Oral & Poster Presentations
Schedule of Events
March 30, 2016
University of Alabama
Ferguson Center
PARTICIPATING COLLEGES & SCHOOLS

ARTS & SCIENCES

BLACKBURN INSTITUTE

CAPSTONE INTERNATIONAL

CULVERHOUSE COLLEGE OF COMMERCE

COMMUNICATION & INFORMATION SCIENCES

EDUCATION

ENGINEERING

EMERGING SCHOLARS

GRADUATE SCHOOL

HONORS COLLEGE

HUMAN ENVIRONMENTAL SCIENCES

NURSING

SOCIAL WORK

STUDENT AFFAIRS

STUDENT GOVERNMENT ASSOCIATION

UNIVERSITY LIBRARIES

URCA COORDINATORS

Chair- Dr. Carl A. Pinkert, Vice President for Research & Economic Development

Director of Undergraduate Research- Dr. Kim Bissell

Arts & Sciences- Dr. Roger Sidje

Blackburn Institute- Dr. Philip Westbrook

Capstone International- Dr. Teresa Wise

Culverhouse College of Commerce- Dr. Diane Johnson

Communication & Information Sciences- Dr. M.K. Shreves

Education- Dr. David Hardy

Engineering- Dr. John Wiest

Emerging Scholars- Dr. M.K. Shreves

Graduate School- Dr. Dave Francko

Honors College- Dr. Shane Sharpe

New College- Dr. Natalie Adams

Human Environmental Sciences- Dr. Lori Turner

Nursing- Dr. Cassandra Ford

Social Work- Dr. Laura Hopson

Student Government Association- Cassidy Reilly
March 30, 2016

Dear Participants:

Welcome to the 9th Annual University of Alabama Undergraduate Research and Creative Activity Conference. We are excited to have close to 500 students representing all academic disciplines participating in this year’s event. We have seen a significant growth in undergraduate student research and creative activities in areas that have been under-represented in the past. This expansion of participation across disciplines demonstrates that research and creative activities have become hallmarks of the undergraduate experience at The University of Alabama.

Our faculty constantly seeks new opportunities to engage our undergraduate students in quality research, discovery and creative endeavors that will define their academic experience at the Capstone. We want to give special thanks to those faculty members who have mentored our student presenters today; our talented students begin what we hope will be a long journey of scholarly achievement and discovery. We also offer hearty congratulations to our student participants for their contributions to the impressive body of work presented today.

Through the collaborative efforts of the Office of the Vice President for Research and Economic Development, the Graduate School, the Undergraduate Research and Creative Activities Committee and the colleges and schools, this has become a premier event at The University of Alabama. Sincere thanks to these groups for making today’s conference possible through their tireless efforts in planning and development.

We celebrate this established tradition of annually recognizing the research and creative accomplishments of our best and brightest undergraduate students.

Sincerely,

Stuart R. Bell
President

Carl A. Pinkert
Vice President for Research and Economic Development
# Table of Contents

**Schedule of Events**

**Schedule of Oral & Poster Presentations**

- College of Arts & Sciences
- Division of Fine Arts & Humanities
- Division of Science & Mathematics
- Division of Social Sciences
- Culverhouse College of Commerce
- College of Communication & Information Sciences
- College of Education
- College of Engineering
- College of Human Environmental Sciences
- Capstone College of Nursing
- School of Social Work
- Emerging Scholars
- Division of Science, Mathematics & Engineering
- Division of Fine Arts & Humanities
- Division of Social & Behavioral Science, Business & Education
- Ten + Ten
- Map of Ferguson Center
- Acknowledgments
- Sponsors
SCHEDULE OF EVENTS

TUESDAY, MARCH 29

1:00PM - 4:00PM Ferguson Ballroom
Oral Presentation Check-in & Upload PowerPoint - All Colleges
Morning Poster check-in & set up

WEDNESDAY, MARCH 30

7:30AM - 8:00AM: Morning Poster check-in
8:00AM - 11:00AM: Morning Poster presentations
8:15AM - 8:45AM: Morning Oral check-in & PowerPoint upload
9:00AM - 1:00PM: Morning Oral presentations
11:00AM - 11:45AM: Poster breakdown
11:45AM - 1:00PM: Afternoon Poster check-in & set-up
1:00PM - 3:00PM: Judges’ Preliminary Review of Posters (A&S)
Poster Presentations - Emerging Scholars
1:00PM - 1:45PM: Afternoon Oral Check-in & PowerPoint upload
2:00PM - 5:00PM: Afternoon Oral presentations
3:00PM - 6:00PM: Afternoon presentations

MORNING
POSTERS
Emerging Scholars-Science, Math, & Engineering
Education
Engineering
HES
Nursing
College of Commerce
C&IS
Social Work

ORALS
Arts & Sciences
Education
Nursing

AFTERNOON
POSTERS
Arts & Sciences
Emerging Scholars-Fine Arts & Humanities
Emerging Scholars- Social Sciences

ORALS
Emerging Scholars- All
College of Commerce
C&IS
Social Work
COLLEGE OF ARTS AND SCIENCES

DIVISION OF FINE ARTS & HUMANITIES

SCHEDULE OF ORAL PRESENTATIONS

Oral presentations in the Division of Fine Arts & Humanities have been divided into 1 group and will be held in room 3104 at the Ferguson Student Center.

Judges will select the top two oral presentations; other presentations may be selected for Honorable Mention.

GROUP 1- ROOM 3104

9:00 am
MARGARET WILBOURNE // New College
Faculty Mentors:
Catherine Roach // New College
Barbara Brickman // New College
Popular Culture and Environmentalism: An Exploration of Perspective

9:20 am
TREVER CHIDESTER // History
Faculty Mentor:
Erik Peterson // History
Changing the Direction of Evolution: From Buffon's Species Degeneration to Lamarck's Organic Progress

9:40 am
CARISSA SCHREIBER // English
Faculty Mentor:
Lauren Cardon // English
Collective Trauma and Community Healing in Post-war American Literature

10:00 am
JESSICA HAUGER // History
Faculty Mentors:
Lisa Lindquist-Dorr // History
Erik Peterson // History
“The Common Lot”: The Philosophical Problem of Labor Pain in the Late Nineteenth Century

10:40 am
SARAH GRISWOLD // Religious Studies
Faculty Mentor:
Michael Altman // Religious Studies
There Is a Well at Cawnpore: The Politics of Commemoration in Colonial India

11:00 am
MCKAY HOUSE & ERIKA DAVIS // A&S - Theatre & Dance
Faculty Mentor:
Rebecca Salzer // Theatre and Dance
Optic Disc: A dance for film

11:20 am
BRIANNA MILNER // Theatre and Dance
Faculty Mentor:
Sarah Barry // Theatre and Dance
Delta S

11:40 am
BOBBY MCCCLURE // Theatre and Dance
Faculty Mentor:
Sarah Barry // Theatre and Dance
Text-Based Movement Generation: How Structure Creates Freedom
In the Division of Fine Arts & Humanities, the initial judging of the poster presentations will take place between 1:00 and 3:00pm without the students being present. Beginning at 3:00pm, the judges will meet with each student and discuss his or her presentation.

1. **Chandler Sawyers // Music**
   Faculty Mentor: Andrea Cevasco-Trotter // Music
   Effects of High Versus Low Pitches of Songs on Premature Infants’ Physiological Parameters Across Time

2. **Spencer Cornelius // Communication Studies**
   Faculty Mentor: Ashley Mcwaters // English
   Chimera City

3. **Allison Miller // Music**
   Faculty Mentor: Ellary Draper // Music
   Effects of Musical Accents, Rhythm, and Melody on Serial Recall of Monosyllabic Digits

4. **Lauren Deutsch // Information Systems, Statistics and Management Science**
   Faculty Mentor: James Mixson // History
   Travels in Late Medieval Religion Case Studies from Visitation and Crusade

5. **Laura Testino // Theatre and Dance**
   Faculty Mentor: Lawrence Jackson // Theatre and Dance
   Tap Dance: Examining the rise and decline of the lost art and its relationship to black American culture

6. **Leah Nicoll // Theatre and Dance**
   Faculty Mentor: Stacy Alley // Theatre and Dance
   Success in “The Digital Age” of Musical Theatre
**College of Arts and Sciences**
**Division of Science and Mathematics**

**Schedule of Oral Presentations**

Oral presentations in the Division of Science and Mathematics have been divided into 2 groups and will be held in rooms 3107 & 3700 at the Ferguson Student Center.

In each group, judges will select the top two oral presentations; other presentations may be selected for Honorable Mention. The students with the top two oral presentations in each group will then present to the judges from one the other groups. The second presentation will take place in the room where the student initially presented.

### Group 1- Room 3107

<table>
<thead>
<tr>
<th>Time</th>
<th>Name</th>
<th>Department</th>
<th>Faculty Mentors</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am</td>
<td>Hayden Arnold</td>
<td>Chemical &amp; Biological Engineering</td>
<td>David Dixon // Chemistry Monica Vasiliu // Chemistry</td>
<td>Hydrolysis Reactions of Actinide Oxide Nitrates</td>
</tr>
<tr>
<td>9:20 am</td>
<td>Shuwen Yue</td>
<td>Chemical &amp; Biological Engineering</td>
<td>David Dixon // Chemistry</td>
<td>Computational Studies of the Conversion of Biomass to Biofuels: Acid-Base Chemistry</td>
</tr>
<tr>
<td>9:40 am</td>
<td>Julia Murphy</td>
<td>Chemical &amp; Biological Engineering</td>
<td>David Dixon // Chemistry</td>
<td>The Reactions of CO2 with Metal Oxide Nanoclusters to Form Metal Carbonates</td>
</tr>
<tr>
<td>10:00 am</td>
<td>William Jackson</td>
<td>Chemical &amp; Biological Engineering</td>
<td>David Dixon // Chemistry</td>
<td>Gas-Phase Acidities of Acid-Substituted Peptides</td>
</tr>
<tr>
<td>10:20 am</td>
<td>Sean Miller</td>
<td>Chemical &amp; Biological Engineering</td>
<td>David Dixon // Chemistry</td>
<td>Reliable Predictions of the Bond Dissociation Energy of Mono-, Bi-, and Tri-alanine and Glycine Peptides and the Corresponding Amides</td>
</tr>
<tr>
<td>10:40 am</td>
<td>Abigail Paulson</td>
<td>Chemical &amp; Biological Engineering</td>
<td>Dave Nikles // Chemistry</td>
<td>Synthesis and optimization of single crystal iron oxide nanoparticles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Name</th>
<th>Department</th>
<th>Faculty Mentors</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 am</td>
<td>Samuel Scope</td>
<td>Biological Sciences</td>
<td>Guy Caldwell // Biological Sciences Edward Griffin // Biological Science</td>
<td>The Role of Neurotransmission in Amyloid-beta Neurotoxicity</td>
</tr>
<tr>
<td>11:20 am</td>
<td>Samuel Stanley</td>
<td>Biological Sciences</td>
<td>Kim Caldwell // Biological Sciences Bryan Martinez // Biological Sciences</td>
<td>Investigation of dopamine neuron degeneration as a consequence of microbiome-derived bacteria</td>
</tr>
</tbody>
</table>

### Group 2- Room 3700

<table>
<thead>
<tr>
<th>Time</th>
<th>Name</th>
<th>Department</th>
<th>Faculty Mentors</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am</td>
<td>Daryll Spangler</td>
<td>Biological Sciences</td>
<td>Laura Reed // Biological Sciences</td>
<td>Sex Ratios and Response to Dietary Restriction in Drosophila Melanogaster</td>
</tr>
<tr>
<td>9:20 am</td>
<td>Nelson Brown</td>
<td>Chemical &amp; Biological Engineering</td>
<td>Laura Reed // Biological Sciences</td>
<td>Testing the Effects of High Intensity Artificial Sweeteners on Drosophila melanogaster</td>
</tr>
<tr>
<td>9:40 am</td>
<td>Kathryn Hiles</td>
<td>Civil, Construction &amp; Environmental Engineering</td>
<td>Michael Steinberg // New College</td>
<td>Trophic Theory Case Study: South Water Caye, Belize</td>
</tr>
</tbody>
</table>
10:00 am  
**Genevieve Miller // Biological Sciences**  
Faculty Mentors:  
Ryan Earley // Biological Sciences  
Kristy Marson // Biological Sciences  
Joe Styga // Biological Sciences  
From water to land: jettisoning out of water in response to predator-associated cues in wild mangrove rivulus

10:20 am  
**Braxton Greer // Biological Sciences**  
Faculty Mentor:  
Stevan Marcus // Biological Sciences  
Studying the effects of the anti-cancer triterpenoid Avicin G in human cancer cell lines

10:40 am  
**Lacey Kennedy // Biological Sciences**  
Faculty Mentor:  
Stevan Marcus // Biological Sciences  
The Role of Stress Responders Pka1 and Pmk1 in Avicin G, a Potent Antitumor Compound

11:00 am  
**Zain Aryanpour // Biological Sciences**  
Faculty Mentors:  
Stevan Marcus // Biological Sciences  
Elan Strange // Biological Sciences  
From beer to cancer: How yeast help in the development of anticancer therapies

11:20 am  
**Shea Barger & Clint Hydrick // Biological Sciences**  
Faculty Mentor:  
Stephen Secor // Biological Sciences  
Not-so-picky eaters; The Cost of Choosing for the Kingsnake

In the Division of Science & Mathematics, the initial judging of the poster presentations will take place between 1:00 and 3:00pm without the students being present. Beginning at 3:00pm, the judges will meet with each student and discuss his or her presentation.

**GROUP 1**

7  
**Brennen Lummus // Chemistry**  
Faculty Mentors:  
Martin Bakker // Chemistry  
Trupti Kotbagi // Chemistry  
Characterization of Hierarchically Porous Catalysts in a Down Flow Reactor

8  
**Austin Pinkerton // Computer Science**  
Faculty Mentor:  
Eben Broadbent // Geography  
Tree-crown Delineation Algorithm Development Using UAV Imagery and Photogrammetric Analysis

9  
**Erin Martin // Mechanical Engineering**  
**Tobi Adedokun // Chemical & Biological Engineering**  
Faculty Mentor:  
Adam Hauser // Physics and Astronomy  
Impedance Analysis of Nanoparticle Metal-Oxide Systems

10  
**Cody Colclough // Chemistry**  
Faculty Mentors:  
Silas Blackstock // Chemistry  
Ariel Kelley // Chemistry  
Calculation of the Magnetic Anisotropy of the Nitroso (-N=O) Group in Nitrosobenzenes

11  
**Catherine Owens // Chemistry**  
Faculty Mentors:  
Silas Blackstock // Chemistry  
Ariel Kelley // Chemistry  
Magnetic Anisotropy of C-nitroso Compounds

12  
**Nicholas Laffey // Mathematics**  
Faculty Mentors:  
Brendan Ames // Mathematics  
Sparse Regression for Predicting Playoff Success in Hockey

13  
**Alison Farrar // Mathematics**  
Faculty Mentor:  
Claudia Mewes // Physics and Astronomy  
Theoretical Investigation of Damping in Exchange Bias Systems
14 **Shaun Hogan** // Physics & Astronomy  
Faculty Mentor:  
Conor Henderson // Physics & Astronomy  
Study of Triphoton Production at the Large Hadron Collider

15 **Caroline Bloodworth** // Chemical & Biological Engineering  
Faculty Mentor:  
David Dixon // Chemistry  
Computational Studies of Trans-Actinide Hydrolysis

16 **Emma Clements** // Civil, Construction & Environmental Engineering  
Faculty Mentor:  
David Dixon // Chemistry  
The Properties of Actinides in High Oxidation States: The Fluorides

17 **Laura Holland** // Human Nutrition & Hospitality Management  
Faculty Mentor:  
David Dixon // Chemistry  
Gas-Phase Acidities of Phosphorylated Peptides

18 **William Layfield** // Chemistry  
Faculty Mentor:  
David Dixon // Chemistry  
Computational Studies of the Hydrolysis of Early Actinide(IV) Cations

19 **Rachael Kress** // Chemistry  
Faculty Mentor:  
Dave Nikles // Chemistry  
Building a Nano-Thermometer for Localized Magnetic Induction Heating

20 **Kaylee O’Connor & Colin Arensberg** // Chemical & Biological Engineering  
Faculty Mentor:  
Dave Nikles // Chemistry  
Optimizing Synthesis of Magnetic Nanoparticles for Use in Magnetically Triggered Drug Delivery System

21 **Taylor Petersen** // Biological Sciences  
Faculty Mentor:  
Dave Nikles // Chemistry  
The Synthesis of Gold Nanoparticles for Laser Triggered Chemotherapeutic Drug Release

22 **Mitch Clayton** // Chemical & Biological Engineering  
Faculty Mentor:  
Dave Nikles // Chemistry  
Synthesis of 10-(4-vinylbenzyl)phenothiazine

23 **Natalie Kidd** // Chemistry  
Faculty Mentor:  
Dave Nikles // Chemistry  
Polymerosomes for a Magnetically Triggered Drug Delivery System

24 **James Parkes** // Physics & Astronomy  
Faculty Mentor:  
Dawn Williams // Physics & Astronomy  
Double Pulse Plus: An Extended Search for Tau Neutrino Double Pulse Events

25 **Clare Ols** // Biological Sciences  
Faculty Mentors:  
Eben Broadbent // Geography  
Angelica Alymeda Zambrano // Geography  
Species abundance and composition in a biological reserve with active ecotourism on the Osa Peninsula of Costa Rica

26 **John Lundeen** // Chemistry  
Faculty Mentor:  
Elizabeth Papish // Chemistry  
Synthesis of Ruthenium-Based Anticancer Prodrugs

27 **Ansley Griffith** // Geological Sciences  
Faculty Mentors:  
Fred Andrus // Geological Sciences  
Christine Bassett // Geological Sciences  
Preliminary Growth Analysis of Alaskan and Canadian Bivalves for Paleoenvironmental Reconstruction
28
Samantha Glukhova // Biological Sciences
Faculty Mentors:
Guy Caldwell // Biological Sciences
Siyuan Zhang // Biological Sciences
Role of neutral cholesterol ester hydrolase gene in lifespan and neuroprotection in a C. elegans model of Parkinson’s Disease

29
Eric Johns // Biological Sciences
Faculty Mentor:
Guy Caldwell // Biological Sciences
Exploring Heritable Resilience to Neurodegeneration in a Parkinson’s Disease Model

30
Jeremie Rushing // Chemistry
Faculty Mentors:
Gregory Szulczewski // Chemistry
Tabitha Sutch // Chemistry
Optimizing the electrical conductivity of Ag2Te/PEDOT:PSS thin films for energy harvesting applications

31
William Robison // Biological Sciences
Faculty Mentor:
Gregory Szulczewski // Chemistry
Tabitha Sutch // Chemistry
Bismuth sulfide/PEDOT:PSS thin films as thermoelectric materials

32
Jordan Fuhrman // Physics & Astronomy
Faculty Mentor:
Ion Stancu // Physics and Astronomy
Enhanced Signal-to-Background Discrimination in the LZ Dark Matter Project

33
Michael Starz // Physics & Astronomy
Faculty Mentors:
Jeremy Bailin // Physics and Astronomy
Krista McCord // Physics and Astronomy
How quickly does a galaxy’s dark matter change?

34
Sarah Black // Biological Sciences
Faculty Mentor:
Jennifer Howeth // Biological Sciences
The role of habitat age in structuring multi-trophic species diversity in a successional pond metacommunity

35
Laura Canaday // Biological Sciences
Faculty Mentor:
John Yoder // Biological Sciences
Transcriptional Regulation of the Hox gene Abdominal-B

37
Jeremy McDonnell // Biological Sciences
Faculty Mentors:
Juan Lopez-Bautista // Biological Sciences
Daryl Lam // Biological Sciences
The Chloroplast Genome of an Epiphytic Marine Green Alga

38
Maya Allen // Biological Sciences
Faculty Mentor:
Juan Lopez-Bautista // Biological Sciences
The Biodiversity of Ulva (Ulvophyceae, Chlorophyta) from the Western Atlantic and Chile

39
Anthony Fiacco // Biological Sciences
Faculty Mentor:
Janis O’Donnell // Biological Sciences
Oh the Irony: Investigating the effect of Iron (III) Chloride in Drosophila melanogaster

40
Cassidy Elliott // Biological Sciences
Faculty Mentor:
Julie Olson // Biological Sciences
Genomic Similarities Between Four Strains of Streptomycetes

41
Dominic Hepner // Biological Sciences
Faculty Mentors:
Julie Olson // Biological Sciences
Philip Lee // Biological Sciences
Temporal and spatial variability in urease activity in wetland soils

42
Andrew Rice & Valerie Turberville // Biological Sciences
Faculty Mentor:
Julie Olson // Biological Sciences
Cultivation and Characterization of Urea Utilizing Bacteria from Weeks Bay, AL
43
MARY KUYKENDALL // Chemical
Faculty Mentor:
John Vincent // Chemistry
Fate of Dietary Copper: Is the Form of Copper Key to Preventing it from Becoming Toxic?

44
MELISSA UEHLING // Biological Sciences
Faculty Mentors:
Kim Caldwell // Biological Sciences
Xiaohui Yan // Biological Sciences
Screening therapeutic drugs for chemical enhancement of torsinA function in C. elegans model of dystonia

45
BLAKE PARKER & BRIAN SMITHERS // Biological Sciences
Faculty Mentors:
Kim Caldwell // Biological Sciences
Development of Genetic Epilepsy-like Convulsion Model in C. elegans

46
RYLEE PERENTIS // Biological Sciences
Faculty Mentor:
David Dixon // Biological Sciences
Hanna Kim // Biological Sciences
Bacterial secondary metabolite alters behavior in an animal model

47
EMILY SCHMIDT // Biological Sciences
Faculty Mentor:
Bill Keel // Physics & Astronomy
Earthshine

48
MICHAEL MOORE // Biological Sciences
JARON NIX // Chemical and Biological Engineering
Faculty Mentor:
Laura Reed // Biological Sciences
The FlyBrator: A Novel Approach to Inducing Sleep Deprivation and Metabolic Syndrome in Drosophila melanogaster

49
KARA MACINTYRE & WHITNEY BEAVERS // Biological Sciences
Faculty Mentors:
Laura Reed // Biological Sciences
Ruth Bishop // Biological Sciences
Determining the genetic basis of genotype-by-environment interactions of metabolic syndrome in Drosophila melanogaster

50
LAURA MAFLA & ANDREW DAVIS // Biological Sciences
Faculty Mentor:
Laura Reed // Biological Sciences
Testing candidate genes thought to be associated with pupal weight in D. melanogaster

51
JOHN HENDERSON // Biological Sciences
Faculty Mentor:
Laura Reed // Biological Sciences
Population Variation in Phenotypic Robustness to Dietary Perturbation

52
BEAU SCHAFFER // Biological Sciences
JARON NIX // Chemical and Biological Engineering
Faculty Mentor:
Laura Reed // Biological Sciences
Quantifying Sleep Deprivation in Drosophila melanogaster

53
OLIVIA SORRELL // Biological Sciences
Faculty Mentors:
Laura Reed // Biological Sciences
Clare Scott // Biological Sciences
Characterizing Mechanisms of Resistance to the Mushroom Toxin α-amanitin in Local Mycophagous Drosophila tripunctata

54
LEVI MILLER // Biological Sciences
Faculty Mentor:
Laura Reed // Biological Sciences
Dietary Impacts on Triglyceride Levels in Drosophila melanogaster
55  
**KELSEY LOWMAN & BRELAHN WYATT** // Biological Sciences  
Faculty Mentor:  
Laura Reed // Biological Sciences  
Implications of adulthood exercise in Drosophila melanogaster fed a high-fat diet during larval stages

56  
**WILLIAM FREEMAN** // Chemical & Biological Engineering  
Faculty Mentors:  
Laura Reed // Biological Sciences  
Vishal Oza // Biological Sciences  
Creating a Drosophila Metabolomics Database

57  
**ZAVIER MASON** // Biological Sciences  
Faculty Mentor:  
Laura Reed // Biological Sciences  
Effects of High Fat Diet on Glucose Concentration in Drosophila melanogaster

58  
**PRESTON HINKEL** // Biological Sciences  
Faculty Mentor:  
Laura Reed // Biological Sciences  
Simulating Complex Genetic Organism Evolution

59  
**JESSICA FULTS** // Biological Sciences  
Faculty Mentors:  
Martha Powell // Biological Sciences  
William Davis // Biological Sciences  
Spatial and Seasonal Diversity of Chytrids in Two Temporary Forest Ponds

60  
**ALEXANDRA ANDREEN** // Chemical & Biological Engineering  
Faculty Mentors:  
Pual Rupar // Chemistry  
Ian Adams // Chemistry  
Identifying Impurities in TBAF

61  
**CALVIN MUTH** // Chemistry  
Faculty Mentor:  
Patrick Frantom // Chemistry  
Synthesis of a Five Carbon Aldol using the Enzyme Hpal

62  
**MICHAEL WALTERS** // Physics & Astronomy  
Faculty Mentor:  
Patrick LeClair // Physics & Astronomy  
Ali Amiri // Physics & Astronomy  
The Application of Vanadium Dioxide in Audio Amplifiers

63  
**ALEX DROZD** // Physics & Astronomy  
Faculty Mentors:  
Preethi Nair // Physics & Astronomy  
Size-luminosity relationship of Elliptical galaxies in the Hubble Space Telescope Frontier Fields Cluster Program

64  
**CONNOR BUCKLEY** // Biological Sciences  
Faculty Mentor:  
Ryan Earley // Biological Sciences  
The effect of endocrine disrupting compounds on the behavior of juvenile mangrove rivulus fish

65  
**KEVIN DUQUE** // Biological Sciences  
Faculty Mentor:  
Ryan Earley // Biological Sciences  
Hormonal Responses to Non-Contact Aggression in Convict Cichlid Fish

66  
**ELIZABETH JOHNSON** // Biological Sciences  
Faculty Mentor:  
Ryan Earley // Biological Sciences  
Evidence of a sneaker male mating strategy in an isolated population of convict cichlid fish.

67  
**JEREMEY HITT & DUSTY TROTMAN** // Chemistry  
Faculty Mentor:  
Shanlin Pan // Chemistry  
Synthesis of α-FeOOH and CoPi Thin Films for use as Catalysts in Electrochemical Water Oxidation and Efficiency Comparison to Known Effective

68  
**EMILY PEARLSTEIN, TORI FIELDS, & KELLEN COWEN** // Biological Sciences  
Faculty Mentor:  
Stephen Secor // Biological Sciences  
Effect of Age and Body Size on Digestive Efficiencies of Hyla cinerea (Green Tree Frog)
COLLEGE OF ARTS AND SCIENCES
DIVISION OF SOCIAL SCIENCES
SCHEDULE OF ORAL PRESENTATIONS // 3103

Oral presentations in the Division of Social Science have been divided into 1 group and will be held in room 3103 at the Ferguson Student Center.

In each group, judges will select the top two oral presentations; other presentations may be selected for Honorable Mention. The students with the top two oral presentations in each group will then present to the judges from one the other groups. The second presentation will take place in the room where the student initially presented.

9:00 am
ALLISON MOLENKAMP // English
Faculty Mentor:
Amber Buck // English
Bridging Personal and Professional Identities Online Through Social Media

9:20 am
TOWANDA PETTWAY // Criminal Justice
Faculty Mentor:
Bronwen Lichtenstein // Criminal Justice
TB on the Hill: Tuberculosis Testing and the Legacy of Tuskegee in Perry County, Alabama
## Division of Social Sciences

### Schedule of Oral Presentations // 3103

<table>
<thead>
<tr>
<th>Time</th>
<th>Presenter(s)</th>
<th>Faculty Mentor(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:40 am</td>
<td>Frances Kyle</td>
<td>Dr. Bronwen Lichtenstein</td>
<td>The day that Led to Foreclosure</td>
</tr>
<tr>
<td>10:00 am</td>
<td>Sierra Lawson</td>
<td>Ian W. Brown, Theodore Trost, Merinda Simmons</td>
<td>Floral Engravings on Gravestones: Interpreting Cultural Values in Tuscaloosa County Burial Grounds</td>
</tr>
<tr>
<td></td>
<td>Elizabeth Schlichting</td>
<td>Anneliese Bolland</td>
<td>Sexual Outcome Expectancy Trajectories among Impoverished Black Adolescent</td>
</tr>
<tr>
<td></td>
<td>Aubrey Long</td>
<td>Andrea Glenn</td>
<td>Effects of religious priming on moral decision-making</td>
</tr>
<tr>
<td></td>
<td>Emily Pickle</td>
<td>Ansley Gilpin</td>
<td>The Improvement of Inhibitory Control and Peer Interactions of Preschool-Aged Children</td>
</tr>
<tr>
<td></td>
<td>Maury Holliman</td>
<td>Ariane Prohaska</td>
<td>Non-Natives as a Vulnerable Population Following a Natural Disaster</td>
</tr>
</tbody>
</table>

## Division of Social Sciences

### Schedule of Poster Presentations // 1:00-6:00 PM

In the Division of Science & Mathematics, the initial judging of the poster presentations will take place between 1:00 and 3:00pm without the students being present. Beginning at 3:00pm, the judges will meet with each student and discuss his or her presentation.

### Group 1

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>Presenter(s)</th>
<th>Faculty Mentor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>Technology Use and Driver Mental Resources</td>
<td>Molly Cory</td>
<td>Beverly Roskos</td>
</tr>
<tr>
<td>82</td>
<td>Predictors of Healthcare Utilization in Rural Patients with Chronic Pain</td>
<td>Megan Lyons</td>
<td>Beverly Thorn</td>
</tr>
<tr>
<td>83</td>
<td>Operation Sappho</td>
<td>Ashley Daugherty &amp; Caitlyn Walker</td>
<td>Christopher Lynn</td>
</tr>
<tr>
<td>84</td>
<td>Multi-sensory campfire experiences influence lower electrodermal response</td>
<td>Emma Duncan</td>
<td>Chris Lynn</td>
</tr>
</tbody>
</table>
DIVISION OF SOCIAL SCIENCES
SCHEDULE OF POSTER PRESENTATIONS

85
Jessica Muzzo, Connor Fasel & Kayleigh Meighan // Anthropology
Faculty Mentor:
Christopher Lynn // Anthropology
Secular belongingness in religious congregation leads to lower stress

86
Danielle Peters // Advertising & Public Relations
Faculty Mentor:
Caryl Cooper // Advertising & Public Relations
Women in Politcs and the Media in the 19th Century

87
Rob Barlow // Anthropology
Faculty Mentor:
Virgil Beasle// Anthropology
Visibility Analysis of Hinterland Mound Centers in the Black Warrior Valley

GROUP 2

88
Emily Mace // Psychology
Faculty Mentors:
Fran Conners // Psychology
Gayle Faught // Psychology
Lani Shellhouse //Psychology
Improving Auditory Skills In Children With Down Syndrome With Hearbuilder

89
Christina Green // Psychology
Faculty Mentor:
Forrest Scogin / A&S - Psychology
Addressing Memory Concerns: A Community Cognitive Screening Event

90
Joo Young Yang // Psychology
Faculty Mentor:
Giyeon Kim // Psychology
Limited English Proficiency and Psychological Distress among Elderly Asian Americans: Mental Health Disparities within Asian Population

91
Taylor Wallace // Chemical & Biological Engineering
Alex Sents // Biological Sciences
Faculty Mentor:
Jason DeCaro // Anthropology

92
Anna Kate Faulk // Anthropology
Faculty Mentor:
John Blitz // Anthropology
What Can Vessel Forms Tell Us About Archaeological Sites?

93
Rebecca Fischer // Psychology
Faculty Mentor:
James Hamilton // Psychology
Factitious Cyberbullying

94
Kristen Morris // Psychology
Faculty Mentor:
Jennifer Cox // Psychology
The Effect of Victim Gender and Criminal History on Sentencing

95
Bethany Herndon // Psychology
Faculty Mentor:
Jennifer Cox // Psychology
The Construct and Application of Aversive Racism in the Criminal Justice System

96
Andy Hurst // A&S - Psychology
Faculty Mentor:
Matthew Jarrett / A&S - Psychology
Anxiety and Academic Performance in Children and Adolescents

97
Jordana Baraad // Psychology
Faculty Mentors:
Matthew Jarrett // Psychology
Dane Hilton // Psychology
Attention-Deficit/Hyperactivity Disorder (ADHD) and Mindfulness

98
Madeleine Evans // Communicative Disorders
Faculty Mentor:
Memorie Gosa // Communicative Disorders
Incidence of Vocal Pathology in Healthy College Students
<table>
<thead>
<tr>
<th>Group 3</th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 99 | **Rachael Nowack** // Political Science  
Faculty Mentor: Nicholas Bauer // Political Science  
Voters' Perceptions of the Qualifications of Female Candidates | |
| 100 | **Molly O’Keefe** // Political Science  
Faculty Mentor: Nicholas Bauer // Political Science  
Electability of LGBTQ Political Candidates | |
| 101 | **Megan Craig** // Political Science  
Faculty Mentor: Nicholas Bauer // Political Science  
Combined Effects of Candidate Race and Class on Voter Opinion | |
| 102 | **Allison Bouslog** // Psychology  
Faculty Mentor: Philip Gable // Psychology  
Influence of direct current neural stimulation on motivation and cognition | |
| 103 | **Taylor Younginer** // Psychology  
Faculty Mentors: Qshequilla Mitchell // Psychology  
John Lochman // Psychology  
Establishing Inter-rater Reliability on an Observer-Coding Measure | |
| 104 | **Justin Crofoot** // Political Science  
Faculty Mentor: Richard Fording // Political Science  
Breakfast in the Classroom Program Effectiveness | |
| 105 | **Delphanie Wu** // Communicative Disorders  
Faculty Mentors: Rebecca Brooks // Communicative Disorders  
Darrin Griffin // Communication Studies  
An Analysis of American Sign Language Instruction at Public Universities | |
## Schedule of Oral Presentations // Room 3110

**2:00 pm**  
**ASHLEY BROWN** // Culverhouse School of Accountancy  
Faculty Mentor:  
Lisa McKinney // Culverhouse School of Accountancy  
Business Education to Assist Economic Restoration in Haiti

**2:20 pm**  
**KANITTA KULPRATHIPANJA** // Economics, Finance & Legal Studies  
Faculty Mentor:  
Robert Reed // Economics, Finance and Legal Studies  
The Impact of Banking Concentration in the United States

## Schedule of Poster Presentations // 8:00-11:00 AM

1  
**CAMERON HARVEY & PATRICK MITCHELL** // Information Systems, Statistics & Management Science  
Faculty Mentors:  
Burcu Keskin // Information Systems, Statistics & Management Science  
Mesut Yavuz // Information Systems, Statistics & Management Science  
Patrol Routing with Alternative Fuel Vehicles

2  
**LOGAN TARBOX** // Information Systems, Statistics & Management Science  
Faculty Mentor:  
Phillip Burns // Student Affairs  
Improving Technical Literacy in Non-Profits

3  
**ALELXA GARDNER** // Economics, Finance & Legal Studies  
Faculty Mentor:  
Paan Jindapo // Economics, Finance & Legal Studies  
Analysis of the Cost-Effectiveness of Cancer Spending on Survival Gains

4  
**KATHERINE O’CONNOR** // Economics, Finance & Legal Studies  
Faculty Mentor:  
Paan Jindapo // Economics, Finance & Legal Studies  
A Sequential Rent-Seeking Experiment

5  
**JOHN DEEBLE** // Economics, Finance & Legal Studies  
Faculty Mentor:  
Robert Brooks // Economics, Finance & Legal Studies  
Trial by Fire: A Performance Comparison of Several Option Valuation Models Using Historical Asset Price Data

6  
**DEREK CARTER** // Economics, Finance and Legal Studies  
Faculty Mentor:  
Stephanie Brewer // Student Affairs  
Economic Freedom and Corruption
2:00 pm
**Kacey Smit, Eric Mayo & Hunter Bethea //**
Communication Studies
Faculty Mentor:
Darrin Griffin // Communication Studies
Faith and Resiliency

2:20 pm
**Ashley Robbins, Ashley Paulmeno & Turner Waddell //**
Advertising & Public Relations
Faculty Mentors:
Teri Henley // Advertising & Public Relations
Gerald Waters // Advertising & Public Relations
Developing a Consumer Segmentation Strategy to Identify Snapple’s Target Audience

2:40 pm
**Jenna Heard, Emily Clack, Claire Stuart, Elizabeth Broussard & Morgan McKinney, Maret Montanari //**
Advertising and Public Relations
 Faculty Mentors:
Teri Henley // Advertising and Public Relations
Gary Creek // Advertising and Public Relations
Alabama Medicaid’s RCO Rebrand Research

3:00 pm
**Bryneth Buckner //** Communication Studies
Faculty Mentor:
Meredith Bagley // Communication Studies
Exploring the Visual Rhetoric of a Non-Profit Organization
COLLEGE OF COMMUNICATION & INFORMATION SCIENCES

SCHEDULE OF POSTER PRESENTATIONS // 8:00-11:00 AM

7 MEGAN ZARTMAN // Communication Studies
Faculty Mentor:
Carol Mills // Communication Studies
The Effect of Significant Others on Sister Relational Closeness in College, and What Can Be Done About It.

8 CHLOE HILL // Culverhouse School of Accountancy
Faculty Mentors:
Chip Brantley // Journalism
Andrew Grace // Journalism
In Fact: The Story of a Cuban Detainee Uprising in Talladega

9 BRIANA BETTISON // Advertising & Public Relations
Faculty Mentor:
Caryl Cooper // Advertising & Public Relations

10 BRANDON HOOKS, MALINICA MALLADI & TAYLOR CARVALHO // Political Science
JOSHUA FULLER // Criminal Justice
MICHAEL CIULLA // Culverhouse School of Accountancy
Faculty Mentor:
Mary Meares // Communication Studies
Serbia Fellowship Experience

11 MICHAIAH SMITH // Advertising & Public Relations
PATRICK CAMPBELL & ANDREW THURMAN //
Communication Studies
Faculty Mentor:
Kim Yonghwan // Telecommunications & Film
Student Participation in intramural athletics and student satisfaction with UA life
COLLEGE OF EDUCATION
SCHEDULE OF ORAL PRESENTATIONS // ROOM 3110

9:00 am
EMILY PICKLE // Psychology
Faculty Mentors:
Elizabeth Wilson // Curriculum and Instruction
Jason Garvey // Educational Leadership, Policy & Technology Studies
Experiences of Perceived Discrimination among Arab Students and Arab Non-Students

9:20 am
ANNA FORRISTER // Anthropology
Faculty Mentor:
Philo Hutcheson // Educational Leadership, Policy & Technology Studies
Reintegration in Macon County Public Schools

COLLEGE OF EDUCATION
SCHEDULE OF POSTER PRESENTATIONS // 8:00-11:00 AM

12
ALLYSON PITZEL // Special Education & Multiple Abilities
Faculty Mentor:
Carol Donovan // Special Education & Multiple Abilities
Helping to Create the Ideal Kindergarten Classroom by Gaining Insight into Early Childhood Personality Types

13
EMILY LEWIS // Curriculum & Instruction
Faculty Mentor:
Elizabeth Wilson // Curriculum & Instruction
Theatrical Techniques in the ELA Classroom
14  
**Michael Dunn // Civil, Construction & Environmental Engineering**  
Faculty Mentor:  
Alex Hainen // Civil, Construction & Environmental Engineering  
Comparative Traffic Analysis of Proposed Flyover at US-11 and AL-69 Using Microsimulation  

15  
**Brodie Wallace // Aerospace Engineering & Mechanic**  
Faculty Mentor:  
Charles O’Neill // Aerospace Engineering & Mechanics  
Aircraft Dynamic Rate Derivatives Extraction for Design and Test-flight Support  

16  
**Michael Outlaw // Electrical & Computer Engineering**  
Faculty Mentor:  
David Dixon // Chemical & Biological Engineering  
Computational Studies of the Hydrolysis of (RuO2)n (n = 1 - 3) Nanoclusters  

17  
**Benjamin Romano // Computer Science**  
Faculty Mentor:  
Jeff Gray // Computer Science  
Managing The Internet of Things  

18  
**Rachel Gentry // Electrical & Computer Engineering**  
Faculty Mentors:  
Jaber Abu Qahouq // Electrical & Computer Engineering  
Zhiyong Xia // Electrical & Computer Engineering  
State-Of-Health Estimation of Batteries using Offline and Online AC Impedance Measurements  

19  
**Valerie Levine // Chemical & Biological Engineering**  
Faculty Mentors:  
Jason Bara // Chemical & Biological Engineering  
John Whitley // Chemical & Biological Engineering  
Preparation of Polymeric Materials in Coordinated Ionic Liquid Media  

20  
**Paaras Agrawal // Chemical & Biological Engineering**  
Faculty Mentor:  
Jason Bara // Chemical & Biological Engineering  
Development of Structured Distillation Packing through Additive Manufacturing  

21  
**Haley Loftis // Electrical & Computer Engineering**  
Faculty Mentor:  
Andrew Lemmon // Electrical & Computer Engineering  
Feasibility of Indoor Solar Energy Harvesting  

22  
**Melissa Mathews // Chemical & Biological Engineering**  
Faculty Mentor:  
Lin Li // Metallurgical & Materials Engineering  
Thickness Dependent Elastic Behavior of Bi2Te3 Two-dimensional Nanosheets  

23  
**Russell Hancock // Aerospace Engineering & Mechanics**  
Faculty Mentor:  
Paul Hubner // Aerospace Engineering & Mechanics  
Aerodynamic Force Study on an Airfoil Covered with Shark Skin  

24  
**Hannah Larson // Mechanical Engineering**  
Faculty Mentor:  
Paul Puzinauskas // Mechanical Engineering  
Toward the Automation of Engine Optimization  

25  
**Clayton Wagenhals // Mechanical Engineering**  
Faculty Mentor:  
Richard Branam // Aerospace Engineering & Mechanics  
Micro-Hall Effect Thruster  

26  
**Mario Maggio // Aerospace Engineering & Mechanics**  
Faculty Mentor:  
Richard Branam // Aerospace Engineering & Mechanics  
Optimizing Mass of a Rocket Engine
27  
**Wen Walsh // Mechanical Engineering**  
Faculty Mentor:  
Wen Walsh // Aerospace Engineering and Mechanics  
Biofidelic Brain Model for Traumatic Brain Injury (TBI) Investigation

28  
**Nicholas Davies // Mechanical Engineering**  
Faculty Mentor:  
Wei Song // Civil, Construction & Environmental Engineering  
Bridge Monitoring and Analysis System

29  
**Husam Ali // Chemical and Biological Engineering**  
Faculty Mentor:  
Yuping Bao // Chemical and Biological Engineering  
MRI: T1 or T2

30  
**Katelyn Isbell & Gatlin LaRochelle //**  
Electrical & Computer Engineering  
Faculty Mentor:  
Yang-Ki Hong // Electrical and Computer Engineering  
Reconfigurable Ferrite Antenna for Mobile Devices

31  
**Justin Magrath // Chemical & Biological Engineering**  
Faculty Mentor:  
Yonghyun Kim // Chemical & Biological Engineering  
The Effects of Salinomycin on Glioblastoma Cancer Stem Cells

32  
**Samantha Tilson // Chemical & Biological Engineering**  
Faculty Mentor:  
Yonghyun (John) Kim // Chemical & Biological Engineering  
The Effects of ROCK Inhibitors on the In Vitro Expansion of Glioblastoma Stem Cells

33  
**Andrew Raddatz // Chemical & Biological Engineering**  
Faculty Mentor:  
Yonghyun (John) Kim // Chemical & Biological Engineering  
The Effects of Hemodynamic Shear Stress on Stemness of Acute Myelogenous Leukemia
Taylor Burns // Human Nutrition & Hospitality Management
Faculty Mentor:
Amy Ellis // Human Nutrition & Hospitality Management
The relationship between visceral fat, CRP, & indexes of insulin resistance among obese older adults

Rainey Gerald // Human Nutrition & Hospitality Management
Faculty Mentors:
Amy Ellis // Human Nutrition & Hospitality Management
Kristi Crowe-White // Human Nutrition Hospitality Management
The accuracy of 24-hour recalls & food frequency questionnaires in determining nutrient intake

Ahmed Ali // General Studies in HES
Faculty Mentor:
Bernard Burroughs // Kinesiology
Athletics Trainer Abstract

Natalie Smith // Human Development & Family Studies
Faculty Mentor:
Casey Totenhagen // Human Development & Family Studies
Depression & Dyadic Coping Within Same-Sex Relationships

Porsha Crusoe // Human Development & Family Studies
Faculty Mentor:
Deborah Casper // Human Development & Family Studies
"They blasted my name on the internet": Being "Friends" with the Enemy on Social Media

Hillary Lindsay // Psychology
Faculty Mentor:
Deborah Casper // Human Development & Family Studies
"She got a boyfriend": The Impact of Jealousy on Friendships

Adrienne Hayes, Trinicia Bodden, Magdalena Chavez & Whitney LaCour // Human Development & Family Studies
Faculty Mentor:
Sherwood Burns-Nader // Human Development & Family Studies
Examining Adults’ Memories of Pediatric Experience

Grace Beasley // Biological Sciences
Faculty Mentor:
Elizabeth Hibberd // Health Science
Relationship Between Throwing Velocity & Physical Characteristics in Adolescents Baseball Players

Jared Halstrom // Biological Sciences
Faculty Mentor:
Glenn Davis // Community Health Sciences
Paramedic Performance Based Trials - The Effects of Fatigue During Shift Work

Maxton Thoman // Biological Sciences
Faculty Mentor:
John Higginbotham // Community Health Sciences
Fit Sprint: A Healthy Gaming Initiative Seeking to Contain the Spread of Childhood Obesity

Jordan Scorzelli // Health Science
Faculty Mentor:
Jen Nickelson // Health Science
Beautiful Health
<table>
<thead>
<tr>
<th>Page</th>
<th>Name</th>
<th>Department</th>
<th>Faculty Mentor</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>Lauren Lewis</td>
<td>Health Science</td>
<td>Jen Nickelson</td>
<td>West Central Alabama Area Health Education Center</td>
</tr>
<tr>
<td>46</td>
<td>Amelia Sliwa</td>
<td>Health Science</td>
<td>Jen Nickelson</td>
<td>Hospice of West Alabama</td>
</tr>
<tr>
<td>47</td>
<td>Elizabeth Pugh</td>
<td>Health Science</td>
<td>Jen Nickelson</td>
<td>Pediatric Care for the Tuscaloosa Area</td>
</tr>
<tr>
<td>48</td>
<td>Alison Kuhlmann</td>
<td>Health Science</td>
<td>Jen Nickelson</td>
<td>Building a Healthier Community</td>
</tr>
<tr>
<td>49</td>
<td>Hunter Winslett</td>
<td>General Studies</td>
<td>Jen Nickelson</td>
<td>Life Long Fitness</td>
</tr>
<tr>
<td>50</td>
<td>Yue Li</td>
<td>Health Science</td>
<td>Jen Nickelson</td>
<td>Biostatistics Does Matter</td>
</tr>
<tr>
<td>51</td>
<td>Robert Roderick</td>
<td>Health Science</td>
<td>Jen Nickelson</td>
<td>Student Recreation Center Experience</td>
</tr>
<tr>
<td>52</td>
<td>Justin Waller</td>
<td>General Studies</td>
<td>Jen Nickelson</td>
<td>Athletic Trainers: Helping champions everywhere</td>
</tr>
<tr>
<td>53</td>
<td>Norman Prince</td>
<td>General Studies</td>
<td>Jen Nickelson</td>
<td>Building Healthy Lives</td>
</tr>
<tr>
<td>54</td>
<td>Anna Bragg</td>
<td>Human Nutrition</td>
<td>Kristi Crowe-White</td>
<td>Relationship between Cardiometabolic Disease Staging &amp; Inflammation in Obese Older Adults</td>
</tr>
<tr>
<td>55</td>
<td>Sam Czarnota</td>
<td>Human Nutrition</td>
<td>Lori Greene</td>
<td>The Impact of Food Insecurity on Diabetes Management: A Literature Review</td>
</tr>
<tr>
<td>56</td>
<td>Katelyn Reichardt</td>
<td>Human Nutrition</td>
<td>Lori Greene</td>
<td>Prevalence of Disordered Eating Behaviors Among College Students: A Literature Review</td>
</tr>
<tr>
<td>57</td>
<td>Brittany Bradley</td>
<td>Human Nutrition</td>
<td>Lori Greene</td>
<td>Parental Feeding Practices &amp; the Association of Overweight &amp; Obesity in Children Using the Child Eating Behavior Questionnaire: A Review</td>
</tr>
<tr>
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<td>Title</td>
<td>Author(s)</td>
<td>Faculty Mentor(s)</td>
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<td>58</td>
<td>ALLISON GORDON, SAVANNAH THOMPSON, ALLISON WOODS, KARLIE CARTER, ASHTON BAUGHMAN, &amp; KACIE HATTAWAY // Human Nutrition &amp; Hospitality Management</td>
<td>Faculty Mentor: Lori Greene // Human Nutrition &amp; Hospitality Management</td>
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<tr>
<td>59</td>
<td>MARANDA BURNS // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td>National AHEC Organization HPV Immunization Project</td>
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<tr>
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<td>EARL JOHNSON // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td>Good Samaritan Clinic</td>
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<td>HAYLEY MCGOWAN// Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td>CALLIE GARRISON // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td></td>
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<td>Inverness Dermatology &amp; Laser</td>
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<tr>
<td>63</td>
<td>BRIANNA MALMBORG // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td>Northstar EMS</td>
<td></td>
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</tr>
<tr>
<td>64</td>
<td>FRANCIE HARRIS // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td>Bariatric Health &amp; Wellness</td>
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<td>RACHEL PAIKOFF // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td>Get Tested Initiative</td>
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<td>AHMED ALI // Health Science</td>
<td>Faculty Mentors: Lori Turner // Health Science, Bernard Burroughs // Kinesiology</td>
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<td>Athletic trainer abstract</td>
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<tr>
<td>67</td>
<td>KHADIJAH CARTER // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<tr>
<td></td>
<td></td>
<td>Common Health Related Issues For Student Athletes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68</td>
<td>BROOKE SEAWELL// Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
<td></td>
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<tr>
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<td></td>
<td>Prevention Not Medication!</td>
<td></td>
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</tr>
<tr>
<td>69</td>
<td>STEPHEN HODGE // Health Science</td>
<td>Faculty Mentor: Lori Turner // Health Science</td>
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<td>Strive For Five</td>
<td></td>
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</tr>
<tr>
<td>70</td>
<td>EMILY WILLIAMSON &amp; RACHAEL ROBBINS // Human Development &amp; Family Studies</td>
<td>Faculty Mentors: Maria Hernandez-Reif // Human Development &amp; Family Studies, Hunter Sartain // Human Development &amp; Family Studies</td>
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</tbody>
</table>
RACHAEL ROBBINS & EMILY WILLIAMSON // Human Development & Family Studies
Faculty Mentors:
Maria Hernandez-Reif // Human Development & Family Studies
Hunter Sartain // Human Development & Family Studies
The Family Interaction Project: A study on the relationships between stress & the social skills, social-emotional capabilities, & sleep quality of young children

SAMANTHA DUFFY & BERNITA HAYES // Health Science
Faculty Mentor:
Michelle Harcrow // Health Science
UA Beautiful Health Program

KYLE JIMERSON, MALCOM WEBB & ANDREW MOSS // Health Science
Faculty Mentor:
Melanie Tucker // Community Health Sciences
Diabetes & Hypertension Clinic

SARAH KIDWELL // Consumer Sciences
Faculty Mentors:
Melissa Wilmarth // Consumer Sciences
Kyoung Kim // Consumer Sciences
Generation Gaps: Generational Differences in Financial Behaviors

CAITLIN WALL & MARY PAT PEEPLES // Consumer Sciences
Faculty Mentor:
Melissa Wilmarth // Consumer Sciences
Financial Counseling: Characteristics of Interested College Students

BRIANNE CRONENWETT & JENNIFER SCHOPP // Consumer Sciences
Faculty Mentor:
Shinae Choi // Consumer Sciences
Financial Planning & Health Care Decisions for People with Alzheimer’s Disease Diagnosis

JONATHAN STEWART, RYAN INGRAM & AMBER WRIGHT // Psychology
Faculty Mentor:
Tricia Witte // Human Development & Family Studies
Posttraumatic Stress Symptoms & Alcohol use Among College Students: Differences by Gender & Trauma Type

AMBER WRIGHT // Psychology
Faculty Mentor:
Tricia Witte // Human Development & Family Studies
Why Do We Stigmatize Substance Users?

MATTHEW AMICK // School of Social Work
COLIN THOMAS & RACE BELK // Psychology
Faculty Mentor:
Tricia Witte // Human Development & Family Studies
Identity Development of Addiction Recovery
80  **ELENA THOMPSON //** Capstone College of Nursing  
   Faculty Mentor:  
   Ann Graves // Capstone College of Nursing  
   Access to Diabetes Education Services in Alabama:  
   A Geographical Information System Analysis

81  **JULIANA DYESS //** Capstone College of Nursing  
   Faculty Mentor:  
   Amy Beasley // Capstone College of Nursing  
   Preparing Nursing Graduates for  
   End-of-Life Communication

82  **SARAH CLARK, EDIE COLLINS, SCOTT COMPTON, RACHEL FULLER, OLIVIA JANYSKA, MICHAEL KEEFE, TAYLOR SOCKWELL & ABBY TAYLOR //**  
   Capstone College of Nursing  
   Faculty Mentor:  
   Ashleigh Woods / Nursing - Capstone College of Nursing  
   Facilitation of Infection Transmission: The Shortage of  
   Hand Hygiene Stations on a Progressive Care Unit

83  **HANNAH TOWNSEND, ALLIE ADAMS, CASSIDY DILLMAN, SARAH LYNN WALKER, NICOLE DUKE, MADISON WILHITE, PAULA RADCLIFF & TJ REHMERT //**  
   Capstone College of Nursing  
   Faculty Mentor:  
   Brian Dickson // Capstone College of Nursing  
   Bariatric Surgery Outcomes Based on  
   Facility Accreditation

84  **ELIZABETH FROMHOLD //**  
   Capstone College of Nursing  
   Faculty Mentor:  
   Rebecca Owings // Capstone College of Nursing  
   The Effect of Lighting Cues on Patients' Reported  
   Hunger Levels

85  **PAULA RADCLIFF //** Capstone College of Nursing  
   Faculty Mentor:  
   Clara (Rebecca) Owings // Capstone College of Nursing  
   How Clean Is Your Cuff?

86  **SAMANTHA BALDWIN //** Capstone College of Nursing  
   Faculty Mentor:  
   Paige Johnson // Capstone College of Nursing  
   Michele Montgomery // Capstone College of Nursing  
   Cardiovascular Disease: The Silent Killer of Tuscaloosa County

87  **HEATHER HOKE, ALLISON MOORE, EMILY SMITH, BAILEY BUSH, GRACE MATTHEWS, JERRICA WATKINS, BOBBY HOLCOMB & TYLER CARTER //**  
   Capstone College of Nursing  
   Faculty Mentor:  
   Heather Reeves // Capstone College of Nursing  
   No Suture Left Behind

88  **LAUREN LONGBARDO, HALEY SAYERS, COURTNEY GAGE, MARY CAROLYN GARCIA, KEARSTON WELLS, CAROLINE BOTTCHER, LUCAS URBI & ALEX SAWICKI //**  
   Capstone College of Nursing  
   Faculty Mentor:  
   Johnny Tice // Capstone College of Nursing  
   Do You Hear What I Hear? Battling Ubiquitous Alarm  
   Fatigue

89  **NICOLETTE STASIAK //** Capstone College of Nursing  
   Faculty Mentor:  
   Leslie Cole // Capstone College of Nursing  
   Determining the Effectiveness of the STOP-BANG  
   Sleep Apnea Questionnaire in Diagnosing Sleep Apnea  
   in a Community Setting
**Capstone College of Nursing**

**Schedule of Poster Presentations // 8:00-11:00 AM**

90  
**Morgan Parson, Kelly Conner, Melia Cotter, Caitlyn Krusinsky, Jaylaan Parker, Baleigh Swaney & Jess Wilson** // Capstone College of Nursing  
Faculty Mentor:  
Leslie Cole // Capstone College of Nursing  
Appropriate Management of Unused Medications

91  
**Rachel Fuller & Emily Valdez** // Capstone College of Nursing  
Faculty Mentor:  
Michelle Cheshire // Capstone College of Nursing  
Emotional Intelligence in Nursing Students

92  
**Hannah Browdy** // Capstone College of Nursing  
Faculty Mentor:  
Michele Montgomery // Capstone College of Nursing  
Smoking in Public Places in Tuscaloosa, AL

93  
**Rachel Hunnicutt** // Capstone College of Nursing  
Faculty Mentor:  
Michele Montgomery // Capstone College of Nursing  
Prenatal Smoking Cessation for Professional Nursing Practice

94  
**Caitlin Taylor & Lucas Uribi** //  
Capstone College of Nursing  
Faculty Mentor:  
Michele Montgomery // Capstone College of Nursing;  
Paige Johnson // Capstone College of Nursing  
Health Outcomes in Underserved Preschool Children

95  
**Madison Stankevich** // Capstone College of Nursing  
Faculty Mentor:  
Michele Montgomery // Capstone College of Nursing;  
Paige Johnson // Capstone College of Nursing  
Literacy at the University of Alabama

96  
**Amy Akel** // Capstone College of Nursing  
Faculty Mentor:  
Michele Montgomery // Capstone College of Nursing

97  
**Lindsey Zimmer, Nikayla Dickey, Kristen Lusco, Tatiya Maddox, Virginia Pittman, Hannah Pitts, Molly Snyder & Megan Ten Berge** //  
Capstone College of Nursing  
Faculty Mentor:  
Meridith Rice // Capstone College of Nursing  
The "Silver" Lining in the Surgical Process: Silverlon

98  
**Caitlyn Bruley & Alex Sawicki** //  
Capstone College of Nursing  
Faculty Mentor:  
Monika Wedgeworth // Capstone College of Nursing  
The Effects of Clinical Journaling in Mental Health Practice

99  
**Hannah Townsend & Mary Talbot Skinner** //  
Capstone College of Nursing  
Faculty Mentor:  
Olivia May // Capstone College of Nursing  
To Aspirate or to Not Aspirate?

100  
**Erica Williams** // Capstone College of Nursing  
Faculty Mentor:  
Paige Johnson // Capstone College of Nursing  
Cobb County Health Assessment

101  
**Meggie Owen-Patterson, Corrine Nulph, Kimberly Mullins, Jordan Kitterman Michael Kirkpatrick, Allison Guebert, Nicki Stasiak & Madison Montanari** //  
Capstone College of Nursing  
Faculty Mentor:  
Sarah Robinson // Capstone College of Nursing  
Medication Administration via Enteral Tube Feeding

102  
**Emily Smith & Alexa Roe** //  
Capstone College of Nursing  
Faculty Mentor:  
Sheree Carter // Capstone College of Nursing  
Systematic Review of Nurse-Led Rheumatology Research
103
**Madison Montanari** // Capstone College of Nursing
Faculty Mentor:
Sara Kaylor // Capstone College of Nursing
The Effects of Undergraduate Research on Nursing Student Leadership

104
**Heather Hoke** // Capstone College of Nursing
Faculty Mentor:
Stephanie Turner // Capstone College of Nursing
Nursing a Disaster

105
**Megan Ten Berge** // Capstone College of Nursing
Faculty Mentor:
Stephanie Turner // Capstone College of Nursing
Resilience & Burnout in Emergency Department Nurses

106
**Marissa Davis, Rose Legault, Faith Wolfard, Anna Peeler, Drew Nolen, Maranda Dearing & Haley Pierce** //
Faculty Mentor:
Stephanie Turner // Capstone College of Nursing
107
ELIE ALLEN, MIRANDA CASEY, MADISON DARLING, MOLLY FINCH, RACHEL HARTLEY, MOLLY MORAN, BAILEY REESE, SHELBY SMITHSON, RACHEL THOMPSON & CHO RONG WON //
School of Social Work
Faculty Mentor: Kevin Corcoran // School of Social Work
USDA Nutrition Guidelines: Do they make a difference?

108
ELIE ALLEN, MOLLY MORAN, BAILEY REESE, SHELBY SMITHSON, RACHEL THOMPSON //
School of Social Work
Faculty Mentor: Kevin Corcoran // School of Social Work
"Living Memories": An app for family matters

109
MIRANDA CASEY, MADISON DARLING, MOLLY FITCH, RACHEL HARTLEY & CLAUDIA WON //
School of Social Work
Faculty Mentor: Kevin Corcoran // School of Social Work
An app for collegiate health promotion
EMERGING SCHOLARS
DIVISION OF SCIENCE, MATH & ENGINEERING
SCHEDULE OF POSTER PRESENTATIONS // 8:00-11:00 AM

110
NICKOLAS MCCARLEY //
Electrical & Computer Engineering
Faculty Mentor:
Jeff Gray // Computer Science
Robotic Navigation through Gesture Based Control

111
PAUL YOU // Chemical & Biological Engineering
Faculty Mentor:
John Van Zee // Chemical & Biological Engineering
Understanding the Effect of Solution Chemistry on Electroplated Ni-Mo Alloys

112
KATHRYN SHAY // Geography
Faculty Mentor:
Eben Broadbent // Geography
Angelica Almeyda Zambrano // Geography
Automated Methodologies for Quantifying Avian Composition & Abundance

113
MICHAEL KUHLMAN //
Chemical & Biological Engineering
Faculty Mentor:
Hung-Ta Wang // Chemical & Biological Engineering
Thickness Identification of Epitaxial Bi2Te3 via Optical Contrast

114
PHOEBE BURNS // Computer Science
Faculty Mentor:
Monica Anderson // Computer Science
Natural Interface to Smart Environment

115
BRENT BARRY & RACHEL OSTROW // Mechanical Engineering
Faculty Mentors:
Keith Williams // Mechanical Engineering
Beth Todd // Mechanical Engineering
Instrumentation of an Orthotic Boot

116
REAGAN HATTAWAY // Human Nutrition & Hospitality Management
MARY CLAY KLINE // Journalism
Faculty Mentor:
Kristi Crowe-White // Human Nutrition & Hospitality Management
Phenolic & Flavonoid Content of Phyllostachys aurea

117
CHRISTOPHER ROPER // Metallurgical & Materials Engineering
Faculty Mentors:
Subhadra Gupta // Metallurgical & Materials Engineering
Billy Clark // Electrical & Computer Engineering
Improvements for STT-RAM

118
MARY TAGLIERI, KYLE LEONARD, KELLEY COOPER & JOSEPH JAMES // Chemical & Biological Engineering
Faculty Mentors:
Margaret Liu // Chemical & Biological Engineering
Ningning Xu // Chemical & Biological Engineering
Establish An Efficient CHO Platform For Antibody Productions

119
COLEMAN HARRIS // Computer Science
Faculty Mentor:
Adam Hauser // Physics & Astronomy
ZrOH4 nanoparticles for impedance-based NO2 detection

120
BLAIR MORRISON // Biological Sciences
Faculty Mentor:
Ryan Earley // Biological Sciences
Does ocean acidification drive changes in the aggressive behavior of mangrove rivulus fish (Kryptolebias marmoratus)?
121
Evan Brannon // Civil, Construction & Environmental Engineering
Faculty Mentors:
Ken Fridley // Civil, Construction & Environmental Engineering
Thang Dao // Civil, Construction & Environmental Engineering
Tu Ho // Civil, Construction & Environmental Engineering
Impact of Wind on Structures

122
Liam Finnegan, Katherine Beyer & Abbey Lauterbach // Chemical & Biological Engineering
Faculty Mentors:
Margaret Liu // Chemical & Biological Engineering;
Jianfa Ou // Chemical & Biological Engineering
Butanol Fermentation from Biomass via a Cellulolytic Bacteria, Clostridium Cellulovorans-adhE2

123
Jennie Kriznik // Human Development & Family Studies
Faculty Mentor:
Asma Hatoum-Aslan // Biological Sciences
Combating Drug-Resistant Staphylococci with Bacterial Viruses

124
Austin Brooks // Biological Sciences
Faculty Mentors:
Ryan Earley // Biological Sciences
Elizabeth Johnson // Biological Sciences
The behavioral effects of endocrine disrupting compounds on mangrove rivulus fish.

125
Caroline Huskin, Gabrielle Waller // Chemical & Biological Engineering
Faculty Mentors:
Margaret Liu // Chemical & Biological Engineering;
Jianfa Ou // Chemical & Biological Engineering
Construction of Butanol Producing Mutant of Clostridium tyrobutyricum

126
Alan Burdick // Capstone College of Nursing
Faculty Mentors:
Ryan Earley // Biological Sciences
Grace Scarcella // Biological Sciences
Does temperature induce sex change in a hermaphroditic fish?

127
Elizabeth Rowe // Chemical & Biological Engineering
Faculty Mentors:
Paul Rupar // Chemistry
Louis Reisman // Chemistry
PEI 3D Printing

128
Keaton Drees // Capstone College of Nursing
Faculty Mentor:
Safiya George // Capstone College of Nursing
Finding the Correlation Between Drug Use & Sexual Risk Behavior in the U.S. Virgin Islands

129
Ethan Lewis // Chemistry
Faculty Mentor:
Jane Rasco // Biological Sciences
Development of an Outbred Strain of Celiac Disease in Swiss Webster Mice

130
Lucas Nelson, Madeline Peterson, Madeline Stewart & Brianna Zarrinfar // Biological Sciences;
Megan McCorkle // Kinesiology
Faculty Mentors:
Jonathan Wingo // Kinesiology
Matthew Leatherwood // Kinesiology
Tori Stone // Kinesiology
Effect of Exercise Mode on Cardiovascular Drift & Maximal Oxygen Uptake During Heat Stress

131
Pierce McLawhorn // Mathematics
Faculty Mentor:
Burcu Keskin // Information Systems, Statistics & Management Science
Online Optimization: Applications in Healthcare, Public Safety, & Supply Chain Management
**Emerging Scholars**

**Schedule of Poster Presentations**

132  
**Michael Patterson** // Chemistry  
Faculty Mentor:  
Daniel Goebbert // Chemistry  
Johnny Lightcap // Chemistry  
Fragmentation of copper acetate nitrate anion complexes

133  
**Ali Stedke & Coyt Majure** // Biological Sciences  
**Rachel Brown** // Chemical & Biological Engineering  
Faculty Mentor:  
Matthew Jenny // Biological Sciences  
Effects of Open & Closed Gates in a Plus Maze on the Associative Learning of Zebrafish

134  
**John Andrews** // Engineering - Computer Science  
Faculty Mentor:  
Preethi Nair // Physics & Astronomy  
Applying General Pattern Recognition Software to Galaxy Image Classifications

135  
**Christian Hutley** //  
Electrical & Computer Engineering  
Faculty Mentor:  
Monica Anderson // Computer Science  
Pervasive Computing - Collecting User Habits at Scale

136  
**Clark Conway** // Civil, Construction & Environmental Engineering  
Faculty Mentor:  
Rona Donahoe // Geological Sciences  
Reclaimed Strip Mines on the Lake Harris & Lake Nicol Watersheds

137  
**Rebecca Denson, Allison Beggin & Sarah Quick** // Biological Sciences  
Faculty Mentor:  
Matthew Jenny // Biological Sciences  
The effects of aging on female zebrafish learning & memory capacity

138  
**Charles Pitsenberger** // Biological Sciences  
Faculty Mentor:  
Jeffrey Lozier // Biological Sciences  
Identifying candidate genes involved in color differentiation in Bombus bifarius

139  
**Sydney Ezelle** // Civil, Construction & Environmental Engineering  
Faculty Mentors:  
Wei Song // Civil, Construction & Environmental Engineering  
Blair Butler // Civil, Construction & Environmental Engineering  
Displacement of a System

140  
**William Bounds** // Electrical & Computer Engineering  
Faculty Mentor:  
Jeff Jackson // Electrical & Computer Engineering  
Customizable Vehicle Diagnostics Application Utilizing Bluetooth

141  
**Alexandra Mannings** // Physics & Astronomy  
Faculty Mentors:  
Jeremy Bailin // Physics & Astronomy  
Krista McCord // Physics & Astronomy  
Exploring Parameter Space: A look at galactic evolution through simulations
EMERGING SCHOLARS
DIVISION OF FINE ARTS & HUMANITIES

SCHEDULE OF ORAL PRESENTATIONS  
// ROOM 3103

2:00 PM  
MOLLY BUFFINGTON // History  
Faculty Mentor:  
Charles Clark // History  
American Views of the North Russian Expedition, 1918-1928

2:20 PM  
REBECCA MURDOCH // Telecommunication & Film  
Faculty Mentor:  
Kristen Warner // Telecommunication & Film  
The Matriarch-Tree: Motherhood and Intergenerational Feminism in Gilmore Girls and Jane the Virgin

SCHEDULE OF POSTER PRESENTATIONS  
// 1:00 - 3:00 PM

109  
LIZA ROGERS & PEIRS RODERS //  
Clothing, Textiles & Interior Design  
Faculty Mentor:  
Marcy Koontz // Clothing, Textiles & Interior Design  
(re)Fashioning Vintage: Visual Branding for a New Local Small Business with a Smart Phone Camera & Social Media Platforms

110  
WILLIAM MCCRARY // History  
Faculty Mentor:  
George Rable // History  
Civil War Values: What the War is Doing to the Country

111  
SARAI RUSSELL // English  
Faculty Mentor:  
Barbara Brickman // New College  
Greased Lightning
2:00 PM
**Caroline Prichard // School of Social Work**
Faculty Mentor: Brenda Smith // School of Social Work
How realistic are “realistic job previews” in child welfare? Implications for employee retention and turnover

2:20 PM
**Manoj Sunny // Economics, Finance & Legal Studies**
Faculty Mentors: Paul Drnevich // Management & Marketing
Collin Gilstrap // Economics, Finance & Legal Studies
M&A Premiums Comparison: Same Industry vs Cross Industry Analysis

2:40 PM
**Matthew Hall // Information Systems, Statistics & Management Science**
Faculty Mentor: James Cochran // Information Systems, Statistics & Management Science
MLB Pitcher Performance on Balls in Play

3:00 PM
**Rebecca Fleisig // Management & Marketing**
Faculty Mentors: Regina Lewis // Advertising & Public Relations
Susan Fant // Management & Marketing
Lindsay Sutton // Advertising & Public Relations
Millennials’ Expectations About Their Work Lives in 2025

3:20 PM
**Larissa Magera // Advertising and Public Relations**
Faculty Mentor: Regina Lewis // Advertising and Public Relations
“A Further Look into the Positive and Negative Effects of being Connected 24/7”

3:40 PM
**Lauren Crawford // Economics, Finance & Legal Studies**
Faculty Mentor: Robert Reed // Economics, Finance & Legal Studies
The Causes and Consequences of Bank Failures in Canada

4:00 PM
**Allie Bartholomew // Culverhouse School of Accountancy**
Faculty Mentor: Todd DeZoort // Culverhouse School of Accountancy
The Use of a Student Whistleblower Policy in Higher Education to Manage Academic Misconduct
112  
**MALLORY CONNOLLY // Capstone College of Nursing**  
Faculty Mentor:  
Andrea Cevasco-Trotter // Music  
Stress responses of ELBW premature infants: An analysis of responses during music & multimodal stimulation sessions

113  
**DANIEL DOUGHERTY // Economics, Finance & Legal Studies**  
Faculty Mentor:  
Victoria Javine // Economics, Finance & Legal Studies  
Is Doing Good Bad for Investors? The Case of Socially Responsible ETFs & Mutual Funds

114  
**STEPHANIE REGISTER // Human Nutrition & Hospitality Management**  
Faculty Mentors:  
Amy Ellis // Human Nutrition & Hospitality Management  
Weight Gain in College Female Students: A Literature Review

115  
**STEPHANIE MACKENZIE // Psychology**  
Faculty Mentor:  
James Hamilton // Psychology  
The Prevalence & Correlates of Excessive Medical illness Behavior: A Study of Collateral Sources

116  
**BRIAN ROBERTS // Biological Sciences**  
**ELIZABETH ELKIN // Journalism**  
Faculty Mentors:  
Scott Parrott // Journalism  
Anna Gwarjanski // Journalism  
News Coverage of Schizophrenia

117  
**ISABELLE BEAUREGARD // Gender & Race Studies**  
Faculty Mentor:  
Dana Patton // Political Science  
Paid Parental Leave Policies & Their Effects on Infant Mortality Rates

118  
**ALEX SERMAN // Economics, Finance & Legal Studies**  
Faculty Mentor:  
William Walsh // Economics, Finance & Legal Studies  
Gulf Red Snapper Resource Allocation Analysis

119  
**RACHAEL DRAKE // Capstone College of Nursing**  
Faculty Mentors:  
Kristina McDonald // Psychology  
Callie Gibson // Psychology  
Empathy for Rejected Others: The Moderating Role of Rejection Sensitivity

120  
**JUSTIN CHAMBERS & ANNA CLAIRE SMITH // Information Systems, Statistics & Management Science**  
Faculty Mentors:  
Jeff Lucas // Information Systems, Statistics & Management Science  
Uzma Raja // Information Systems, Statistics & Management Science  
Adoption of New Technology Platform: A Life Cycle

121  
**JESSICA FULWIDER // Psychology**  
Faculty Mentor:  
Theodore Tomeny // Psychology  
Autism & Typically-Developing Siblings: Relations with Social Support

122  
**ELIZABETH ELKIN // Journalism**  
**BRIAN ROBERTS // Biological Sciences**  
Faculty Mentors:  
Scott Parrott // Journalism  
Anna Rae Gwarjanski // Journalism  
Gender in Politics: How current events affect perceptions of gender in politics

123  
**CLAIRE PARKER // Electrical & Computer Engineering**  
Faculty Mentors:  
Paul Puzinauskas // Mechanical Engineering  
Kaylie Crosby // Mechanical Engineering  
Implementation of Onboarding Procedure Will Lead to Increase in Team Motivation & Involvement
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Author(s)</th>
<th>Faculty Mentors</th>
</tr>
</thead>
<tbody>
<tr>
<td>124</td>
<td>Kynnedi Fye // Criminal Justice</td>
<td>Faculty Mentor: Darrin Griffin // Communication Studies</td>
<td>Cyber Terrorism &amp; Educational Institutions: Examining Resiliency Against Threats</td>
</tr>
<tr>
<td>125</td>
<td>Zach Lyles // Economics, Finance &amp; Legal Studies</td>
<td>Faculty Mentors: Robert McLeod // Economics, Finance &amp; Legal Studies, Jackson Mills // Economics, Finance &amp; Legal Studies</td>
<td>Head Coach Facial Masculinity &amp; Team Performance</td>
</tr>
<tr>
<td>126</td>
<td>Hunter Foster // Culverhouse School of Accountancy</td>
<td>Faculty Mentor: Todd DeZoort // Culverhouse School of Accountancy</td>
<td>An Evaluation of Corporate Tax Practices</td>
</tr>
<tr>
<td>127</td>
<td>Kathryn Fritz // Chemistry</td>
<td>Faculty Mentor: JoAnn Oliver // Capstone College of Nursing</td>
<td>Lymphedema in Breast Cancer Patients: Identifying the Gap from the Literature</td>
</tr>
<tr>
<td>128</td>
<td>Alexandra Gary // Health Science</td>
<td>Faculty Mentors: Lori Turner // Health Science, Megan Schewmake // Health Science</td>
<td>Beliefs, Use &amp; Misuse of Psychiatric Medications among College Students</td>
</tr>
<tr>
<td>130</td>
<td>McKenzie Plyman // Capstone College of Nursing</td>
<td>Faculty Mentors: Safiya George // Capstone College of Nursing, Stefanie O’Neill // Capstone College of Nursing</td>
<td>A Study of the Role of Music &amp; Religion on African American Adolescent Females’ Sexual Beliefs &amp; Behaviors</td>
</tr>
<tr>
<td>131</td>
<td>Elizabeth Di Valerio // Biological Sciences</td>
<td>Faculty Mentor: Safiya George // Capstone College of Nursing</td>
<td>Exploring HIV Stigma in the US Virgin Islands</td>
</tr>
<tr>
<td>132</td>
<td>Lacie Johnson // Chemistry</td>
<td>Faculty Mentor: Safiya George // Capstone College of Nursing</td>
<td>Social Support, Depression &amp; Perceived Stress with People Living with HIV, is there a correlation?</td>
</tr>
<tr>
<td>133</td>
<td>Emily Stebbins // Psychology</td>
<td>Faculty Mentor: Lance Kinney // Advertising &amp; Public Relations</td>
<td>The Cosmo Girl: Who is the “Fun, Fearless Female?”</td>
</tr>
<tr>
<td>134</td>
<td>Jordan Cantrell // Chemical &amp; Biological Engineering</td>
<td>Faculty Mentors: William Hart // Psychology, Kyle Richardson // Psychology</td>
<td>How Sexist Humor Impacts the Workplace</td>
</tr>
<tr>
<td>135</td>
<td>Megan Anderson // Economics, Finance &amp; Legal Studies</td>
<td>Faculty Mentors: Philip Gable // Psychology, Hunter Threadgill // Psychology</td>
<td>Did Pixar Get It Right?: The Influence of Disgust, Anger, &amp; Sadness on Memory</td>
</tr>
</tbody>
</table>
136
CARA BOLT // Advertising & Public Relations
Faculty Mentor:
Chris Roberts // Journalism
How News-Mediated Evidence is Used & Misused in Presidential Campaign Ads

137
RAMIE RUBLE // Capstone College of Nursing
Faculty Mentor:
Alexa Tullett // Psychology
Analysis of Personality Traits & Political Ideology

138
ANDREW LANINGHAM // Communication Studies
Faculty Mentor:
Darrin Griffin // Communication Studies
There’s No Such Thing as A Free Lunch; Using a Grounded Theory Approach to Understand Perceptions of a Hypothetical Food Honor System

139
TRISTAN PONDER // Music
Faculty Mentor:
Kristen Warner // Telecommunication & Film
Nicki Minaj: The Black Barbie

140
BRADLEY JOHANSEN // Economics, Finance & Legal Studies
Faculty Mentor:
Shawn Mobbs // Economics, Finance & Legal Studies
Do Shareholders Value CFO Board Membership?

141
MADISON REDMILL // Mathematics
COURTNEY CHARLAND // Information Systems, Statistics & Management Science
Faculty Mentors:
Emmett Lodree // Information Systems, Statistics & Management Science
The Effect on Incentives & Transactions Costs on Donation Drives
Ten Plus Ten

Ten Plus Ten is collaboration between student artists and student researchers. Each artist is assigned a researcher and given 10 hours to go from theory to canvas. Artwork will be displayed throughout the Ballroom.

Artist //

Melody Knight // Art
Alyssa Bentley // Marine Science & Biology
Mei Ray // Art (Pre-Med)
Grace Kurosaka // Dance, Biology, Pre-med
Sophie Williams // Biology, English
Zoey Zelmore // International Studies
Magdalene Kennedy // New College - Interdisciplinary
Emily Sturgeon // Telecommunication & Film
Devyn Danley // Anthropology & international studies
Jessica Shieh // Marketing & International Studies

Researchers //

Connor Buckley // Marine Science, Biology
Preston Hinkel // Chemical Engineering
Cody Colclough // Chemistry, Chemical Engineering
Sean Miller // Biochemistry
Kelsey Lowman // Microbiology
Sahiti Madireddy // Biology
Alison Farrar // Mathematics & Physics
Emily Schmidt // Physics
John Reynolds // Physics (Biology Concentration)
Sam Mukkamala // Biology
SPECIAL THANKS TO THE DEANS AND THEIR OFFICES FOR THEIR SUPPORT

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COLLEGE OF HUMAN ENVIRONMENTAL SCIENCE
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