abstract:** The public defense system is broken across the country. The system varies state to state; but, its one commonality is that it does not seem to work properly anywhere. As protected by the Constitution, every citizen has the right to assistance by council (Baxter, 2012, Pg.92). Thus, public defenders are a vital part of the American legal process. However, public defenders' offices across the country simply cannot facilitate appropriate and necessary legal counsel under the current conditions. Public defenders are constantly noted as being underpaid and overworked. Such circumstances raise questions of due process and the service that public defenders are able to provide (Baxter, 2012, Pg.92). For decades the American Bar Association, lawyers, and academics have recognized the strain on public defender's offices; yet, conditions still remain the same. This paper will analyze the issues facing public defenders, look at varying public defense systems throughout the country, and offer policy solutions on how to best reform the public defense system.

**Student:** Jenkins, Baylee

**Major:** Psychology

**Faculty mentor(s):** Quinlivan, Deah

**Co-presenter(s):** Brianne Bennett

**Presentation Type:** Poster, 8

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** The Effect of Eyewitness Identification Procedures on Jurors' Perceptions

**Abstract:** The relationship between feedback and bias and instructions given by police officers to an eyewitness during a photo array selection and its effect on jury members was examined. Two hundred sixty-eight college students from Florida Southern College and Louisiana State University, 20% males and 80% females, aged 18-30, volunteered to participate in order to receive credit for introductory psychology courses. Participants were presented the study through the use of Survey Monkey. They were required to view one of four videos based on random assignment and complete a selection of questionnaires to determine a level of view, attention, certainty, the ability to determine specific features, and verdicts. The researchers found that when the participants viewed one of the videos where the police officer gave positive feedback about the eyewitness's suspect selection, the participants showed a higher response of guilty verdicts though it is not statistically significant.

## Fiat Lux Spring 2017

---

**Student:** Jones, Summer

**Major:** Psychology

**Faculty mentor(s):** Quinlivan, Deah

**Presentation Type:** Poster, 9

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** Pre-Admonition Suggestion and its Effects on Mistaken Eyewitnesses

**Abstract:** Pre-admonition suggestion is an identification-relevant comment made to an eyewitness by a lineup administrator before the lineup admonition. Quinlivan et al. (2012), found that their suggestion inflated mistaken identification rates and retrospective identification. However, the suggestion used was a compound statement, making it unclear which component influenced choosing rates. The current experiment was conducted to parse out the effects. Participants (N = 211) viewed a crime video and received either one component of the compound suggestion (a suggestion to pick or that the witness had paid substantial attention), both components, or no suggestion. All participants received an admonition, made an identification choice, and answered questions about their witnessing experience. The results demonstrated that the pick suggestion increased mistaken identifications from a perpetrator-absent lineup whereas the effects of the attention suggestion were restricted to the retrospective judgments. These results show support for the role of secondary (non-memorial) processes in eyewitness identification.

**Student:** Karr, Jenna

**Major:** Marine Biology

**Faculty mentor(s):** Franks, Bryan

**Presentation Type:** Oral

**Presentation Time:** 7:30 - 7:45

**Room:** BR 201

**Title:** Age and Growth of *Rhizoprionodon terraenovae*

**Abstract:** Age and growth estimates for shark species may be determined through growth rings seen in the vertebral cartilage. Age estimates were made for 24 male Atlantic sharpnose sharks (*Rhizoprionodon terraenovae*) caught in 2014 that ranged in length from 54 -76 cm FL. Spinal cartilage is currently being analyzed for clear growth ring patterns in order to estimate shark ages. Determining the rate of growth within cartilaginous fish species such as *Rhizoprionodon terraenovae* allow for an increased understanding on the potential impacts on population dynamics. Past studies on have determined shark species to have an overall slow growth pattern forcing their populations to grow at a rate that may not keep up with detrimental impacts such as overfishing or pollution. Continuing age and growth studies with shark species will aid in conservation efforts by supporting shark fishing guidelines that would allow healthy population numbers to be maintained based on the growth rate of individuals.

## Fiat Lux Spring 2017

---

**Student:** Kessler, Zachary

**Major:** Economics and Finance

**Faculty mentor(s):** Connors, Joseph

**Presentation Type:** Oral

**Presentation Time:** 6:30 - 6:45

**Room:** CH 209

**Title:** Innovating Taxation: The impacts of a Federal Transfer Tax

**Abstract:** In 1913, an amendment to the Constitution would be passed that would radically alter the methods with which the United States government gathers revenue. The income tax created a new collection system and led to the founding of the Internal Revenue Service (IRS). For more than a century, the income tax has formed the foundation for the U.S. tax system. However, as our nation has grown, so to have budget deficits and the total national debt. A new tax system that focuses on the most profitable sectors of the United States would be able to establish a greater revenue base while protecting the lower and middle class by allowing their income to remain in their families. A nationwide tax on any monetary transfer would accomplish these goals. Taxes on loans, investments, wire transfers, and more would all be initiated to replace all current federal taxes. However, a tax system based upon the engines that cause growth for an economy could potentially harm the system. The incentive structure for investment and financial ventures would be altered. Understanding the various changes to this structure is vital if this new taxation method is to be implemented.

## Fiat Lux Spring 2017

---

**Student:** Koetter, Paige

**Major:** Biology

**Faculty mentor(s):** Gasper, Brittany

**Presentation Type:** Poster, 10

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** Determining the Genetic Relatedness of Varying Rosa Species By DNA Barcoding

**Abstract:** The lineage of the genus *Rosa* can be traced mostly to Asia with some species originating in North America, Europe, and Northern Africa. Over many years, roses from all over the world have been crossed to create new species and hybrids. As a result, many species have unknown origins. Some botanists believe that various species of roses are similar enough to be considered the same species resulting in ambiguity over the exact number of species. This study looked to understand the phylogenetic relatedness of eleven different species of roses currently found in North America. DNA barcoding was used to determine the genetic relatedness of the species. The two genes used for barcoding were the highly conserved *rbcl* gene, which codes for ribulose biphosphate carboxylase (RUBISCO), and *matK*, which codes for a plant plastidial gene whose protein function is to splice out introns. PCR amplified *rbcl* and *matK* gene fragments were sequenced and bioinformatically compared in order to accurately understand the relationship between the species. The sequencing results were used to generate a phylogenetic tree of the eleven species, the results of which will be discussed.

**Student:** Koilpillai, Anisha

**Major:** Political Science

**Faculty mentor(s):** McHugh, Kelly; Bruce Anderson

**Presentation Type:** Oral

**Presentation Time:** 7:45 - 8:00

**Room:** CH 112

**Title:** World War 3? Examining the Precarious Situation Between NATO, the Baltic States, and Russia

**Abstract:** The Baltic states, Lithuania, Latvia, and Estonia, are increasingly worried about Russian influence. Russia notably invaded Georgia in 2008 and Ukraine in 2014. The Baltic states fear they are next. These three countries are part of the North Atlantic Treaty Organization (NATO), an intergovernmental military alliance consisting of twenty-eight total countries. Under NATO's Article Five, an attack on one country is considered an attack on all of the countries in NATO, and thus collective military action can be taken against a state. If Russia were to invade the Baltic states, Article Five can be evoked, and NATO can respond militarily. If a war were to take place, could this spell out World War 3? Would a Russian invasion finally be the breaking point in the unstable peace between NATO and Russia? Is NATO strong enough to counter Russia if a war is to occur? This paper aims to look at potential policy options for NATO to counter the current threat of a possible Russian invasion in the Baltic states.



## Fiat Lux Spring 2017

---

**Student:** Le Grand, Alexis

**Major:** Psychology

**Faculty mentor(s):** Quinlivan, Deah

**Presentation Type:** Poster, 11

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** Pre-Admonition Suggestion and its Effects on Mistaken Eyewitnesses

**Abstract:** Pre-admonition suggestion is an identification-relevant statement made to an eyewitness by a lineup administrator before the lineup admonition. Quinlivan et al. (2012), found that their suggestion inflated mistaken identification rates and retrospective identification. The current experiment was conducted to parse out the effects. To date, no study has been conducted to examine whether there are any effects of pre-admonition suggestion on accurate witnesses. Participants (N = 211) viewed a crime video, either received the pre-admonition suggestion or no suggestion, and were shown either a target absent or target present lineup. All participants received an admonition, made an identification choice, and answered questions about their witnessing experience. The results demonstrated that the pre-admonition suggestion increased mistaken identifications from a perpetrator-absent lineup and inflated their retrospective judgements of certainty, attention, and view. These results show support for the role of secondary (non-memorial) processes in eyewitness identification.

**Student:** Long, Tyler

**Major:** Music-Performance

**Faculty mentor(s):** Burke, Lawrence

**Co-presenter(s):** Kevin Diaz, Collin Carter and Scott McDonogh

**Presentation Type:** Performance

**Presentation Time:** 7:05 - 7:20

**Room:** BR 202

**Title:** Birdsong as a Foundation for 20th Century Composition

**Abstract:** Birdsong has long been identified with music, but in the 20th c. composers, beginning with Oliver Messian, began to use literal birdsong as thematic material for composition. Through recording birdsong, slowing it down through the use of computer programs, and transcribing to standard notation, works based on the original bird calls are composed and performed.

## Fiat Lux Spring 2017

---

**Student:** Lutz, Alexandra

**Major:** Psychology

**Faculty mentor(s):** Smith, Patrick

**Presentation Type:** Oral

**Presentation Time:** 6:00 - 6:15

**Room:** BR 201

**Title:** The Effect of Magazine Ads as a Supplement for Learning Biological Material

**Abstract:** Visual metaphors have been proven to be an effective strategy to learn abstract content. For example, graphic novelization has been shown to be an effective tool to supplement lecture material across disciplines, including natural sciences (e.g., Moe & De Beni, 2005; Niebert, Marsche, & Treagust, 2012; Sabeti, 2012). In addition to graphic novels, a previous study conducted used advertisements to teach the functions of common neurotransmitters. The results showed that out of three conditions, (word definitions, related pictures, and advertisements with both words and pictures) both short- and long- term retention of the material was better when the participants used the advertisements compared to learning with just pictures as a supplement. As an extension of this study, the current project aimed to use magazine spreads as a supplement for learning about hormones found in the human body. Given that traditional textbook learning and advertisements were shown to have the best retention scores, the magazine spreads contain one side with words, and one side with an ad. It was hypothesized that learning would be best when the magazine spreads combined relevant text and relevant ads compared to conditions where only one or neither sides of the spread were relevant to the material.

## Fiat Lux Spring 2017

---

**Student:** Lutz, Alexandra

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani

**Co-presenter(s):** Tabitha Powell

**Presentation Type:** Poster, 12

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** The Effect of Confederate Clothing and Gender on Change Blindness

**Abstract:** Change blindness is the inability to recognize a change in the environment due to the change being obscured from sight (Levin, Simons, Angelone, & Chabris, 2002). Previous research demonstrates that when conversation partners are switched on participants, many do not notice the change even though many of their features differed (Levin & Simons, 1997). There has been no previous research on the effect of uniforms or gender of the conversation partner on rates of blindness. Therefore, this project investigated the effects of gender of the conversation partner and the clothing worn by conversation partners on rates of blindness. Participants were guided to an office, and asked to sign a consent form. While they signed, the conversation partner they spoke with would duck behind a counter, and switch with another conversation partner. Depending on the condition, the conversation partners would be male or female, and wearing regular clothing or Army Combat Uniforms (ACUs). It was hypothesized that when conversation partners wore ACUs that there would be higher rates of blindness, that rates of blindness would be higher when the conversation partner was a female in regular clothing, and that rates of blindness would be similar in the ACU conditions across gender.

## Fiata Lux Spring 2017

---

**Student:** McNeil, Ashley  
**Faculty mentor(s):** Smith, Patrick  
**Presentation Type:** Poster, 13  
**Presentation Time:** 7:15 - 8:15

**Major:** Psychology  
**Room:** Honeyman Pavillion

**Title:** Visualization as a Tool to “ad” Knowledge of Neurotransmitter Function

**Abstract:** The use of symbolic metaphors has been characterized as a valuable tool in terms of providing imagery to complex material (e.g., Belleza, 1992; McCabe, 1988). Over the past few years, recent work by Smith and colleagues (2015) demonstrated that graphic novelization can effectively engage students (both behaviorally and physiologically) when compared to text-based strategies. The purpose of the current study is to explore whether another visual imagery technique, the usage of fictional advertisements of neuroscience communication, can also serve as an effective pedagogical tool. In the experiment, seventy-five introductory-level psychology majors participated. The participants were given a standard video that described common neurotransmitter communication. Participants then were given a.) a traditional text-based definitions of neurotransmitter action; b.) pictorial descriptions of neurotransmitter action; or c.) both text-based and pictorial descriptions of neurotransmitter action. Participants were then given a short-and long-term retention test of content as well as a perceptual/likeability rating sheet for the supplemental materials (for details, see Smith, Haynes, & Bradshaw, 2015). Results supported previous findings in terms of image-based retention of material and likability of material. The findings of the current study that symbolic metaphors (i.e., with verbal facilitation) enhance memory retention despite a potential paradox of physiological activity.

## Fiat Lux Spring 2017

---

**Student:** Mielecki, Monika

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani

**Presentation Type:** Oral

**Presentation Time:** 7:30 - 7:45

**Room:** CH 207

**Title:** The Effects of Stability Balls and Music on Self-stimulating Behaviors in Children with ASD

**Abstract:** Some researchers have reported cognitive and behavioral benefits from the use of stability balls in place of regular chairs in the classroom for children with attention problems, such as ADHD, dyslexia, or autism. However, these studies included very small samples sizes, the behavioral benefits were limited, and the setting for these studies was primarily in the classroom. Therefore, it is important to generalize these benefits to other settings and behaviors, such as self-stimulating behaviors. Additional studies have observed increased attention during therapy sessions in children with ASD with the presence of music, and a reduction self-stimulating behaviors as well. Therefore, the current study is to determine if the benefits of using stability balls in place of regular chairs, as well as the use of background music, can be replicated in other children with autism and whether the behavioral benefit generalizes to a reduction in self-stimulating behaviors in the context of an applied behavioral therapy center. Based on the limited previous literature, it is hypothesized that children with autism will exhibit a reduction in self-stimulating behavior while sitting on the stability balls and listening to soothing, instrumental music during behavioral therapy sessions; thus, making it an effective replacement for such behaviors.

**Student:** Modrall, Robert

**Major:** Computer Science

**Faculty mentor(s):** Roberson, Christan

**Presentation Type:** Poster, 14

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** BuckStop Order Application

**Abstract:** Buck-To-Go is a mobile application designed to provide students easy, mobile ordering while also reducing the wait time at Florida Southern College's BuckStop food stand. The application hopes to reduce surge orders during busy hours to increase BuckStop's sales and efficiency while also creating a stress-free and wait-free process for customers.

## Fiat Lux Spring 2017

---

**Student:** Moore, Sera

**Major:** Elementary Education

**Faculty mentor(s):** Blanco, Bernardo

**Presentation Type:** Oral

**Presentation Time:** 7:30 - 7:45

**Room:** Moc Theatre

**Title:** Xenophobia in the American Classroom: How is it Affecting the Students?

**Abstract:** This paper explores the idea of xenophobia affecting the American classrooms. Around the country, teachers are taught and encouraged to be fair and unbiased to their students in order to make a safe classroom environment. However, the rise of fear of foreign peoples and things, or xenophobia, causes the dynamic of the classroom to shift. After initially polling over 60 people, the responses dictated that xenophobia exists in small forms throughout almost all levels of education. In regards to the administration level of education, research into the Polk County School Board shows that little to no reports are done on bilingual special education students in the area. This lack of available information makes it difficult to obtain data regarding bilingual students who need services in the classroom; research into other counties and states was needed to continue. After a second poll, the results showed that over half of those who responded have witnessed an act of xenophobia in the classroom setting. They do, however, want to change the perspective of foreign peoples. In conclusion, xenophobia has affected the school system in subtle, yet distinct ways, and people want to work together to make all people feel safe and accepted.

**Student:** Mouring, Kaely

**Major:** Music-Performance

**Faculty mentor(s):** Burke, Lawrence

**Co-presenter(s):** Roxanne Jester, Robert Vernor, Margaret Leach

**Presentation Type:** Performance

**Presentation Time:** 6:50 - 7:05

**Room:** BR 202

**Title:** Birdsong as a Foundation for 20th Century Composition

**Abstract:** Birdsong has long been identified with music, but in the 20th c. composers, beginning with Oliver Messian, began to use literal birdsong as thematic material for composition. Through recording birdsong, slowing it down through the use of computer programs, and transcribing to standard notation, works based on the original bird calls are composed and performed.

## Fiat Lux Spring 2017

---

**Student:** Mulligan, Lillian

**Major:** Computer Science

**Faculty mentor(s):** Roberson, Christian

**Presentation Type:** Poster, 15

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** On Call Scheduler

**Abstract:** We created a web application that allows members of Community Living, such as Resident Advisers and Community Directors, to schedule "On-Call" days. When RAs are planning their On-Call schedule for the semester, the current process is analog and time-consuming. Our application enables users to create a user profile and select an available day to add to their schedule. Each RA has a display that shows what days they have signed up for and how many days they still need to sign up for. After selecting a day, the next user is notified to select a day, allowing all users a fair chance at getting their preferred days. CDs can create an admin account that allows them to choose an order that the RAs can select their days and the days available to be On-Call. There is also a feature that allows RAs to communicate with one another if they need to exchange their On-Call days.

**Student:** Nicolodi, Victoria

**Major:** Biology

**Faculty mentor(s):** Morvillo, Nancy

**Presentation Type:** Oral

**Presentation Time:** 6:15 - 6:30

**Room:** CH 209

**Title:** The Effect of Atrazine Exposure on Global DNA Methylation Patterns in *Drosophila Melanogaster*

**Abstract:** Atrazine is the second most commonly-used herbicide in the United States with 80 million pounds being applied to farmlands yearly. It usually is broken down in the soil in a single growing season, but atrazine will persist in lakes, ponds and groundwater. It is a potent endocrine disrupter, as it acts as a xenoestrogen and causing estrogen dominance. Atrazine has been observed to cause behavioral, developmental, and reproductive changes in species such as frogs, salmon, and rats. Amphibians are especially vulnerable. Current research is looking at DNA methylation, which is the addition of a methyl group to the fifth carbon on the cytosine ring, as an epigenetic factor for gene expression and how it controls cellular processes such as gene suppression, genomic imprinting, carcinogenesis, and embryonic development. In this study, *Drosophila melanogaster* were exposed to varying concentrations of atrazine and their DNA was extracted to observe and compare the changes in global methylation patterns. It is predicted that there were be global DNA hypomethylation.

## Fiat Lux Spring 2017

---

**Student:** Ntagungira, Michel

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 7:45 - 8:00

**Room:** Moc Theatre

**Title:** Racial Disparity in the Criminal Justice System

**Abstract:** Racial disparity in the criminal justice system exists when the proportion of a racial or ethnic group within the control of the system is greater than the proportion of such groups in the general population (sentencingproject.org, 2000). The racial disparities in the criminal justice system are of staggering numbers. For example, despite the fact that whites and African-Americans use drugs at almost similar rates, African-Americans are arrested on drug crimes at twice the rate of their white counterparts (Kahn & Kirk ; 2015). Racial profiling by law enforcement fuels the racial disparities we see. African-Americans are heavily stereotyped to be violent towards the general public and one of the reasons for that is because African Americans very often are portrayed with all kinds of deviant acts in the media more often than white people. So that is why police officers are three times more likely to search the cars of stopped African-Americans drivers than white drivers (Kahn & Kirk, 2015).Racial bias in the criminal justice system has proven to keep more African- Americans in prisons than ever before causing prison over-population which is another costly problem that this country doesn't need.

**Student:** Parisi, Alyssa

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani; Patrick Smith

**Presentation Type:** Poster, 16

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** Retention of Appealing Landscape Photographs in Children with and without Dyslexia

**Abstract:** Dyslexia is a specific learning disorder characterized by a pattern of difficulties with word recognition and spelling despite adequate intelligence (American Psychiatric Association, 2013). Past research has shown that there is a link between environmental cues and memory (Godden & Baddeley, 1975), however there is no current research on the possible benefits for children with dyslexia compared to age-equivalent controls. Therefore, the purpose of the current study was to determine if the greater likability for natural landscape photographs generalized to children with dyslexia and age-equivalent controls, and if photograph type impacted recognition rates at both a short-term retention interval (i.e., immediately after exposure) and a long-term retention interval (i.e., four months later). Results indicate that all children liked natural the most, but paid longer attention to blended. While both groups recognized all photographs at a high rate after the short-term retention interval, the children with dyslexia had better memory compared to the age-equivalent controls at the long-term. Based on our results, we advise educators to incorporate natural and blended images into the learning context in order to create a more aesthetically pleasing and attention-capturing environment in order to possibly improve long-term retention of information associated with the images.



## Fiat Lux Spring 2017

---

**Student:** Parisi, Alyssa

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani; Patrick Smith

**Presentation Type:** Poster, 17

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** Forced-choice Preference and Recognition of Photographs in Children with Dyslexia

**Abstract:** In a previous study, children with dyslexia (and age-equivalent controls) rated the likability of three different types of photographs using a 5-point Likert scale to measure likeability and a standard recognition paradigm (i.e., stimuli shown one at a time) (Parisi, Goodmon, Smith, Phillips, & Cox, 2016). The purpose of the current study was to determine if the previous results generalized to children with dyslexia and age-equivalent controls using a forced-choice paradigm (i.e., stimuli shown in pairs). Consistent with previous research, participants preferred natural to urban and blended photographs. Furthermore, the children with dyslexia paid longer attention to pairs where blended was an option in the preference phase. Nevertheless, both groups failed to exhibit a forced-choice recognition advantage for blended photographs after either the short- or long-retention interval, and children with dyslexia did not have better memory compared to the controls. However, participants' recognition of natural and blended photographs suffered less of a decline between the short- and long-term retention interval. Based on these results, educators might find it useful to incorporate natural and blended images into the learning experience in order to increase students' overall attention and decrease memory loss of information associated with the images over time.

**Student:** Persaud, Sunil

**Major:** Political Science

**Faculty mentor(s):** McHugh, Kelly; Bruce Anderson

**Presentation Type:** Oral

**Presentation Time:** 8:00 - 8:15

**Room:** CH 209

**Title:** Water Crisis in Southern Florida

**Abstract:** Through the use of research and analysis of current and past policies, this writing examines possible steps to preserve the water supply of southern Florida. As supporting evidence, we will look at the opinions of scholars and professionals in the subject matter in order to grasp a better concept of the severity and need to refine current policy. By the end, we will look at possible solutions and propose a solution that best factors in cost, benefit, and risks associated with its implementation. The purpose of this paper will be to not only define a current problem with the water supply to southern Florida, but also to build upon the premise that it is a public concern. By understanding the effects beyond drinking water in southern Florida, we will come to understand the effects to the environment, such as the Everglades and its inhabitants, but also to every tax-payer in the United States.

## Fiat Lux Spring 2017

---

**Student:** Powell, Tabitha

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani; Charlie Law

**Presentation Type:** Poster, 18

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** College Rape Myth Acceptance: Does Sexual Assault Training Help?

**Abstract:** Rape Myth Acceptance (RMA) is the tendency of individuals to accept common myths about rape (Hinck & Thomas, 1999). Past research reveals that rates of RMA vary as a function of several demographic characteristics. For example, men tend to exhibit higher rates of RMA compared to women (Aronowitz, 2012; Carroll, Rosenstein, Foubert, Clark, & Korenman, 2016; Davies, Gilston, & Rogers, 2012; McMahon, 2012; Hinck & Thomas, 1999) and men in fraternities exhibit higher levels of RMA than non-fraternity affiliated men (Beecker & Murnen, 2005; Carroll, Rosenstein, Foubert, Clark, & Korenman, 2016; McMahon, 2012). Furthermore, the acceptance of male rape myths (when a man is the victim) is positively correlated with the acceptance of female rape myths (Davies, Gilston, & Rogers, 2012). However, those who have been exposed to sexual assault and prevention classes exhibit lower rates of RMA (McMahon, 2012; Hinck & Thomas, 1999). The purpose of the current study is to investigate levels of RMA between Army ROTC cadets, who receive sexual assault and prevention training each year (Army SHARP program) and non-ROTC individuals. Results show that rates of RMA decrease from freshman to senior year regardless of ROTC status. It was also found that rates of RMA for a male victim decreased from freshman to senior year for ROTC students but not non-ROTC students and that rates for a female target decreased for non-ROTC students but not ROTC students.

## Fiat Lux Spring 2017

---

**Student:** Pullen, Elise

**Major:** Marine Biology

**Faculty mentor(s):** Franks, Bryan

**Presentation Type:** Oral

**Presentation Time:** 8:00 - 8:15

**Room:** BR 201

**Title:** Maternal Offloading of Mercury in the Bonnethead shark (*Sphyrna tiburo*).

**Abstract:** Many marine organisms including sharks may be susceptible to accumulating high concentrations of toxins from exposure to their environment and as top predators through biomagnification. Mercury is frequently referred to as a bioaccumulate as it can collect in the system of an organism, and is commonly found in the tissues of marine organisms particularly those living in contaminated environments. The bonnethead shark (*Sphyrna tiburo*) is a coastal elasmobranch belonging to the hammerhead family. Bonnethead reproduction involves a close connection between mother and embryo through a placental analogue. Maternal offloading refers to the transfer of various toxins from the system of a mother to her offspring and may be an important source of contaminant loading in species with an umbilical connection throughout development. The presence of maternal offloading in this species was tested by examining non-pregnant female bonnethead sharks, pregnant female bonnethead sharks, and the respective unborn offspring of the pregnant individuals captured from middle Tampa Bay, FL. Total mercury levels were measured in the liver and muscle tissues of non-pregnant, pregnant, and embryos. The concentration of total mercury levels measured in the offspring were then compared to the total mercury levels found in the liver and muscle tissues of the respective mothers and non-pregnant individuals. These results have implications for shark populations residing in areas with high levels of pollution specifically for sharks with placental viviparity whereby mothers may pass significant levels of contaminants to their unborn offspring in much higher relative concentrations than found in the mother.

## Fiat Lux Spring 2017

---

**Student:** Ragusa, Vincent

**Major:** Computer Science

**Faculty mentor(s):** Mathias, H. David

**Presentation Type:** Oral

**Presentation Time:** 6:45 - 7:00

**Room:** BR 201

**Title:** Genetic Algorithms for Applied Path Planning

**Abstract:** Path planning is the computational task of choosing a path through an environment. As a task humans do hundreds of times a day, it may seem that path planning is an easy task, and perhaps naturally suited for a computer to solve. This is not the case, however. There are many ways in which NP-Hard problems like path planning can be made easier for computers to solve, but the most significant of these is the use of approximation algorithms. One such approximation algorithm is called a genetic algorithm. Genetic algorithms belong to an area of computer science called evolutionary computation. The techniques used in evolutionary computation algorithms are modeled after the principles of Darwinian evolution by natural selection. Solutions to the problem are literally bred for their problem-solving ability through many generations of selective breeding. The goal of the research presented is to examine the viability of genetic algorithms as a practical solution to the path planning problem. Various modifications to a well-known genetic algorithm (NSGA-II) were implemented and tested experimentally to determine if the modification had an effect on the operational efficiency of the algorithm.

**Student:** Rassmann, Jordan

**Major:** Mathematics

**Faculty mentor(s):** De Castro, Lisa

**Presentation Type:** Poster, 19

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** Identifying the Static Kick Point in a Golf Shaft

**Abstract:** The static kick point is the maximum bending point of a golf shaft and can visually be seen as the point furthest away from a line connected to both ends of a loaded shaft. Different kick points in shafts generate different ball flight trajectories and thus are an important factor when it comes to golf club fittings. We focused on finding a model for the static kick point (bending moment at position  $x$ ) due to an applied vertical load  $M$  on two types of golf shafts: a steel shaft for irons and a tapered graphite shaft for a driver. By solving a second order differential equation that correlates with the deflection of a bending shaft and then using the cross product, we will present a way to identify the static kick point.

## Fiat Lux Spring 2017

---

**Student:** Reimertz, Robert

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 7:45 - 8:00

**Room:** CH 209

**Title:** The Effect of Drug Addiction and Abuse on West Virginia

**Abstract:** Drug addiction and abuse has become an ongoing problem in the United States for many years, with the state of West Virginia being most ravaged by this problem. Whether it has been the abuse of prescribed medication or the rampant use of illegal opioids and heroin, this is an epidemic that cannot be ignored. People who abuse these drugs are overdosing and dying at an alarming rate. According to a CDC report, forty-one out of every one hundred thousand people in West Virginia have died drug overdoses in 2015 alone. To put it in perspective, the nation's average is fourteen. In West Virginia, drug abuse and economic depression are intertwined as West Virginia has one of the highest unemployment rates in the U.S. The amount of shipments of prescribed painkillers that are being sent to small West Virginia counties are contributing to poor conditions as well. Furthermore due to the labor that the coal industry demands has taken its toll on the people that have jobs and many of them have become dependent on these drugs to continue working or ease their physical pain. All of these factors must be taken into account when selecting a viable solution and while it is understood that drug addiction and abuse in West Virginia cannot be eradicated, a solution that is reasonably successful will produce results that reflect a decrease in the amount of drug overdoses and related deaths.

**Student:** Riley, Laura

**Major:** Chemistry

**Faculty mentor(s):** Le, An-Phong

**Presentation Type:** Oral

**Presentation Time:** 7:45- 8:00

**Room:** CH 206

**Title:** Activity of Geraniol and Carvacrol during Lipid Oxidation in Food oil-in-water Emulsions

**Abstract:** The oxidation of fatty acids in food products such as emulsion systems is a problem that directly affects the lifetime of a product. As the polyunsaturated fatty acid chains are exposed to light and heat, free radicals are formed that break the lipids down and produce oxidative fragments. These fragments lead to a decrease in food quality in areas such as taste, odor, and color. Sunflower and peanut oil-in-water emulsions were used to test the effect of the antioxidants, carvacrol and geraniol, in mitigating lipid oxidation. The samples were tested in room temperature conditions as well as accelerated conditions. The concentration of primary oxidation products after 14 days was used to evaluate the antioxidants' success. It was found that geraniol exhibited the most activity and inhibition of lipid oxidation of the two antioxidants and a general trend of increasing percent inhibition was seen in accelerated conditions. Future studies include looking into the antioxidants' effects on secondary oxidation products.

## Fiat Lux Spring 2017

---

**Student:** Rooker, Amy  
**Faculty mentor(s):** Morvillo, Nancy  
**Presentation Type:** Oral  
**Presentation Time:** 7:45 - 8:00

**Major:** Biology  
**Room:** BR 201

**Title:** Epidemiology of Salmonella typhimurium in *Caenorhabditis elegans* under different socio-environmental conditions

**Abstract:** Disease transmission throughout a population is a multi-faceted process controlled by dynamic and overlapping factors, or determinants of health. The World Health Organization has identified the physical environment, and the social and economic environment, as key determinants of health. Aspects of these environments include, but are not limited to: access to health services, proper sanitation, and availability of safe food and water. Water-associated diseases linked to unclean water and improper sanitation cause an estimated 2 million deaths annually. To control and prevent these types of illnesses, it is important to understand the socio-environmental risk factors involved in contracting a water-associated disease. In this research, populations of the nematode *C. elegans* were infected with the water-associated pathogen *S. typhimurium* under different socio-environmental conditions. Nematodes were exposed to the opportunistic pathogen under different population densities, food insecurity levels, and levels of access to health services. Bacterial loads for each condition were compared to determine the best determinants of health.

**Student:** Seward, Haley  
**Faculty mentor(s):** Goodmon, Leilani  
**Presentation Type:** Oral  
**Presentation Time:** 7:15 - 7:30

**Major:** Psychology  
**Room:** BR 201

**Title:** The Relationship between Self-serving Bias and Levels of Narcissism in Preschoolers and Children with Dyslexia

**Abstract:** Self-serving bias is the tendency to attribute positive events to your own character, but attribute negative events to external factors. The purpose of this experiment was to determine if there was an interaction between a child's level of narcissism and their self-serving bias, and whether children with dyslexia had a more accurate memory when the information was presented visually or verbally. Specifically, to determine if higher levels of narcissism correlated with a greater self-serving bias effect. Consistent with our hypothesis, there was a significant relationship between narcissist's memory of their own giving and other's giving. However, our results did not support our hypothesis that narcissists would have a poorer memory of their own taking behavior compared to their memory of other's taking behavior. Furthermore, lower narcissists did not have significantly better memories of their own giving and taking behavior compared to their memory of others' giving and taking. Additionally, there was no difference in memory accuracy between visual and verbal presentation style in children with dyslexia. This research can be applied in the school system by focusing tasks and lessons on the children so they are more likely to remember the information.

## Fiat Lux Spring 2017

---

**Student:** Seward, Haley

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani

**Co-presenter(s):** Brittany Groth

**Presentation Type:** Poster, 20

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** The Relationship between Academic Factors and Personality Traits and Scores on the GRE

**Abstract:** There are several factors that influence students' scores on the GRE. Previous research provides evidence that personality traits, practice exams, and anxiety levels all correlate with standardized tests. However, no previous research has been conducted investigating the relationship between these variables and the GRE specifically. The purpose of this study is to determine if there is a relationship between traits measured on the BFI-44 Personality Inventory, quiz scores on GRE focused material, GPA, and anxiety levels with GRE scores. The results revealed that there was a slight correlation between Openness and scores on the Posttest GRE and between Neuroticism and scores on the Baseline and Practice GRE. The results for sleep and stress in correlation with GRE scores were both found to be inconclusive. There was no correlation between Baseline GRE scores and practice quizzes; however, there was a significant interaction between practice quizzes and Practice GRE scores. These results indicate that practice quizzes are the most significantly correlated factor with GRE scores.

**Student:** Seward, Haley

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani

**Presentation Type:** Poster, 21

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** The Relationship between Preschoolers' Perception of Emotion and Gender Stereotyping

**Abstract:** The purpose of this study was to determine if there is a relationship between the gender of the perceiver, a gendered name label, and emotion identification in gender ambiguous faces. Participants viewed ambiguous adult and adolescent faces each displaying an emotion, with either a stereotypical male, female, or neutral label. Participants then identified the emotion. Our hypothesis that the participants would be accurate in identifying the emotions of happy and sad regardless of label, and emotions in adolescent faces would be more accurately identified than in adult faces was supported. However, our hypothesis that females would be better at identifying emotions than males, and gender label would influence emotion identification of disgust, anger and fear was only partially supported. Nevertheless, it seems that gender does have some effect on emotion identification, as a trend in certain emotions being considered more masculine, and others more feminine, was found in all participants.

## Fiat Lux Spring 2017

---

**Student:** Seward, Haley

**Major:** Psychology

**Faculty mentor(s):** Goodmon, Leilani

**Co-presenter(s):** Brittany Groth

**Presentation Type:** Poster, 22

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** The Relationship between Self-serving Bias and Levels of Narcissism in Preschoolers and Children with Dyslexia

**Abstract:** The self-serving bias is the tendency to attribute positive events to your own character, but attribute negative events to external factors (Tasimi & Johnson, 2015). The purpose of this experiment was to determine the relationship between a child's level of narcissism (as measured by Thomaes and colleagues' (2008) childhood narcissism scale) and the degree of their self-serving bias using the giving and taking paradigm developed by Tasimi and Johnson (2015). Overall, we only partially replicated the self-serving bias in preschoolers. We found that preschoolers demonstrated the self-serving bias for memory of giving behavior but not for taking behavior. Regardless of the child's level of narcissism, they remembered their own behavior better than the behavior of others; for this reason, educators could apply the results in the creation of educational lessons to make them more memorable for their students.

**Student:** Smith, Austin

**Major:** Athletic Training

**Faculty mentor(s):** Allen, Charles

**Presentation Type:** Poster, 23

**Presentation Time:** 7:15 - 8:15

**Room:** Honeyman Pavillion

**Title:** The Impact of an Acute Therbo Robotic Treatment on Fastball Pitch Velocity in Division II Collegiate Baseball Pitchers

**Abstract:** The purpose of this research was to examine an acute Therbo Robotic™ therapy treatment on the fastball pitching velocity of Division II collegiate baseball pitchers. Seven pitchers completed bilateral hip active internal and external rotation assessment followed by maximal pitch velocity assessment from the windup and stretch start positions. Participants then received Therbo Robotic™ treatment targeting lead leg iliacus, gluteus medius and drive leg iliotibial band, tensor fascia latae, gluteus medius and piriformis for 10 minutes at each tissue. Range of motion and velocity were re-measured post-treatment. Paired sample t-test were used to determine differences between pre- and post-treatment data. Mean velocity from the windup declined from  $78.09 \pm 5.35$ mph to  $76.46 \pm 5.25$ mph post-treatment ( $p=0.025$ ). Mean velocity from the stretch also declined from  $78.29 \pm 4.48$ mph to  $76.79 \pm 5.37$ mph post-treatment but the change was not statistically significant ( $p=0.058$ ). Lead leg and drive leg internal rotation range of motion improved 12.76% and 12.44%. Drive leg external rotation range of motion increased 7.75% while lead leg external rotation remained unchanged. Tissue treatment using Therbo Robotic™ technology acutely improves hip joint range of motion but leads to a decrease in maximal pitching velocity.



## Fiat Lux Spring 2017

---

**Student:** Stemle, Leyna

**Major:** Marine Biology

**Faculty mentor(s):** Langford, Gabriel

**Co-presenter(s):** Kristen, Martinet

**Presentation Type:** Poster, 24

**Presentation Time:** 6:00 - 7:00

**Room:** Honeyman Pavillion

**Title:** An Ongoing Study of the Striped Mud Turtle (*Kinosternon baurii*) At Circle B Bar Reserve in Central Florida

**Abstract:** Little is known about the natural history and ecology of the striped mud turtle (*Kinosternon baurii*), although previous work in Florida suggests that they are highly terrestrial and nest primarily in the fall. We are conducting a population and spatial ecology project on *K. baurii* using radio telemetry at Circle B Bar Reserve (CBR), a restored former cattle ranch adjacent to Lake Hancock, Polk County, Florida. Seven mud turtles are tagged, and standard natural history data on morphology and reproduction is gathered. Additionally, we have implemented an ongoing mark and recapture study for this population. Our data indicate that *K. baurii* have a fairly small home range, with males moving greater distances than females. The health of captured turtles is generally good, although feral pigs and human interactions (especially after national news events) appear to represent the greatest threats to the turtles. We recapture many of the same turtles at CBR, but after almost 2 years of sampling we are still capturing unmarked turtles and the population is diverse. Overall, the data we have collected helps CBR understand more about their mud turtle population and increases their knowledge of the wildlife they protect.

**Student:** Stevens, Carey

**Major:** Religion

**Faculty mentor(s):** Willis, Waite

**Presentation Type:** Oral

**Presentation Time:** 7:15 - 7:30

**Room:** CH 111

**Title:** Faith Formation Brick by Brick

**Abstract:** I will present my senior Capstone in Religion on how Christian Educators can integrate scripture in teaching individuals who are in different stages of faith. The paper and presentation are based on the book *Stages of Faith* by James Fowler. In the paper I identify the stages of faith and point out ways in which Christian educators can use different Bible passages in different ways.

## Fiat Lux Spring 2017

---

**Student:** Strobel, Jenna

**Major:** Chemistry

**Faculty mentor(s):** Bromfield Lee, Deborah

**Presentation Type:** Oral

**Presentation Time:** 6:00 - 6:30

**Room:** CH 206

**Title:** Synthesis of bis(4-pyridyl)methane

**Abstract:** Metal organic framework (MOF) chemistry blends an organic ligand and an inorganic metal or cluster to often create a porous structure that can be used for many applications. MOFs can be focused toward a specific application due to specialization, specifically in the organic ligand. Many ligands can be commercially bought, but some have to be organically synthesized. My research focuses on the synthesis of bis(4-pyridyl)methane in two steps: Grignard and Deoxygenation.

**Student:** Suarez, Austin

**Major:** Political Science

**Faculty mentor(s):** Anderson, Bruce; Kelly McHugh

**Presentation Type:** Oral

**Presentation Time:** 7:15 - 7:30

**Room:** Moc Theatre

**Title:** Lake Okeechobee Overflows and the Florida Coastline

**Abstract:** This presentation addresses the Lake Okeechobee overflows and the detriment it has on the Floridan coastline, specifically the coastline of southwest Florida. This presentation analyzes the current situation where the overflows are discharged into the coastline and discusses how these discharges are toxic when being discharged into the coastline. Then I will discuss possible solutions to this crisis.

## Fiat Lux Spring 2017

---

**Student:** Sullivan, Kelan

**Major:** Political Science

**Faculty mentor(s):** McHugh, Kelly; Bruce Anderson

**Presentation Type:** Oral

**Presentation Time:** 7:30 -7:45

**Room:** CH 112

**Title:** Governmental Cybersecurity

**Abstract:** This presentation will look at different policy options in order to protect the United States governmental agencies from future cybersecurity attacks. Cybersecurity attacks are happening all over the world and it seems that no country is safe from being attacked from foreign entities. Everything today is on computers and networks, from information on personnel, agencies, citizens and governmental projects, it can all be accessed through the internet. As this information grows and more countries are looking to make everything digital, there grows the need for more security to not only protect the governments' information, but also the private citizens.

**Student:** Taylor, Haley

**Major:** English

**Faculty mentor(s):** Bravard, Rebecca

**Presentation Type:** Oral

**Presentation Time:** 7:45 - 8:00

**Room:** CH 111

**Title:** Myth-taken Identity: Margaret Atwood and Carol Ann Duffy's Feminist Revisionist Mythology

**Abstract:** In the Western literary canon, Greco-Roman mythology acts as the foundation that all subsequent texts are built upon. For better or for worse, these ancient texts continue to perpetuate harmful ideas about gender, authorship, and storytelling. The reification of these texts simultaneously reinforces misogynist ideas about women's voices and serves to further exclude women from the legacy of Western literary history. Using the work of contemporary feminist authors, this paper will focus on ways in which we can reimagine our history to be one of inclusion rather than exclusion. Within Margaret Atwood and Carol Ann Duffy's body of work, both authors use feminist revisionist mythology to reclaim women's voices that classical mythology mistreated or left out altogether. In doing so, their writings provide a form of literary justice to the women left out of Western literary canon and suggest a new way of approaching canonical texts.

## Fiat Lux Spring 2017

---

**Student:** Thiele, Danika  
Public Relations

**Major:** Communication- Advertising and

**Faculty mentor(s):** Trice, Michael; Gabriel Langford

**Presentation Type:** Oral

**Presentation Time:** 6:15 - 6:30

**Room:** CH 208

**Title:** Genetically Modified Statutes: the Commercialization of GMOs in America

**Abstract:** Similar to Rachel Carson's "Right to know" movement regarding the publicity of chemical toxins, modern consumers have an intrinsic right to clear, science-based information elucidating the origin of the food they consume on a daily basis. In a world of modern commercialism and proliferation of various branding techniques, agriculture often is overlooked in life's grand scheme. Often American assumptions regarding products and the actual informative labeling of said goods vary greatly. Genetically modified organisms (GMOs), though highly controversial, currently are unrestricted by Federal Department of Agriculture guidelines regarding labeling. As a country, the US has no concise guidelines for labeling GMOs. This is in conflict with the consumer's best interest, as the American public deserves to know the processes involved in food production just as much as a food's calorie content. This research project elaborates on this divided, diverse world of GMO opinions and legislation and gives insight into how it may be improved.

## Fiat Lux Spring 2017

---

**Student:** Trout, Zoe

**Major:** Communication- Advertising and Public Relations

**Faculty mentor(s):** Mackie, Cara

**Presentation Type:** Oral

**Presentation Time:** 6:30 - 6:45

**Room:** CH 208

**Title:** Millennials Changing the World? A Look at the Relationships between College Students' Values, Dreams of Travel, and the Desire to Make a Difference

**Abstract:** In this thesis, I explore cultural interaction between millennials from the U.S. and residents in third world countries where they may volunteer, with a focus on how these young people view themselves and others, and, in particular, any “dominant culture” attitudes that might impact the volunteer experience, for both the volunteer and the residents of the home country. I explore three important relationships: between millennials and volunteering, millennials and their perceptions of themselves as the dominant culture, and millennials and people who are culturally different from them. I seek to understand the connection between the values and perceptions of young people who want to help, and the likelihood that they will follow through. A few themes stand out: a strong connection between diversity as a high value and a strong desire to volunteer outside of the US; money and career issues as significant barriers to volunteering; concerns regarding the misallocation of funds by coordinating organizations, to the detriment of host countries; and a strong perception by participants that they had a strong skillset to bring, contrasted with a weak perception that there was value in learning from residents in their host community. With this research, I hope to increase understanding of the gap between the strong desire for service and the lack of follow-through, especially in cultures that are significantly different from our own.

## Fiat Lux Spring 2017

---

**Student:** Walker, Brett  
**Faculty mentor(s):** Shelby, Shameka  
**Presentation Type:** Oral  
**Presentation Time:** 7:15 - 7:45

**Major:** Biochemistry and Molecular Biology  
**Room:** CH 206

**Title:** Identification of Scramblase Protein Involved in Phosphatidylserine Exposure in Photoreceptor Outer Segments to Induce Phagocytosis by the Retinal Pigment Epithelium

**Abstract:** Vertebrate perception of light is accomplished by photoreceptors in the retina. When struck by a photon, rhodopsin—a chemically bound protein located at the tips of photoreceptors (POS) in membrane bound discs—undergoes a chemical transformation to begin the phototransduction cascade to take the signal to the brain. Ironically, this process will damage the photoreceptor over time. To combat the accumulated damage through phototransduction, the photoreceptors are continuously growing and the damaged ends are consumed by a layer of cells next to the retina known as the retinal pigment epithelium (RPE). Communication between the cells to initiate this process occurs when the inner membrane component, phosphatidylserine (PS), is transported to the outer membrane of the POS disc by an unknown protein in the scramblase family. In this study, the expression of fifteen potential scramblases was analyzed in mouse retina. To do so, cDNA (reverse transcribed from mouse retinal RNA) was amplified using primers specific to each potential scramblase proteins via the polymerase chain reaction. The same primers were also used to amplify cDNA from mouse brain and liver tissue to assess specificity. In future studies, the identified scramblase protein will be purified and its PS flipping activity examined. The assay developed here can be useful to identify other unknown proteins in similar pathways in the retina.

## Fiat Lux Spring 2017

---

**Student:** Wargat, Bryanna

**Major:** Marine Biology

**Faculty mentor(s):** Langford, Gabriel; Bryan Franks

**Presentation Type:** Oral

**Presentation Time:** 6:15 - 6:30

**Room:** BR 201

**Title:** An Investigation of the Dominant, Small Freshwater Fish Species of Circle B Bar Reserve, Lakeland, Florida

**Abstract:** Circle B Bar Reserve in Lakeland, Florida is largely comprised of freshwater swamp habitats with fluctuating water levels and a diverse abundance of wildlife. Through the use of catch and release practices via minnow traps, fish species were identified from September 2016 to March 2017. Varying habitat types were evaluated throughout the reserve, and a variety of species were collected. The most prevalent species were mosquitofish (*Gambusia holbrooki*), lined topminnow (*Fundulus lineolatus*), and sailfin molly (*Poecilia latipinna*). The identification of these dominant species will be used in upcoming studies to assess the future stability of these fish populations in central Florida. As local water systems are affected by climate change, it is important to assess the species that are susceptible to potential stressors including changes in water temperature and pH. Such studies could be beneficial in determining the species most at risk at the reserve.

**Student:** Waters, Audrey

**Major:** English

**Faculty mentor(s):** Bravard, Rebecca

**Presentation Type:** Oral

**Presentation Time:** 7:30 - 7:45

**Room:** CH 208

**Title:** *No Vacancy* and the Birth of a Novel

**Abstract:** *No Vacancy* is a retelling of the traditional Christmas narrative and is categorized as a Young Adult Historical Fiction novel. The inspiration for the story stemmed from the Bible verse Luke 2:7, "...and she gave birth to her firstborn, a son. She wrapped him in swaddling cloths and laid him in a manger, because there was no place for them in the inn." This is the only mention of an inn, let alone an innkeeper, in any of the four gospels. *No Vacancy* centers around the innkeeper, his family, and other key townspeople in Bethlehem, as they receive the proclamation of King Herod's census and prepare for the influx of travelers. The story ends with the arrival of Mary and Joseph, and the birth of Jesus—one of the few recognizable aspects of the narrative. This presentation will include a short reading from the completed first draft of *No Vacancy*.

## Fiat Lux Spring 2017

---

**Student:** Wellish, Mordechai

**Major:** Political Science

**Faculty mentor(s):** McHugh, Kelly; Bruce Anderson

**Presentation Type:** Oral

**Presentation Time:** 7:30 - 7:45

**Room:** CH 108

**Title:** Yemen: The Houthi Conflict and the Case for Intervention

**Abstract:** Yemen is in a rapidly growing regional conflict with severe implications for global trade and security. The United States currently maintains limited activity in Yemen, mainly targeting Al Qaeda operations. The ongoing Houthi insurgency, backed by Iran, has driven out the Western-backed Hadi government. The resulting civil war has killed thousands and destabilized yet another corner of the Middle East. This paper makes the case for U.S. and Western-backed intervention to counter Iranian expansion and reinstate a stable government in Yemen.

**Student:** Weot, Alex

**Major:** Biology

**Faculty mentor(s):** Kjellmark, Eric

**Presentation Type:** Oral

**Presentation Time:** 7:30 - 7:45

**Room:** CH 209

**Title:** Sediment Coring and Future Analysis of the Ecological History of Andros Island

**Abstract:** This presentation will include what I accomplished during my honorization of the Tropical Ecology course this Spring. Since this class doubled as a Junior Journey, I was able to travel to Andros Island in the Bahamas to collect data that I will be using for my Honor's Thesis. While we were on Andros Island, we collected a sediment core from a 14 meter deep blue hole. The sediment core could contain sediments that date back as far as 1500 years. Analysis of the pollen and charcoal in the sediments will shed light on the vegetation history and possibly the human history of Andros Island. This presentation will focus on how a sediment core was collected, how the sediment will be analyzed, and how this data can be used for further ecological and archaeological research.



## Fiat Lux Spring 2017

---

**Student:** Wetz, Samantha

**Major:** English

**Faculty mentor(s):** Bravard, Rebecca

**Presentation Type:** Oral

**Presentation Time:** 8:00 - 8:15

**Room:** CH 208

**Title:** How the Mighty Fall: An Examination of the Luciferian Arc in Arthurian Legend

**Abstract:** Despite the vast amount of scholarship discussing King Arthur, the religious connections between Christianity and Arthurian legend only discuss the similarities between Arthur and Christ. Lucifer is conspicuously absent from the conversation. Considering the parallels between the stories of Lancelot, Lanval, and Lucifer, an additional aspect of allegory, the Luciferian Arc, can be realized. Through a step-by-step process of evaluation using the Luciferian Arc, I will prove that Lancelot and Lanval are representations of Lucifer in Arthurian legend.

**Student:** Workman, Abigail

**Major:** Music- Music Education

**Faculty mentor(s):** Jossim, Jo

**Presentation Type:** Performance

**Presentation Time:** 6:15 - 6:25

**Room:** BR 202

**Title:** Florida Southern College Woodwind Quintet

**Abstract:** The Florida Southern College Woodwind Quintet will discuss the makeup of a Woodwind Quintet and why the instruments that play in a Woodwind Quintet make up the ensemble. The Woodwind Quintet will then perform two numbers that demonstrate the diverse range and colors of each of the instruments in the Quintet.

## Fiat Lux Spring 2017

---

**Student:** Yingst, Megan

**Major:** Music- Music Education

**Faculty mentor(s):** Chen, Fen-Fang

**Presentation Type:** Performance

**Presentation Time:** 6:25 - 6:50

**Room:** BR 202

**Title:** Pipa History and Ensemble Showcase

**Abstract:** We are Florida Southern's Pipa Ensemble. During our Junior Journey to Taiwan with Dr. Chen, the four of us bought a Traditional Chinese instrument called the Pipa with the intention of forming an ensemble. When we returned to school in Fall 2016, our World Music class was created and we began our study under the direction of Dr. Chen, who has been playing Pipa her entire life. Our presentation would showcase the history of the Pipa, various Pipa playing techniques, an overview of our experience in the Taiwan Junior Journey, and a performance of the pieces we have learned.

**Student:** Young, Matthew

**Major:** Biology

**Faculty mentor(s):** Langford, Gabriel; Nancy Morvillo and Melanie Langford

**Presentation Type:** Oral

**Presentation Time:** 6:30 - 6:45

**Room:** CH 207

**Title:** Morphological and Molecular Examination of Mites to Potentially Discover a New Species

**Abstract:** A species of *Lawrencarus* mite has been found in the nasal cavity of Southern Leopard Frogs. Similar species of *Lawrencarus* are found in the nasal cavity of other types frogs and birds all over the world. To discover any potential relationship, the mites found in the Southern Leopard frog were examined morphologically and molecularly and are then compared to other species of *Lawrencarus*. Their physical characteristics such as body shape, body size, number of hairs and the hair's location is being compared. Morphological differences may be indicative of species delineation. The Cytochrome C Oxidase Subunit I (COI) region of mitochondrial DNA is being compared between the mites as well to discover any significant differences. The genetic region will be extracted from the Southern Leopard Frog species, sequenced, then aligned and contrasted to COI regions of mites from other hosts using computer software. If no major relationship to other *Lawrencarus* mites is found it is possible that the mite found in the Southern Leopard Frog is a new species.

## Fiat Lux Spring 2017

---

**Student:** Zunic, Destiny

**Major:** Criminology

**Faculty mentor(s):** Carter, Lisa

**Presentation Type:** Oral

**Presentation Time:** 6:00 - 6:15

**Room:** CH 208

**Title:** The Effects of Social Media and Self-Esteem on the Fear of Missing Out (FoMO) and Delinquent Behavior

**Abstract:** The purpose of this study was to determine if there is a relationship between social media use and self-esteem with both feelings of a fear of missing out and of delinquent behavior. An additional purpose was to determine whether certain characteristics, such as GPA, are found in those with high levels of Fear of Missing Out (FoMO), as well as to determine if a correlation between high levels of FoMO and delinquent behavior exists. Participants completed a survey designed to measure their social media utilization, level of self-esteem, level of FoMO, and their intensity of delinquent behavior, both mild and serious. It was hypothesized that those with high social media utilization will have lower levels of self-esteem, as well as high levels of Fear of Missing Out and higher levels of delinquent behavior compared with those with lower rates of social media use. It was speculated that a correlation between levels of FoMO and delinquent behavior also exists. Additionally, it was hypothesized that males, those with lower GPA's, those in upper-class standings, and those with a greater number of college activities will have higher levels of FoMO.

## Fiat Lux Index, Alphabetical by Student Last Name

---

<b>Last</b>	<b>First</b>	<b>Found on pages in Abstract Book</b>
Adcock	Kortney	1, 15, 18
Anderson	Mackenzie	1, 16, 18
Arroyo	Samantha	1, 12, 19
Barnes	Elise	11 10, 19
Beckman	Tyler	1, 11, 20
Benthal	Tyler	1, 13, 20
Bockhorst	Alex	1, 16, 21
Bores	Sierra	1, 13, 21
Brittain	Katie	1, 14, 22
Buckley	Siobhan	1, 8, 23
Burrows	Erin	1, 16, 23
Carrillo	Stephanie	1, 10, 24
Cole	Sarah	2, 12, 24
Coody	Shannon	2, 9, 25
Cuervo	Pedro	2, 13, 25
De Sario	Jose	2, 10, 26
Denault	Bradley	2, 13, 26
Disbro	Katelyn	2, 8, 27
Donovan	Peter	2, 16, 27
Eberle	Amanda	2, 8, 28
Edgar	Peter	2, 16, 28
Exum	Keifer	2, 12, 29
Fry	Sonya	2, 10, 30
Gavin	Kourtney	2, 10, 31
Guhl	Austin	2, 8, 31
Hancock	Steven	2, 16, 32
Harris	Lauren	3, 9, 32
Harrison	Nicole	3, 10, 33
Howard	Jordan	3, 16, 34
Huffstickler	Robert	3, 11, 35
Jenkins	Hailey	3, 11, 36
Jenkins	Baylee	3, 16, 36
Jones	Summer	3, 16, 37
Karr	Jenna	3, 14, 37
Kessler	Zachary	3, 12, 38
Koetter	Paige	3, 16, 39
Koipillai	Anisha	3, 13, 39
Le Grand	Alexis	3, 16, 40
Long	Tyler	4, 15, 40

## Fiat Lux Index, Alphabetical by Student Last Name

---

Lutz	Alexandra	4, 14, 17, 41, 42
McNeil	Ashley	4, 17, 43
Mielecki	Monika	4, 44
Modrall	Robert	4, 17, 44,
Moore	Sera	4, 13 45
Mouring	Kaely	4, 15, 45
Mulligan	Lillian	4, 17, 46
Nicolodi	Victoria	4, 12, 46
Ntagungira	Michel	4, 13, 47
Parisi	Alyssa	4, 17, 47, 48
Persaud	Sunil	4, 12 48
Powell	Tabitha	5, 17, 49
Pullen	Elise	5, 14, 50
Ragusa	Vincent	5, 14, 51
Rassmann	Jordan	5, 17, 51
Reimertz	Robert	5, 12, 52
Riley	Laura	5, 9, 52
Rooker	Amy	5, 14, 53
Seward	Haley	5, 14, 17, 53, 54, 55
Smith	Austin	5, 17, 55
Stemle	Leyna	6, 17, 56
Stevens	Carey	6, 13, 56
Strobel	Jenna	6, 9, 57
Suarez	Austin	6, 13, 57
Sullivan	Kelan	6, 13, 58
Taylor	Haley	6, 13, 58
Thiele	Danika	6, 11, 59
Trout	Zoe	6, 11, 60
Walker	Brett	6, 9, 61
Wargat	Bryanna	6, 14, 62
Waters	Audrey	6, 11, 62
Wellish	Mordechai	7, 13, 63
Weot	Alex	7, 12, 63
Wetz	Samantha	7, 11, 64
Workman	Abigail	7, 15, 64
Yingst	Megan	7, 15, 65
Young	Matthew	7, 10, 65
Zunic	Destiny	7, 11, 66

