



# 28th Annual Celebration of Student Research and Creative Endeavors

Session Schedule  
April 16, 2025



## **Event Information**

**Doors Open at 8:30am.** All presentations occur on the 4th Floor Plemmons Student Union. There is a short break between 12:00-1:00pm  
Poster Competition Awards are announced at 12:45pm.

**Poster Sessions** include 2 sessions in the morning and 2 sessions in the afternoon.

Morning Session 1 - 9:00am -10:30am.

This session also includes the Poster Competition where Undergraduate and Graduate students were selected to participate based on reviews of their abstracts. They will present their poster to a panel of judges and the top 3 in each category will be selected.

Morning Session 2 - 10:40am -12:00pm

Afternoon Session 1 - 1:00pm - 2:30pm

Afternoon Session 2 - 2:40pm - 4:00pm

Poster boards are 4 feet by 4 feet. Numbers are assigned to posters - please look for your poster number upon arrival. Please arrive at least 10 minutes before your presentation to place your poster on the assigned board.

**Oral Sessions** include 2 sessions in the morning and 3 sessions in the afternoon.

Oral Session 1 - 9:00am - 11:20am

Oral Session 2 - 10:40am - 12:00pm

Oral Session 3 - 1:00pm - 2:20pm

Oral presentations are 20 minutes in length allowing for at least 5 minutes for questions. Please arrive at least 10 minutes before your scheduled session in order to upload your presentation. Please stay for the entire session. Oral presentations will occur in either room 415 or 417 Plemmons Student Union.

**Annual Poster Competition - 9:00-10:30am - Parkway Ballroom**

	<b>Poster Number</b>
<b>Graduate Student Poster Competition Finalists</b>	
Caroline Fehlman, Geography Graduate Student - Masters Faculty Mentor: Maggie Sugg, Geography and Planning Co-Author(s): Maggie Sugg; Dennis Guignet; Zhiyuan Yao Title: Maternal Healthcare Access Disparities in North Carolina, 2016-2019: A Fine-Scale Geospatial Analysis	PC1
Jenna Hall, Biology Graduate Student - Masters Faculty Mentor: Mary Kinkel, Biology Co-Author(s): N/A Title: THE ROLE OF GUT MOTILITY GENES IN ZEBRAFISH	PC2
Kaylee Noble, Nutrition Graduate Student - Masters Faculty Mentor: Alisha Farris, Nutrition and Health Care Management Co-Author(s): Emily Bowles, Dr. Brook Harmon, Dr. Heather Schier Title: Evaluating the Effectiveness of a Cultural Foods Course on Cultural Competence Through a Survey	PC3
Jose Picado, Exercise Science Graduate Student - Masters Faculty Mentor: Alan Needle, Public Health and Exercise Science Co-Author(s): Dr. Herman van Werkhoven, Dr. Kristen Nicholson, Dr. Rene Salinas Title: PULSE VS KINATRAX: CAN CONCURRENT VALIDITY BE ESTABLISHED WHEN COMPARING IMU TO MARKERLESS MOTION CAPTURE ELBOW VARUS TORQUE IN COLLEGIATE PITCHERS?	PC4
Kyle Vetter, Business Administration Graduate Student - Masters Faculty Mentor: Dennis Guignet, Economics Co-Author(s): N/A Title: THE IMPACTS OF MITIGATING HAZARDOUS CHEMICAL RELEASES ON INFANT HEALTH	PC5
Sean Doherty, Exercise Science Graduate Student - Masters Faculty Mentor: Herman van Werkhoven, Public Health and Exercise Science Co-Author(s): Alan R. Needle, Robert J. Kowalsky Title: CAN THE OPENCAP MARKERLESS MOTION CAPTURE FRAMEWORK DETECT LOWER EXTREMITY KINEMATIC CHANGES DURING A FATIGUING RUN?	PC6
Joe Rebilas, Sustainable Technology Graduate Student - Masters Faculty Mentor: Chris Tolbert, Sustainable Technology and the Built Environment Co-Author(s): None Title: CASE STUDY OF A COST-EFFECTIVE SUSTAINABLE TRANSPORTATION SOLUTION: A STEP-BY-STEP MANUAL FOR THE ELECTRIC CONVERSION OF A 1988 FORD RANGER	PC7

Caleb Blackburn, Geography Graduate Student - Masters Faculty Mentor: Maggie Sugg, Geography and Planning Co-Author(s): Sophie Ryan Title: Spatial Disparities in Disaster Recovery: Assessing Flood Risk, Resilience, and Federal Aid Distribution in Western North Carolina After Hurricane Helene	PC8
François Desautels, Biology Graduate Student - Masters Faculty Mentor: Andrew Bellemer, Biology Co-Author(s): Dr. Megan Culpepper Title: ANTICONVULSANT PROPERTIES OF LONG POLYUNSATURATED FATTY ACIDS IN DROSOPHILA MELANOGASTER SEIZURE MODEL	PC9
Chris Lucero, Geography Graduate Student - Masters Faculty Mentor: Derek Martin, Geography and Planning Co-Author(s): Forest Pearson Title: INVESTIGATING THE TEMPORAL NATURE OF OROGRAPHIC INFLUENCES ON PRECIPITATION INTENSIFICATION DURING HURRICANE HELENE IN THE SOUTHERN APPALACHIAN MOUNTAINS.	PC10
	<b>Poster Number</b>
<b>Undergraduate Student Poster Competition Finalists</b>	
Withdrawn	PC11
Lauren Fleeman, Environmental Science Undergraduate Student Faculty Mentor: William Anderson, Geological and Environmental Sciences Co-Author(s): N/A Title: BASEFLOW SOURCES IN A MOUNTAIN HEADWATER STREAM BASED ON PASTA MODELING OF AIR AND STREAM TEMPERATURES	PC12
Addison Pollock, Biology Undergraduate Student Faculty Mentor: Darren Seals, Biology Co-Author(s): Hannah Wolf, Maryam Ahmed Title: THE EFFECT OF VSV INFECTION ON PODOSOME ACTIVITY IN M1 AND M2 THP-1 MACROPHAGES	PC13
Leiana Santoro, Geology Undergraduate Student Faculty Mentor: Andrew Heckert, Geological and Environmental Sciences Co-Author(s): N/A Title: Dissolving diagenetic selenite from microvertebrate concentrate: An exploration of diverse techniques	PC14

<p>Amanda Bruckstein, Nutrition Undergraduate Student  Faculty Mentor: Caroline Smith, Public Health and Exercise Science  Co-Author(s): N/A  Title: THE EFFECTS OF HYPERHYDRATION AND MENSTRUAL CYCLE PHASE ON EXERCISE PERFORMANCE IN AEROBICALLY TRAINED WOMEN</p>	PC15
<p>Ian Daniel, Geography Undergraduate Student  Faculty Mentor: William (Hui) Wang, Geography and Planning  Co-Author(s): Joshua McLellan  Title: Observing Western North Carolina Well Water Quality Post Flood-Event</p>	PC16
<p>Justin Gilbert, Public Health Undergraduate Student  Faculty Mentor: Martie Thompson, Public Health and Exercise Science  Co-Author(s): Sophie Ryan (potentially)  Title: COVID-19 SCHOOL CLOSURES IN NORTH CAROLINA AND THE EFFECT ON ADOLESCENT MENTAL HEALTH AND EMERGENCY DEPARTMENT VISITS.</p>	PC17
<p>Quinn Keefer, Geography Undergraduate Student  Faculty Mentor: Maggie Sugg, Geography and Planning  Co-Author(s): Caleb Blackburn  Title: SPATIAL CLUSTERING OF GUN VIOLENCE DURING HEATWAVES IN THE UNITED STATES (2015–2023): A PURELY SPATIAL BERNOULLI ANALYSIS</p>	PC18
<p>Raven Lester, Biology Undergraduate Student  Faculty Mentor: Ashley Adams, Biology  Co-Author(s): Rylee Strassner  Title: AN ASSESSMENT OF FUNGAL DIVERSITY IN SOUTHERN APPALACHIAN COARSE WOODY DEBRIS</p>	PC19
<p>Tucker Terrell, Geology Undergraduate Student  Faculty Mentor: Ellen Cowan, Geological and Environmental Sciences  Co-Author(s): Keith Seramur  Title: RESTORING SOUTHERN HISTORY THROUGH GROUND-PENETRATING RADAR: REVEALING THE LOST BURIAL GROUND OF ENSLAVED ANCESTORS AT FORT DEFIANCE</p>	PC20

**Morning Session Poster Presentations 9:00-10:30am Parkway Ballroom**

<b>Presenter</b>	<b>Poster Number</b>
Jessica Frazier, Biology Undergraduate Student Faculty Mentor: Ashley Adams, Biology Co-Author(s): Mia Dziwanowski, Hei-Young Kim, Jeremy Ferrell Title: AN EVALUATION OF THE IMPACT OF ORGANIC AMENDMENTS ON CROP GROWTH AND NUTRIENT CONCENTRATION	21
Zoe Horack, Biology Undergraduate Student Faculty Mentor: Shea Tuberty, Biology Co-Author(s): Spencer Bechtol, Zachary Abbott, Alek Brown, Joe Johnson, George Santucci Title: REVIVING RIVERS: CAN LIFE BE RECOVERED THROUGH STREAM RESTORATION?	22
Maggie Pipkin, Biology Graduate Student - Masters Faculty Mentor: Shea Tuberty, Biology Co-Author(s): Aleisha Whipple, Liyah Moser, Duck Duckworth, Sherri White-Williamson, Carol Babyak Title: THE CUMULATIVE IMPACT OF ENVIRONMENTAL POLLUTANTS ON SAMPSON COUNTY WELL WATER	23
Anderson Payne, Biology Graduate Student - Masters Faculty Mentor: Ashley Adams, Biology Co-Author(s): Jeb Barrett Title: EFFECTS OF BIOCHAR AMENDMENTS ON NEMATODE COMMUNITY STRUCTURE	24
Ava Clark, Biology Undergraduate Student Faculty Mentor: Andrew Bellemer, Biology Co-Author(s): N/A Title: THE ROLE OF PHOSPHATIDYLCHOLINE LYSOPHOSPHOLIPASE, SWISS CHEESE, IN NOCICEPTION	25
Addisyn Keen, Biology Undergraduate Student Faculty Mentor: Andrew Bellemer, Biology Co-Author(s): N/A Title: Hormonal Modulation of Nociception: The Influence of Ecdysone in Drosophila	26
Hannah Orton, Biology Graduate Student - Masters Faculty Mentor: Andrew Bellemer, Biology Co-Author(s): N/A Title: Neurological Dysfunction Genes related to Seizure Phenotypes in Parabss1	27
Umamah Quadri, Biology Undergraduate Student Faculty Mentor: Andrew Bellemer, Biology Co-Author(s): N/A	28

Title: DIET MODIFICATIONS USED AS TREATMENT FOR EPILEPSY	
Maxwell Ramey, Biology Undergraduate Student Faculty Mentor: Jon Davenport, Biology Co-Author(s): Jon Davenport Title: Diet of three co-occurring large Plethodons in western North Carolina	29
Jacob Clontz, Biology Undergraduate Student Faculty Mentor: Mark Venable, Biology Co-Author(s): N/A Title: PROTECTING MAMMALIAN CELLS FROM PIT VIPER VENOM USING A NATURAL LIPID INHIBITOR	30
Kennedi Ratcliffe, Economics Undergraduate Student Faculty Mentor: Dr. Dennis Guignet, Economics Co-Author(s): Dr. Santosh Nandi, Department of Management, nandis1@appstate.edu Title: ASSESSING THE EFFECT OF HURRICANES ON HOUSING MARKETS: A STUDY OF NORTH CAROLINA AND VIRGINIA COASTAL COUNTIES	31
Sofie Van Moorlegheem, Nutrition Graduate Student - Masters Faculty Mentor: Manan Roy, Nutrition and Health Care Management Co-Author(s): Alisha Farris Ph.D., RDN, and Danielle Nunnery Ph.D., RDN. Title: CLIMATE CHANGE AND NUTRITION OUTCOMES - A LITERATURE REVIEW	32
Samuel Svetik, Nutrition Graduate Student - Masters Faculty Mentor: Ayron Walker, Nutrition and Health Care Management Co-Author(s): Danielle Nunnery, Katie Wolsiefer Title: EXPLORING FACULTIES' INPUT AND FEEDBACK ON AN EDUCATIONAL SIMULATION ON WEIGHT BIAS	33
Carolyn Gura, Exercise Science Graduate Student - Masters Faculty Mentor: Rebecca Battista, Public Health and Exercise Science Co-Author(s): Brooke C. Towner, Stella Cybulski, J. Joy James Title: SCIENCE IN MOTION: EXPLORING WAYS TO INCREASE CHILDRENS PHYSICAL ACTIVITY DURING THE SCHOOL DAY	34
Mabry Watson, Exercise Science Graduate Student - Masters Faculty Mentor: Alan Needle, Public Health and Exercise Science Co-Author(s): Jared Skinner Jennifer Howard Title: NON-INVASIVE BRAIN STIMULATION OF THE MOTOR CORTEX ON HOP PERFORMANCE IN INDIVIDUALS WITH ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION	35
Liam Brady, Exercise Science Undergraduate Student Faculty Mentor: Matthew Rogatzki, Public Health and Exercise Science Co-Author(s): N/A Title: SWEAT LACTATE AS A MARKER OF EXERCISE INTENSITY	36

Colby Bierwirth, Geology Undergraduate Student Faculty Mentor: Cole Edwards, Geological and Environmental Sciences Co-Author(s): N/A Title: LOCATION MATTERS, OR DOES IT? TESTING STABLE CARBON AND OXYGEN ISOTOPIC VARIABILITY FROM ORDOVICIAN CARBONATE LITHOLOGIES: IMPLICATIONS FOR DIAGENETIC OVERPRINTS OF PALEOENVIRONMENTAL RECONSTRUCTIONS	37
Jackson Leatherman, Geology Undergraduate Student Faculty Mentor: Cole Edwards, Geological and Environmental Sciences Co-Author(s): N/A Title: STABLE CARBON ISOTOPE ( $\delta^{13}\text{CCARB}$ AND $\delta^{13}\text{CORG}$ ) EVIDENCE OF THE TOARCIC OCEAN ANOXIC EVENT FROM CENTRAL ITALY: EVIDENCE FOR A GLOBALLY MIXED TETHYS SEA.	38
Sophia Choiniere, Geology Undergraduate Student Faculty Mentor: Andrew Heckert, Geological and Environmental Sciences Co-Author(s): N/A Title: LIFE RECONSTRUCTION OF THE EARLY CRETACEOUS DROMAEOSAUR MICRORAPTOR GUI, THE SMALL THIEF	39

### Morning Session Poster Presentations 10:40am-12:00pm Parkway Ballroom

Avery Hodgson, Biology Undergraduate Student Faculty Mentor: Rachel Bleich, Biology Co-Author(s): Dr. Kevin Zwetsloot, Dr. Chequita Brooks, Oluwatobi Azeez Title: QUANTIFICATIONS OF CHANGES IN SHORT-CHAIN FATTY ACIDS DUE TO EXERCISE IN OLD AND YOUNG MICE	41
Kiara Neilsen, Biology Undergraduate Student Faculty Mentor: Rachel Bleich, Biology Co-Author(s): Ally Lawing Title: BACTERIAL INTERACTIONS OF A CALORICALLY RESTRICTED MICROBIOME	42
Marcus Planck, Biology Undergraduate Student Faculty Mentor: Cara Fiore, Biology Co-Author(s): N/A Title: ECOLOGY OF FRESHWATER SPONGES IN WESTERN NORTH CAROLINA	43
Tanishka Dass, Chemistry Undergraduate Student Faculty Mentor: Michael Reddish, Chemistry and Fermentation Sciences Co-Author(s): Amy Brown Title: The Stabilization of Membrane Scaffold Proteins for Lipid Nanodisc Formation	44
Heiden Kristoffersen, Chemistry Undergraduate Student Faculty Mentor: Jefferson Bates, Chemistry and Fermentation Sciences Co-Author(s): Jack N. McKeon, Gary L. Guillet Title: ELECTRONIC STRUCTURE STUDIES OF A REDUCED TRI-FERROUS EXTENDED METAL ATOM CHAIN COMPLEX	45



Emily Willman, Environmental Science Undergraduate Student Faculty Mentor: Robert Swarhout, Chemistry and Fermentation Sciences Co-Author(s): Harlie Hodge Title: QUANTIFYING BIODEGRADATION RATES OF DILUTED BITUMEN FROM THE 2010 KALAMAZOO OIL SPILL	46
Benjamin Goodridge, Environmental Science Undergraduate Student Faculty Mentor: Sarah Carmichael, Geological and Environmental Sciences Co-Author(s): Dr. Sarah Carmichael, Dr. William Anderson Title: HOW DOES SUBMARINE GROUNDWATER DISCHARGE AFFECT PALEOTEMPERATURE CALCULATIONS? A CASE STUDY FROM DEVONIAN ISLAND ARCS IN THE CENTRAL ASIAN OROGENIC BELT.	47
Zsigmond Majtenyi, Environmental Science Undergraduate Student Faculty Mentor: William Anderson, Geological and Environmental Sciences Co-Author(s): Nicholas Fiori Title: Impacts of Storm Overwash and Sea Level Rise on Saltwater Intrusion of Barrier Island Freshwater Aquifers	48
Jack Dickson, Geography Undergraduate Student Faculty Mentor: Bhuwan Thapa, Geography and Planning Co-Author(s): Bhuwan Thapa, Geumjin Han, Miyoun Kwon, Yoonjin Ro Title: Spatiotemporal variations in surface temperature and built environment: Case of Seoul, South Korea	49
Eden Vigus, Geography Undergraduate Student Faculty Mentor: Bhuwan Thapa, Geography and Planning Co-Author(s): Jackson Kinney, Bhuwan Thapa, Erik Rabinowitz, Ram Poudel, Jennifer Schroeder Tyson, Brian Raichle Title: ACTIVE COMMUTER EXPOSURE TO AIR POLLUTION IN RURAL APPALACHIAN COLLEGE COMMUNITY	50
Bella Vanden Boom, Geography Graduate Student - Masters Faculty Mentor: Maggie Sugg, Geography and Planning Co-Author(s): Caroline Fehlman Title: IDENTIFYING MATERNAL HEALTHCARE DESERTS: A CENSUS-TRACT LEVEL SPATIAL ANALYSIS	51
Elvis Geissler, Geology Undergraduate Student Faculty Mentor: Andrew Heckert, Geological and Environmental Sciences Co-Author(s): Caeden Carter, Kathleen Plesh, Joshua Crouch Title: PRODUCING PORTABLE PALEONTOLOGICAL EXHIBITS TO ENHANCE EDUCATIONAL ENGAGEMENT	52
Madison Schwarte, Geology Undergraduate Student Faculty Mentor: Marta Toran, Geological and Environmental Sciences Co-Author(s): N/A Title: MATERIALS FOR YOUTH EDUCATION OUTREACH	53
Jayne Hinson, Physics Undergraduate Student Faculty Mentor: Jefferson Bates, Chemistry and Fermentation Sciences Co-Author(s): N/A Title: COMPLEX EXCITATION ENERGIES FROM A FIRST-ORDER TRUNCATION OF	54

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Clara Lopez, Physics Undergraduate Student Faculty Mentor: Brooke Hester, Physics and Astronomy Co-Author(s): Brooke Hester Title: STRATEGIES FOR OPTIMIZING RAMAN SPECTRA IN A LASER TWEEZER RAMAN SPECTROSCOPY (LTRS) SYSTEM:	55
Alan Schneider, Physics Undergraduate Student Faculty Mentor: Brooke Hester, Physics and Astronomy Co-Author(s): Asher Rockriver, Clara Lopez Title: Implementation approaches for automating and optimizing optical tweezers in a Laser Tweezer Raman Spectroscopy system	56
Chloe Thompson, Physics Undergraduate Student Faculty Mentor: Brooke Hester, Physics and Astronomy Co-Author(s): N/A Title: IMPLEMENTATION OF A SPATIAL LIGHT MODULATOR FOR PRODUCING AN ARBITRARY INTENSITY DISTRIBUTION LASER BEAM	57
Cade Tischer, Physics Undergraduate Student Faculty Mentor: James Sherman, Physics and Astronomy Co-Author(s): Jonathan Linderich Title: OPTIMIZING AEROSOL HUMIDIFICATION FOR IMPROVED CLIMATE MODELING AND FIELD MEASUREMENTS	58
Michaela Sutherland, Psychology Undergraduate Student Faculty Mentor: Tim Huelsman, Psychology Co-Author(s): Cassidy Zekas, Leah Uteg-Winkelman, Camila Yamaleyeva, Niasia Jones, Hunter Bass, Jess Doll, Kristl Davison Title: SCALING DEI: EVALUATING CHANGE PREPAREDNESS IN ORGANIZATIONS	59
Jaylin Van Noy, Psychology Undergraduate Student Faculty Mentor: Yalcin Acikgoz, Psychology Co-Author(s): Anastasia Dubinsky, Reagan Kaeding, Alex Hernandez Title: PROFESSIONALISM	60
Elizabeth Arnold, Psychology Undergraduate Student Faculty Mentor: Shawn Bergman, Psychology Co-Author(s): Dacey Ramroth Title: SAFETY REPORTING BETWEEN EMPLOYEES AND CONTRACTORS	61
Mollie Bollinger, School Psychology Graduate Student - Masters Faculty Mentor: Sandra Gagnon, Psychology Co-Author(s): Mary Margaret Watson, India Horn, Emie Choquette, Kellie Honeycutt, Katherine Smith, Jack Settlemyer, Madeline Messitt, Gracie Leophard Title: COLLEGE VICTIMS OF HIGH SCHOOL BULLYING: DOES SOCIAL SUPPORT MATTER?	62

<p>Mary Margaret Watson, School Psychology Graduate Student - Masters  Faculty Mentor: Sandra Gagnon, Psychology  Co-Author(s): Mary Margaret Watson, Sandra Gagnon, Mollie Bollinger, Emie Choquette, India Horn, Kellie Honeycutt, Jack Settlemyer, Katherine Smith, Madeline Messitt, Gracie Leophard  Title: College Victims of High School Bullying: Emotion Regulation May Help</p>	63
<p>Sophia Chapdelaine, School Psychology Graduate Student - Masters  Faculty Mentor: Crystal Taylor, Psychology  Co-Author(s): Gracie Streeval and Jamie Yarbrough  Title: BOOSTING SOCIAL-EMOTIONAL SKILLS: SECOND STEP'S IMPACT ON ELEMENTARY CHILDREN</p>	64
<p>Sarah Louise Wood, Sociology Undergraduate Student  Faculty Mentor: Ellen Lamont, Sociology  Co-Author(s): N/A  Title: CLASSED DATING PRACTICES: HOW COLLEGE STUDENTS USE SOCIAL CLASS TO NAVIGATE THEIR ROMANTIC DECISIONS</p>	65
<p>Emma Getz, Public Health Undergraduate Student  Faculty Mentor: Richard Christiana, Public Health and Exercise Science  Co-Author(s): N/A  Title: TICK-BORNE DISEASE PREVENTION IN LONG-DISTANCE APPALACHIAN TRAIL HIKERS: A HEALTH BELIEF MODEL APPROACH</p>	66
<p>Caroline Halliday, Recreation Management Undergraduate Student  Faculty Mentor: Mandy Harrison, Recreation Management and Physical Education  Co-Author(s): N/A  Title: EXPLORING THE CONNECTION BETWEEN TRANSFORMATIVE EDUCATIONAL EXPERIENCES AND RESILIENCE</p>	67
<p>Isabel Schniper, Recreation Management Undergraduate Student  Faculty Mentor: Erik Rabinowitz, Recreation Management and Physical Education  Co-Author(s): n/a  Title: THE CORRELATION OF RECREATION AND REDUCING OFFENDING IN NORTH CAROLINA.</p>	68
<p>Madi Heater, Recreation Management Undergraduate Student  Faculty Mentor: Erik Rabinowitz, Recreation Management and Physical Education  Co-Author(s): N/A  Title: ECONOMIC AND ENVIRONMENTAL IMPACTS OF HURRICANE HELENE ON THE BLUE RIDGE PARKWAY</p>	69
<p>Gabrielle Engstrand, Psychology Undergraduate Student  Faculty Mentor: Kym Fasczewski, Public Health and Exercise Science  Co-Author(s): Samantha DuBois  Title: SUSTAINING PHYSICAL ACTIVITY IN MULTIPLE SCLEROSIS: THE ROLE OF MOTIVATION, COGNITION FUNCTION, AND CHARITY EVENT PARTICIPATION</p>	70

Patton Ansley, Exercise Science Undergraduate Student Faculty Mentor: Jared Skinner, Public Health and Exercise Science Co-Author(s): Breanna Gibson, Scott Collier, PhD. Title: SLEEP DISTURBANCES IN PARKINSON'S DISEASE: THE IMPACT OF INSUFFICIENT SLEEP TIME ON SLEEP EFFICIENCY AND DEEP SLEEP STAGES.	71
Katie Rhoades, Nursing Undergraduate Student Faculty Mentor: Tammy Haley, Nursing Co-Author(s): N/A Title: MEANING MAKING IN MAYHEM: THE IMPACT OF PASTORAL CARE ON INPATIENT PSYCHIATRIC PATIENTS	72
Emily Bowles, Nutrition Graduate Student - Masters Faculty Mentor: Alisha Farris, Nutrition and Health Care Management Co-Author(s): Brook E. Harmon PhD RDN FAND, Heather Schier PhD Title: EVALUATING THE IMPACT OF A CULTURAL FOODS COURSE THROUGH SEMI-STRUCTURED INTERVIEWS	73
Joey Hochstrasser, Biology Undergraduate Student Faculty Mentor: Shea Tuberty, Biology Co-Author(s): Marcus Planck, Camden Ryan Title: RADON LEVELS IN WATAUGA COUNTY, NORTH CAROLINA	74
Olivia Carter, Biology Undergraduate Student Faculty Mentor: Ava Udvadia, Biology Co-Author(s): Daneyda Rebolgar Torres Title: FUNCTIONAL TESTING OF ENHANCER DELETION MUTANTS PROMOTING GENE	75

### Afternoon Sessions Poster Presentation 1:00pm - 2:30pm Parkway Ballroom

Eric Bravver, Biology Undergraduate Student Faculty Mentor: Brooke Christian, Chemistry and Fermentation Sciences Co-Author(s): N/A Title: STABILIZATION OF ALCOHOL DEHYDROGENASE BY TARDIGRADE-SPECIFIC CYTOSOLIC ABUNDANT HEAT-SOLUBLE PROTEIN Q	81
Grace Alvanos, Biology Undergraduate Student Faculty Mentor: Brooke Hester, Physics and Astronomy Co-Author(s): Darren Seals Title: INVESTIGATING ELASTIC MODULUS CHANGES IN SRC527-EXPRESSING NIH 3T3 FIBROBLASTS AT DIFFERENT STAGES OF INVADOPODIA FORMATION	82
Isabela Rengifo Ramirez, Biology Undergraduate Student Faculty Mentor: Michael Reddish, Chemistry and Fermentation Sciences Co-Author(s): N/A Title: STABILITY OF A HUMAN ADRENODOXIN - CYTOCHROME P450 27A1 FUSION CONSTRUCT THROUGHOUT EXPRESSION AND PURIFICATION IN ESCHERICHIA COLI	83

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Audi Holloway, Biology Undergraduate Student Faculty Mentor: Jennifer Geib, Biology Co-Author(s): Caitlin McClear Title: DETECTION OF ISRAELI ACUTE PARALYSIS VIRUS IN HONEYBEES IN WESTERN NORTH CAROLINA	85
Michael Lowe, Chemistry Undergraduate Student Faculty Mentor: Jefferson Bates, Chemistry and Fermentation Sciences Co-Author(s): Jefferson E. Bates Title: Magnetic coupling constants of bimetallic complexes through the lens of the random phase approximation	86
Seth Brahney, Chemistry Undergraduate Student Faculty Mentor: Michael Reddish, Chemistry and Fermentation Sciences Co-Author(s): N/A Title: Development of LC-MS Methods for Measuring Cholesterol Oxidation by Human Cytochrome P450 27A1	87
Sarah Tucker, Chemistry Undergraduate Student Faculty Mentor: Michael Reddish, Chemistry and Fermentation Sciences Co-Author(s): N/A Title: APPLICATION OF PROFLUORESCENT SUBSTRATES TO CYTOCHROME P450 27C1	88
Matthew Manbodhe, Environmental Science Undergraduate Student Faculty Mentor: William Anderson, Geological and Environmental Sciences Co-Author(s): N/A Title: ESTIMATING AQUIFER PARAMETERS OF A DISCRETE FRACTURE USING EARTH TIDES	89
Adam Chastain, Exercise Science Graduate Student - Masters Faculty Mentor: Kimberly Fasczewski, My Mentor's Department is not listed or I am unsure what is their Department Co-Author(s): Chris Wing, Abi Cameron, Andrey Sanko, Kelli Okonek, Kimberly Fasczewski Title: Riding the Flow: Investigating Flow State Experiences in Male and Female Mountain Biking, River Sport, and Snow Sport Athletes	90
Christian Diaz, Exercise Science Undergraduate Student Faculty Mentor: Kym Fasczewski, Public Health and Exercise Science Co-Author(s): Jessica Schmid, Paige Bramlett, Chris Wing, Kimberly Fasczewski Title: Social Support and its Effect on Athlete Return to Play	91
Daliana Estevez, Exercise Science Undergraduate Student Faculty Mentor: Dr. Jared Skinner, Public Health and Exercise Science Co-Author(s): Dr. Robert Kowalsky and Ansley Patton Title: COMPARING GAIT ACTIVITY TOOLS TO ASSESS FALL RISK IN PARKINSON'S DISEASE	92

Withdrawn	93
James Bartlinski, Geology Undergraduate Student Faculty Mentor: Andrew Heckert, Geological and Environmental Sciences Co-Author(s): N/A Title: AN INVESTIGATION OF ENAMEL DEGRADATION IN TEETH OF THE HOMESTEAD SITE MICROVERTEBRATE ASSEMBLAGES AT THE GARITA GREEK FORMATION, (LATE TRIASSIC: NORIAN) NEW MEXICO	94
Joshua Crouch, Geology Undergraduate Student Faculty Mentor: Andrew Heckert, Geological and Environmental Sciences Co-Author(s): Ikaika Turner Title: A VERTEBRATE ASSEMBLAGE FROM THE LATE CRETACEOUS (MAASTRICHTIAN) PEEDEE FORMATION OF GREENVILLE, NORTH CAROLINA	95
Orion Buckley, Geology Undergraduate Student Faculty Mentor: Jamie Levine, Geological and Environmental Sciences Co-Author(s): Gabriele Casale Title: Deformation in Quartz and Calcite in Greenschist-Facies Rocks of the Alpi Apuane, Central Italy.	96
Alana Olson, Psychology Undergraduate Student Faculty Mentor: Shawn Bergman, Psychology Co-Author(s): Tony Grebentsov, Lauryn Womble, Brenna McNamara, Claire Parson, Abigail Branco Title: ASSESSING THE UTILITY OF A CAREER EXPLORATION PLATFORM FOR PSYCHOLOGY STUDENTS	97
Drew Snipe, Psychology Undergraduate Student Faculty Mentor: Shawn & Tim Bergman & Ludwig, Psychology Co-Author(s): Jacob Leslie, Firzana Syazania, Mariana Solanilla, Nick Rupert, Shawn Bergman, & Tim Ludwig Title: YOU'RE DOING IT WRONG! SAFETY REPORTING BETWEEN EMPLOYEES AND INDEPENDENT CONTRACTORS	98
Avery Blackwell, Psychology Undergraduate Student Faculty Mentor: Andrew Smith, Psychology Co-Author(s): N/A Title: Examining the Relationship between Risk Taking, Maximizing, and Anxiety	99
Caroline Schnitzlein, Psychology Undergraduate Student Faculty Mentor: Andrew Smith, Psychology Co-Author(s): DeVaughn Burnett-Garrett, Olivia Hamilton, Abigail Branco, and Andrew Smith Title: STEREOTYPES AS ENERGY-SAVERS: A REPLICATION AND EXTENSION OF MACRAE ET AL. (1994)	100

Gracie Streeval, School Psychology Graduate Student - Masters Faculty Mentor: Crystal Taylor, Psychology Co-Author(s): Sophia Chapdelaine Title: EMPOWERING EDUCATORS: CONSULTATION TO IMPROVE CLASSROOM MANAGEMENT AND REDUCE STRESS	101
Emily Reigard, School Psychology Graduate Student - Masters Faculty Mentor: Jamie Yarbrough, Psychology Co-Author(s): Gracie Streeval, Anhminh Nguyen, & Nicole Iturbide Title: IMPACT OF FACULTY RACE ON STUDENT REFERRAL AND SUSPENSION RATES	102
Lauren Perrone, Sociology Undergraduate Student Faculty Mentor: Dr. Ellen Lamont, Sociology Co-Author(s): N/A Title: "Bitch Better Pay for It": Fathers' Claims of Alienation in Family Court	103
Michael Ayiku, Sustainable Technology Graduate Student - Masters Faculty Mentor: Arezou Sadoughi, Sustainable Technology and the Built Environment Co-Author(s): N/A Title: CARBON IMPACT OF MODULAR MASS TIMBER	104
Duncan Burns, Technology Graduate Student - Masters Faculty Mentor: Sohad Abu-elzait, Sustainable Technology and the Built Environment Co-Author(s): Bradley Del Vecchio Title: SOLAR-POWERED WATER PURIFICATION SYSTEM	105
Abigail Putnam, Nutrition Graduate Student - Masters Faculty Mentor: Melissa Gutschall, Nutrition and Health Care Management Co-Author(s): Susan Hedges, PhD, Sydeena Isaacs, PhD, RD, LDN Title: DIETARY PATTERNS OF YOUNG ADULTS WITH INTELLECTUAL DISABILITIES ANALYZED BY PHOTO-ASSISTED RECALL: TAILORING NUTRITION EDUCATION INTERVENTIONS	106
Ryan Musgrave, Nutrition Graduate Student - Masters Faculty Mentor: Brook Harmon, Nutrition and Health Care Management Co-Author(s): Nathan West, PhD; Adam Hege, PhD Title: CLERGY PERSPECTIVES ON DESIGNING A FAITH-BASED PHYSICAL ACTIVITY PROGRAM INFORMED BY THE SOCIO-ECOLOGICAL MODEL	107
Therese Kafant, Nutrition Graduate Student - Masters Faculty Mentor: Danielle Nunnery, Nutrition and Health Care Management Co-Author(s): Dr. Manan Roy, PhD Title: SOCIO-DEMOGRAPHICS, SEVERE MATERNAL MORBIDITY, & OBSTETRIC OUTCOMES RELATED TO HOSPITAL CLOSURES IN NORTH CAROLINA	108
Elyssa Wiggins, Nutrition and Foods Graduate Student - Masters Faculty Mentor: Sydeena Isaacs, Nutrition and Health Care Management Co-Author(s): Amanda Hege, Andrea Anderson Title: FARM TO EARLY CARE AND EDUCATION PILOT PROGRAM- WESTERN NORTH CAROLINA HIGH COUNTRY INTEREST SURVEY	109

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<p>Nicole Iturbide, Psychology Graduate Student - Masters  Faculty Mentor: Jamie Yarbrough, Psychology  Co-Author(s): Gracie Streeval, India Horn, Sara Hehn, Mlynn Wooden, Emily Reigard, Anhminh Nguyen, Hannah Schulze, Kristian Terry, &amp; Elliana Hamilton  Title: THE BRAVE NEW WORLD OF AI AND ACADEMIC INTEGRITY</p>	151

**Oral Session Morning 9:00am - 10:20am Room 415 Plemmons Student Union**

<p>Anna Nall, Political Science Undergraduate Student  Faculty Mentor: Nancy Love, Government and Justice Studies  Co-Author(s): N/A  Title: ACTIONS SPEAK TO WORDS: AN ANALYSIS OF POLITICAL RHETORIC AND VIOLENCE</p>	9:00am
<p>CJ Burns, Building Sciences Undergraduate Student  Faculty Mentor: Sharareh Shirzad, Sustainable Technology and the Built Environment  Co-Author(s): Sharareh Shirzad, Jonathan Culpepper  Title: THE EFFECT OF BIOCHAR PARTICLE SIZE ON PHYSICAL AND MECHANICAL PROPERTIES OF CEMENT PASTE AND MORTAR</p>	9:20am
<p>Alex G. Langlais, Exercise Science Undergraduate Student  Faculty Mentor: Martie Thompson, Public Health and Exercise Science  Co-Author(s): N/A  Title: Concussion and Mental Health Associations among Youth Before and During the COVID-19 Pandemic: An Empirical Assessment</p>	9:40am
<p>Rylee Strassner, Biology Graduate Student - Masters  Faculty Mentor: Ashley Adams, Biology  Co-Author(s): N/A  Title: COMPARING CARBON STORAGE BETWEEN NATURAL SUCCESSIONAL DECIDUOUS FORESTS AND PLANTED CONIFEROUS FORESTS IN THE SOUTHERN APPALACHIAN MOUNTAINS</p>	10:00am

**Oral Session Morning 10:40 am-12:00pm Room 417 Plemmons Student Union**

Jonathan Culpepper, Technology Graduate Student - Masters Faculty Mentor: Dr. Sharareh Shirzad, Sustainable Technology and the Built Environment Co-Author(s): Dr Sharareh Shirzad Title: EFFECTS OF ARUNDO DONAX BIOCHAR AND CLASS F FLY ASH ON THE MECHANICAL PROPERTIES OF HYDRAULIC CEMENT MORTAR	10:40am
Christiana Wright, Computer Science Graduate Student - Masters Faculty Mentor: Nazia Sharmin, Computer Science Co-Author(s): Shahash Kandel Amanda Carr Title: RISK SCORING IN THE RECONNAISSANCE PHASE	11:00am
Changed to Poster	11:20am
Katie Baker, Chemistry Undergraduate Student Faculty Mentor: Christian Wallen, Chemistry and Fermentation Sciences Co-Author(s): N/A Title: SYNTHESIS OF ELECTRONICALLY DIVERSE METAL-ORGANIC COMPLEXES FOR HYDROGEN SULFIDE CAPTURE	11:40am

**Afternoon Oral Session 3 1:00-2:20pm Room 415 Plemmons Student Union**

<p>Caitlin McClear, Biology Undergraduate Student  Faculty Mentor: Jennifer Geib, Biology  Co-Author(s): Matthew Johnson, Maryam Ahmed, Audi Holloway  Title: Viral Spillover from Honey Bee Apiaries in Native Bumble Bee Populations</p>	1:00pm
<p>Asher Rockriver, Physics Undergraduate Student  Faculty Mentor: Brooke Hester, Physics and Astronomy  Co-Author(s): Dr. Brooke Hester  Title: IMPLEMENTATION OF SURFACE ENHANCED RAMAN SPECTROSCOPY IN THE BIYOSEF LASER TWEEZER RAMAN SPECTROSCOPY (LTRS) SYSTEM</p>	1:20pm
<p>Jessica Horton, Physics Undergraduate Student  Faculty Mentor: Andrew Bellemer, Biology  Co-Author(s): Andrew Bellemer  Title: UNDERSTANDING THERMAL NOCICEPTION BEHAVIOR ANALYSIS OF THE DROSOPHILA CONNECTOME</p>	1:40pm
<p>Claire Kennedy, Religious Studies Undergraduate Student  Faculty Mentor: Randall Reed, Philosophy and Religion  Co-Author(s): N/A  Title: S[AI]NTS: EXPLORING THE USE OF GPTS FOR SPIRITUAL CONVERSATION</p>	2:00pm

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