

# OVERVIEW OF EVENTS

On-Site Registration Schedule					
Presentation Type	Location	Monday, April 17, 2017	Tuesday, April 18, 2017	Wednesday, April 19, 2017	Friday, April 21, 2017
Oral	RSP Building 1st Floor Lobby	8:30 a.m. – 1:00 p.m.	8:30 a.m. – 1:00 p.m.	8:30 a.m. – 1:00 p.m.	8:30 a.m. – 10:00 a.m.
Poster	Jane Elliott Hall Lobby	10:00 a.m. – 1:30 p.m.	9:00 a.m. – 3:00 p.m.		

## MONDAY, APRIL 17, 2017

2:00 P.M.                      Opening Ceremony and Plenary Session  
 E.T. Goins Recital Hall, Performing Arts Center  
 Symposium Keynote Speaker Wendell S. Fortson, Ph.D., J.D.

## TUESDAY, APRIL 18, 2017

### Presentations:

9:00 A.M. – 12:00 P.M.      Graduate Engineering I Orals, RSP 163  
 9:00 A.M. – 12:00 P.M.      Graduate Science I Orals, RSP 209  
 1:00 P.M. – 4:15 P.M.        Graduate Engineering II Orals, RSP 209  
 1:00 P.M. – 4:00 P.M.        Graduate Science II Orals, RSP 163

## WEDNESDAY, APRIL 19, 2017

### Presentations:

9:00 A.M. – 11:45 A.M.      Undergraduate Engineering Orals, RSP 209  
 9:00 A.M. – 12:00 P.M.      Graduate Science III Orals, RSP TIGER Institute 009  
 9:00 A.M. – 11:30 A.M.      Undergraduate Science I Orals, RSP 163  
 1:00 P.M. – 4:15 P.M.        Graduate Science IV Orals, RSP 209  
 1:00 P.M. – 3:30 P.M.        Undergraduate Science II Orals, RSP 163

## THURSDAY, APRIL 20, 2017

Poster Presentations: Posters will be displayed in the Jane Elliott Hall Auditorium, April 18, 2017 – April 20, 2017

9:00 A.M. – 11:00 A.M.      Faculty Poster Session, Jane Elliott Hall Auditorium  
 9:00 A.M. – 11:00 A.M.      Graduate Poster Session and Judging, Jane Elliott Hall Auditorium  
 1:00 P.M. – 3:00 P.M.        Undergraduate Poster Session and Judging, Jane Elliott Hall Auditorium

3:30 P.M. – 6:30 P.M.        Psychology Research Day: James E. Farrell – Fred E. Westbrook Building, 118  
 Poster Presentations. Faculty Research Slam. Awards. Keynote Speaker, Vonetta Dotson, Ph.D.

## FRIDAY, APRIL 21, 2017

### Presentations:

9:00 A.M. – 11:00 A.M.      Faculty Orals I, RSP 163  
 9:00 A.M. – 11:00 A.M.      Faculty Orals II, RSP TIGER Institute 009

12:00 P.M. – 2:00 P.M.        Awards Luncheon and Closing Ceremony, James E. Farrell – Fred E. Westbrook Building, 118  
 Luncheon. Awards. Awards Luncheon Keynote Speaker – Mr. Mark N. Russ

Posters will be displayed in the Jane Elliott Hall Auditorium from Tuesday, April 18, 2017 – Thursday, April 20, 2017

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# PRESENTATION SCHEDULES

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## ORAL PRESENTATIONS - Tuesday, April 18, 2017

### GRADUATE ENGINEERING I

9:00 A.M. - 12:00 P.M. - Presentations will be in the Research and Sponsored Programs Building, Room 163

9:00 AM	GR ENGR 1	<b>CROSS LAYERS DECISION MAKING AND FUSION MODELS FOR AUTOMATED SENSOR EXPLOITATION IN LAYERED SENSING SYSTEMS</b> Bakhita Salman*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Saleh Zein-Sabatto
9:15 AM	GR ENGR 2	<b>POLARIZED BEAMFORMING FOR ENHANCED COUNTERMEASURE AGAINST INTERFERENCE IN WIRELESS SYSTEMS</b> Ali Aldarraj*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Liang Hong
9:30 AM	GR ENGR 3	<b>ATTACK SURFACE EXPANSION STRATEGY TO PROTECT VIRTUALIZED NETWORK INFRASTRUCTURE</b> Tulha Al-Salah*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Liang Hong
9:45 AM	GR ENGR 4	<b>FEEDING EVERYONE IF INDUSTRY IS DISABLED</b> D. Dorothea Cole*, Michael Griswold, and Mohamed Abdelkhaliq. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): David Denkenberger and Joshua M. Pearce
10:00 AM	GR ENGR 5	<b>CORRELATING ACCESS MANAGEMENT FEATURES TO PEDESTRIAN OPERATIONS</b> Kevin Soloka*. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): Deo Chimba
10:15 AM	GR ENGR 6	<b>DEVELOPING CALIBRATION FACTORS FOR RURAL TWO WAY TWO LANE INTERSECTION FACILITIES HSM MODELS FOR USE IN TENNESSEE</b> Wambura Chacha*. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): Deo Chimba
<b>10:30 AM - 10:45 AM BREAK</b>		
10:45 AM	GR ENGR 7	<b>DEVELOPMENT OF A TEST-BED FOR INTELLIGENT HUMAN MACHINE TEAMING</b> Mohammed Thanoon*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Saleh Zein-Sabatto and Charles D. McCurry
11:00 AM	GR ENGR 8	<b>THE EFFECTS OF VARIED INITIAL AGING TIMES ON SEI GROWTH AND DEVELOPMENT</b> Adrian Parker*. <i>TIGER Institute</i> , College of Engineering. Advisor(s): Samuel Hargrove, Frances Williams, and Richard Mu
11:15 AM	GR ENGR 9	<b>IMPACTS OF ACCESS MANAGEMENT ON VEHICLE EMISSIONS</b> Henry Ajieh*. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): Deo Chimba
11:30 AM	GR ENGR 10	<b>EXPERIMENTAL IMPLEMENTATION OF NETWORK RESOURCE MANAGEMENT FOR CLOUD BASED NETWORKED CONTROL SYSTEMS</b> Mohammad Arafatur Rahman*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Lee Keel and Liang Hong
11:45 AM	GR ENGR 11	<b>MULTI-AGENT SYSTEMS FOR DETECTING FALSE DATA INJECTION ATTACKS AGAINST THE ELECTRIC POWER GRID</b> Esther Amullen*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Lee Keel

### GRADUATE ENGINEERING II

1:00 P.M. - 4:15 P.M. - Presentations will be in the Research and Sponsored Programs Building, Room 209

1:00 PM	GR ENGR 12	<b>HOSTS-BASED ATTACK GRAPH AND RANKING APPROACH FOR RISK MANAGEMENT OF COMPUTER NETWORKS</b> Tao Zhao*. <i>Computer Science</i> , College of Engineering. Advisor(s): Wei Chen
1:15 PM	GR ENGR 13	<b>IMPROVED BOTTOM FRICTION, SURFACE ROUGHNESS, AND WIND STRESS IN A COUPLED WAVE AND STORM SURGE MODEL</b> Kyra Bryant*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar
1:30 PM	GR ENGR 14	<b>DESIGN OF AN ADAPTIVE CONTROLLER FOR FLIGHT CONTROL OF AIRCRAFT MODELS</b> Kevin Terrell*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Saleh Zein-Sabatto

# PRESENTATION SCHEDULES

1:45 PM	GR ENGR 15	<b>AERODYNAMIC STUDY OF A MORPHING WING USING FLUID STRUCTURE INTERACTION TECHNIQUES</b> Anwar Alsulami*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar and Woong Yeol Joe
2:00 PM	GR ENGR 16	<b>DETERMINATION OF GAS DRIFT PARAMETERS IN MINICHANNELS USING VOLUME OF FLUID TECHNIQUES</b> Benjamn Northington*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar and S. Mostafa Ghiaasiaan
2:15 PM	GR ENGR 17	<b>A COUPLED ATMOSPHERIC AND CIRCULATION MODEL FOR ACCURATE HURRICANE STORM SURGE FORECASTING</b> Abram Musinguzi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar
2:30 PM	GR ENGR 18	<b>INSTANT RESPONDER: A PROPOSAL OF SAFETY AND SECURITY SYSTEM ON TENNESSEE STATE UNIVERSITY MAIN CAMPUS</b> Alghamdi Abdullah*, Thanoon Mohammed*, and Anwar Alsulami*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar and Mohamed Saleh Zein-Sabatto
<b>2:45 PM - 3:00 PM BREAK</b>		
3:00 PM	GR ENGR 19	<b>PERFORMANCE EVALUATION OF HURRICANE STORM SURGE SIMULATION USING 2D AND 3D ADCIRC MODELS</b> Simbarashe Kanjanda*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar
3:15 PM	GR ENGR 20	<b>TRAJECTORY EXTRACTION FOR BEHAVIOR ANALYSIS IN LAYERED SENSING</b> Quaker Manuel*. <i>Computer Science</i> , College of Engineering. Advisor(s): Fenghui Yao and Saleh Zein-Sabatto
3:30 PM	GR ENGR 21	<b>DYNAMIC HUMAN FACIAL EXPRESSION RECOGNITION AND LEARNING</b> Karthikeya Ravi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Amir Shirkhodaie
3:45 PM	GR ENGR 22	<b>MULTI-CAMERA MULTI-TARGET TRACKING, OBJECT AND ACTIVITY RECOGNITION IN VIRTUAL ENVIRONMENT</b> Kalyankumar Bogi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Amir Shirkhodaie
4:00 PM	GR ENGR 23	<b>UTILITY BASED OBJECT RECOGNITION</b> Durga Telagamsetti*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Amir Shirkhodaie

## GRADUATE SCIENCE I

9:00 A.M. - 12:00 P.M. - Presentations will be in the Research and Sponsored Programs Building, Room 209

9:00 AM	GR SCI 1	<b>TRIBUTYL TIN ALTERS INTERLEUKIN 1 BETA AND INTERLEUKIN 6 PRODUCTION AND MRNA EXPRESSION FROM HUMAN IMMUNE CELLS</b> Shyretha Brown*, Mariam Boules, and Nafisa Hamza. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
9:15 AM	GR SCI 2	<b>TARGETED GENOME EDITING (CRISPR/CAS9) OF TRY AND CPC GENES IN SOYBEAN (GLYCINE MAX) PLANTS</b> C M Sabbir Ahmed* and Mary Jane Espina. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ali Taheri and Korsi Dumenyo
9:30 AM	GR SCI 3	<b>CRISPR-CAS9 EDITING OF THE CHICKEN GENOME</b> Mary Shannon Byers*, Sherly Celada, and Duaa Babaer. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Xioafei Wang
9:45 AM	GR SCI 4	<b>EVALUATION OF BIORATIONAL PRODUCTS AND FUNGICIDES FOR MANAGEMENT OF PHYTOPHTHORA ROOT ROT OF HYDRANGEA</b> Md. Niamul Kabir*, Prabha Liyanapathirana, and Terri Simmons. <i>Otis L. Floyd Research Center</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Fulya Baysal-Gurel

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# PRESENTATION SCHEDULES

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10:00 AM	GR SCI 5	<b>PRODUCTION OF POLYHYDROXYBUTYRATE (PHB) BY NEW IDENTIFIED BACILLUS CEREUS TSU1 STRAIN WITH RAPESEED CAKE SUBSTRATES (RCS)</b> Hui Li*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Suping Zhou and Johnson Terrance
10:15 AM	GR SCI 6	<b>SIMULTANEOUS ENCAPSULATION OF ANTIBIOTIC ALTERNATIVES FOR PATHOGEN CONTROL IN POULTRY INTESTINAL TRACT</b> Cosmas Mwendwa*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ying Wu, Fur-Chi Chen, and Agnes Kilonzo-Nthenge
<b>10:30 AM - 10:45 AM BREAK</b>		
10:45 AM	GR SCI 7	<b>DO TENNESSEE FRUIT AND VEGETABLE FARMERS LIKE ORGANIC FARMING? PERCEPTIONS AND ATTITUDES</b> Kumuditha Hikkduwa Epa Liyanage*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Hiren Bhavsar, Dilip Nandwani, and Fisseha Tegegne
11:00 AM	GR SCI 8	<b>RETENTION FACTORS IN AFRICAN AMERICAN ENGINEERING STUDENTS</b> Tonya McKoy*. <i>Psychology</i> , College of Education. Advisor(s): Marie S. Hammond
11:15 AM	GR SCI 9	<b>BIOLOGICAL CONTROL OF PHYTOPHTHORA BLIGHT OF TOMATO USING SELECTED ENDOPHYTIC BIOLOGICAL CONTROL AGENTS</b> Afona Irabor*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Margaret Mmbaga and Emily Rotich
11:30 AM	GR SCI 10	<b>PREDICTING SPATIAL DISTRIBUTION OF WOODY BIOMASS ACROSS THE STATE OF TENNESSEE</b> Man Kumari Giri*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Bharat Pokharel
11:45 AM	GR SCI 11	<b>SYNTHESIS, CHARACTERIZATION, AND CATALYTIC APPLICATIONS OF U3O8 SUPPORTED IN A SILICA GEL MATRIX</b> Fatima Green*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Joshua Moore

## GRADUATE SCIENCE II

1:00 P.M. - 4:00 P.M. - Presentations will be in the Research and Sponsored Programs Building, Room 163

1:00 PM	GR SCI 12	<b>EVALUATION OF COWPEA GENOTYPES FOR DROUGHT TOLERANCES IN THE SAVANNAH ECOLOGY OF GHANA</b> Damba Yahaya*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Matthew Blair
1:15 PM	GR SCI 13	<b>PHYTOCHEMICAL PROFILES, ANTIOXIDANT, AND ANTI-DIABETIC PROPERTIES OF TWO PIGEON PEA VARIETIES</b> Rabia Syed*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ying Wu
1:30 PM	GR SCI 14	<b>LEADERSHIP BEHAVIORS IN AGRICULTURAL AND ENVIRONMENTAL SCIENCE UNDERGRADUATES: THE IMPACT OF PRE-COLLEGIATE AND COLLEGIATE LEADERSHIP EXPERIENCES</b> Quintin Robinson*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): John Ricketts
1:45 PM	GR SCI 15	<b>IDENTIFICATION OF SWEET SORGHUM BOOTING STAGE DEVELOPMENTS TO HARVEST EARLY UNINUCLEATE MICROSPORES</b> Deependra Bhatta*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ahmad Aziz
2:00 PM	GR SCI 16	<b>EXPRESSION AND CHARACTERIZATION OF IMMUNE FUNCTION GENES AND TOLL-LIKE RECEPTORS (TLR) IN ADULT GUINEA FOWL USING TRANSCRIPTOME ANALYSIS</b> Gabriel Akerele*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Samuel Nahashon

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# PRESENTATION SCHEDULES

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2:15 PM	GR SCI 17	<b>SPEECH PATHOLOGY VS NON-SPEECH PATHOLOGY RATINGS OF FACULTY INTELLIGIBILITY</b> Stephanie Dixon* and Cori Gonzalez*. <i>Speech Pathology and Audiology</i> , College of Health Sciences. Advisor(s): Iris Johnson-Arnold, Danielle Watson, and Owen Johnson
<b>2:30 PM - 2:45 PM BREAK</b>		
2:45 PM	GR SCI 18	<b>TARGETED GENOME EDITING BY MICROINJECTION OF LENTIVIRAL VECTOR FOR GERMLINE TRANSGENIC CHICKENS</b> Sherly Celada*, Mary Shannon Byers, and Duaa Babaer. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Xiaoifei Wang
3:00 PM	GR SCI 19	<b>EFFECT OF BIOCHAR AND NITROGEN FERTILIZER RATE ON SWITCHGRASS YIELD, NITROGEN AND CARBON IN BIOMASS HARVESTED FOR BIOENERGY PRODUCTION</b> Priya Saini*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Jason de Koff
3:15 PM	GR SCI 20	<b>TOXICITY OF COAL FLY ASH AND TOXICOLOGICAL RESPONSE OF SWITCHGRASS GROWN ON FLY ASH AMENDED SOIL</b> Olushola Awoyemi*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Kudjo Dzantor
3:30 PM	GR SCI 21	<b>SCREENING, CLONING AND EXPRESSION OF CELLULASE ENCODING GENES FROM THE GOAT RUMEN BACTERIAL METAGENOMIC LIBRARY</b> Santosh Thapa*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Suping Zhou
3:45 PM	GR SCI 22	<b>EFFECTS OF ELEVATED HYDROSTATIC PRESSURE AGAINST BACKGROUND MICROFLORA AND PLANKTONICALLY-GROWN SALMONELLA SEROVARS</b> Abimbola Allison*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Aliyar Fouladkhah

## ORAL PRESENTATIONS - Wednesday, April 19, 2017

### GRADUATE SCIENCE III

9:00 A.M. - 12:00 P.M. - Presentations will be in the Research and Sponsored Programs Building, TIGER Institute-Room 009

9:00 AM	GR SCI 23	<b>ANTI-MICROBIAL ACTIVITIES OF ENDOPHYTIC FUNGAL CRUDE EXTRACTS ISOLATED FROM FLOWERING DOGWOODS (CORNUS FLORIDA L.)</b> Asha Maheshwari*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Margaret Mmbaga and Agnes Kilonzo-Nthenge
9:15 AM	GR SCI 24	<b>REAL-TIME DETECTION AND SUBTYPING OF SALMONELLA BY SURFACE PLASMON RESONANCE</b> Devendra Bhandari*. <i>Family and Consumer Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Fur-Chi Chen
9:30 AM	GR SCI 25	<b>EVALUATION OF HEALTH BENEFITS OF ENCAPSULATED BITTER MELON JUICE</b> Li Wang*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ying Wu and Arvazena Clardy
9:45 AM	GR SCI 26	<b>PATHOGENICITY OF RHIZOCTONIA SOLANI AND PHYTOPHTHORA NICOTIANAE TO BIOFUMIGATION COVER CROPS (BRASSICA SPP.)</b> Prabha Liyanapathirana*. <i>Otis L. Floyd Research Center</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Fulya Baysal-Gurel
10:00 AM	GR SCI 27	<b>COMPARATIVE ECONOMIC ANALYSIS OF AMERICAN GINSENG PRODUCTION IN SOUTHEASTERN REGION</b> Avis Ortiz*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Prabodh Illukpitiya, Enefiok Ekanem, and Fisseha Tegegne
10:15 AM	GR SCI 28	<b>ESTABLISHING NEW CATALYST SYSTEM FOR FLUORINATION OF ORGANOTRIFLUOROBORATES</b> Sathesh Thatiparti*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum
<b>10:30 AM - 10:45 AM BREAK</b>		

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# PRESENTATION SCHEDULES

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10:45 AM	GR SCI 29	<b>PENTACHLOROPHENOL ALTERS SECRETION OF INTERLEUKIN 6 (IL-6) FROM HUMAN IMMUNE CELLS</b> Tamara Martin*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
11:00 AM	GR SCI 30	<b>CELLULOLYTIC THERMOPHILES ISOLATED FROM SPRAY GEYSER, AMPHITHEATER SPRINGS, AND WHITEROCK SPRINGS INSIDE YELLOWSTONE NATIONAL PARK</b> Joshua O'Hair*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Suping Zhou and Terrance Johnson
11:15 AM	GR SCI 31	<b>STUDENT RETENTION IN HIGHER EDUCATION: PUBLIC VS PRIVATE</b> Eckton Chinyanga*. <i>Education Leadership</i> , College of Education. Advisor(s): Elen Elder
11:30 AM	GR SCI 32	<b>INVESTIGATING THE EFFECTS OF CHROMOBACTERIUM VIOLACEUM VIOLACEIN AT THE HUMAN SEROTONIN 2C RECEPTOR</b> Letimicia Fears*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Hugh Fentress and Terrance Johnson
11:45 AM	GR SCI 33	<b>ANTI-CANCER EFFECTS AND MOLECULAR MECHANISMS OF PHYTOCHEMICALS IN BREAST CANCER CELLS</b> Xiaoyong Wang*. <i>Family and Consumer Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Hongwei Si

## GRADUATE SCIENCE IV

1:00 P.M. - 4:15 P.M. - Presentations will be in the Research and Sponsored Programs Building, Room 209

1:00 PM	GR SCI 34	<b>PROTEOME CHANGES IN SWITCHGRASS EXPOSED TO ALUMINUM STRESS</b> Mahesh Rangu*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Suping Zhou
1:15 PM	GR SCI 35	<b>EFFECTS OF PRECIPITATION CHANGE ON SWITCHGRASS BIOMASS AND SOIL CO<sub>2</sub> EMISSION</b> Sadiye Aras*, Qi Deng, Chih-Li Yu, Xiaotao Ding, and Jaquantey Bowens. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Dafeng Hui
1:30 PM	GR SCI 36	<b>DIBUTYLTIN ALTERS PRODUCTION OF INTERLEUKIN 1 BETA AND INTERLEUKIN 6 IN HUMAN IMMUNE CELLS</b> Linda Sushak*, and Nafisa Hamza. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
1:45 PM	GR SCI 37	<b>SYNERGISTIC ANTI-INFLAMMATORY EFFECTS OF COMBINED PHYTOCHEMICALS IN HUMAN ENDOTHELIAL CELLS</b> Lijuan Zhang*. <i>Family and Consumer Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Hongwei Si
2:00 PM	GR SCI 38	<b>EVALUATION OF BACILLUS SUBTILIS ISOLATES AS POTENTIAL BIOLOGICAL CONTROL AGENTS AGAINST SOYBEAN CHARCOAL ROT CAUSED BY MACROPHOMINA PHASEOLINA</b> Jeremiah Sumpter*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Margaret Mmbaga and Emily Rotich
2:15 PM	GR SCI 39	<b>SEASONAL VARIATIONS AND STATISTICAL ANALYSIS OF THE PHYSICOCHEMICAL CHARACTERISTICS IN A DEVELOPING WETLAND IN NASHVILLE, TENNESSEE</b> Mark Okafor*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): De'Etra Young and Tom Byl
<b>2:30 PM - 2:45 PM BREAK</b>		
2:45 PM	GR SCI 40	<b>ANTIGENIC DIVERSITY OF FLAGELLIN AND ITS APPLICATION IN SUBTYPING OF CAMPYLOBACTER</b> Shreya Hamal*. <i>Family and Consumer Sciences</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Fur-Chi Chen
3:00 PM	GR SCI 41	<b>SCHIFF BASES AND HEMIAMINALS: SYNTHESIS, MECHANISM OF FORMATION AND BIOLOGICAL EVALUATION</b> Md. Shafiqul Islam*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Mohammad Karim

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# PRESENTATION SCHEDULES

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3:15 PM	GR SCI 42	<b>GENERATING HIGH-RESOLUTION PROFILES OF HISTONE METHYLATED MODIFICATION IN PANICUM HALLII USING CHIP-SEQ</b> Shohana Huq*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Suping Zhou
3:30 PM	GR SCI 43	<b>ECONOMICS OF UTILIZATION OF LIGNOCELLULOSIC BIOMASS FROM SHORT ROTATION WOODY CROP OF SWEETGUM FOR BIOETHANOL PRODUCTION</b> Firuz Yuldeshev*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Prabodh Illukpitiya and Fisseha Tegegne
3:45 PM	GR SCI 44	<b>EVALUATION OF TRICLOSAN EXPOSURES ON INTERLEUKIN 6 SECRETION FROM HUMAN IMMUNE CELLS</b> Wendy Wilburn*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
4:00 PM	GR SCI 45	<b>SYNTHESIS AND BIOLOGICAL EVALUATION OF NOVEL FLUORINATED TACRINE HYBRIDS AGAINST ALZHEIMER'S DISEASE</b> Chibuike Obi*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Cosmas Okoro

## UNDERGRADUATE ENGINEERING

9:00 A.M. - 11:45 A.M. - Presentations will be in the Research and Sponsored Programs Building, Room 209

9:00 AM	UG ENGR 1	<b>VITAMINS IN AGRICULTURAL CATASTROPHES</b> Michael Griswold*, D. Dorothea Cole, and Mohamed Abdelkhalik. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): David Denkenberger, Joshua M. Pearce, and A. Ray Taylor
9:15 AM	UG ENGR 2	<b>A PROOF OF CONCEPT OF COUNTERMEASURES TO GPS SPOOFING</b> Chris Clegg*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Lee Keel and Liang Hong
9:30 AM	UG ENGR 3	<b>PROVIDING NON-FOOD NEEDS IF INDUSTRY IS DISABLED</b> Mohamed Abdelkhalik*, Michael Griswold*, and D. Dorothea Cole. <i>Civil and Architectural Engineering</i> , College of Engineering. Advisor(s): David Denkenberger and Joshua Pearce
9:45 AM	UG ENGR 4	<b>GPS SPOOFING DETECTION VIA INDEPENDENT LOCALIZATION</b> Elliot Steen*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Lee Keel and Liang Hong
10:00 AM	UG ENGR 5	<b>MULTIPLE-INPUT SINGLE-OUTPUT RECONFIGURABLE COMMUNICATION SYSTEM</b> Ebhola Ijeh*. <i>Electrical and Computer Engineering</i> , College of Engineering. Advisor(s): Liang Hong

### 10:15 AM - 10:30 AM BREAK

10:30 AM	UG ENGR 6	<b>DETERMINATION OF HYDRODYNAMICS PARAMETERS FOR MICROPOROUS CRYOCOOLER REGENERATOR FILLERS UNDER STEADY FLOW CONDITIONS</b> Abdulelah Alhejaili*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar and S. Mostafa Ghiaasiaan
10:45 AM	UG ENGR 7	<b>CONVECTION COOLING A SOLAR CONCENTRATING PHOTOVOLTAIC-THERMOELECTRIC HYBRID SYSTEM TO MAXIMIZE POWER GENERATION</b> Said Alamri*, Saud Almutairi*, and Turki Alamri*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Muhammad Akbar, Fatemeh Hadi, and Matthew J. Traum
11:00 AM	UG ENGR 8	<b>DESIGN OF AN EXPERIMENTAL MACRO-SCALE HYDRO TESLA TURBINE TO REPLICATE PERFORMANCE OF A MEMS-SCALE TURBINE RUNNING PRODUCTS OF COMBUSTION</b> Mubarak Alrabie*, Muhammad Altarrgemy*, and Faisal Altamimi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering. Advisor(s): Fatemeh Hadi, Muhammad Akbar, and Matthew J. Traum
11:15 AM	UG ENGR 9	<b>FIRST RESPONSE DRONE SQUAD</b> Melvin Mason*, and Paxtyn Wright*. <i>Aeronautical and Industrial Technology</i> , College of Engineering. Advisor(s): Ivan T Mosley, Sr. and Carlos Beane
11:30 AM	UG ENGR 10	<b>REAL-TIME ROOT MONITORING AND IMAGE ANALYSIS OF HYDROPONIC CROP PLANTS</b> Timothy Darrah* and Caleb Joshua Blankenship. <i>Computer Science</i> , College of Engineering. Advisor(s): Erdem Erdemir

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# PRESENTATION SCHEDULES

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## UNDERGRADUATE SCIENCE I

9:00 A.M. - 11:30 A.M. - Presentations will be in the Research and Sponsored Programs Building, Room 163

9:00 AM	UG SCI 1	<b>DNA MARKERS<sup>®</sup>™ BASED ANALYSES OF INDIVIDUAL MICROSPORES FROM SWEET SORGHUM VARIETIES</b> Alexius Dingle*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ahmad Aziz and Deependra Bhatta
9:15 AM	UG SCI 2	<b>QUANTIFICATION OF COTTONSEED GOSSYPOL LEVELS USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY</b> Aron Felts*, and Micah Blake-Smith. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ahmad Aziz and Sarabjit Bhatti
9:30 AM	UG SCI 3	<b>VARIABILITY OF FREE FATTY ACID CONTENT WITHIN WINTER CANOLA VARIETIES</b> Raheem Kosoko*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Jason de Koff
9:45 AM	UG SCI 4	<b>GREEN HOUSE MAINTENANCE OF SWEET SORGHUM VARIETIES FOR BIOFUEL APPLICATIONS</b> Aron Felts*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Ahmad Aziz and Deependra Bhatta
10:00 AM	UG SCI 5	<b>COMPARATIVE EVALUATION OF APOLIPOPROTEIN A1 RELATIONSHIP WITH FATNESS IN POULTRY AND OTHER MAMMALIAN SPECIES</b> Phyllicia Hemphill*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Samuel Nahashon and Thyneice Taylor

### 10:15 AM - 10:30 AM BREAK

10:30 AM	UG SCI 6	<b>IDENTIFICATION AND CHARACTERIZATION OF VIMENTIN IN THE GUINEA FOWL (NUMIDA MELEAGRIS)</b> Justin McKinnie*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Samuel Nahashon and Thyneice Taylor
10:45 AM	UG SCI 7	<b>EVALUATION OF METHIONINE AND CYSTEINE REQUIREMENTS ON FRENCH GUINEA FOWL BROILERS</b> Amaris Daniels*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Nahashon Samuel and Samuel Nahashon
11:00 AM	UG SCI 8	<b>CHARACTERIZATION AND ANALYSIS POTENTIAL OF BIOLOGICAL CONTROL AGENTS ON PHYTOPHTHORA CAPSICI IN PEPPERS</b> Justus Watson*. <i>Agricultural Sciences and Environmental</i> , College of Agriculture, Human and Natural Sciences. Advisor(s): Margaret Mmbaga and Emily Rotich
11:15 AM	UG SCI 9	<b>PROTEIN STRUCTURE MODELS ASSESSMENT</b> Christopher Jones* and Kiara Armstrong. <i>Computer Science</i> , College of Engineering. Advisor(s): Kamal Al Nasr

## UNDERGRADUATE SCIENCE II

1:00 P.M. - 3:30 P.M. - Presentations will be in the Research and Sponsored Programs Building, Room 163

1:00 PM	UG SCI 10	<b>TRANSITIONAL LEADERSHIP USING STIMULATION IN NURSING EDUCATION</b> Meghan Lambert*. <i>Nursing</i> , College of Health Sciences. Advisor(s): Kwaghdoo Bossuah
1:15 PM	UG SCI 11	<b>EVALUATION OF EXPOSURES TO THE ENVIRONMENTAL CONTAMINANT DDT ON INTERLEUKIN 6 SECRETION FROM HUMAN IMMUNE CELLS</b> Margarita Peete*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
1:30 PM	UG SCI 12	<b>TRICLOSAN-INDUCED ALTERATIONS OF INTERLEUKIN 1 BETA SECRETION FROM HUMAN IMMUNE CELLS</b> Dylan Brooks*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen
1:45 PM	UG SCI 13	<b>NOVEL TARGETED NANOVACCINE FOR THE TREATMENT OF CANCER</b> Danielle Johnson*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen



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# PRESENTATION SCHEDULES

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2:00 PM	UG SCI 14	<b>THE ROLE OF NOTCH SIGNALING IN T LYMPHOCYTES</b> Kalyann Parks*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Margaret Whalen and Anil Shanker
2:15 PM	UG SCI 15	<b>THALAMIC CONNECTIONS OF AREA 6V IN THE MARMOSSET MONKEY</b> Elisabeth Stansberry*. <i>Psychology</i> , College of Education. Advisor(s): Lisa de la Mothe
<b>2:30 PM - 2:45 PM BREAK</b>		
2:45 PM	UG SCI 16	<b>GENERATION AND CHARACTERIZATION OF THE PROLINE108SERINE SINGLE NUCLEOTIDE POLYMORPHISM IN THE HUMAN SEROTONIN 2C RECEPTOR</b> Gerald Nwosu*, Mia Krout*, and Quzonna Reed*. <i>Biological Sciences</i> , College of Life and Physical Sciences. Advisor(s): Hugh Fentress and Michael Ivy
3:00 PM	UG SCI 17	<b>A NOVEL PROCESS FOR HIGHLY SUBSTITUTED ESTERS FROM TERTIARY ALCOHOLS AND ARCOPDCL SPECIES</b> Carsyn Snagg*. <i>Chemistry</i> , College of Life and Physical Sciences. Advisor(s): Sara Chrisman and Mohammad Al-Masum
3:15 PM	UG SCI 18	<b>STUDENT RATINGS OF THE INTELLIGIBILITY OF FACULTY WITH FOREIGN ACCENTS</b> Ayana McWoods*, Nicole Halcin*, and Faith D'Amato*. <i>Speech Pathology and Audiology</i> , College of Health Sciences. Advisor(s): Iris Johnson-Arnold, Danielle Watson, and Owen Johnson

## ORAL PRESENTATIONS - Friday, April 21, 2017

### FACULTY I

9:00 A.M. - 11:00 A.M. - Presentations will be in the Research and Sponsored Programs Building, Room 163

9:00 AM	FAC O 1	<b>SERRATIA SPP. FROM CORNUS FLORIDA AS A BIOLOGICAL CONTROL AND ITS POTENTIAL USES</b> Emily Rotich*, Margaret Mmbaga, and Jacqueline Joshua. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences
9:15 AM	FAC O 2	<b>PARKINSON'S DEMENTIA</b> Kwaghdoo Bossuah*. <i>Nursing</i> , College of Health Sciences
9:30 AM	FAC O 3	<b>GREEN KABARET: LINKING ENVIRONMENTAL ADVOCACY TO THE HUMANITIES</b> Marsha Williams*. <i>English</i> , College of Liberal Arts
9:45 AM	FAC O 4	<b>DETERMINING SUSCEPTIBILITY OF AMARANTH SPECIES TO COMMON PATHOGENS IN MIDDLE TENNESSEE</b> Lucas Mackasmiel*, Margaret Mmbaga, Matthew Blair, and Emily Rotich. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences
10:00 AM	FAC O 5	<b>BENEFITS OF PARTICIPATING IN SMALL FARMERS' GROUP NETWORK</b> Fisseha Tegegne*, Hiren Bhavsar, Enefiok Ekanem, and Mary Mafuyai. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences
10:15 AM	FAC O 6	<b>ADSORPTION OF ANTIMONY (V) ON HEMATITE: A MACROSCOPIC AND IN SITU ATR-FTIR STUDY TO DETERMINE THE SURFACE COMPLEXATION MECHANISM</b> Jerzy Mierzwa* and Sudipta Rakshit. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences
10:30 AM	FAC O 7	<b>ENHANCEMENT OF BIOMASS PRODUCTION BY BIOENERGY FEEDSTOCK IN DEGRADED SOIL USING AMENDMENT AND INOCULATION STRATEGIES</b> Ekundayo Adeleke* and Kudjo Dzantor. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences
10:45 AM	FAC O 8	<b>COMPUTER COMPETENCIES NEEDED BY AERONAUTICAL AND INDUSTRIAL TECHNOLOGY STUDENTS FOR THE 21ST CENTURY</b> Ivan Mosley* and Carlos Beane*. <i>Aeronautical and Industrial Technology</i> , College of Engineering

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# PRESENTATION SCHEDULES

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## FACULTY II

9:00 A.M. - 11:00 A.M. - Presentations will be in the Research and Sponsored Programs Building, TIGER Institute-Room 009

9:00 AM	FAC O 9	<b>POLYMER NANOFIBERS - A POTENTIAL ADVANCED MATERIAL TO ADDRESS ENGINEERING CHALLENGES</b> Richard Mu*, Frances Williams, Samuel Hargrove, and Deyu Li. <i>TIGER Institute</i> , College of Engineering
9:15 AM	FAC O 10	<b>EXPANDING FIELD-BASED FOREST INVENTORY USING MAP MODEL APPROACH</b> Bharat Pokharel*. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences
9:30 AM	FAC O 11	<b>WHAT IS BEHIND THE GROWING DEMAND FOR GOAT MEAT AMONG TENNESSEANS</b> Mary Mafuyai*, Enefiok Ekanem, and Mary Mafuyai. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences
9:45 AM	FAC O 12	<b>ELECTRONIC STRUCTURE PROPERTIES AND STABILITY OF CZTS/CZTSE (CU<sub>2</sub>ZNSNS<sub>4</sub>XSE<sub>4</sub>-4X) SOLID SOLUTION</b> Sita Ram Aryal*, Jing Xu, Ranganathan Parthasarathy, and Lizhi Ouyang. <i>Physics</i> , College of Life and Physical Sciences
10:00 AM	FAC O 13	<b>RESISTANCE-TEMPERATURE EFFECT OF CARBON BLACK / POLYDIMETHYLSILOXANE COMPOSITE</b> Jing Xu* and Lizhi Ouyang. <i>Physics</i> , College of Life and Physical Sciences
10:15 AM	FAC O 14	<b>MIXING AND CHEMICAL KINETICS INTERACTIONS IN TURBULENT REACTING FLOW SIMULATIONS</b> Fatemeh Hadi*. <i>Mechanical and Manufacturing Engineering</i> , College of Engineering
10:30 AM	FAC O 15	<b>SEPARATED TEMPORAL AND SPATIAL (SETS) FRAMEWORK FOR STRESS CALCULATIONS IN ATOMIC MODELS</b> Ranganathan Parthasarathy*, Sita Ram Aryal, Anil Misra, and Lizhi Ouyang. <i>Physics</i> , College of Life and Physical Sciences
10:45 AM	FAC O 16	<b>SCREENING OF COMMON BEAN FOR MULTIPLE DISEASE RESISTANCE UNDER NATURAL INFECTION BY COMMON BACTERIAL BLIGHT AND CHARCOAL ROT</b> Lucas Mackasmiel*, Daniel Ambachew, Margaret Mmbaga, and Matthew Blair. <i>Agricultural and Environmental Sciences</i> , College of Agriculture, Human and Natural Sciences

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# PRESENTATION SCHEDULES

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## POSTER PRESENTATIONS

Posters will be displayed in the Jane Elliott Hall Auditorium, April 18, 2017 – April 20, 2017

### FACULTY POSTERS

- FAC-P 1      **THE ESCALATION OF PHARMACEUTICAL DRUG PRICES: A POLICY BRIEF**  
Elizabeth Brown\*. *Public Health, Healthcare Administration and Health Sciences*, College of Health Sciences
- FAC-P 2      **THE RISING COST OF PRESCRIPTION DRUGS IN THE UNITED STATES: PATHS TO REFORM (POLICY MODIFICATIONS)**  
Adaku Onyekwere\*, Lakasha Price, and Laxmi Shrestha. *Public Health, Healthcare Administration and Health Sciences*, College of Health Sciences
- FAC-P 3      **HUD HOUSING REDEVELOPMENT POLICY: NASHVILLE IMPACT**  
Elizabeth Brown\*, Mon-Cheri Robinson, and Regina Bell. *Public Health, Healthcare Administration and Health Sciences*, College of Health Sciences
- FAC-P 4      **UTILIZATION OF PIGEON PEA (CAJANUS CAJAN) FOR ERADICATION OF JOHNSON GRASS RHIZOMES (SORGHUM HALEPENSE)**  
Vanaja Kankarla\*, Fitzroy Bullock, and Shahidullah Choudhary. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences
- FAC-P 5      **LETHAL AND SUBLETHAL EFFECTS OF FIELD-AGED INSECTICIDE RESIDUES ON GREEN LACEWINGS (NEUROPTERA: CHRYSOPIDAE)**  
Kaushlya Amarasekare\*, Preston Brown (Oregon State University), and Peter Shearer (Oregon State University). *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences
- FAC-P 6      **THE DRUG CRISIS WITH DRUG PRICES: THE DANGERS OF UNREGULATED PHARMACEUTICAL COMPANIES A POLICY BRIEF**  
Angelique Carney\*, Elizabeth Brown, Fitzgerald Tochukwu, and Hanan Altimimi. *Public Health, Healthcare Administration and Health Sciences*, College of Health Sciences
- FAC-P 7      **MAXIMIZING OUR STUDENTS' POTENTIAL: A PLAN FOR UTILIZING THE SKILL SET OF TECHNOLOGICALLY INCLINED STUDENTS TO PROVIDE EFFECTIVE CARE FOR THE PATIENT**  
Pinky Noble-Britton\*. *Nursing*, College of Health Sciences
- FAC-P 8      **BUPRESTID AND CERAMBYCID TRAPPING: THE PROGRESSION OF 13 YEARS OF TRAPPING**  
Nadeer Youssef\*, Jason Oliver (Otis L. Floyd Research Center), Joshua Basham (Otis L. Floyd Research Center), and Joseph Lampley (Otis L. Floyd Research Center). *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences
- FAC-P 9      **BUILDING HEALTHY FAMILIES FROM THE INSIDE OUT: A COMBINATION OF KNOWLEDGE, ATTITUDE, AND SKILLS IN A COMMUNITY NUTRITION EDUCATION PROGRAM.**  
Leslie Speller-Henderson\*, Natalie Owens, Deborah Goddard, and Chizoba Anyimukwu. *Cooperative Extension*, College of Agriculture, Human and Natural Sciences
- FAC-P 10      **ENHANCING GOAT MEAT MARKETING WITH ONLINE RESOURCES**  
Mary Mafuyai\*, Enefiok Ekanem, Fisseha Tegegne, and Prabode Illukpitiya. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences
- FAC-P 11      **DIVERSIFICATION, CAPITAL STRUCTURE, AND FARM INCOMES AMONG FARM BUSINESS HOUSEHOLDS: HOW DOES TENNESSEE COMPARE?**  
Aditya Khanal\*, and Suraj Adhikari. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences
- FAC-P 12      **ENHANCING FOOD SAFETY GAPS FOR EXTENSION EDUCATORS AND GROWERS IN LIMITED RESOURCE PRODUCE FARMS**  
Agnes Kilonzo-Nthenge\*, John Ricketts, and Jessica Dompreeh. *Family and Consumer Sciences*, College of Agriculture, Human and Natural Sciences
- FAC-P 13      **DO CHANGES IN CLASSROOM ERGONOMICS EFFECT STUDENT LEARNING?**  
Cathleen St. Dennis\*, and Guinevere Bennett\*. *Occupational Therapy*, College of Health Sciences
- FAC-P 14      **THE IMPACT OF DIALOGIC READING ON STORY RETELLING SKILLS**  
Danielle Watson\*. *Speech Pathology and Audiology*, College of Health Sciences
- FAC-P 15      **UNIAXIAL COMPRESSION OF COOKED SWEET POTATOES (ORGANIC) AND EFFECT OF THERMAL TREATMENTS AND TEXTURAL CHARACTERISTICS**  
Ramasamy Ravi\*, Dilip Nandwani, and Sochinwechi Nwosisi. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences

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# PRESENTATION SCHEDULES

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## GRADUATE POSTERS

GRADUATE POSTER JUDGING – THURSDAY, APRIL 20, 2017

9:00 A.M. – 11:00 A.M. in Jane Elliott Hall Auditorium

- GR-P 1      **SYSTEMATIC REVIEW OF KINESIOTAPING TO PREVENT SHOULDER IMPINGEMENT SYNDROME IN BASEBALL PITCHERS WHO PERFORM REPETITIVE OVERHEAD MOVEMENTS**  
Jennifer Duncavage\*, Kendall Keeton\*, Josh Melchior\*, Josh Wilson\*, and Zach White\*. *Physical Therapy*, College of Health Sciences. Advisor(s): Karen Coker
- GR-P 2      **MULTIDIMENSIONAL FACTORS AFFECTING FUNCTIONAL OUTCOMES AFTER AMPUTATION**  
Keshia Agazuma\*, Kay Bachman\*, Lindsay Cox\*, Erin Keyes\*, and Muthuraman Venkataraman\*. *Physical Therapy*, College of Health Sciences. Advisor(s): Edilberto Raynes
- GR-P 3      **INVOLVEMENT OF MAPK SIGNALING PATHWAYS IN TRIBUTYL TIN-INDUCED INCREASES OF INTERLEUKIN 1 BETA AND INTERLEUKIN 6 MRNA IN HUMAN LYMPHOCYTES**  
Shyretha Brown\*, Mariam Boules, and Nafisa Hamza. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
- GR-P 4      **PREVALENCE OF ULNAR COLLATERAL LIGAMENT TEARS IN PREBUTESCENT MALE BASEBALL PITCHERS WHO SPECIALIZE IN BASEBALL YEAR ROUND**  
Shelby Blankenship\*, Cristin Cotter\*, Justin McGee\*, Houston Newman\*, and Cara Gray\*. *Physical Therapy*, College of Health Sciences. Advisor(s): Deborah Edmondson, Shelby Blankenship, Cristin Cotter, Justin McGee, and Houston Newman
- GR-P 5      **SYNTHESIS OF CU(II), NI(II) AND CO(II) COMPLEXES AS ANTICANCER DRUGS**  
Md. Shafiqul Islam\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Mohammad Karim
- GR-P 6      **DEVELOPMENT OF A PRELIMINARY CLINICAL PREDICTION RULE FOR IDENTIFYING SLAP LESIONS IN PATIENTS**  
Chasiti Smith\*, Kelly Glymph\*, Grayson Lambert\*, Katie Rigney\*, and Andrew Fuqua\*. *Physical Therapy*, College of Health Sciences. Advisor(s): Richard Clark
- GR-P 7      **DEVELOPMENT OF A RAPID, LOW-COST PROTOPLAST ISOLATION METHOD FOR SWITCHGRASS USING PECTOBACTERIUM CAROTOVORUM**  
Ekundayo Adeleke\*, and Mary Jane Espina. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Ali Taheri, Korsi Dumenyo, and Christine Ondzighi-Assoume
- GR-P 8      **EFFECT OF SACCHROMYCES CEREVISIAE AND BIFIDOBACTERIUM LONGUM ON SALMONELLA REDUCTION AND GROWTH PERFORMANCE IN POULTRY**  
Joy Igbafe\*. *Family and Consumer Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Agnes Kilonzo-Nthenge and Samuel Nahashon
- GR-P 9      **KINETIC INACTIVATION OF FOOD BORNE PATHOGENS IN MILK USING UV-C TECHNOLOGIES**  
Danielle M. Gunter-Ward\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Ankit Patras
- GR-P 10      **COLD PLASMA INACTIVATION OF ESCHERICHIA COLI AND SALMONELLA ON GOLDEN DELICIOUS APPLES**  
Siqin Liu\*. *Family and Consumer Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Agnes Kilonzo-Nthenge, Patras Ankit, and Sudheer Yannam
- GR-P 11      **COLD HARDINESS AND SOIL COVERAGE OF INDUSTRIAL OILSEED CROPS FOR BIOENERGY PRODUCTION**  
Shivam Chawla\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Jason de Koff and Prabodh Illukpitiya
- GR-P 12      **COMPARISON OF NEAR INFRARED SPECTROSCOPY AND OILPRESS EXTRACTION FOR OIL CONTENT DETERMINATION IN WINTER CANOLA VARIETIES**  
Edmund Tetteh\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Jason de Koff
- GR-P 13      **FOR PATIENTS WITH CHRONIC MUSCULOSKELETAL PAIN, DOES THERAPEUTIC NEUROSCIENCE EDUCATION (TNE) COMPLEMENT EXERCISE AND/OR MANUAL TREATMENT IN DECREASING THE PERCEPTION OF PAIN?**  
Alexandria Bryant\*, Jacob Gamper\*, Joshua McCallum\*, and William Wilson\*. *Physical Therapy*, College of Health Sciences. Advisor(s): David A. Lehman

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# PRESENTATION SCHEDULES

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- GR-P 14      **DISTRIBUTED NETWORKED CONTROL SYSTEM FOR TURBINE ENGINES**  
Khadijeh Wehbi\*. *Electrical and Computer Engineering*, College of Engineering. Advisor(s): Saleh Zein-Sabatto
- GR-P 15      **ASSESSMENT OF IMPACTS OF HEAVY METAL IN COAL FLY ASH AMENDED SOILS AND BIOENERGY FEEDSTOCK, SWITCHGRASS**  
Olushola Awoyemi\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Kudjo Dzantor
- GR-P 16      **EFFECT OF MULCHES ON YIELD PERFORMANCE OF ORGANICALLY GROWN SWEETPOTATO**  
Sochinwechi Nwosisi\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Dilip Nandwani
- GR-P 17      **A COMPARISON OF DRY CUPPING AND DRY NEEDLING IN REDUCING PAIN ASSOCIATED WITH MYOFASCIAL TRIGGER POINTS**  
Trey Hudgins\*, Josh MacNaughton\*, Eric Newman\*, Joanne Tan\*, and Mike Wigger\*. *Physical Therapy*, College of Health Sciences. Advisor(s): Derek Charles
- GR-P 18      **OPERATIONAL EVALUATION OF FREIGHT INTERMODAL CONNECTORS**  
Emmanuel Masindoki\*, and Jeremiah Afolabi\*. *Civil and Architectural Engineering*, College of Engineering. Advisor(s): Deo Chimba
- GR-P 19      **EMISSIONS ALONG FREIGHT INTERMODAL CONNECTORS**  
James Mbilinyi\*, and Jeremiah Afolabi\*. *Civil and Architectural Engineering*, College of Engineering. Advisor(s): Deo Chimba, Roger Painter, Woong Joe, and Xiaoming Li
- GR-P 20      **SIZE DIFFERENCES IN IMPORTED FIRE ANT SPECIES, PATTERNS IN GEOGRAPHICAL DISTRIBUTION AND POTENTIAL IMPLICATIONS FOR BIOLOGICAL CONTROL**  
Manoj Pandey\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Jason Oliver, Karla Addesso, Reginald Archer, and Philip Ganter
- GR-P 21      **SENSITIVITY AND INACTIVATION OF SALMONELLA SEROVARS IN APPLE CIDER DURING HIGH PRESSURE PASTEURIZATION**  
Eleonora Troyanovskaya\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Aliyar Fouladkhah
- GR-P 22      **RESPONSE OF HYDRANGEA CULTIVARS TO POWDERY MILDEW AND EFFECT OF BIORATIONAL PRODUCTS AND FUNGICIDE ON POWDERY MILDEW DISEASE OF HYDRANGEA**  
Prabha Liyanapathirana\*. Md. Niamul Kabir, and Terri Simmons. *Otis L. Floyd Research Center*, College of Agriculture, Human and Natural Sciences. Advisor(s): Fulya Baysal-Gurel
- GR-P 23      **THE INHIBITION OF CELLULAR GROWTH USING DIOSCOREA VILLOSA ON VARIOUS COLORECTAL CANCER CELL LINES**  
Carey Johnson\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): E. Lewis Myles
- GR-P 24      **THE EFFECT OF CHINESE-BITTER MELLON ON BREAST CANCER CELLS LINES**  
Ashley Blair\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): E. Lewis Myles
- GR-P 25      **TOXICITY ANALYSIS OF CANCER CELL LINE A549 AFTER A 24 HOUR EXPOSURE TO PSIDIUM GUAJAVA**  
Heba Alhamdi\*, Christopher Davis\*, and Chanel Alford\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): E. Lewis Myles
- GR-P 26      **A NEUROSCIENCE STUDY IMPLEMENTING THE METRONOME TO AFFECT READING FLUENCY**  
Show Mei Lin\*. *Teaching and Learning*, College of Education. Advisor(s): Sylvia Driggins and Show Mei Lin
- GR-P 27      **THE EFFECT OF VIOLACEIN AND RHAMNUS EXTRACTS ON BREAST AND LUNG CANCER CELLS**  
Alaa Bahannan\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Terrance Johnson and E. Lewis Myles
- GR-P 28      **SCREENING BACILLUS THURINGIENSIS STRAINS FROM MIDDLE TENNESSEE FOR BACTERIOCIN ACTIVITY**  
Fahdah Alshammari\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Anthony Ejiofor and Terrance Johnson
- GR-P 29      **THE EFFECT OF ANTIBIOTICS ON THE GROWTH OF CHROMOBACTERIUM VIOLACEUM**  
Jawaher Khoja\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Terrance Johnson and Anthony Ejiofor
- GR-P 30      **CORRELATION ON AHL N-ACYLHOMOSERINE PRODUCTION TO THAT OF VIOLACEIN IN CHROMOBACTERIUM VIOLACEUM STRAINS**  
Mahmoud Gaballa\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Terrance Johnson and Anthony Ejiofor

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# PRESENTATION SCHEDULES

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- GR-P 31      **SCREENING BACILLUS THURINGIENSIS STRAINS OBTAINED FROM MIDDLE TENNESSEE FOR CHITINASE ACTIVITY**  
Rasha Alsamadani\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Anthony Ejiolor and Terrance Johnson
- GR-P 32      **IDENTIFICATION OF AMIDASE NEGATIVE STRAINS OF BACILLUS THURINGIENSIS**  
Sarah Filfilan\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Terrance Johnson and Anthony Ejiolor
- GR-P 33      **GENOMICS VERSUS PHENOMONICS CLASSIFICATION OF BACILLUS THURINGIENSIS STRAINS ISOLATED FROM MIDDLE TENNESSEE**  
Wejdan Aljafar\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Terrance Johnson and Anthony Ejiolor
- GR-P 34      **SOIL RESPIRATION, MICROBIAL BIOMASS AND EXOENZYME ACTIVITY IN SWITCHGRASS STANDS UNDER NITROGEN FERTILIZATION MANAGEMENT**  
Siyang Jian\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Jianwei Li and Jason de Koff
- GR-P 35      **EFFECT OF DIFFERENT LEVELS OF LYSINE ON EXPRESSION OF GENES ASSOCIATED WITH FAT ACCRETION IN BROILER CHICKENS**  
Boniface Kimathi\*. *Agricultural Sciences and Environmental*, College of Agriculture. Advisor(s): Samuel Nahashon and Thyneice Taylor
- GR-P 36      **EXPERTS, CAREGIVERS, AND THE NEED FOR SEXUALITY EDUCATION FOR YOUNG ADULTS WITH DOWN SYNDROME**  
Allison Katsantonis\*, Rebecca Russell\*, Becky DeKock\*, and Kate Nelson\*. *Occupational Therapy*, College of Health Sciences. Advisor(s): Christine Watt
- GR-P 37      **SCALABLE DDOS ATTACK DETECTION ON CLOUD COMPUTING PLATFORM**  
Sabah Alzahrani\*. *Computer Science*, College of Engineering. Advisor(s): Tamara Rogers
- GR-P 38      **EVALUATION OF CONVENTIONAL AND COVER CROPPED MAPLE PRODUCTION SYSTEMS ON TREE GROWTH AND INCIDENCE OF FLATHEADED APPLE TREE BORER ATTACK**  
Sujan Dawadi\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Karla Adesso
- GR-P 39      **TREATING POWDERY MILDEW ON BITTER MELON THROUGH BIOLOGICAL CONTROLS**  
Nia Gordon\*. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Arvazena Clardy and Margaret Mmbaga
- GR-P 40      **HOW DO SENSORY BASED THERAPEUTIC ACTIVITIES AFFECT SHORT TERM MEMORY IN YOUNG ADULTS?**  
Amanda Wallach\*, Jeremiah Ogunmola\*, Emily Dunleavy\*, Tori Ragan\*, and Sharon Scott\*. *Occupational Therapy*, College of Health Sciences. Advisor(s): Christine Watt
- GR-P 41      **WHAT IS THE EFFECT OF INFORMATION PRESENTATION FORMAT ON SHORT TERM RECALL IN GRADUATE STUDENTS?**  
Christina Dionne\*, Amber Alexander\*, Emily Barnett\*, Cat Stavola\*, and Courtney Strickland\*. *Occupational Therapy*, College of Health Sciences. Advisor(s): Christine Watt
- GR-P 42      **ESTERS FROM CARBOXYLIC ACID THROUGH RCOOPDH SPECIES AND ARCOPDCL SPECIES**  
Musa Aman\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum
- GR-P 43      **A COMPARISON OF DRY CUPPING AND DRY NEEDLING IN REDUCING PAIN ASSOCIATED WITH MYOFASCIAL TRIGGER POINTS**  
Trey Hudgins\*, Joanne Tan\*, Eric Newman\*, Josh MacNaughton\*, and Mike Wigger\*. *Physical Therapy*, College of Health Sciences. Advisor(s): Derek Charles

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# PRESENTATION SCHEDULES

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## UNDERGRADUATE POSTERS

UNDERGRADUATE POSTER JUDGING – THURSDAY, APRIL 20, 2017

1:00 P.M. – 3:00 P.M. in Jane Elliott Hall Auditorium

- UG-P 1      **ROLE OF MAPKs AND NF- $\kappa$ B IN TRIBUTYL TIN-STIMULATED INTERLEUKIN 1 BETA SECRETION AND PRODUCTION FROM HUMAN IMMUNE CELLS**  
Mariam Boules\* and Shyretha Brown. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
- UG-P 2      **SIGNALING PATHWAYS INVOLVED IN TRIBUTYL TIN-INDUCED INCREASES IN INTERLEUKIN 6 PRODUCTION BY LYMPHOCYTES**  
Nafisa Hamza\* and Shyretha Brown. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Margaret Whalen
- UG-P 3      **MODULATION OF PHOSPHO TENSIN HOMOLOG (PTEN) BY THE FLAVONOIDS QUERCETIN, KAEMPFEROL AND GENISTEIN IN 3T3-L1 AND VARIOUS CANCER CELLS**  
Alekszander Garcia\* and Md. Shafiqul Islam. *Chemistry*, College of Life and Physical Sciences. Advisor(s): William Boadi and E. Lewis Myles
- UG-P 4      **STUDY OF THE FACTORS AFFECTING THE SYNTHESIS OF MELANIN-LIKE PIGMENT FROM HOMOGENTISIC ACID**  
Juan Knight\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Koen Vercruyssen
- UG-P 5      **SYNTHESIS OF WATER-SOLUBLE MELANIN-LIKE PIGMENTS FROM VARIOUS PRECURSORS**  
Shelby Russell\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Koen Vercruyssen
- UG-P 6      **COMPARISON OF THE FTIR AND HPLC METHODS FOR COTTONSEED GOSSYPOL MEASUREMENTS**  
Micah Blake-Smith\* and Aron Felts. *Agricultural and Environmental Sciences*, College of Agriculture, Human and Natural Sciences. Advisor(s): Ahmad Aziz, Nsoki Phambu, and Sarabjit Bhatti
- UG-P 7      **VIABILITY ANALYSIS OF ADENOCARCINOGENIC CELL LINES AFTER EXPOSURE TO NATURAL COMPOUNDS**  
Aje Walton\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): E. Lewis Myles
- UG-P 8      **TOXICITY ANALYSIS OF CANCER CELL LINE A549 AFTER A 24 HOUR EXPOSURE TO COSTUS SPECIOSUS**  
Chanel Alford\*, Heba Alhamdi\* and Christopher Davis\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): E. Lewis Myles
- UG-P 9      **CELLULAR VIABILITY ANALYSIS OF COSTAS, RHAMUS, AND FENUGREEK**  
Chanel Alford\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): E. Lewis Myles
- UG-P 10     **SYNTHESIS OF 7-(TRIFLUOROMETHYL)-7,8-DIHYDROQUINOLIN-5(6H)-ONE. A NEW TRIFLUOROMETHYL BUILDING BLOCK FOR THE SYNTHESIS OF BIOLOGICALLY ACTIVE COMPOUNDS**  
Jacquantey Bowen\*, Kenya Collins\* and Chibuike Obi\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Cosmas Okoro
- UG-P 11     **EFFECTS OF BIOCHAR AND NITROGEN APPLICATION ON SWITCHGRASS PHOTOSYNTHESIS AND SOIL CO<sub>2</sub> EMISSION**  
Kenya Collins\*, Qi Deng, and Chih-Li Yu. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Dafeng Hui and Jason de Koff
- UG-P 12     **DESIGN OF A SOLAR POWERED EMERGENCY DRONE**  
Raed Batawi\*. *Aeronautical and Industrial Technology*, College of Engineering. Advisor(s): Carlos Beane
- UG-P 13     **EFFICIENT PROCESS FOR THE SYNTHESIS OF FLUORINE SUBSTITUTED AROMATIC KETONES**  
Grady Clopton\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum
- UG-P 14     **EXPLORING N-ARYLATION OF DIHALIDES & THREE COMPONENT COUPLING BY USING DIHALIDES, AMINES, AND TRIFLUOROBORATES**  
Maria Dabshee\*. *Chemistry*, College of Life and Physical Sciences. Advisor(s): Mohammad Al-Masum
- UG-P 15     **THE PHYSIOLOGICAL PROCESS THEORY OF ARTIFICIAL INTELLIGENCE**  
Juanita Richmond\* and David Johnson\*. *Biological Sciences*, College of Life and Physical Sciences. Advisor(s): Lois Wofford Harlston
- UG-P 16     **PHYTOCHEMICAL PROFILES AND ANTIOXIDANT ACTIVITY OF DIFFERENT ORGANIC TOMATO CULTIVARS**  
CheKenna Fletcher\* and Dilip Nandwani. *Agricultural and Environmental Sciences*, College of Agriculture. Advisor(s): Ying Wu and Yvonne Myles