College of Agriculture and Human Ecology

Agriculture

Undergraduate

Title: Fighting for Survival: A Bee's Life
Primary author: Amber Dunnaway
Research Advisor: Bruce Greene

Human Ecology

Undergraduate

Title: Parents’ Perspectives of Nature or Nurture in their Children’s Development
Primary author: Caleb Mott
Research Advisor: Rufaro Chitiyo

College of Arts and Sciences

Biology

Undergraduate

Title: Testing Diel Fish Migrations Between Riffle-Pool Habitats
Primary author: Shannon Murphy
Co-authors: Codi Underwood and Juju Wellemeyer
Research Advisor: Joshuah Perkin

Graduate

Title: Effect of Lake Depth on Hypoxia in Agricultural Lakes
Primary author: Jason Payne
Research Advisor: Justin Murdock

External Collaborators: Amy Gebhard, William Curtis
Chemistry

Undergraduate – 2 way tie

Title: Preparation of Novel Hemi-1,2,4-Triazinyl-[2,2']-bypyridines via the Negeishi Coupling and Telescoped Condensation Towards Chemoselective Minor Actinide Separations.

Primary author: Ryan Downs
Co-author: Kayla Dean
Research Advisor: Jesse Carrick
External Collaborators: Ai Lin Chin

Undergraduate

Title: Synthesis of Pyruvaldehyde Thiosemicarbazone Ligands and Their NMR Spectrum Data

Primary author: Adam Koch
Co-author: Kelsey Richards
Research Advisor: Ed Lisic

Graduate

Title: Molecular mechanism of JNK attenuation by parkin
Primary author: Cameron Davis
Research Advisor: Xuanzhi Zhan

Counseling and Psychology

Undergraduate

Title: The Role of Academic Self-Efficacy in Student Success
Primary author: Christopher Brown
Co-authors: Alanea Graci and Jessica Kelley
Research Advisor: Matthew Zagumny

Earth Sciences

Undergraduate

Title: Bumped, Bruised and Broken: Mississippian Crinoids as Indicators of Paleoflow Conditions
Primary author: Czarinna Clay
Co-author: Kayla Hillis
Research Advisor: Jeannette Wolak
## English - Paper Presentations

### Undergraduate – 3 way tie

**Title:** Fulfilling Fate: Roman Mythological Allusions and Organic Unity in Romeo and Juliet  
**Primary author:** Kelsey Taylor  
**Research Advisor:** Kristen Deiter

**Title:** "The Weaker Vessels": Gender Roles in Shakespeare's Romeo and Juliet  
**Primary author:** Shannon Buford  
**Research Advisor:** Kristen Deiter

### Undergraduate

**Title:** Star-Crossed Oppression in a Patriarchal Society: Feminist Critique of Romeo and Juliet  
**Primary Author:** Brittney Herman  
**Research Advisor:** Kristen Deiter

### Graduate – 2 way tie

**Title:** Curiosity and Fear as Elements of the Sublime in Poe and Hawthorne  
**Primary author:** Brandi Kriebel  
**Research Advisor:** Michael Burduck

**Title:** Eliza's Rising Consciousness in Pygmalion  
**Primary author:** Cody Matthews  
**Research Advisor:** Paulina Bounds

### History

**Graduate**

**Title:** Virtual Campus Historical Tour  
**Primary author:** Kellie Price  
**Co-author:** Chasely Goodman  
**Research Advisor:** Allen Driggers
Physics

Undergraduate

Title: Optimizing the Timing Resolution for the NeXT Array
Primary author: Aaron Engelhardt
Co-author: Leonard Mostella
Research Advisor: Mustafa Rajabali
External Collaborators: Stephen Shadrick, Kyle Schmidt

Sociology and Political Science

Undergraduate

Title: Prescription Pain Reliever Misuse: An Explanatory Study of the Social Factors
Primary author: Nathan Payne
Research Advisor: Steven Seiler

College of Business

Decision Sciences and Management

Undergraduate

Title: Using Creative Inquiry to Answer Human Resource Questions
Primary author: Laura Secord
Research Advisor: Thomas Timmerman
College of Education

Art Craft and Design

Undergraduate

Title: Researching Environmental Wayfinding Design at Nashville International Airport
Primary author: Amanda Kail
Co-authors: Dustin Jackson, Kimberley McGrath, and Tori Vann
Research Advisor: David Gallop

Counseling and Psychology

Graduate

Title: Effective Narrative Therapy Techniques with Latino College-Aged Clients
Primary author: Leslie Bohn
Co-author: Angelica Galvan
Research Advisor: Tony Michael

College of Engineering

Chemical Engineering

Undergraduate

Title: Thermal desalination for utilization of waste heat from nuclear power production
Primary author: Robyn Varner
Co-authors: Katlin Schubert and Hunter Himes
Research Advisor: Laura Arias Chavez

Graduate

Title: Role of Electrokinetics in the Cleaning-Efficiency of a Dialyzer: Toward an Artificial-Kidney
Primary author: Nastasia Allred
Research Advisor: Pedro Arce
Civil and Environmental Engineering

**Undergraduate**
- **Title:** Short and Long-Term Chart Solutions for Design of Compacted Clay Slopes
- Primary author: Clifton Tubb
- Research Advisor: Daniel VandenBerge

**Graduate**
- **Title:** Improving Accuracy of Annual Average Daily Traffic Estimates from Short-Period Traffic Counts
- Primary author: Michelle Edwards
- Research Advisor: Daniel Badoe

Computer Science

**Undergraduate**
- **Title:** Little Suzie: Exploring Game Mechanics as a Narrative Device
- Primary author: Cyril Focht
- Research Advisor: David Brown

**Graduate**
- **Title:** Machine Learning with Feature Selection for Continuous Authentication
- Primary author: Jnana Deepika Bala
- Research Advisor: Ambereen Siraj

Electrical and Computer Engineering

**Graduate**
- **Title:** Short-term Voltage stability enhancement using MAS in distribution feeders with PV penetration
- Primary author: Marco Gonzalez
- Research Advisor: Satish Mahajan

Manufacturing and Engineering Technology

**Undergraduate**
- **Title:** Reducing Post-Processing and Allowing Free Complexity in Metal Additive Manufacturing
- Primary author: Zachary Carter
- Co-authors: William House, Forrest Hale, and Grant Livingston
- Research Advisor: Duckbong Kim
**Mechanical Engineering**

**Undergraduate**

Title: Modeling and Prototyping of Artificial Knee Joint for Embedded Piezoelectric Transducers
Primary author: Robert Ponder
Co-author: Mohsen Safaei
Research Advisor: Steven Anton
External Collaborators: R. Michael Meneghini

**Graduate**

Title: Force and center of pressure detection in instrumented knee implant
Primary author: Mohsen Safaei
Research Advisor: Steven Anton

**College of Interdisciplinary Studies**

**Environmental Studies**

**Undergraduate – 2 way tie**

Title: Wastewater sample analysis by LC-MS/MS for amphetamine-type stimulants and opioids
Primary author: Amy Loftis
Co-authors: Waverly Parker, Madison Fulmer, Madison Moffit, and Patrick Kane
Research Advisor: Tammy Boles

**Undergraduate**

Title: Community Outreach in the Form of Education in the Upper Cumberland
Primary author: Emily Warren
Co-authors: Brianna Banes, Tully Watson, James Scott, and Rachel Gambrell
Research Advisor: Tammy Boles

**Interdisciplinary Studies (Global Village)**

**Undergraduate**

Title: Importance of Religion and Politics among Southeastern College Students
Primary author: Chassidy Overstreet
Co-authors: Melissa Eager and Madison Davis
Research Advisor: Matthew Zagumny
Honors Program

Undergraduate

Title: Classroom Physiology: The Mechanics of Student Interaction in the Honors Classroom

Primary author: Allison Faust

Co-authors: Ben Swank and Jacob Kelley

Research Advisor: Laura Cruz