



The Basic Facts

Volume 6, Issue 11, December 2005

The Basic Facts, College of Basic and Applied Sciences, Middle Tennessee State University, Murfreesboro, TN

The Science of Success

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Aerospace was traditionally thought of as a profession limited to males, but MTSU Aerospace has one of the largest populations of females of any program in the USA - and as this photo suggests, it is paying



off! Four of the seven young women pictured here are MTSU Aerospace graduates. On the front row starting with the second from the left are Kelly Futrell, Bonnie Doyka, Brandi Watts,

and Kari Hart. Kelly, Bonnie, Brandi and Kari graduated from MTSU with a Professional Pilot degree between 2003 and 2005. All fly for American Eagle as operated by RegionsAir, Inc. Four stripes on the shoulder means Airline Captain; three stripes means First Officer. Aerospace will host the national conference of the Women in Aviation International in Nashville in March of 2006.

MTSU Horse Judging Team Wins Major Contest

Continuing the winning ways of the spring, the MTSU horse judging team captured another big prize as the team dominated the competition in the intercollegiate horse judging contest October 14 at the All-American Quarter Horse Congress in Columbus, Ohio. Thirty teams from university and junior colleges competed, twenty in the senior college division. MTSU swept the three categories that make up the total score, winning team firsts in conformation judging, performance judging and oral reasons. The team scored 3,204



points out of a possible 3,400. Individually, Sarah McKee, a junior from Gallatin, was ranked first in

conformation, second in performance, fourth in reasons, and second overall and received a \$500 scholarship for her achievements. Teammate Michael Hunsinger, also a senior from Gallatin, ranked second high individual in conformation and second in oral reasons and seventh overall. This win came in addition to two out of three victories in the spring when the team won the National Reining Horse Breeders Classic in Katy, Texas, and the National Intercollegiate Horse Show contest held in Sunbury, Ohio. The team also placed second in the National Paint Horse Contest held in Fort Worth, Texas.



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2005 Farm Festival

The School of Agribusiness and Agriscience hosted the MTSU Farm Festival November 9 at the Tennessee Livestock Center. This was an opportunity for school-age children from around Middle Tennessee to "experience agriculture." Approximately



1,100 students from Rutherford and surrounding counties had an opportunity to milk a dairy cow, hold a baby chick, pet a pig, sit in a tractor, touch a cotton boll, sample some MTSU milk, and much, more. A first-grade teacher at Reeves Rogers Elementary School commented that "most children nowadays have

never even seen a cow up close or held a chick, so this was really a treat!" Children learned that the milk they get at school doesn't come from the local grocery store but that it is ultimately produced by U.S. dairy farmers; that the sources for the clothes they wear to school may very well be the local cotton grower; and that the eggs they eat for breakfast came from real live hens. The goal of the MTSU Farm Festival is education in a fun learning environment with emphasis on how agriculture influences every American's daily life.



The Basic B.E.S.T. (Boastful Educators Sharing Talents)

All departments are invited to submit items for this column

Agribusiness / Agriscience

Harry Djunaidi presented "Computer Simulation Model Applied in Teaching Agricultural Economics" and "Statistical Concepts Applied in Teaching Agribusiness" at the 115th Annual Tennessee Academy of Science at UT Martin November 18.



Biology

Michael Thompson presented a poster titled "Tyrosine 244 Stabilizes the Transition State of the Peptidase Reaction of *Saccharomyces Cerevisiae* Leukotriene A4 Hydrolase" with **Rebecca Seipelt** and C. E. Romer at the 2005 Tennessee Academy of Science.

Michael Thompson sponsored a poster presented by undergraduate Erin Archer titled "A Conserved Tryptophan Residue With an Altered pKa Is Essential for the Peptidase Reaction of *Saccharomyces Cerevisiae* Leukotriene A4 Hydrolase" with **Rebecca Seipelt** at the same conference.

Jeffrey Walck presented seminars at the University of Kentucky on October 12 and at Ohio State University on October 14. He also presented a workshop on seed ecology at the Ornamental Plant Germplasm Center at OSU and participated in the videoconference course International Seed Production with Chile and Brazil.

Vince Cobb coauthored "Freshwater Turtle Populations of Reelfoot Lake" and "Feeding Activity of Stinkpots Reelfoot Lake Tennessee" with graduate students Brad Glorioso and Elizabeth Young at the Tennessee Academy of Science at UT Martin in November.

Sandra Johnson participated in the Fall 2005 Research Alliance in Math & Science Faculty Mentor Workshop at the Oak Ridge National Laboratory in December. The goal was to foster collaborative partnerships between academia and ORNL to better prepare students for careers in science.

Frank Bailey and four of his graduate students made four presentations titled

"The Use of Terminal Restriction Fragment Length Polymorphism (TRFLP) in Fecal Bacterial Source Tracking" with J. B. Anderson; "The Effects of Polychlorinated Biphenyls on Gonadal Differentiation in the Gray Tree Frog (*Hyla Chrysoscelis*)" with A. M. Tolley; "Effects of Aquatic Plants on Metal Bioavailability to Organisms" with E. G.

Reed; and "Effects of Herbicide Atrazine on the Gray Tree Frog (*Hyla Chrysoscelis*) in a Microcosm System" with R. R. Street at the 25th Annual Society of Environmental Toxicology and Chemistry in Baltimore, MD, in November.

John Zamora presented "Allelopathic and Antimicrobial Properties of The Ayurvedic Herbs, Neem and Gotu Kola" with Christina Nelson and "The Isolation and Identification Of Antimicrobial-Producing Organisms" with Brandon Naquin at the Tennessee Academy of Science.

WaterWorks! Program Director **Karen Hargrove** partnered with the Municipal Technical Assistance Service and TDOT's assistance program to showcase MTSU's public education and outreach materials for storm water and public works managers November 15 in Nashville and November 16 in Jackson.

Kim Cleary Sadler and Nancy Stetton from the TN Department of Education presented a workshop titled "Geology Rules: A View of the Cedar Glades in Tennessee." They also co-facilitated a tour for science teachers to the Couchville Glades in Long Hunter State Park.

Cindi Smith-Walters and Kim Cleary Sadler presented two workshops at the Southern Regional National Science Teachers Association at the Opryland Hotel December 1.



The first session was entitled "Special Habitats of Tennessee," and the second session introduced elementary teachers to the concepts of carrying capacity, human geography and environmental stewardship through an interdisciplinary hands-on workshop.

Chemistry

Earl Pearson developed a "Classroom Activity" paper for the *Journal of Chemical Education* to accompany his accepted paper on "The Magnet and BB Analogy to Millikan's Oil Drop Experiment."

Computer Science

Richard Detmer presented "Integrating Institutional Effectiveness" with Dr. Janice Leone (History) at the 2005 Annual Meeting of the Commission on Colleges of Southern Association of Colleges and Schools in Atlanta December 5. This presentation covered MTSU's computerized system for IE plans, including both uses of the system and some technical details behind the system.

Richard Detmer gave a presentation on computer usage for senior citizens December 2 at the Mental Health and Aging Workshop at the St. Clair Street Senior Center.

Engineering Technology and Industrial Studies

ETIS, in collaboration with Continuing Studies, won the training contract at Asurion Corporation. **David Gore** will present the first training, "Lean Training Essentials," to company executives in early January.

Math

Over 60 students attended all or part of the first Math Majors Fall Festival November 22. This event was to advise students on various matters regarding their future career,

graduate programs and to address their concerns about the real world in their profession. Special thanks to **Vatsala Krishnamani** and **Mimi Thomas** for arranging the faculty panel and special speakers.

Zachariah Sinkala presented "Growth and Control of Diffusive Tumors" at a workshop at East Tennessee State University October 13-14.

Military Science

Fourteen aspiring senior cadets received their United States Army Branch assignments. Six will go into active duty, five to the Army Reserve and three to the Tennessee National Guard.



Nursing

Karen Ward and **Suzanne Prevost** were elected as delegates from the local Xi Alpha Chapter to the Biennial Convention of Sigma Theta Tau International and attended the convention in November.

Lynn Parsons was appointed to the Murfreesboro City Schools Advisory Board. They are currently focusing on childhood obesity.

Suzanne Prevost was reelected as Secretary for Sigma Theta Tau International.

Anita Crockett presented "Secure the Ship's Deck: Extending the Leading Through Partnering Model" at the 38th International Biennial Convention of Sigma Theta Tau International.

Francisca Cisneros-Farrar presented "Empowering Quality Minority Health Care Access: A Latino Model of Care" at the International Conference on Cultural Diversity at MTSU in November.

CBAS

Eleven CBAS students were initiated into the Phi Kappa Phi honor society December 7.