

## EURēCA

### 2019 Winners

The 23rd Exhibition of Undergraduate Research and Creative Achievement (EURēCA) took place April 15-18, 2019 in Hodges Library. Students from across the university entered their undergraduate research, senior design projects, clinical projects, and creative achievements for judging. Over 1000 students presented 749 projects. projects received recognition at the EURēCA Awards night.

Each undergraduate college selects and awards their top students. College awards ranged from first place to honorable mention. The top students on Monday night and Wednesday night also received ORE Gold, Silver, and Bronze Awards for Undergraduate Research funded by the Office of Research and Engagement. These awards are presented across research areas and highlight the best of the best in undergraduate research and creative achievement on our campus. In nine categories, students were awarded 10 gold, 10 silver and 8 bronze awards. These Awards of Excellence provide prizes in the following amounts: \$500 for gold awards, \$300 for silver awards, and \$200 for bronze awards.

A total of 139 Awards were presented at the Awards Ceremony on Monday, April 22, 2019. Below is the list of award recipients.

#### ORE Awards

<b>ORE Gold Awards</b>				
Award	College	Student(s)	Project Title	Faculty Mentor
Office of Research & Engagement Gold Award	Herbert College of Agriculture	Marlo Black	A Survey of Domestic Hosts of <i>Cimex lectularius</i> in an Urban Setting	Karen Vail
Office of Research & Engagement Gold Award	College of Arts & Sciences, Natural Sciences	Kyle Freeman	Investigating Role of Cell Wall Modifying Enzymes on Intercellular Trafficking in Plants	Tessa Burch-Smith
Office of Research & Engagement Gold Award	College of Arts & Sciences, Natural Sciences	Kaylie Richard	Identification and Purification of an Outer Membrane Protein from <i>Campylobacter jejuni</i>	Jeremiah Johnson

Office of Research & Engagement Gold Award	College of Engineering	Alec Yen, Yah Mensa	SABR: Development of a Neuromorphic Balancing Robot	Mark Dean
Office of Research & Engagement Gold Award	College of Arts & Sciences for Art, Music, and Theater	Hannah Mcmillen	Shelf Help	Sarah Lowe
Office of Research & Engagement Gold Award	College of Social Work	Scott Sloan	Prevention & Retention: An analysis of a Community Law Office Youth Program Attendance Patterns	Bill Nugent
Office of Research & Engagement Gold Award	College of Arts & Sciences, Social Sciences	Megan Belcher	“Pipe(ing) Up about Pipe Fragments: An Analysis of Woodland Period Pipes from the Topper Site (38AL23)”	David Anderson
Office of Research & Engagement Gold Award	College of Nursing	Mallory Lanier	Rescue Dosing as a Standardized Treatment Protocol for Neonatal Abstinence Syndrome to Decrease Length of Hospital Stay	Jennifer Tourville
Office of Research & Engagement Gold Award	College of Arts & Sciences, Humanities	Hannah Nelson	What the —: UT Students’ Bad Language Ideologies	Jessica Grieser

Office of Research & Engagement Gold Award	College of Architecture & Design	Michael Lidwin Tyler Sanford, Elizabeth Ott, Cochran Tettleton, Sydney Bittinger, John Huddleston, Margaret House, Walter Costner, Aubrey Bader, Kari Essary, Samuel Brown, Schuyler Daniel, Brian Pickle, Allison Ward	Design-Building as Community Empowerment through Green Magnet Academy's Little STEAM Library	Katherine Ambroziak
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<b>ORE Silver Awards</b>				
Award	College	Student(s)	Project Title	Faculty Mentor
Office of Research & Engagement Silver Award	Tickle College of Engineering	Nicole Kowalski	Comparing EMG- and Goniometer-Driven NMI Control For A Virtual Target Acquisition Task	Dustin Crouch
Office of Research & Engagement Silver Award	College of Arts & Sciences, Natural Sciences	Parker Stevenson	Spying on Mice: Video coding and quantifying pup retrieval behavior in adult female mice	Keerthi Krishnan
Office of Research & Engagement Silver Award	Tickle College of Engineering	Taylor Berger	Decoding Brainwaves for Visual Attention to Faces and Scenes	Xiaopeng Zhao

Office of Research & Engagement Silver Award	College of Arts & Sciences, Natural Sciences	Thomas Clarity	Acute social defeat-induced neuroinflammation in the vmPFC of Syrian hamsters via microglial activation	Matthew Cooper
Office of Research & Engagement Silver Award	Haslam College of Business	Austin Kuhr	Using Martingale Difference Correlation for Variable Selection	Chung Lee
Office of Research & Engagement Silver Award	College of Nursing	Malerie Lazar	"I've Always Had to Fight": A Phenomenological Study on Appalachian Men and Women Who Seek Care at Free Episodic Health Care Clinics	Lisa Davenport
Office of Research & Engagement Silver Award	College of Arts & Sciences, Social Sciences	Adriana Ford	Solar Potential Impacts on Energy Poverty in Knox County, TN in 2017	Yingkui Li
Office of Research & Engagement Silver Award	College of Education, Health & Human Sciences	Alexandra Nussbaumer	Successful Implementation and Elements of Healthy Food Retail Programs: Extension Professionals Perceptions	Sarah Colby
Office of Research & Engagement Silver Award	College of Architecture & Design	Grayson Word, Nicole Hamel, Alison Ward	Haitian Housing: Social and Cultural Evolution Through Transitional Space	Katherine Ambroziak
Office of Research & Engagement Silver Award	College of Communication & Information	Dara Carney-Nedelman	AUIGTROSAI (Acronym Usage in Groups: The Relationship of Socialization and Identification)	Emily Paskewitz

<b>ORE Bronze Awards</b>				
Award	College	Student(s)	Project Title	Faculty Mentor
Office of Research & Engagement Bronze Award	College of Engineering	Collin Pekol	Developing a Method for Testing Tackiness of Bituminous Tack Coats	Chris Wetteland

Office of Research & Engagement Bronze Award	College of Engineering	Matthew Adams	Oxide Supported Nickel Based Intermetallic Compounds in Dry Reforming of Methane for Syngas Production	Siris Laursen
Office of Research & Engagement Bronze Award	College of Arts & Sciences, Natural Sciences	Landen Mcdonald	Turbulent Flow Modeling using Cryogenic Helium and Neutron Beams	Yuri Kamyshkov
Office of Research & Engagement Bronze Award	College of Arts & Sciences, Natural Sciences	John Hymel	A computational study of CO2 interactions with functionalized calixarene molecules	Konstantinos D. Vogiatzis
Office of Research & Engagement Bronze Award	College of Arts & Sciences for Art, Music, and Theater	Carrie Garrison, McLane Zaitz, Evan Zelem, Ndigirigi Gichingiri	Dixon vs. Alabama State Board of Education	Cary Staples
Office of Research & Engagement Bronze Award	Haslam College of Business	Matthew Holt	Investigation into the Reporting & Presentation of the Underlying Economics of Stock-based Compensation	Lauren Cunningham
Office of Research & Engagement Bronze Award	College of Arts & Sciences, Social Sciences	Alexis Beaver	“Do parental fear perceptions affect phobic children’s performance on a parent-child behavioral approach test?”	Kristy Allen
Office of Research & Engagement Bronze Award	Architecture & Design	Zachary Orig	Organic Urbanisms: Applied Agronomy on the Campus of Knoxville College	Tricia Stuth

## College Awards

<b>Herbert College of Agriculture</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Marlo Black	A Survey of Domestic Hosts of <i>Cimex lectularius</i> in an Urban Setting	Karen Vail	Herbert College of Agriculture	First Place
Rajeev Kumar	More than Skin Deep: Blood Serum Protein Changes in Response to <i>Batrachochytrium salamandrivorans</i> Chytridiomycosis	Matt Gray	Herbert College of Agriculture	Second Place
Jaime Ragos	A Pilot Study on Teaching Food Safety to Bilingual Students with Hands On Activities	Jennifer Richards	Herbert College of Agriculture	Third Place
Leah Dunlap	Plant Mapping Overwintering <i>Phyllocoptes fructiphilus</i>	Mark Windham	Herbert College of Agriculture	Honorable Mention
Anna Kouns	Rose Rosette Disease Research in Knoxville	Mark Windham	Herbert College of Agriculture	Honorable Mention

<b>College of Arts &amp; Sciences, Humanities</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Hannah Nelson	What the ---: UT Students' Bad Language Ideologies	Jessica Grieser	College of Arts & Sciences, Humanities	Award of Excellence

Margaret Stroud, Zoe Mazzu, Hrysoula Grammatikas, Aurora Parker, Carla Whaley,	Italian Translation Project: “La Leggenda del Borgo” The Legend of the Medieval Town	Annachiara Mariani	College of Arts & Sciences, Humanities	Award of Excellence
Julia Walsh	Common Ancestors and the Ethical Display of Bog Bodies in “Kingship and Sacrifice”	Lisa King	College of Arts & Sciences, Humanities	Award of Excellence
Audrey Jean Culpepper	Visually Mapping the Narrative System of Dostoevsky’s The Idiot	Stephen Blackwell	College of Arts & Sciences, Humanities	Award of Excellence
Anita Voorhees	Metaphor Theory and Its Relation to Social Policy	Lisa King	College of Arts & Sciences, Humanities	Honorable Mention
Amanda Bryant	The Slave Woman and the Free: Hagar and Sarah as Exegetical Strategy in Galatians 4:21-5:1	Erin Darby	College of Arts & Sciences, Humanities	Honorable Mention

Jeffrey Holt	Blood and Conquest: An Investigation into The Most Prominent Diseases of 16th Century Mexico and How They Impacted Colonization and Cultural Exchange	Millie Gimmel	College of Arts & Sciences, Humanities	Honorable Mention
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<b>College of Arts &amp; Sciences, Social Sciences</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Kelly Roth, Caitlin Berosh, Emily Grimes	The Impact of Race and Affect on Infant Visual Attention to Faces	Greg Reynolds	College of Arts & Sciences, Social Sciences	Award of Excellence
Martin Walker, Megan Belcher	“Pipe(ing) Up about Pipe Fragments: An Analysis of Woodland Period Pipes from the Topper Site (38AL23)”	David Anderson	College of Arts & Sciences, Social Sciences	Award of Excellence
Adriana Ford, Kelly Baar	Solar Potential Impacts on Energy Poverty in Knox County, TN in 2018	Yingkui Li	College of Arts & Sciences, Social Sciences	Award of Excellence



Alexis Beaver	“Do parental fear perceptions affect phobic children’s performance on a parent-child behavioral approach test?”	Kristy Allen	College of Arts & Sciences, Social Sciences	Award of Excellence
Esther Reynolds, Catalina Gonzalez	The effects of stress and anxiety on a cued attention task	Shannon Ross-Sheehy	College of Arts & Sciences, Social Sciences	Award of Excellence
Nickolas Jernigan	Face the Music: Facial expressions of emotion suggest that sad music elicits more positive than negative affect	Jeff Larsen	College of Arts & Sciences, Social Sciences	Award of Excellence
Alexander Tripp	Modern Chinese Development of Latin America	Richard Pacelle Jr	College of Arts & Sciences, Social Sciences	Award of Excellence
Patrick Sonnenberg	LGBTI+ Terminologies, Identities, and Activism in Nepal	Lois Presser	College of Arts & Sciences, Social Sciences	Award of Excellence
Paige Greene	Campus Alert: How Colleges Construct Racial and Sexual Violence in Clery Reporting	Louise Seamster	College of Arts & Sciences, Social Sciences	Honorable Mention
Jasmine Blue	European Union Responses to the “Migrant Crisis” Stem from Western Europe’s History of Colonialism and Imperialism	Anthony Nownes	College of Arts & Sciences, Social Sciences	Honorable Mention
Connor Smith, Megan Schmidt, Daren Garcia, Erin Crittenden	The Convergent and Discriminant Construct Validity of the SCORS-G as a Measure of Personality Functioning	Mark Waugh	College of Arts & Sciences, Social Sciences	Honorable Mention

Elizabeth Martens	Examining the Behavioral Dynamics of Selective Attention in the Flanker Task	Aaron Buss	College of Arts & Sciences, Social Sciences	Honorable Mention
Regan Carell, Mckenzie Martin	Understanding the Relation Between Core ADHD Symptoms and Lower- and Higher-Level Reading Abilities	Jenn Bolden	College of Arts & Sciences, Social Sciences	Honorable Mention
Megan Porter	Convective Mode and Communication in Tennessee: Tornado Warning Challenges for Forecasting within the National Weather Service	Kelsey Ellis	College of Arts & Sciences, Social Sciences	Honorable Mention
Mary Gray	Reconstruction of a Roman Fort: Photogrammetry of Tabernae (Lalla Lilaliya)	Stephen Collins-Elliott	College of Arts & Sciences, Social Sciences	Honorable Mention
Michaela Thordarson, Lindsey Bailey	The role of color in transsaccadic object correspondence	Caglar Tas	College of Arts & Sciences, Social Sciences	Honorable Mention

<b>Haslam College of Business</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Austin Kuhr	Using Martingale Difference Correlation for Variable Selection	Chung Lee	Haslam College of Business	First Place
Matthew Holt	Investigation into the Reporting & Presentation of the Underlying Economics of Stock-based Compensation	Lauren Cunningham	Haslam College of Business	Second Place

Luke Norton	Close to Home: How College Proximity Impacts Award of Merit-Based Scholarship Effects	Maria Padilla-Romo	Haslam College of Business	Third Place
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<b>College of Communication &amp; Information</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Dara Carney-Nedelman	AUIGTROSAI (Acronym Usage in Groups: The Relationship of Socialization and Identification)	Emily Paskewitz	College of Communication & Information	First Place
Emily Caylor	Family Communication Patterns and Advice Response Theory: How Emerging Adults View Parental Advice on Money	Courtney Wright	College of Communication & Information	Second Place

<b>College of Education, Health &amp; Human Sciences</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Alexandra Nussbaumer	Successful Implementation and Elements of Healthy Food Retail Programs: Extension Professionals Perceptions	Sarah Colby	College of Education, Health & Human Sciences	First Place
Taylor Morgan	Overuse and Acute Injury Risk: Early Warning Signs in Female Soccer Players	Joshua Weinhandl	College of Education, Health & Human Sciences	Second Place
Elissa Doll	Patient Perception and Clinician Ratings of Voice Disorder Severity	Sue Hume	College of Education, Health & Human Sciences	Third Place

<b>College of Nursing</b>				
<b>Student (s)</b>	<b>Project Title</b>	<b>Faculty Mentor</b>	<b>College</b>	<b>Award</b>
Mallory Lanier	Rescue Dosing as a Standardized Treatment Protocol for Neonatal Abstinence Syndrome to Decrease Length of Hospital Stay	Jennifer Tourville	College of Nursing	First Place in Research
Malerie Lazar	“I’ve Always Had to Fight”: A Phenomenological Study on Appalachian Men and Women Who Seek Care at Free Episodic Health Care Clinics	Lisa Davenport	College of Nursing	Second Place in Research

Gabrielle Thress	Primary care provider's knowledge of and attitude of probiotic supplementation during pregnancy	Kathleen Thompson	College of Nursing	Third Place in Research
Caroline Carter	Sensory Processing Disorder in Premature Infants with Intrauterine Drug Exposure	Jennifer Tourville	College of Nursing	Honorable Mention in Research
Mary Wilson	Effects of Parent Educational Intervention on Nutrition and Physical Activity Behaviors for Children Enrolled in a School-Based Health Program	Lizanne Elliott	College of Nursing	Honorable Mention in Research
Morgan Graham	Effect of Provider Training on HPV Vaccination Rates in Southeastern Rural Communities	Kathleen Thompson	College of Nursing	Honorable Mention in Research
Taylor Janeczek, Hanna Bayne, Madison Milner, Savannah Boxley	The Effect of Rotating Shift on the Development of Obesity in Female Nurses	Susan McLennon	College of Nursing	First Place in Evidence Based Practice

Carlton Griffin, Casey Smith, Margaret Macey, Martha Higgs	Language Barrier Interventions and Self-Reported Satisfaction in Non-English-Speaking Patients	Laurie Acred-Natelson	College of Nursing	Second Place in Evidence Based Practice
Trava King, Chelsea Kendall, Morgan French, Elizabeth Kraft	Prophylactic aspirin for preeclampsia and maternal mortality	Rebecca Koszalinski	College of Nursing	Third Place in Evidence Based Practice
Suelyn Wadsworth Travis Hunt, Kurtis Smith, Melanie Brummette	Effect of Early Ambulation on the Development of Post-Intensive Care Syndrome (PICS) Among Adult Patients in the Intensive Care Unit (ICU)	Rebecca Koszalinski	College of Nursing	Honorable Mention in Evidence Based Practice
Cassandra Rooke, Olivia Snow, Ashley Bond, Grace Greenwell	Traditional vs. Alternative Birthing Positions' Effects on Labor	Susan McLennon	College of Nursing	Honorable Mention in Evidence Based Practice

Rachel Sherry, Ravina Patel, Peyton Daigre, Anna Neglia	The Effects of Music Therapy on Cognition and Memory in Persons with Dementia	Jennifer Tourville	College of Nursing	Honorable Mention in Evidence Based Practice
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<b>College of Social Work</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Scott Sloan	Prevention & Retention: An analysis of a Community Law Office Youth Program Attendance Patterns	Bill Nugent	College of Social Work	First Place
Cal Lane	Analysis of the Quality of Life for Migrant and Seasonal Agricultural Workers in East Tennessee Attending Head Start Programs	Bill Nugent	College of Social Work	Second Place
Meredith Hawk	Studying the Effects of Race on the Duration of Child Mentoring Matches	Bill Nugent	College of Social Work	Third Place
Kalynne Woodard	Factors Affecting Maternal Visitation with their NAS Infants in the NICU	Terri Orme	College of Social Work	Award of Merit
Rebecca Nicholson	Measuring ACE score validity based on method of scale administration	Bill Nugent	College of Social Work	Award of Merit

<b>College of Arts &amp; Sciences, Honors English 298</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Aruha Khan	An Analysis of the Impact of Finance-Based Accounting upon High-Risk Decision-Making in American Corporations	Randy Adicott	College of Arts & Sciences, Honors English 298	First Place

Travis Thornton	Examining the Effects of Americanization on International Chinese Student's Perceptions of China	Robin Barrow	College of Arts & Sciences, Honors English 299	Second Place
Madalyn Payne	Current Opioid Regulation: Impact on Prescribers and their Patients	Robin Nicks	College of Arts & Sciences, Honors English 300	Third Place

<b>College of Architecture &amp; Design</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Michael Lidwin, Tyler Sanford, Elizabeth Ott, Cochran Tettleton, Sydney Bittinger, John Huddleston, Margaret House, Walter Costner, Aubrey Bader, Kari Essary, Samuel Brown, Schuyler Daniel, Brian Pickle, Allison Ward	Design-Building as Community Empowerment through Green Magnet Academy's Little STEAM Library	Katherine Ambroziak	College of Architecture & Design	Award of Excellence



Grayson Word, Nicole Hamel, Allison Ward	Haitian Housing: Social and Cultural Evolution Through Transitional Space	Katherine Ambroziak	College of Architecture & Design	Award of Excellence
Allison Ward	Preserving McKee Hall	Tricia Stuth	College of Architecture & Design	Award of Excellence
Grace Altenbern	A Machine to Understand the Tennessee River	Brian Ambroziak	College of Architecture & Design	Award of Excellence
Niklos Toldi	Hollow Convergence	Lisa Mullikin	College of Architecture & Design	Award of Excellence
Zachary Orig	Organic Urbanisms: Applied Agronomy on the Campus of Knoxville College	Tricia Stuth	College of Architecture & Design	Award of Excellence
Joseph Platt	The DJ's Archive	Jennifer Akerman	College of Architecture & Design	Award of Excellence
Allison Ward	MEATSPACE: Reconciling Perceptions of the Meal as Architecture	Brian Ambroziak	College of Architecture & Design	Award of Excellence

<b>College of Arts &amp; Sciences, Art, Music, Theater</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Collin Hall	Lighting Design for The Real Inspector Hound	Kenton Yeager	College of Arts & Sciences for Art, Music, and Theater	Award of Excellence
Steven Brown	From "Northern Lights" to "The Ground": A Stylistic Survey of the Choral Works of Ola Gjeilo	Brendan McConville	College of Arts & Sciences for Art, Music, and Theater	Award of Excellence

Hannah Mcmillen	Shelf Help	Sarah Lowe	College of Arts & Sciences for Art, Music, and Theater	Award of Excellence
Vicki Nguyen	Music as a Metaphor for Culture	Carolyn Staples	College of Arts & Sciences for Art, Music, and Theater	Award of Excellence
Alaysia Jetter	Two & Fro	Sarah Lowe	College of Arts & Sciences for Art, Music, and Theater	Award of Excellence
Cassidy Bruninga	Lokel	Sarah Lowe	College of Arts & Sciences for Art, Music, and Theater	Award of Excellence
Tiara Householder	Imprints	Sarah Lowe	College of Arts & Sciences for Art, Music, and Theater	Award of Excellence
McLane Zaitz, Carrie Garrison, Ndigirigi Gichingiri, Evan Zelem	Dixon vs. Alabama State Board of Education	Carolyn Staples	College of Arts & Sciences for Art, Music, and Theater	Honorable Mention
Alexa Pavon	Young Designers in the Freelance World	Sarah Lowe	College of Arts & Sciences for Art, Music, and Theater	Honorable Mention
Haley Ivey	Empowering Women with PCOS: Lifestyle Tracking Made Simple	Sarah Lowe	College of Arts & Sciences for Art, Music, and Theater	Honorable Mention

Geghie Davis	Intersectionality of African American Women During the Civil Rights Movement	Carolyn Staples	College of Arts & Sciences for Art, Music, and Theater	Honorable Mention
Jennifer Bondarenko	Left Write Writing Exercises for Graphic Design Students	Sarah Lowe	College of Arts & Sciences for Art, Music, and Theater	Honorable Mention

<b>College of Arts &amp; Sciences, Natural Sciences</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Landen Mcdonald	Turbulent Flow Modeling using Cryogenic Helium and Neutron Beams	Yuri Kamyshkov	College of Arts & Sciences, Natural Science	Award of Excellence
Afton Russell	A Cell Cycle Cue Triggers Cell Growth Resumption After Division	Maitreyi Das	College of Arts & Sciences, Natural Science	Award of Excellence
Jackson Turner	How does elevation affect arbuscular mycorrhizal fungal abundance?	Stephanie Kivlin	College of Arts & Sciences, Natural Science	Award of Excellence
John Hymel	A computational study of CO2 interactions with functionalized calixarene molecules	Konstantinos D. Vogiatzis	College of Arts & Sciences, Natural Science	Award of Excellence
Thomas Clarity	Acute social defeat-induced neuroinflammation in the vmPFC of Syrian hamsters via microglial activation	Matthew Cooper	College of Arts & Sciences, Natural Science	Award of Excellence

Andrew Dixon	Cytolytic Properties of Transmembrane Peptides	Franc Olivares Barrera	College of Arts & Sciences, Natural Science	Award of Excellence
Kyle Freeman	Investigating Role of Cell Wall Modifying Enzymes on Intercellular Trafficking in Plants	Tessa Burch-Smith	College of Arts & Sciences, Natural Science	Award of Excellence
Parker Stevenson	Spying on Mice: Video coding and quantifying pup retrieval behavior in adult female mice	Keerthi Krishnan	College of Arts & Sciences, Natural Science	Award of Excellence
Margaret Spangler	Arabidopsis thaliana NIP2;1: A Lactic Acid Transporter With a Role in Plant Survival Under Low Oxygen Stress	Daniel Roberts	College of Arts & Sciences, Natural Science	Award of Excellence
Emily Graham	The Relationship Between Dominance Status and Coping Strategy	Matthew Cooper	College of Arts & Sciences, Natural Science	Award of Excellence
Philip Morgan	Examining the Role of the GCN2-eIF2 $\alpha$ Paradigm in a ROS-mediated Stress Signaling Pathway in Arabidopsis thaliana	Ansui Lokdarshi	College of Arts & Sciences, Natural Science	Award of Excellence
Mia Roark	How does age-related floral trait variation affect reproductive success in an annual plant, Collinsia verna?	Robert McElderry	College of Arts & Sciences, Natural Science	Award of Excellence
Trell Stroud	Computational Investigation of a New Fe(II) Tetracarbene Catalyst	Steven Johnston	College of Arts & Sciences, Natural Science	Award of Excellence

Jody Fleming	Developmental plasticity in response to increased temperature mean and variation helps beetles adjust to temperature change	Kimberly Sheldon	College of Arts & Sciences, Natural Science	Award of Excellence
Bruce Boles	The Full Genome Sequence of an Antarctic Microbe Constructed Using a Rapid, Portable Sequencer and a Hybrid Assembly	Jill Mikucki	College of Arts & Sciences, Natural Science	Award of Excellence
Brett Emery, Matthew Everett	Investigating the cortical expression of perineuronal nets in mouse models of CDKL5 disorder	Keerthi Krishnan	College of Arts & Sciences, Natural Science	Award of Excellence
Kaylie Richard	Identification and Purification of an Outer Membrane Protein from <i>Campylobacter jejuni</i>	Jeremiah Johnson	College of Arts & Sciences, Natural Science	Award of Excellence
Isabella Ritchie	Using Behavioral Variation to Explain Wolf Spider Community Structure	Susan Riechert	College of Arts & Sciences, Natural Science	Award of Excellence
Rachel Shah	Identifications of dying larval neurons during early phase of metamorphosis and genetic factors involved in their apoptosis in <i>Drosophila melanogaster</i>	Jae Park	College of Arts & Sciences, Natural Science	Honorable Mention
Jeffrey Dixon, Molly Landon, Brandon Kristy	Genetically engineering <i>E. coli</i> to degrade toxic contaminants by utilizing dehalogenating mechanisms	Frank Loeffler	College of Arts & Sciences, Natural Science	Honorable Mention
Kevin Kleiner	Modeling Solid-Liquid Interface Reactions with Next Generation Quantum Molecular Dynamics	Nick Dygert	College of Arts & Sciences, Natural Science	Honorable Mention

Alva Bethurum	Association of BMI with Increased Anastomotic Time in Kidney Transplantation	Gladys Alexandre	College of Arts & Sciences, Natural Science	Honorable Mention
Whitney Gulledge	Characterizing degradation of the core hypoxia response protein Calmodulin-Like 38 during post-hypoxia recovery	Daniel Roberts	College of Arts & Sciences, Natural Science	Honorable Mention
Clare Remy	Identifying Cystic Fibrosis (CF) Skeletally: A Proposed Differential Diagnosis	Amy Mundorff	College of Arts & Sciences, Natural Science	Honorable Mention

<b>Tickle College of Engineering</b>				
Student (s)	Project Title	Faculty Mentor	College	Award
Cabot Anderson, Jordan Brewer, Calvin Conn, Luke Martin	Design of a Solar-Powered Non-Thermal Plasma Device for Water Disinfection	Xiofei Ye	Tickle College of Engineering	First Place, Capstone Design
Matthew Johnson, Ryan Watson, James Louis, Christian Patterson	Rain Garden Remediation and Infiltration Enhancement by Biochar Injection System	John Tyner	Tickle College of Engineering	Second Place, Capstone Design
Yah Mensa, Alec Yen	SABR: Development of a Neuromorphic Balancing Robot	Mark Dean	Tickle College of Engineering	First Place, Research
Taylor Berger	Decoding Brainwaves for Visual Attention to Faces and Scenes	Xiaopeng Zhao	Tickle College of Engineering	Second Place, Research

Lorna Treffert	The ARMor App: An Augmented Reality Prototype for Reliability and Maintainability	Xueping Li	Tickle College of Engineering	Third Place, Research
Elijah Davis	Tailored Metallic Hyper Energetic Nanomaterial Synthesis	Dibyendu Mukherjee	Tickle College of Engineering	Award of Merit
Collin Pekol	Developing a Method for Testing Tackiness of Bituminous Tack Coats	Chris Wetteland	Tickle College of Engineering	Award of Merit
Nicole Kowalski	Comparing EMG- and Goniometer-Driven NMI Control For A Virtual Target Acquisition Task	Dustin Crouch	Tickle College of Engineering	Award of Merit
Matthew Adams	Oxide Supported Nickel Based Intermetallic Compounds in Dry Reforming of Methane for Syngas Production	Siris Laursen	Tickle College of Engineering	Award of Merit
Logan White	Investigation of the effect of laser power on defects, texture, and tensile behavior of additively manufactured 316L stainless steel using in-situ synchrotron x-ray computed tomography and diffraction	Hahn Choo	Tickle College of Engineering	Award of Merit
Quinton Wright	Synthesis and Characterization of High-Entropy Perovskite (GdLaNdSmY)MnO <sub>3</sub>	Veerle Keppens	Tickle College of Engineering	Award of Merit

**Congratulations to all of this year's winners!**