

SCHOLARS WEEK

**MIDDLE
TENNESSEE**
STATE UNIVERSITY

2011 UNIVERSITY EXPOSITION

FRIDAY, APRIL 8

Complete schedule of events, abstracts, and other information is available at www.mtsu.edu/research/scholars_week.shtml

Undergraduate Titles

U1	Johnathan Gilliam	An Analysis of the Factors that Contribute to Intellectual Property Theft	U22	Matthew Hampton	How the Financial Crisis Affected Household Wealth
U2	Ashely Phillips	Building a Research Partnership in a SENCER Tennessee Science and History Learning Community	U23	Matt Petree	Industry/University Study on Applying Colloidal Silicates To Improve Concrete Properties
U3	Matthew Williams	The Effects of Emotional Pictures on Short Term Memory	U24	Matthew Cooley	Movement of Groundwater Along Fold Hinges in Central Rutherford County, Tenn.
U4	Kaylyn Gerth	The Effects of Various Warm-Up Protocols on Acute Vertical Jump Performance	U25	Kaylen Fletcher	The Effects of Proprioceptive Neuromuscular Facilitation Stretching on Vertical Jump Performance
U5	Samuel Mitchell	Is Porous Silica a Superior Medium for Sensing Protein-Antibody Binding Events?	U26	Chase Kowalski	The Effect of Caffeine on Vertical Jump Performance
U6	Megan O'Connell	Empowering Communities in Need through Education and Innovation	U27	Krista Huff	Comparative Genomics of <i>Nerodia sipedon</i> Populations from Ohio and Tennessee
U7	Lindsay Earnest	Does Price Reflect Quality? An Analysis of Retail Ice Cream Prices	U28	Yvette White	The Effectiveness of 12-Step Programs
U8	Cui le Chen	Thermal Behavior of 1,6-Di- <i>tert</i> -Butylhydroquinone	U29	Amanda Fanelli	Interoceptive Awareness and Eating Disorders Risk Among Female High School Athletes and Non-Athletes
U9	Eric Limbird	Seed Source Location and Captan Treatments Influence Germination Behavior in <i>Rhododendron calendulaceum</i>	U30	Adam Emerson	Are Memories for Taste Vulnerable to a Sensory Confirmation Bias?
U10	Derrick Donegan	Admixtures	U31	Katrina Smith	pH Dependence of Raman Spectral Signals of Aminobiphenylsomers Adsorbed on Gold or Silver Colloidal Nanoparticles
U11	Taylor Dove	Individual Differences in Self-Talk Frequency	U32	David Phillips	Effects of Densifiers on Concrete Properties
U12	Kathryn Holden	Now You Taste It, Now You Don't: Confirmation Biases in Taste Perception	U33	Robert Baudo	A Study of Delayed Disengagement of Attention: Pictures Versus Words
U13	Amy Howell	Preliminary Findings of Zooarchaeological Research and Food Processing Techniques at the Fewkes Site	U34	Caitlin Orman	Vocabulary, Morphology, and Prosody in English Language Learners
U14	Ryan Hopkins	The Impact of Social Media: a Case Study of TSA's Online Reputation Management	U35	Charles Cummings	A Comparison of the Acute Effects of Static and PNF Stretching on the Hip Adductors
U15	Brittney Martin	Effects of Preferred/Non-Preferred Music on Wingate Anaerobic Performance	U36	Amy Shaffer	A Morphological and Molecular Method for Assessing the Effects of Potential Toxins on Zebrafish
U16	Charles Sowers	Designing, Preparing, and Testing Sample Concrete Mixtures	U37	Lindsay Kilpatrick	College Students Beliefs, Attitudes and Knowledge Concerning Hospice Care
U17	Cari Jennings	Fluorescent and Biosensor Detection of Anthrax-Simulating Spores	U38	William Fultz	Creating Higher Reactivity Slag Cement Utilizing Waste Limestone Fines
U18	Lindsay Gates	From Red to Green: The Progression of Indian Agriculture from Independence to the Green Revolution	U39	Kathryn Tackett	Using The Camoebians as Indicators of Environmental Change within Todds Lake, Murfreesboro
U19	Andrew Johnson	The Effects of the Secondary Ticket Market	U40	Aaron Fisher	Determining High Strength, Lightweight and Environmental Performance for Southeast Concrete Competition
U20	Miquel Hurtado	Fermentative Conversion of Glucose Derived from Kenaf Pulp into Ethanol	U41	Jessica Taylor	Synthesis of Cyclopropyl Peptidomimetics as Potential Alzheimer's and Antiviral Drugs
U21	Joseph Quarles	Snow White: A Cinematic Study			

U42	Dan Nguyen	Exploration of Microwave-Assisted Synthesis Approaches for the Efficient Production of Biodiesel	U76	LaTeasha Hughes	Rich in Pores: Synthesis, Characterization, and Drug Delivery Applications of Mesoporous SiO ₂ Films
U43	Daniel Messick	Science-Based Experiential Learning in the Greenhouse for Special Needs Students: Linking Secondary to College	U77	Natalie Papini	Eating Disorders Risk and Perfectionism Among High School Athletes and Non-Athletes
U44	May Wai	Cellular Oncogene Expression during <i>Legionella pneumophila</i> Infection	U78	Leah Mattix	The Progression of Protest: An Investigation of the Use of Social Media in the Recent Egyptian Uprising
U45	Laura Vo	Evaluation of Microwave-Assisted Synthesis for the Esterification of Glycerol	U79	Kamryn Warren	Perspectives of Refugee Resettlement Experiences in Middle Tennessee
U46	Ronald Martin	The Effects of Passive and Active Warm-ups on Sprint Performance	U80	Brandon Cathey	A Surface Electromagnetic Wave Biosensor for the Detection and Study of Biological Compounds
U47	Keaten Holley	Efficacy of Gene Therapy in BERK Sickle Cell Mouse Model	U81	Michael Harris	Inside the Criminal Minds of Highly Intelligent Fraudsters
U48	David Antonelli	Synthesis of Labelled Mevalonolactone	U82	Madison C. Bauder	Experiential Interior Design Studio: Hospitality Projects for Tennessee State Parks
U49	Ryan Parawan	Effectiveness and Stability of an Enzymatic Endoscope Pre-Cleaning System	U83	Clay Ingram	Investigating the Use of a New Metakaolin for the Concrete Market
U50	Evan Cartabiano	The Impact of the Recent Growth of Rutherford County on the Ichthyofauna of the Stones River	U84	Eric Guyes	Quantum-Dot Sensitized Solar Cells Using Copper (I) Oxide as the Hole Transport Layer
U51	Michael Vaughan	Overweight and Obesity: Hydrostatic Weighing vs. BMI	U85	LaTia Jennings	Substance Use in Relation to Signs of Depression among High School Students in Tennessee
U52	Dahae Kim	Development and Testing of a Senior Level Undergraduate Laboratory Experiment to Analyze Amino Acids	U86	Kristy Hardin	The Nashville Flood: Comparing and Contrasting Local and National Coverage
U53	Blake Jenkins	Optimizing Concrete Floor Tiles for Sustainability and Loading Performance	U87	Evan Scott	Fruit Juice Solar Cells
U54	Evan Totty	Salary Caps and Competitive Balance in Professional Sports	U88	Tashea Danner	Relationship between Weight Status and Physical Activity among High School Students in Tennessee
U55	Emma Harris	Analysis of Mutants of Nucleoside Hydrolase from <i>Escherichia</i>	U89	Shabnam Etemadi	The Effects of Immigration on Family Development in the United States
U56	Jeremy Tiegs	Reliability of Au-Sn and Sn-Ag Solder Joints in High Temperature Packaging Applications	U90	Lauren Rigsby	A New Transmission-Line Matrix Approach for Modeling Metamaterials
U57	Ethan Khazali	Isolation of Adenosine Deaminase from Alaska Pea Seeds	U91*	Amber Gray	Safety Management Systems: The Perspective of Tennessee Airports
U58	Jordan Brien	"Don't Ask, Don't Tell," Just Listen to Our Side	U92*	Michael Finch	Home! Sweet Home!: Music's Role in the Civil War and Beyond
U59	Crystal Lawson	Development of Laboratory Experiments for the Biochemical Laboratory	U93*	Emily Allman	Danish Mame: Inspiration and Presentation
U60	Courtney Shaw	The Relationship Between (IPV) and Mental Health Status Among Tennessee High School Students	U94*	Vivian Rivard	Oriental Mame
U61	Alexander Murphy	Student Problem Solving Strategies: Dot-grid Area	U95*	Sarah Thompson	Exotic Indian Revival: Inspiration and Solution
U62	Hinaben Patel	Purification of <i>E. coli</i> Thymidine Phosphorylase	U96*	Kaitlin Thiesse	Art Moderne for Mame
U63	Courtney Wall	The Association between Physical Fitness and Academic Achievements in College Students	U97*	Megan Richter	Danish Modern Inspired by "Auntie Mame"
U64	Benjamin Bunnell	Sharing Two Pairs of Entangled Photons for High Fidelity Quantum Teleportation	U98*	George Carter	The South and the Modern World: 15 Photographs of an Evolving Culture
U65	Jeanne Stubblefield	Potential Use of Chlorine Dioxide to Decontaminate Skin Surfaces in an Animal Mass Casualty Event	U99*	George Carter	The Elasticity of Murine Red Blood Cells and Murine Sickle Cell Red Blood Cells
U66	Julian Harbehband	Purification of Uridine Nucleosidase from Alaska Pea Seeds	U100*	McKenzie Sadler	Claiming Feminism In The Name of Dance
U67	Andrea Kehoe	Steal Much!	U101*	Courtney Primus	Scenic Design
U68	Kristina Winslett	Sexuality and Relationship Quality	U102*	Diaondra Simpson	<i>Krapp's Last Tape</i> Scene Design
U69	Jonathan Bentley	Quantum Teleportation: The Most Secure Way to Forward Mail To Your "X"	U103*	Anna Risner	Scene Design for the play, <i>Krapp's Last Tape</i>
U70	Bethaney Bowen	Roots to Runway	U104*	Casey Martin	Scenic Design for <i>Krapp's Last Tape</i>
U71	Shayan Rouhanifard	Isolation of Adenosine Nucleosidase from Corn	U105*	Colton Carroll	Scene Design for <i>Krapps Last Tape</i>
U72	Chad Hardy	Developing a Business Plan Based on the Principles of Effectuation	U106*	Adam Cunningham	The Art of Scenic Design
U73	Murray Harris	Chronological History of MTSU Athletics from 1911-2011	U107*	Dana Gwinn	Residential Design Studio Solution for a Green and Universal House Design
U74	Daniel Bonior	Spectral and Polarization Entanglement Swapping in Two Pairs of Twin Photons	U108*	Jacob Pasco	C.I.M. Senior Lab; Concrete shrinkage and Strength gain
U75	Amanda Lee	Role of Accentuation in Dialogue Comprehension: an Electrophysiological Investigation	U109*	Daniel Cook	Rapid Set Cement for Concrete Repair
			U110*	Matt Hanning	Properties of Type III (High Early Strength Cement) + Aluminum Admixtures
			U111*	Tom Brown	Testing the Capabilities of Low Permeability/ Quick Setting Cement for Bridge Repair Material
			U112*	Laurence Tumpag	Philippines: A Broad Survey of Pre-Colonial and Early Colonial Times
			U113*	Graham Shelton	<i>Medea</i> : Theatrical Design
			U114*	Elizabeth Fletcher	"Medea Turns the Bright Air Black and Dreams Back to Nightmare"
			U115*	Jamie Donahue	A Work in Progress

U116*	Jordan Kirkman	1968, MTSU, and the Dixie Controversy
U117*	Jennifer Illsley	Expanding Your Horizons Program: Encouraging Young Women to be Future Leaders in Math and Science
U118*	Kristofer Hallfrisch	Iranian Women's Struggle for Agency and Its Role in the Future of the Middle East
U119**	Connie Jones	<i>Thump, Thump</i>
U120**	Emily Bailey	<i>Right Here</i>

Graduate Titles

G1	Bahir Alkadhimi	Experimental Vehicles: Innovation and Creativity in Science, Technology, Engineering, and Math
G2	John Ursone	The Effects of Acute Static Stretching on Glenohumeral Internal and External Rotation Strength
G3	Robert Girtz	The Effects of Personality Traits on Wages: A Matching Approach
G4	Anca Traian	Estimation of a Health Production Function for Eastern European Countries
G5	Todd Henrichs	Parametric Cost Modeling for Space Telescopes
G6	Basil Naah	Using Multiple-Choice Visuals in the Assessment of Students' Understanding of the Dissolving Process
G7	Daiva Berzinskas	Sustained Silent Reading and Its Impact on Reading Comprehension Skills for ESL Students
G8	Hussain Zakir	Does Walking or Riding a Bike to School Reduce Obesity?
G9	Patrick Cusaac	Effect of Maternally Transferred MeHgCl on Stress Induced Corticosterone in <i>Nerodia sipedon</i> Neonates
G10	Rong Lu	A New Nonparametric Phenotypic Coding of Family-Based Association Test in Late-Onset Analysis
G11	Beth Delk	Student Assessment and Grading Procedures of Secondary Band and Choral Directors in Tennessee
G12	Allison Armstrong	The Economic Impact of Equine Events at On-Campus Facility
G13	Angela Risto	Cultural Perspectives Regarding Educational Technology
G14	James Jordan	The Effects of Static and PNF Stretching on Agility Performance in Elite Youth Soccer Players
G15	Richard Ewool	Stochastic Modeling of the Michealis-Menten Enzymatic System Using Milstein Higher Order Method
G16	Alison Carey	Engaging High School Students in Original Scientific Research
G17	Alison Carey	Effects of Food Deprivation on Plasma Corticosterone and Nutrient Levels in <i>Nerodia sipedon</i>
G18	Ashley Johnson	Family Literacy
G19	Kyungtae Kim	Effects of Correlation on Dimensionality in Multidimensional Item Response Theory
G20	Audrey Weddington	Finding Palin: Focusing Events, Framing, and Public Opinion on a Prominent Political Figure
G21	Audrey Weddington	Sexual Objectification and The Super Bowl: A Textual Analysis of the Top 2010 Advertisements
G22	John Ihrie	Using Web-Based Data Mining Tools to Find Similarities in Varied Genetic Predictors for Colon Cancer
G23	Christian Brown	The State and the Supernatural: Support for Prosocial Behavior
G24	Margaret Pitt	Quantitative Analysis of Transcript Linkage in <i>Zea mays</i>
G25	Elizabeth Sharp	Effect of Teaching Experiences on Pre-Service Teacher Concerns: A Meta-Analysis
G26	Ryan Seddon	Stressed-out Skinks: Effects on Hormones and White Blood Cells

G27	Volodymyr Borodin	Potential Fields Generated by Point Sources on Shells of Revolution
G28	Philip Routon	Farming and Fighting
G29	Farhana Akhter	Investigating the Characteristics of Melamine-Cyanurate in Blood Plasma and Kidney Tissue
G30	Chris Dickson	Effect of Using Coping Skills and Exercise on Changes in Stress and Energy Among Police Officers
G31	Mohammedali Gangardiwala	Mesoporous Silica: Potential Scaffolding for Bone Growth
G32	Michael Chasteen	Developing a New Online Tool that Supports Program Code Review Among CS Student Peers
G33	Lauren Ingram	Right Choices: Service Learning Benefits Students and Community
G34	Michael Anderson	The Cranial and Pectoral Osteology of the Common Carp, <i>Cyprinus carpio Linnaeus</i> , 1758
G35	Michael Anderson	Population Survey of the Streamside Salamander, <i>Ambystoma barbouri</i> , in the Central Basin
G36	Benjamin King	Coupling of Poly(3-hexylthiophene) and Fullerenes for the Improvement of Organic Solar Cells
G37	Tewodros Gebrehiwot	Experimental Investigation of Energy Dissipation in Granular Segregation
G38	Chris Bowman	The Toxic Effects of Metal Nanoparticles During Early Zebrafish (<i>Danio rerio</i>) Development
G39	Lauren Bryant	Differences in How Aggressive and Prosocial Students Interpret Teacher Behavior
G40	Jessica Horvath	The Cognitive Processes Involved in MLD and ADHD
G41	Youngdeok Kim	Rater Variability of TGMD-2 in Children with Intellectual Disabilities
G42	Mohammed Majumder	The Link between Economic Growth and Financial Development: Evidence from Districts of Bangladesh
G43	Anuradha Pathirirage	Synthesis of Cyclopropyl Peptidomimetics as Potential HIV Protease Inhibitors
G44	Poliala Mahoney-Dickson	Examining Alcohol Consumption Behaviors among Students at MTSU
G45	Hisham Abu-Taleb	Apolactoferrin Binds the Hemopexin Domain of Pro-matrix Metalloproteinase-2
G46	Hisham Abu-Taleb	Regulation of MMP-2 and pro-MMP-2 by the copper-binding serum protein apoceruloplasmin
G47	Abhradeep Maiti	How Do Technological Advancements Influence Democracy?
G48	Melissa Brock	Assessing Breadth and Depth of Vocabulary Knowledge: A Comparison of Four Vocabulary Tasks
G49	Adam Keasling	<i>Passiflora incarnata</i> : An Allopathic Study.
G50	Sachintah Pitigala	Identifying Training Sets for Personalized Article Retrieval System
G51	Tyler Hubbard	Timing Influences on the Specificity of Implied Movement Interference Effects
G52	Vanessa Hobbs	Elucidating the Chemical Profile of the Smoke Samples of Synthetic Cannabinoid Substances
G53	Anna Costa	Reading through Mathematics: Equity for All Students
G54	Peter Cothron	Detection and Degradation of Chemical Weapons Models Using Mesoporous TiO ₂ Films
G55	Angel Simmons	Nonsuicidal Self-Injurious Behavior and its Relationship with Partner Violence
G56	Emily Casey	School Uniforms
G57	Saori Ishikawa	Perceived Overweight or Obese Body Image and Weight-Control Behaviors among Adolescents in Tennessee

G58	Joseph Kirby	The Impact of Same-Sex Marriage on Gay and Lesbian Wage Differentials
G59	Raymond Wright	Fecal Samples as an Indicator of Mercury Absorption in Dosed Northern Water Snakes, <i>Nerodia sipedon</i>
G60	Phillip Mnrirajd	Synthesis of Non-Halogenated Crystalline Phosphorus Flame Retardants for Engineering Resins
G61	Joshua Haley	Reliability of the Rockport Walk Test in 5-8 Year Olds
G62	Jacob Campbell	Sexual Dimorphism and Its Energetic Cost for Oversized Chelipeds in Male Fiddler Crabs
G63	Talal Alfurayh	Who is in Charge of Food Safety: An International Comparison
G64	Jerrold Shipman	Thermal Ecology of Hibernation in <i>Nerodia sipedon</i>
G65	Chris Dunn	The Effects Of Pre-College Aural Training On Instrumental Music Majors
G66	Andrea Van Hoozer	Predicting Parental Involvement in a Rural Middle School Setting
G67	Deanna Jordan	Influence of Musical Ability on Linguistic Stress Perception: An EEG Study
G68	Mike Blumberg	Frequency of Use and Perceptions of the National Standards in Band
G69	Joel Reece	Evaluation of a 16-Week, Family-Based After-School Nutrition and Physical Activity Health Program on Selected Health Variables in School-Aged Youth
G70	Rebecca Zanolini	Between Two Worlds: The Formation of Ethnic Identity in Latino University Students
G71	Brittney Oliver	The Relationship Between Age of Sexual Initiation and Substance Use Among U.S. High School Students
G72	Kaylin Davis	Integrating the Arts to Promote Multimodal Literacies
G73	Amanda Cole	The Effect of Bullying on Mental Health Status
G74	Doug Brown	Mobile Data Design and Applications for Emergency Response Vehicles
G75	Misa Culley	Polarized Lenses: Party Identification and Ratings of the National Economy, 2001-2011
G76	Matthew Booth	Employment, Wage, and Output Dynamics under External Habit Formation and Shirking Efficiency Wages
G77	Kevin Isbell	Male Participation in High School Choral Ensembles as Perceived by Choral Directors in Rutherford County High Schools
G78	Chiaki Shima	Giving College Students Incentives to Complete Their Homework: Rewards or Punishments
G79	Karen Hargrove	Women's Outdoor Experiences at the 2009 Tennessee "Becoming an Outdoors-Woman" (BOW) Program
G80	Yuanyuan Chen	A General Equilibrium Examination of the Effects of Loss Aversion/Narrow Framing on Asset Price

Faculty Titles

F1	Stephen Wright	Contribution of Avians to the Epidemiology of Lyme Disease and Southern Tick Associated Rash Illness
F2	Wendy Beckman	Using Microsoft Flight Simulator in the Classroom to Improve Student Pilot Decision Making Skills
F3	Debra Wilson	The Botswana "I am proud to be a nurse" Project
F4	Rachel Kirk	How Students are Taught to Write and What They Are Expected to Read in General Education Courses
F5	Virginia Donnell	What Students Can Tell Us: Assessing Performance Levels in a Fundamentals of Communication Course
F6	Virginia Donnell	Arts Organizations of the Future: THEA 3800 Introduction to Arts Management

F7	Tricia Farwell	Philanthropy During WWI: A Case Study of Edith Wharton's Charitable Works
F8	Christopher Klein	Deregulation and the Demise of Sham Litigation: A Structural Time-Series Approach
F9	Wandi Ding	Optimal Control Applied to Native-Invasive Populations Competition via a PDE Model
F10	Jeanne Fain	Young Urban Bilingual Preschoolers' Response with Critical Texts
F11	Janet K. McCormick	Student Interest in Experiential Learning and Online Classes in a Proposed Minor
F12	Jason Vance	Scrapbooks of Kentucky's Pack Horse Librarians (1936-1943)
F13	Nancy Caukin	Science Writing Heuristic: A Writing-to-Learn Strategy Used in Secondary Chemistry
F14	Danielle Brown	Intrapopulation Niche Differences: Do They Exist for Northern Tamandua Anteaters?
F15	Timothy Graeff	Faculty Mentoring
F16	Matthew Klukowski	Reproduction and Plasma Corticosterone Levels in Free-Living Female Fence Lizards
F17	Jane Marcellus	Southern Myths and the Nineteenth Amendment: The Participation of Nashville Publishers in the Final State's Ratification Debate
F18	Tanya M. Peres	National Register Testing at the Coats-Hines Site, Williamson County, Tennessee
F19	Mary Ellen Fromuth	Characteristics and Students' Perceptions of Teacher Bullying
F20	Melissa Lobegeier	Foraminifera as water quality indicators in St. Andrew Bay, Florida
F21	Michael Thompson	A SN362 Increases Zinc Affinity of Leukotriene A4 Hydrolase
F22	Yun Soo Lee	Trends in Participation in Physical Education Among High School Students in Tennessee, 2003-2009
F23	Cathy Cooper	Integrating Informatics Competencies into a Baccalaureate Nursing Curriculum
F24	Janis Brickley	Exploration of Pattern Scale in Play Environments for Pre-School Children
F25	Mark Abolins	Mapping Developed Land in a 1,500 Sq. Km Area Around Mobile Bay, Alabama
F26*	Philip Loubere	Online Interactive Graphics: <i>Good Friday Tornado</i> and <i>Fortress Rosecrans</i>
F27*	Scott Boyd	Rent: A Bohemian Exploration On-Stage.
F28*	Dorothy Craig	Blogging on Education: Using Blogs to Encourage Discourse and Dialog in Graduate Courses
F30*	Anne Willingham	Here Comes the Bride- Students Explore Non-Traditional Lighting Design
F31*	Jasmin Hyunju Kwon	The Integration of Fashion and Culture in an Apparel Design and Merchandising Course

Centers, Institutes, and Program Titles

C1	College of Graduate Studies
C2	Master of Science in Professional Science and Interdisciplinary Science Ph.D. Programs
C3	Association of Pre-Professional Life Scientists (APLS)
C4	Center for Historic Preservation
C5	Center for Popular Music
C6	Center for Health and Human Services (CHHS)
C7	Women in STEM Center (WISTEM)
C8	Center for Cedar Glade Studies and Center for Environmental Education (CEE)
C9	MTSU Interdisciplinary Microanalysis and Imaging Center (MIMIC)
C10	The Forensic Institute for Research and Education (FIRE)
C11	Aerospace Programs (UAS, ATC)
C12	Tennessee Lead Elimination Project (LEAP)
C13	Honors College