MTSU Ranks MTSU one of the best universities in the Southeast

2009 annual rankings of America’s Top Colleges and Universities

MTSU

57th best public institution in the United States

Only public university in the State of Tennessee to be ranked in the top 100

47th in the country among all institutions, both public and private, in the category of “America’s Best College Buys”
I have served MTSU as the Vice Provost for Research and the Dean of the College of Graduate Studies for a little over two and a half years. I believe that the university has made significant progress during this period and the Office of Research (OoR) and the College of Graduate Studies (CGS) have contributed greatly to this success.

Less than 10 years ago, MTSU was attracting less than $4 million in extramural sponsored awards. In FY2008 - 2009, MTSU received $38.1 million in extramural funds for research, service, and instruction - an increase of $1.54 million over the preceding year. Of the total funding received, $11.9 million was from federal funding sources, an increase of 134% over the amount received in the preceding year. Much of this success was due to an aggressive effort to submit strong proposals to the National Science Foundation.

The College of Graduate Studies continues to expand both in the quality and quantity of graduate programs and in numbers of graduate students. The university has received favorable reviews of its proposals to create three new science Ph.D.s. and to establish master’s degrees in Horse Science, International Affairs, Information Systems, Accounting, Leisure and Sport Management, and Health and Human Performance. Graduate student enrollment increased by 10.7% last year, bringing the total graduate student enrollment to over 2,600 for the first time. The university’s claim as the number one public graduate school in the region was further bolstered by a 10.5% increase in enrollment this Fall, giving MTSU 2890 graduate students. This past year the CGS made globalization of our graduate student body a major focus and we are gratified by the success of our recruitment efforts, especially in recruiting students from the Middle East, China, and India. As a result, our international graduate student enrollment increased in the Fall and included four Fulbright Scholars and one Muskie Fellow. Though we have made significant progress in international recruiting, we expect our efforts in reorganizing, developing of new processes and procedures, and establishing new relationships to continue to move MTSU forward in globalization of the university.

Though this is a challenging time for all universities, I believe that MTSU has a plan and the leadership to move the university forward while our state support decreases. MTSU, led by President Sidney McPhee, has been involved in a very transparent, well-thought-out process for Positioning the University for the Future that will help us grow and develop even during these difficult economic times.

I am excited about the progress MTSU has made and am looking forward to the coming year. I appreciate your support and hard work in growing research and graduate programs, and look forward to working with each of you as we move forward.

Sincerely,

Michael D. Allen, Ph.D., P.E.
Vice Provost for Research and
Dean of the College of Graduate Studies
# TABLE OF CONTENTS 2009

## Executive Summary
Office of Research 6
College of Graduate Studies 7

## Office of Research
Office of Research Services 9
Office of Compliance 12
Undergraduate Research Center 14
Center for Advancement of Research and Scholarship (CARS) 16
Intellectual Property Development and Commercialization (IPD&C) 17
Faculty Research and Creative Activity Committee (FRCAC) Grants 18

### Initiatives
- Partnership for Healthy Homes 19
- Aviation Safety 20
- STEM Education Center 21
- Federal Initiatives Development 22

### Featured Centers and Institutes
- Center for Environmental Education (CEE) 24
- Center for Health and Human Services 26
- Center for Historic Preservation 28
- Center for Physical Activity and Health in Youth (CPAHY) 30
- Forensic Institute for Research and Education (FIRE) 31
- Tennessee Center for Child Welfare (TCCW) 32
- Tennessee Small Business Development Center (TSBDC) 33
- Tennessee Mathematics, Science, and Technology Education Center (TMSTEC) 34

## Partnerships and Strategic Alliances
- National Aeronautics and Space Administration (NASA) 36
- Oak Ridge Associated Universities/Oak Ridge Institute for Science and Education 37
- Oak Ridge National Laboratory/Southeast Regional Research Initiative (ORNL/SERRI) 38
- Smyrna Airport 39
- Arnold Engineering Development Center 40
- Tennessee Valley Authority 41
- Bridgestone/Firestone 41
- United Southern and Eastern Tribes (USET) 42
- Hudson Alpha Research Institute 43

## Spotlight on the National Science Foundation (NSF) Projects

## Faculty Awards

## Events
- Posters at the Capitol/Posters on the Hill 50
- Scholars Week 51
# TABLE OF CONTENTS 2009

## College of Graduate Studies

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Initiatives</td>
<td>53</td>
</tr>
<tr>
<td>New Programs</td>
<td>56</td>
</tr>
<tr>
<td>New Directions</td>
<td>57</td>
</tr>
<tr>
<td>• Goals</td>
<td>58</td>
</tr>
</tbody>
</table>

## Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of Research Organizational Chart</td>
<td>62</td>
</tr>
<tr>
<td>College of Graduate Studies Organizational Chart</td>
<td>63</td>
</tr>
<tr>
<td>College of Graduate Studies Coordinators</td>
<td>64</td>
</tr>
<tr>
<td>Scholars Week Organizing Committee 2009</td>
<td>65</td>
</tr>
<tr>
<td>Graduate Council 2008-2009</td>
<td>66</td>
</tr>
</tbody>
</table>
Executive Summary

The Office of Research and College of Graduate Studies have enjoyed several notable successes. These are captured in the bullets below. Most of the items are more broadly discussed in the body of the report.

Office of Research:

- All time high in extramural funding: $38.1 million total with 72% from federal sources
- 168 proposals were submitted; 60 proposals were awarded and 61 proposals are pending
- Unprecedented NSF funding success: $6.9 million in new awards so far in CY2009 and a 43% success rate compared to a 20% success rate nationally
- MTSU federal initiatives development efforts resulted in $1.66 million in funded grants from the FY2009 federal budget and $5.54 million in requests from the FY2010 federal budget
- Faculty seed funding of $462,480 through FRCAC and matching funds of $549,055 from the Office of Research Services
- The Office of Research Services conducted nine pre-award workshops and seven post-award workshops and the Office of Compliance conducted two workshops. There were a total of 134 participants in these workshops.
- Undergraduate research funding of $500,000 through externally funded programs and $133,000 in URSCA grants
- Scholars Week – 5 day celebration of undergraduate, graduate, and faculty research
- Record number of interns (14 total) placed at ORNL in Summer 2008/2009
- One patent was granted and one project received $100,000 funding for commercialization
- Development of strategic alliances
  → New Partnerships
    1. United South and Eastern Indian Tribes – Tribal Epidemiology Center
    2. Smyrna Airport
    3. Bridgestone
    4. Arnold Engineering Development Center
    5. HudsonAlpha Biotechnology
    6. Southeast Regional Research Initiative
  → Continuing Partnerships
    1. Oak Ridge National Laboratory
    2. Oak Ridge Associated Universities/Oak Ridge Institute for Science and Education
    3. Tennessee Valley Authority
    4. NASA – Marshall Space Flight Center
  → New partnerships resulted in $550,000 in grants in FY2009
Executive Summary

Graduate Studies:
- Largest and most comprehensive public graduate school in region
- Graduate enrollment – increase of 22% since Fall 2007
- New students – almost 1,100 first time graduate students enrolled in Fall 2009
- Internationalization – New international graduate admissions up 54% over last year
- International Scholars – Enrolled four Fulbright Scholars and one Muskie Fellow in Fall 2009
- Degrees awarded – Record number (810) of graduate degrees were conferred in 2008 – 2009
- New master’s programs – New degrees in International Affairs, Horse Science, Health & Human Performance, Leisure & Sport Management, and Information Systems approved by TBR and waiting for THEC authorization
- New doctoral degrees – Proposals to establish Ph.D. degree programs in Molecular Biosciences, Computational Science, and Mathematics & Science Education were approved by TBR and were recently approved by THEC
- Workshops and Seminars – added new annual workshop for graduate program directors and weekend intensive GRE preparation workshops for students
The Office of Research (OoR), led by the Vice Provost for Research, includes three organizational entities: (1) the Office of Research Services (ORS), (2) the Office of Compliance (OC), and (3) the Undergraduate Research Center (URC). The mission of these groups is to provide service and support to faculty involved in research, instruction, and/or public service grants and contracts. We encourage principal investigators to get the pre-award staff involved in proposal development and submittal and the post-award staff involved in grant administration as soon as possible in the process. Our goal is to help make grant work easier for the faculty and support staff.

The ORS, directed by Dr. Myra Norman, is primarily responsible for all pre-award and post-award grant and contract activities. The ORS pre-award group helps faculty identify funding opportunities and submit proposals to federal and state agencies for research, instruction, and public service funding. The post-award group monitors grants and
OFFICE OF RESEARCH

contracts and ensures compliance with federal and state laws and reporting requirements. In addition, ORS is responsible for new faculty orientation, proposal development workshops, and faculty training in securing funding and in managing grants and contracts. Because of the aggressive growth in extramural funding for research and service over the past decade, ORS has grown and taken on more responsibility for understanding and insuring compliance with federal and state regulations and policies. With the growth of the research enterprise, more careful oversight of financial and research compliance of grants and contracts has become necessary. The faculty and staff have to work more closely with the ORS post-award staff to ensure that their grants and contracts are in compliance with the constantly changing federal and state regulations and reporting requirements.

The Office of Compliance (OC) is responsible for the Institutional Review Board (IRB), the Institutional Animal Care and Use Committee (IACUC), the Institutional Biosafety Committee (IBC), and Responsible Conduct of Research. The OC ensures compliance with all applicable state and federal laws pertaining to research involving human subjects, animals, and specific biological agents. The Vice Provost for Research is the Institutional Official for the IRB, IACUC, and IBC and has responsibility for the Responsible Conduct of Research.

The OC is undergoing a change starting Fall 2009 in management. For the past four years the OC has been managed by Tara Prairie. Tara did an excellent job for MTSU. She enforced the federal regulations and worked well with the faculty and staff. However, she is moving on to bigger and better opportunities. We have hired Leigh Gostowski to replace Tara as the Research Compliance Officer.

The Undergraduate Research Center (URC), managed by Peggy Duszynski, is responsible for fostering and managing undergraduate research programs. Last year MTSU invested almost $700,000 in undergraduate research through the URC, the STEP-MT grant, and the McNair Scholars program. The URC will award approximately $127,000 for the 2009–2010 academic year to undergraduate scholars as competitive funding for research in their chosen discipline.

The Office of Research (OoR) also oversees a number of innovative programs that contribute to the research mission defined in the university’s Academic Master Plan. These programs include the Center for the Advancement of Research and Scholarship (CARS), the Faculty Research and Creative Activities Committee (FRCAC), the Intellectual Property Advisory Committee (IPAC), and Scholars Week. Each of these initiatives will be discussed later in this report.

The Office of Research provides overall direction and leadership for developing an infrastructure and intellectual capacity that will significantly enhance the level of research and scholarship at MTSU. Dr. Allen, assisted by Dr. Andrienne Friedli, is responsible for anticipating and seizing new opportunities that
arise, for providing vision and an entrepreneurial spirit that will encourage growth of the research enterprise, for developing new policies and procedures, and for planning actions that result in success. The OoR organizational structure is best visualized by referring to the appendix.

The Office of Research has made huge strides in extramural sponsored awards since the turn of the century. At the beginning of the new millennium, MTSU was receiving about $5 million per year in extramural sponsored awards for research, instruction, and public service. In the 2008 – 2009 academic year, MTSU was awarded $38.1 million in extramural awards. The increase in funding from federal and state agencies is the result of a new emphasis on research and graduate education presented in the University’s Academic Master Plan. The university has developed new research infrastructure and innovative programs that encourage and invest in faculty who prepare proposals for grants and contracts from federal and state funding agencies. Seventy-two percent of MTSU’s grants and contracts originate from federal sources.

Of the total extramural funding, 15% is for research and 72% is for public service. As new doctoral programs are approved, a higher percentage of the total funds will be for research. Though MTSU is focused on serving Middle Tennessee, we are also placing emphasis on growing our research portfolio and developing new research intensive doctoral degrees.
The Office of Research Services (ORS) supports the University’s goal of striving for excellence in research, scholarship, creative projects, and public service. To achieve this, ORS works with faculty to secure extramural funding from federal, state, local, and private entities. In FY09 MTSU faculty and staff were awarded $38.1 million. The ORS serves the University through three essential services: 1. Education and Training, 2. Pre-Award Management, and 3. Post-Award Management.

1. Education and Training

The ORS staff constantly strives to improve the working environment for faculty and staff who submit proposals or are working on grants and/or contracts. Members of the ORS staff:

- Develop and present workshops and seminars on how to apply for competitive grants, administer grants, and follow compliance requirements. In FY09, pre-award staff offered 10 workshops. Post award staff offered 8 sessions of the grants management workshops, and the Office of Compliance offered two workshops.
- Organize faculty visits to workshops held by funding agencies.
- Invite agency representatives to campus for presentations.
- Foster the development of internal and external interdisciplinary collaborations and partnerships.

2. Pre-Award Management

The ORS pre-award office is staffed by Samantha Cantrell, who works with faculty of the colleges of Business, Mass Communications, and Liberal Arts, and Sharon Smith, who works with the colleges of Education and Behavioral Science and Basic and Applied Sciences. These staff members research and disseminate information on funding sources. They also provide guidance on every aspect of proposal submission, from developing an appropriate budget for the project through securing the required approvals and submitting the proposal to the funding agency on time.
3. **Post-Award Management**

*Stewardship of extramural funds is essential to sustaining our growth in external funding.*

The University must properly monitor and expend its grant funds in order to maintain a solid reputation among the funding agencies. To accomplish this, the members of post-award management work closely with principal investigators and project directors to assure compliance with federal, state, and university policies and procedures. The post-award staff members, Fiscal Manager Katrina Keller and financial analysts Nancy Martin and Lisa Thayer, provide administrative support for all aspects of the execution of awarded grants and contracts. Furthermore, the ORS has initiated an Internal Compliance Committee composed of selected faculty, staff, and administrators to streamline policies and procedures for funding compliance.
Office of Compliance

The Office of Compliance has continued its efforts to nurture research while working with faculty, staff, and students to assure research compliance and integrity. Principal activities have included:

- Workshops for faculty and students regarding human and animal subjects research
- Quality assessments of both human and animal subjects programs
- Attendance at conferences providing educational resources and training applicable to MTSU
- IRB website update, to include the new oral history & streamlined expedited/full review applications and supporting documents
- Continuing to work with faculty on the creation of an Institutional Biosafety Committee (IBC).

Community efforts of the Office of Compliance have included:

- Continuing to work with the Tennessee Bureau of Investigation as their IRB of record to review their research
- Educating local community members at Linebaugh Library and providing IRB certificates to individuals in order for them to volunteer on an oral history project

Breakdown of Processed IRB protocols:

- 317 total reviews
- 140 exempt reviews
- 169 expedited reviews
- 8 full reviews

Breakdown of Processed IACUC protocols:

- 9 total reviews
- 1 designated member review
- 8 full reviews

Changing of the guard - Outgoing Compliance Officer, Tara Prairie (L) hands over the reigns to Leigh Gostowski
The MTSU Undergraduate Research Center was created in 2004 to promote research at the undergraduate level, and to provide university support for undergraduate students and the faculty members who mentor them in scholarly and creative activities. This includes providing information and financial support through grants.

The URC administers the URSCA funds awarded to undergraduate students and their faculty mentors. The Undergraduate Research, Scholarship and Creative Activity Committee (URSCA) evaluates proposals based on merit. This committee is composed of accomplished and passionate faculty members from all five academic colleges at MTSU. Externally-funded programs that involve undergraduate research on campus include: the McNair Scholars Program, Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP), and Stepping Up Undergraduate Research at Middle Tennessee (STEPMT).

URC Mission:

As part of the Office of Research, the Undergraduate Research Center (URC) mission is to be the central hub for communications about undergraduate research grants and other related opportunities on and off campus, and to distribute university funds for undergraduate research and creative projects.

URC Vision:

The URC’s vision is to nurture a culture of research and creative activity at MTSU through support for undergraduate students and their faculty mentors.

URC Values:

Implement the goals of the University’s Academic Master Plan related to the URC mission with the following values:

- Excellence in research, scholarship, and creative projects
- Opportunities for student-centered learning
- Productive internal and external collaborations and partnerships
- Success in academic and professional careers of our undergraduate students and their faculty mentors

During the 08-09 academic year, $133,000 was awarded to 60 deserving undergraduate students by the URSCA committee. Out of 75 proposals submitted, the College of Liberal Arts submitted 41, and the College of Basic and Applied Sciences put forward 14.

Center Director: Dr. Andrienne Friedli
Coordinator: Ms. Peggy Duszynski

http://www.mtsu.edu/urc/
OFFICE OF RESEARCH

Center for Advancement of Research and Scholarship (CARS)

Through CARS, the Office of Research formulates strategic plans to increase the quality and quantity of research done through interdisciplinary groups and centers. Concerned with expanding the research enterprise at MTSU, CARS houses the administrative responsibility for reaching out to potential government and industry partners, planning, holding, following up on brainstorming sessions, following up on Research Council ideas, and maintaining strategic relationships.

During 2008-2009 the Research Council, a carefully selected group of faculty, met to discuss suitable industry partners and prioritize an approach to courting them. A preliminary list of existing industry partners was compiled. Another meeting with David Gore (Engineering Technology) helped to document more existing industrial relationships. The Director and Assistant Director of the Business and Economic Research Center (BERC) also lent their perspectives on industry strengths in Tennessee and especially the middle region.

Vision: To establish strategic alliances that catalyze research and creative activity across disciplines.

Mission: Encourage and enable faculty to maximize their potential for research, scholarship and creative activity.

Goals:
- Find appropriate federal, state, and private funding sources for existing and developing interdisciplinary projects
- Match faculty research expertise with needs of regional institutions and industry
- Align priorities for internal seed support with those at the state and federal level

Recent Initiatives through CARS:
- Interdisciplinary brainstorming sessions
- Regional partners in research
- Study of regional strengths
- Federal Initiatives development
- American Reinvestment and Recovery Act (ARRA) - proposal strategy development
Intellectual Property Development and Commercialization (IPD&C)

**Mission:**
To educate the University community about intellectual property, encourage faculty, students, and staff to develop and refine commercializable ideas, facilitate protection of IP developed by university employees alone or jointly with collaborators, and transfer the benefits of the IP to the public through commercialization.

**Vision:**
To nurture a culture of discovery and innovation in which creation of intellectual property and its subsequent commercialization are a recognized and valued aspect of the research enterprise.

The primary mechanisms for dealing with intellectual property development are the Intellectual Property Advisory Committee (IPAC) and the TBR Counsel. After two years of refining MTSU policies and working with selected faculty to develop disclosures, the IPAC will present a workshop about MTSU IP policy and process. The TBR Counsel generally helps with patent issues, commercialization efforts and legal documents.

**MTSU’s most prolific inventors, Dr. Charles Perry (Russell Chair of Manufacturing Excellence) and Dr. William Robertson (Physics and Astronomy) presented their latest technologies at the TN Innovation Conference in Nashville.** Dr. Perry has created a motor that fits in the wheel hub and generates electricity as the vehicle moves. It can be installed on any existing vehicle to improve overall fuel efficiency or be built into new cars. Both inventors applied for $50,000 from the TN Technology Development Corporation (TTDC) Innovation Fund to develop the technologies for licensing. Perry received the TTDC grant, which was matched with funds from Dr. Miles Palmer, a venture capitalist and inventor who wants to merge the motor with his own concept for an alternative energy vehicle. Dr. Robertson’s biosensor was ranked but not funded. The device is a compact optical sensor that detects refractive index changes on surfaces when specific binding interactions occur. It can be used in wet (flow cell) or dry conditions and can potentially scan as many as 10,000 samples in a microarray format, which makes it a promising candidate for medical diagnosis applications in the future.

[http://frank.mtsu.edu/~research/IPD&C_about.html](http://frank.mtsu.edu/~research/IPD&C_about.html)
The FRCAC is funded at the level of approximately $500,000 per year and supports faculty research and creative activities through summer salary support as well as academic year support of reassigned time, travel, supplies and equipment.

These funds are intended to leverage MTSU’s ability to garner extramural dollars for research and are not intended to be an ongoing source of funding of any individual’s research program, except in disciplines bereft of suitable funding sources. Support is provided for both individual awards and synergy awards, which are intended to foster scholarly synergies between faculty in different disciplines.

Proposals are reviewed three times each year, once in the Fall and twice in the Spring. Deadlines and guidelines for proposal preparation instructions should be carefully observed. These are specified in detail on the URL for this initiative.

This committee consists of faculty members from all colleges who are selected by the Faculty Senate. It was chaired this year by Dr. Mary Nichols (Electronic Media), along with physical and social science sub-committee Chairs: Dr. Daniel Prather (Aerospace) and Dr. Scott Boyd (Speech and Theater).

In 2008-2009, 79 proposals were submitted for consideration by the committee, with 49 being awarded in individual grants. One synergy grant was awarded to support a joint project being conducted by faculty members from the Computer Science and History Departments.
The TN LEAP grant, led by Drs. Kathy Mathis and Carol Boraiko, helps rid low income homes in Tennessee of dangerous lead paint. Now in its third funding cycle, the project is well established and MTSU has name recognition in the area. The success with HUD supported projects led to a new initiative that we are calling the Partnership for Healthy Homes. Three inclusive brainstorming sessions were held to better define MTSU’s capabilities and available funding in the area. The concept of a Partnership for Healthy Homes was explored through discussion with the leadership of the Tennessee Center for Child Welfare, the Center for Health and Human Services, the Forensic Institute for Research and Education, and the Center for Environmental Education. A Healthy Homes partnership could take advantage of existing expertise and strengths at MTSU to leverage more funding at the state and federal level.

The group is working to align its vision, mission and goals with those of the HUD Office of Healthy Homes.

**Vision:** To lead the nation to a future where homes are both affordable and designed, constructed, rehabilitated, and maintained in a manner that supports the health and safety of families.

**Mission:** To reduce health and safety hazards in housing in a comprehensive and cost effective manner, with a particular focus on protecting the health of children and other sensitive populations in low income households.

**Goals:** Four key goals to guide the program’s activities:

1) **Build a framework in TN aligned with the national framework:** Foster partnerships for implementing a healthy homes agenda.

2) **Create healthy housing through key research.** Support strategic, focused research on links between housing and health and cost-effective methods to address hazards and assess effectiveness of these methods.

3) **Mainstream the Healthy Homes Approach:** Promote the incorporation of healthy homes principles into ongoing practices and programs.

4) **Enable communities to create and sustain Healthy Homes:** Build sustainable healthy homes programs.

Many opportunities have arisen through the American Reinvestment and Recovery Act (ARRA), also called *stimulus funding*. The VPR and the Director of CARS met with 8 faculty members in Spring 2009 to alert them to relevant funding opportunities. The OoR has posted a website to alert faculty to the appropriate funding agencies and programs as they arise.
MTSU’s niche program in Aerospace has recognized expertise in the training of air traffic controllers and pilots. The program has attracted attention and $3M funding from the Federal Aviation Administration and NASA for simulation equipment. The MTSU aviation program is among the top five most successful in the USA. A long-term plan to create an Air Traffic Controller Center of Excellence has begun. The first goal is to obtain and install a $3M ATC tower simulator. In collaboration with the FAA Training Academy, MTSU plans to develop a standard training program for the use of new technologies, especially ADS-B (the satellite based replacement for radar). A research component to study how human factors affect safe and effective use of the new technology by ATCs and pilots is also a priority.

The OoR is fully committed to this initiative and has provided the following support over the past year:

- Developed and promoted three federal initiatives to support projects involving the aerospace program.

- Encouraged and supported the development of strategic alliances with the Arnold Engineering Development Center, NASA Marshall, and Smyrna Airport.
One of MTSU’s goals is to become the university recognized as having the best STEM education programs in the mid-south region. The Tennessee Center for Mathematics, Science and Technology Education Center (TMSTEC) is the epicenter of STEM education activity. The mission of TMSTEC since it was created in 2000 has been primarily focused on mathematics education for in-service teachers. Since hiring the new director, Dr. Rick Vanosdall, the Center has been expanding its mission.

Initiative, a non-profit organization funded to replicate the UTeach program at universities throughout the USA. The Mathematics and Science Education Ph.D. will strengthen the research component of Center activities.

The OoR is fully committed to this initiative and has provided the following support over the past year:

- Developed and promoted a federal initiative to support the Teachers Now project and key personnel
- Funded personnel to work on STEM education grant proposals
- Encouraged and supported partnerships for joint STEM education projects (e.g. Alpha Hudson, NASA)
- Began developing a brochure and marketing material to promote STEM Education

One recent direction is to emphasize pre-service teacher training using the UTeach model developed at the University of Texas, Austin. In conjunction with this shift, the center received two NSF Noyce grants (see Spotlight on NSF p. 44) and is likely to receive funding to implement the UTeach program at MTSU from the National Mathematics and Science
## Federal Initiatives Development

Table 1: Federal Initiatives Funded in 2009

<table>
<thead>
<tr>
<th>P.I.</th>
<th>Agency</th>
<th>Title of Project</th>
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<tbody>
<tr>
<td>Don Morgan</td>
<td>Centers for Disease Control (CDC)</td>
<td>Promotion of Physical Activity and Health in Youth</td>
<td>295,000</td>
</tr>
<tr>
<td>Dovie Kimmins</td>
<td>Department of Education</td>
<td>Teachers Now</td>
<td>476,000</td>
</tr>
<tr>
<td>Paul Craig</td>
<td>NASA</td>
<td>Pilot/Controller Safety Training Using Emerging Technologies</td>
<td>400,000</td>
</tr>
<tr>
<td>Hugh Berryman</td>
<td>Department of Justice</td>
<td>Forensic Training for Law Enforcement Personnel</td>
<td>550,000</td>
</tr>
<tr>
<td>Patrick Kayser</td>
<td>USDA</td>
<td>Equine Science Conference and Equipment</td>
<td>219,960</td>
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Table 2: Federal Initiatives Proposed for 2010

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<tr>
<th>P.I.</th>
<th>Agency</th>
<th>Title of Project</th>
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<tbody>
<tr>
<td>Wayne Dornan</td>
<td>Federal Aviation Administration</td>
<td>Center for Air Traffic Controller Training</td>
</tr>
<tr>
<td>Joe Bales</td>
<td>Department of Transportation</td>
<td>Intermodal Transportation Hub - SAFETEA-LU reauthorization</td>
</tr>
<tr>
<td>Rick Vanosdall</td>
<td>Department of Education</td>
<td>STEM Teachers NOW</td>
</tr>
<tr>
<td>Carl Peaster</td>
<td>Department of Homeland Security</td>
<td>Interoperable Radio Communications for Campus Safety</td>
</tr>
<tr>
<td>Don Morgan</td>
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</tr>
<tr>
<td>Paul Craig</td>
<td>National Aeronautics and Space Administration</td>
<td>Aviation Safety Training and Human Factors</td>
</tr>
<tr>
<td>Hugh Berryman</td>
<td>Department of Justice</td>
<td>Forensic Training for Law Enforcement Personnel</td>
</tr>
<tr>
<td>Lynn Parsons</td>
<td>Health Resources and Service Administration</td>
<td>Addressing the Nursing Shortage</td>
</tr>
<tr>
<td>Heather Brown</td>
<td>Federal Aviation Administration</td>
<td>Extending Effective Runway Length at General Aviation Airports</td>
</tr>
<tr>
<td>Mary Farone</td>
<td>U.S. Department of Agriculture</td>
<td>Control of Pathogenic Bacteria for Improved Food Safety</td>
</tr>
<tr>
<td>Thomas Cheatham</td>
<td>Department of Energy Office of Science</td>
<td>Computational Modeling of Drug-Resistant Bacteria</td>
</tr>
</tbody>
</table>
Each year MTSU develops about a dozen federal initiatives to present to our congressional delegation for possible federal funding. These initiatives are carefully vetted by the Office of Research and are approved by the Vice President for Development and University Relations. The university wants to ensure that the proposed initiatives add value to the federal agency’s mission and contribute to the research, teaching, and/or service mission of the university. Each of these federal initiatives is presented in a short, two-page description that includes sections on Purpose, Need, Impact, and MTSU’s Unique Qualifications. The description also has a suggested funding agency, proposed funding amount, and a MTSU principal investigator with contact information.

This past year the VPR hosted a consultant from the National Group based in Washington D.C. who made several suggestions about the organization of the two-page descriptions and about possible federal funding opportunities that might work for MTSU. Based on these suggestions, the MTSU book of possible federal initiatives for FY2010, called the MT Book, was reorganized. Drs. Allen and Friedli met with several faculty groups to select the projects that were included in the MT Book. All of the projects that had been funded in the previous year were included in the MT Book. Since it is generally easier to get repeat funding than to get new funding.

The MT Book was presented to Congressman Gordon, Senator Alexander, and Senator Corker by Joe Bales. The requests totaled $5,537,800 and are listed on congressman Gordon’s website: http://gordon.house.gov/appropriations/index.shtml.

OFFICE OF RESEARCH
Federal Initiatives Development
The MTSU Center for Environmental Education (CEE) is dedicated to improving environmental education in Middle Tennessee.

The CEE has a 35+ year history of teacher/youth leader training in quality environmental education, curriculum and responsible practices. Since 1991 nearly a million people have been directly reached through classroom presentations, training sessions, teleconferences, and seminars and many more than that indirectly through public service announcements, videos, and broadcasts. Several outreach programs and opportunities are housed under the umbrella of CEE:

- **Microscope Loan program** - Recycled compound light microscopes, dissecting microscopes, micro-viewers, hand magnifiers, and related materials are available year round on a checkout basis to educational groups in Middle Tennessee.

- **Public education and outreach program to improve water quality** in Tennessee through public service announcements, a youth project awards program, brochures, surveys, and a website which includes an interactive watershed map of the state, and related activities.

- **Professional training, after school workshops & in-services for educators**, often in partnership with TVA and/or NASA and/or TMSTEC - opportunities range from field trips to workshops and seminars, to increase content or technology knowledge of teachers, youth leaders, administrators, home schoolers, and the general public.

- **TAMP – Tennessee Amphibian Monitoring Program** is an all volunteer effort to assess the abundance of breeding populations of frogs and toads in Tennessee. Volunteers establish listening stations along selected routes and monitor calling activity 4 times each year. With the data gathered from TAMP, we will better understand the distribution and relative abundance of each species.

- **Specific Training using Internationally Recognized Curricula** - Low cost or free educational training in variety of curricula, including but not limited to GLOBE (Global Learning & Observations to Benefit the Environment), Project WILD (Wildlife In Learning Design), WILD Aquatic and Flying WILD, Project Learning Tree, Project WET (Water Education for Teachers), Population Connection, and Facing the Future.
OFFICE OF RESEARCH
Center for Environmental Education

The CEE Awards:

- 2008-09 Award of Excellence for Educational Programming from the Tennessee Association of Museums for work with the TN State Museum on a series of public programs, teacher’s workshops, and a newspaper insert publication that accompanied the museum’s exhibition, The River Inside: John Guider’s Amazing Journey.

- 2009 Silver Telly Award for the “Empower Hour”, a video focusing on engaging teens in reducing water pollution. The video was produced for the MTSU WaterWorks! Program and was selected from over 13,000 entries.

Staff Awards:

Dr. J. Padgett Kelly —

2008 Distinguished Educator Award from TN Science Teachers Association

2008 Population Connection Trainer of the Year

2008 MTSU Foundation Outstanding Teaching

Dr. Cindi Smith-Walters —

2008 President Tennessee Academy of Science

2009 Keynote – 2nd Annual Tennessee Outdoor Classroom Symposium

2009-2010 State Task Force - TN Master Naturalist Certification program

2009-2011 – Keep Tennessee Beautiful Committee (by appointment of the Governor)

2009-2012 – National Science Teachers Association Children’s Book Committee

2009-2011 – Association for Science Teacher Education - Professional Development Committee

Co-Directors:

Dr. Cindi Smith-Walters, Dr. J. Padgett Kelly, and Dr. Kim Cleary Sadler

http://frank.mtsu.edu/~mtsucee/
OFFICE OF RESEARCH
Center for Health and Human Services

The Center for Health and Human Services, under the auspices of the Adams Chair of Excellence in Health Care Services, initiates and strengthens academic programs in health and human services to support workforce development and promote healthy communities. Through collaborative affiliations and partnerships, the Center disseminates research and health-related information, and conducts education and outreach projects designed to improve population health. The Center endeavors to enhance the health and human services educational programs at MTSU through the efforts of an interdisciplinary community of scholars. The Center’s projects for the 2008/2009 year totaled $533,573.

The Center supports the efforts of Dr. M.Jo Edwards, Adams Chair of Excellence in Health Care Services. The Center also collaborates with public agencies and private not-for-profit organizations to develop and implement programs designed to improve the health of the middle and greater Tennessee community, and to develop partnerships throughout the community, the state, and beyond.

The Center’s many initiatives include:

- Development of a state-wide training program for investigating sudden unexpected infant death syndrome
- Folic acid education for Girl Scouts and other adolescent girls
- Programs to promote smoking cessation in pregnant women
- Cessation of tobacco products among youth and adults throughout the state of Tennessee
- Public and allied health workforce assessment
- Development of a health care “Career Map” guide (printed and website)
- Development and implementation of the state’s first Tennessee Comprehensive Cancer Control Plan and supported efforts of the newly released second edition of the state plan, as well as hands-on activities to implement five annual Cancer Summits throughout the state
- Development of the Tennessee Institute of Public Health (TNIPH).

The Center, in conjunction with the Tennessee Department of Health and the Tennessee Comprehensive Cancer Control Coalition, has been directly involved in development of a healthy lifestyles curriculum for daycare/preschool providers, “A-B-C-1-2-3 Healthy Kids in Tennessee”, which has gained international interest and has been recognized through several professional organizations and groups.
The Center was instrumental in the development of the Tennessee Institute of Public Health, where Dr. Edwards served as co-founder and interim director until late 2008.

**Director:** Dr. Martha Jo Edwards  
http://www.mtsu.edu/~achcs/

The Center has produced multiple editions of the “Health Care Career Map” as a tool for those seeking careers in a health-related field as well as employers in health care and researchers seeking workforce data. This project was funded by the Middle Tennessee Career Advancement Center and the Tennessee Hospital Association.

Implementation of “A-B-C-1-2-3 Healthy Kids in Tennessee” in a local daycare center. The Center has facilitated five annual Cancer Summits across the state in conjunction with the Tennessee Department of Health, the Tennessee Comprehensive Cancer Control Coalition, and other community partners.

The “A-B-C-1-2-3 Healthy Kids in Tennessee” project has reached over 5,000 preschool children, parents, and caregivers and addresses healthy lifestyles in six targeted areas with the ultimate goal of reducing the burden of cancer in Tennessee. The project is a collaborative effort between MTSU’s Center for Health and Human Services, the Tennessee Department of Health, and the Middle Tennessee Comprehensive Cancer Control Coalition, and has received several awards and recognition at the local, state, and international level.
The Center is a research, education, and public service institute committed to the preservation, protection, enhancement, and sensitive promotion of our historic environment. The Center follows a dual mission of improving higher education in Tennessee Board of Regents Universities and expanding the state’s economic opportunities through historic preservation and heritage development programs and activities. Every county of Tennessee receives Center services through such statewide projects such as:

- The Tennessee Century Farms program, a partnership with the Tennessee Department of Agriculture
- The Tennessee Civil War National Heritage Area, a partnership unit of the National Park Service and,
- The Teaching American History program, a partnership unit of the Library of Congress

Recognized nationally and internationally for its innovative approaches and partnerships to further heritage development, the Center is one of the hosts and sponsors for the 2009 National Preservation Conference, organized by the National Trust for Historic Preservation and held in Nashville in October.

From AY2006-2007 through 2008-2009, the Center’s state and federal funding has supported the research of seven Ph.D. students in Public History, who completed residencies and assistantships at the Center. Two of the seven have received their doctoral degrees. Outside funding has also supported seven M.A. students in History and Information Technology in AY2008-2009. The Center further supports undergraduate and graduate education and student-centered learning through classes and direct financial support.

The Center has launched an innovative “real world” lab in historic preservation and heritage development at the Heritage Center of Murfreesboro and Rutherford County. This converted 1960 hardware store serves as joint offices for the Tennessee Civil War National Heritage Area and Main Street Murfreesboro. Graduate students have received valuable training in exhibit development, interpretation, education, and Main Street adaptive reuse through three years of programs and projects at the Heritage Center. The contributing partners include the City of Murfreesboro, Main Street Murfreesboro, Rutherford County Government, the Tennessee Civil War National Heritage Area, the MTSU Art, Human Science, and History departments, and various private funders.

Director: Dr. Carroll Van West

http://histpres.mtsu.edu/histpres/
OFFICE OF RESEARCH

Center for Historic Preservation

Graduate students and Center faculty/staff at Bell Buckle in Bedford County.

2009-2010
Centers of Excellence funds (state appropriation) $188,000
Library of Congress (federal appropriation) $200,000
National Park Service (projected) $470,000
Total $858,000

2008-2009
Centers of Excellence Funds (state appropriation) $188,000
Library of Congress (federal appropriation) $200,000
National Park Service (federal appropriation) $470,000
Total $858,000

2007-2008
University of Tennessee (Getty Study funds) $30,000
Centers of Excellence Funds (state appropriation) $184,000
National Park Service (federal appropriation) $470,000
Total $684,000

Major Sources of Outside Funding:

Graduate students and Center faculty/staff working on a historic structures report for Pickett Chapel United Methodist Church in Lebanon, the oldest brick building in Lebanon and now the site of Ray Bailey African American History Center.
The Center for Physical Activity and Health in Youth (CPAHY), a university-community partnership, was established in 2008 with funding from the Centers for Disease Control and Health Prevention totaling $335,203. The main objective of CPAHY is to promote childhood physical activity and improve the physical fitness of children and adolescents in middle Tennessee. This is an important mission, especially given the relatively low levels of physical activity and high prevalence of childhood obesity present among Tennessee youth. CPAHY operates in a collaborative framework with faculty and personnel representing MTSU, other academic and medical facilities, elementary and secondary school systems, and a diverse collection of local groups, state and federal agencies, and private sector organizations.

The Center currently sponsors a number of initiatives, including multidisciplinary research and community programs aimed at raising physical activity and fitness levels among youth, creation of a distinguished lecture series in childhood physical activity and fitness, establishment of a summer sports camp for youngsters with physical disabilities, partnering with healthcare providers to assess children’s physical activity and educate parents and caregivers about the importance of family fitness, and development of an innovative multimedia campaign to promote the physical, mental, and social benefits of physical activity for children and families.
MTSU established the Forensic Institute for Research and Education (FIRE) in the Summer of 2006. The institute, under the direction of nationally known forensic anthropologist Dr. Hugh Berryman, brings together faculty and students in several disciplines to provide exceptional educational and training opportunities for law enforcement officers, medical examiners, coroners, attorneys, social workers, and other groups in forensic science and Homeland Security. FIRE supports course development and offers workshops for college and pre-college students, and training for Health Science teachers of Forensic Science.

The Institute also fosters research collaboration and grant development among faculty. FIRE’s Forensic Anthropology Search and Recovery Team (FASR Team) is comprised of 10 exceptional students who provide assistance to law enforcement in the investigation of crime scenes involving skeletal remains.

FIRE actively supports forensic education, sponsoring at least one forensics lecturer per year, and supports MTSU faculty to develop courses and workshops in relevant topics such as Computer Forensics. Each summer, FIRE sponsors the Crime Scene Investigations (CSI) Summer Camp, a popular week long hands-on forensic problem solving exercise, to a maximum of 20 high school students.

**Director: Dr. Hugh Berryman**

[http://www.mtsu.edu/fire/](http://www.mtsu.edu/fire/)

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<td>Development of Public Service Message “Methamphetamine Laboratories in Your Neighborhood”</td>
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<td>Lucas Grant</td>
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<td>Department of Justice</td>
<td>$550,000.00</td>
<td>09-10</td>
<td>Forensic Training for Law Enforcement Personnel</td>
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<td>Southeast Regional Research Initiative (SERRI) – Department of Homeland Security</td>
<td>$155,650.00</td>
<td>09-10</td>
<td>Aerobic Decomposition: An Alternative Method for Managing Large Scale Animal Fatalities</td>
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OFFICE OF RESEARCH

Tennessee Center for Child Welfare (TCCW)

TCCW was established in 2004, when the Tennessee Social Work Education Consortium (TNSWEC) selected Middle Tennessee State University (MTSU) as the lead University for the Consortium to provide professional development services for the Department of Children’s Services (DCS) staff. TCCW currently works with eight public universities across the state with accredited social work programs to provide these services.

The vision of TCCW is to make a measureable difference in child welfare management, practice, and outcomes. TCCW partners with key stakeholders to provide quality social work education, training, professional development, and organizational support to the child welfare system. TCCW also strives for excellence in research in all areas impacting the safety, permanence, and well-being of at-risk children, youth, and families.

For the first five year grant period, TCCW’s budget ranged from $8.7 to 20.3 million per year. TCCW has been awarded a second 5 year grant, beginning in FY 09-10, with annual budgets ranging between $14-$17 million.

TCCW’s work includes:
- Develop, deliver, evaluate, and improve professional development programs to DCS staff and Resource Parents.
- Conduct research projects on topics relevant to improving the outcomes of at-risk children.
- Provide support and technical assistance for projects on an as needed basis for DCS.

In October 2007, TCCW welcomed a new Executive Director, Daryl Chansuthus, who quickly began working on creating a more streamlined, efficient organization and strengthening partnerships with DCS, DCS regional offices, private agencies, universities, and other child welfare stakeholders. Some of the key accomplishments over the past two years include:
- Launching online learning for DCS staff and resource parents by offering more than 20 courses as computer based trainings.
- Completed revisions of the core trainings for staff (Pre-Service) and Resource Parents (PATH)
- Transitioning from a trainer-led learning model to a learner-center model.
- Designing and rolling out the coaching model with all MSW Supervisory Specialists and trainers (Professional Development Coaches).
- Increasing research and evaluation activities through applied projects with DCS and community partners.

In Spring 2009, TCCW and MTSU were recognized with an Academic Excellence Award by the American Public Human Services Association (APHSA).

Please visit our website for more information about TCCW:

www.tccw.org
The TSBDC consists of 16 locations statewide. The TSBDC Lead Center is headquartered at MTSU as well as a Service Center with offices at the Rutherford County Chamber of Commerce Building with two affiliate offices at Columbia and Lebanon. There are an additional 12 offices located across the state at other Tennessee Board of Regents schools and one office at a University of Tennessee Martin campus that provides business counseling, workshops, and economic and community development activities in Tennessee in conjunction with state and local governments.

### Statewide Programs

- Raised Financing $27.6 million
- Sales Generated $44.9 million
- Sales Retained $55 million

The TSBDC assisted 4,052 small businesses in 2008. There were 14,422 hours of counseling and 8,530 counseling sessions. There were 722 training sessions with 10,921 attendees. The TSBDC-MTSU Service Center contributed to the overall state program with 445 business clients and 55 workshops with 817 attendees.

### Network Generated or Saved in past 5 years

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<td>$891 million</td>
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### Clients

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<td>Saved Jobs</td>
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The TSBDC program offers business training activities across the state, covering a wide range of topics including starting and managing a business, business structure, business planning, marketing, taxation, raising financing, government procurement, regulations, and human resources. Workshops help the TSBDC develop working relationships with the regional business and banking communities and generate new customers. The TSBDC Lead Center received $2,165,778 in outside funding.

State Executive Director: Patrick R. Geho

http://www.tsbdc.org/mtsu/mtsu.html
Center for STEM Education, celebrates 7 years of leadership in STEM Education. The mission of the Center is to enhance the quality of P-20 mathematics, science, and technology education across Tennessee.

TMSTEC develops exemplary programs in mathematics, science and technology that engage P-20 students and teachers in transformative learning experiences. These programs capitalize on collaborative partnerships with leaders from business, industry, community, and government.

TMSTEC projects focus on the following:

- Teacher development in effective STEM education;
- Program enhancement across P-20 STEM education;
- State standards and policy revision related to STEM education; and
- Scholarly inquiry and research in STEM education.

Significant progress in each of these areas occurred in 2009. Noteworthy achievements include:

1. **150+ days of sustained teacher development institutes for more than 400 K-12 teachers** in Chattanooga, Knoxville, Murfreesboro, Clarksville, and Memphis, during May, June, and July. These efforts were funded by $2.4 million in competitive dollars.

2. **Hosted the 3rd Annual STEM Education Research Conference at MTSU** serving STEM educators and researchers statewide. Internationally acclaimed neuroscientist and teacher Judy Willis, M.D., M.Ed. presented the latest research on the teaching practices that align with neuro-chemical basis of motivation and learning. Additional presentations focused on STEM Education research updates from universities across Tennessee, and policy updates from Governor Bredesen’s Office, the State Department of Education, and the State Board of Education.

3. **TMSTEC staff expanded and strengthened collaborative partnerships with:**

   - University of Memphis,
   - Austin Peay State University,
   - East Tennessee State University
   - Tennessee State University
   - UT Chattanooga
   - UT Martin
   - UT Knoxville
   - Governor Bredesen’s Office
   - TN State Department of Education
   - TN State Board of Education
   - Mind2Marketplace
   - Rutherford County Chamber of Commerce
   - Tennessee State Chamber of Commerce
   - The National Math and Science Initiative
   - U.S. Department of Energy
   - U.S. Department of Education
   - NASA
   - National Science Foundation
   - The Executive Office of the President of the United States
4. **TMSTEC supported extended and expanded collaborative projects** between the Colleges of Basic & Applied Sciences and Education & Behavioral Sciences. These collaborative projects include: (a) winning $5.9 million for new externally funded projects, and (b) submitting additional grant proposals exceeding $11.6 million.

5. **Contributed to state math and science education policy** through participation in the P-16 Mathematics Curriculum Alignment Committee, Mathematics and Science Standards Curriculum Revision Committees, TBR Teacher Quality Initiative, and TN Department of Education discussions to increase number of math and science graduates successfully obtaining state teacher licensure.

6. TMSTEC Director, Dr. Rick Vanosdall, was elected Vice-Chair/ Chair Elect for the Tennessee STEM Education Leadership Council.

**Tennessee Mathematics, Science, and Technology Education Center (TMSTEC)**

Director: Dr. Rick Vanosdall

http://www.mtsu.edu/tmstec
A group of faculty including Drs. Klumpe and Robertson (Physics and Astronomy), Nasab, (Engineering Technology), Li (Computer Science), Allen and Friedli (Office of Research), Vanosdall (Director of the STEM center), and Ms. Gostowski (STEM Coordinator), traveled to NASA Marshall Space Flight Center (MSFC) to meet with Frank Six (Education), and the top Education and Engineering Administrators on August 13, 2008. We decided to pursue several education-related projects including robotics and rocketry. On October 1, 2008, Dr. Rudy Gostowski (MSFC) visited and gave a seminar to STEM students about applying for NASA internships. Right afterward, he spoke to Dr. Nasab’s evening course about NASA-sponsored university rocketry teams. He returned on October 3 to discuss collaborations with NASA on education projects with faculty and advised students about starting a rocket team. The MTSU Rocket Team (Dr. Nasab, mentor) registered by October 10, obtained $2500 support from CBAS and OoR and $5000 from the TN Space Grant Consortium to build a rocket. They participated in the annual rocket competition at NASA, winning an award for “best design”. The STEM Center obtained $35K from the TN Space Grant Consortium to carry out a rocketry program in Williamson County Schools. Dr. Abolins (Geosciences) received another $5K for Geographic Information Systems research.
students took part in the Pre Service Teacher program, in which they received training in the translation of hands-on science experiences to the high school classroom in addition to their laboratory experiences. Several of the students returned for a DOE-sponsored poster session later in the semester, continuing their relationships with their ORNL mentors.

The ORAU annual meetings featured High Performance Computing (HPC) and Science Education. This gave an opportunity for continued discussions between MTSU and ORISE about joint projects with TMSTEC at MTSU and to set the stage for interactions between the faculty active in HPC or the Computational Science Ph.D. degree.

Young faculty members in STEM fields were systematically encouraged to compete for the Powe Award, an ORAU sponsored grant. One faculty member applied for, and six MTSU faculty reviewed, Powe applications.
SERRI's Mission: Assist local, state, tribal, and regional leaders within the southeast region in developing the tools and methods required to anticipate and deter terrorist events and to enhance disaster response.

Oak Ridge National Laboratory has awarded two contracts through its SERRI to MTSU with FY 2009 funding from the Department of Homeland Security. One project is a continuation of the first year of support for a project entitled “Biosensors for Rapid Detection of Infectious Agents” (PIs Robertson/Friedli/Wright). The researchers are developing the biosensor to detect trace amounts of specific infectious agents and/or environmental contaminants following a natural disaster or terrorist event. Vapor sensors will be applied to detection of human-influenced environmental and safety concerns such as chemical spills or terrorist attacks.

The other project, entitled “Aerobic Decomposition as an Alternative Method for Managing Large Scale Animal Fatalities”, (Pis Berryman/Haffner) is in its first year of funding. The goal of the project is to develop a publicly acceptable and scientifically proven method for the appropriate disposal of deceased animals or human casualties in high-magnitude mass disasters.

The four year collaboration between Dr. Tibor Koritsanszky and personnel in the Spallation Neutron Scattering (SNS) facility led to a successful NSF-MRI proposal requesting a neutron diffactometer. The instrument will be housed at ORNL in the SNS, but faculty from MTSU will have preferential access to the state-of-the-art instrument.

The VPR and other MTSU representatives attended the National Science and Technology Summit held at ORNL as representatives of academic institutions invited to join industry and government attendees to discuss strategy for maintaining the US competitiveness in STEM.
The Vice Provost for Research, Director of CARS, Aerospace Chair, and Director of Concrete Industry Management met with Mr. John Black, administrator of Smyrna Airport, on May 28th to discuss options for joint projects. Mr. Black was open to further discussion. The Smyrna Airport has a city-approved plan to become an industrial park. The OoR will continue discussions with Mr. Black and Smyrna’s Economic Development Agency for providing educational opportunities and research and development services for businesses and industries that might relocate to the Smyrna Industrial Park.
Arnold Engineering Development Center (AEDC) is the most advanced and largest complex of flight simulation test facilities in the world. The center operates 58 aerodynamic and propulsion wind tunnels, rocket and turbine engine test cells, space environmental chambers, arc heaters, ballistic ranges and other specialized units.

Twenty-seven of the center’s test units have capabilities unmatched elsewhere in the United States; 14 are unique in the world. AEDC is an Air Force Materiel Command organization and an important national resource.

Dr. Allen and a group of professors visited AEDC on July 20, 2009. Colonel Jim Jolliffe, base commander, acted as the host. Dr. Allen has had additional conversations with Colonel Jolliffe about how MTSU and AEDC can form a strategic alliance that will benefit the USAF, AEDC, and MTSU.
Mission: Serving the Valley through Energy, Environment, and Economic Development

The VPR and Dr. Andrienne Friedli met at MTSU with Dr. Ron Williams, TVA’s Vice President for Land and Water Stewardship, and Dr. Rick Driggans, TVA’s Vice President for Research, on October 3rd. The visitors provided contacts within TVA and gave some examples of projects supported by TVA distributors. Later, they helped to find contacts to discuss the Kingston fly ash spill. The TVA contacts ultimately resulted in a $120K grant to Dr. Ryan Otter (Biology) and collaborators to determine the effect of the spill on fish populations. Dr. Warner Cribb (Geosciences) and coworkers performed analyses on toxic metals in rivers near TVA sites, including Kingston. Dr. Heather Brown (Engineering Technology) has investigated incorporation of fly ash in concrete. Drs. Brown and Otter submitted a $790K proposal to TVA/ORNL for a project to convert fly ash to energy and components in concrete.

A group of faculty including Drs. Chong, Patterson, Friedli (Chemistry) and Drs. Gore, Boles and Allen (Engineering Technology) traveled to the Bridgestone-Firestone plant in Lavergne, Tennessee on December 15th to meet with plant manager John McLaughlin and 6 technical and HR employees. The purposes of the visit were to negotiate for more internships and tighten ties between MTSU and the company. Last year, Dr. Chong and undergraduate Ben King successfully conducted a summer project with Julie Becker in Bridgestone/Firestone’s quality control laboratory. McLaughlin originally offered 5 summer internships.
United South and Eastern Tribes (USET)

USET is dedicated to promoting Indian leadership, improving the quality of life for American Indians, and protecting Indian rights and resources on tribal lands. Although its guiding principle is unity, USET plays a major role in the self-determination of all member tribes by working to improve the capabilities of tribal governments. Established in 1969, United South and Eastern Tribes Inc., is a non-profit, intertribal organization that collectively represents its member tribes at the regional and national level.

In Summer 2008 the OoR was approached to help the USET-Tribal Epidemiology Center (based in Nashville) to produce a Diabetes Report and perform a cost analysis for each type of health intervention (these are not itemized in the Indian Health system). Discussions were held in July 2008 and a contract signed 11/26 outlining a collaboration between Business and Economic Research Center (BERC), Center for Health and Human Services (CHHS), Dr. Jwa Kim (Psychology), some consultants including Dr. Robert Kalwinsky (EMC) and former EMC student Sherry Parfait (now owner of Parfait Media) and USET-TEC. The work formally began during Spring 2009. USET frequently requires interns to help with data analysis and we hope that MTSU can provide a steady stream of interns as a result of the contract.

Sherry Parfait, MTSU alumna and marketing consultant on USET contract.
From discovery to enterprise:
Genomics, the study of genes, gene sequences and their functions, has yielded unprecedented insight into what makes us, and the world around us, work. Each new discovery offers vast potential for improving life as we know it, but discovery is just the beginning of the journey. Taking what we know and transforming it into solutions representing significant advancements in health, well-being and livelihood is the ultimate destination.

The HudsonAlpha Institute is the cornerstone of a 150-acre biotech campus strategically located in Cummings Research Park, the nation's second largest research park. The non-profit institute is an integral part of Alabama's life sciences community. We believe a self-governed institute, affiliated with major research institutions, will provide the energy, inspiration and creative atmosphere to accomplish these goals and objectives.

A group of faculty including Drs. Seipelt (Biology), Robertson (Physics), and Cahoon (Biology), Vanosdall (Director of the STEM center), Friedli (Chemistry), and Allen (Office of Research), Ms. Gostowski (Research Compliance Officer), and Mr. Adiraj (M.S. students in Biology), traveled to HudsonAlpha Research Institute in Huntsville, AL on September 12, 2008. Dr. Vanosdall (TMSTEC) followed up with HudsonAlpha’s Drs. Hott and Lamb on educational outreach projects during Fall 2008.

Another group of faculty representing the MTSU Biodynamics Group (Quinn, Sinkala, Khaliq) visited HudsonAlpha in January to discuss potential collaborations using computational methods to understand biological processes. HudsonAlpha’s affiliated business incubator could potentially help in developing a biosensor invented at MTSU. The innovative educational outreach program could benefit Tennessee teachers through the MTSU STEM Center.
Over the past 10 years, MTSU has been awarded an average of about $1 million per year in NSF funds. So far, in CY2009, MTSU has received almost $7 million to support 12 projects. The title, PI, amount of funding, and duration of each project are shown in Table 1.

The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 “to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense…” With an annual budget of about $6.06 billion, NSF is the funding source for approximately 20 percent of all federally supported basic research conducted by America’s colleges and universities. In many fields such as mathematics, computer science and the social sciences, NSF is the major source of federal backing.

Some of the past major successes with NSF include large long-term projects led by Dean Thomas Cheatham of the College of Basic and Applied Sciences. These projects bring $500K-$3M to MTSU over 3-5 years and are intended to catalyze change. For example, three Partnerships for Innovation (PFI) grants develop strengths within science departments: Biology “Biotechnology Resource Group: A Framework for Innovative Partnerships” ($782,916, 8/1/02-7/31/06) and “Concrete Industry Management: Accelerated Program Expansion” (APEX), ($599,000, 7/2004-6/2008). This year, the Computer Science Department added “Partners for Innovation in Information Technology (PIIT)” to the list of successful PFI grants. The STEM Talent Expansion Program, “Stepping Up Undergraduate Research at MTSU (STEP-MT)”, is an interdisciplinary project designed to increase retention in STEM through research and discovery-based learning in 7 STEM departments ($1.683 M 9/04-8/10). A resubmission of another STEP proposal is pending review. “First STEP” is a bridge program to increase mathematics proficiency in entering freshmen.

Many of the new grants are related to STEM education. “TRIAD: Reforming Graduate Education by Integrating Teaching, Research, and Industry Applications to Deepen Scientific Understanding” is a GK-12 program that will enrich the education of graduate students and allow them to teach in high school settings. Two of the funded grants were Noyce grants, one to fund scholarships for pre-service STEM teachers studying Physics (Noyce I, PI Robert Carlton), and the other from the Noyce Teacher Scholarship Program (Noyce II, PI Rick Vanosdall).

Some of the success with NSF funding is related to the extra funding available since the beginning of 2009 from the American Recovery and Reinvestment Act (ARRA) program, also known as stimulus funds. NSF received $6.5B in FY2009 and a budget of $6.9B was approved for FY2010 to boost scientific productivity. This keeps the institution on track to double its...
budget in the next decade. With the NSF’s increased budget, the success rate for proposals has increased from 12% to 20% in the past year. At MTSU, the NSF proposal success rate is 43%.

Table 1: Funded NSF Proposals in CY 2009

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<th>Name</th>
<th>Department</th>
<th>Project Title</th>
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<td>TRIAD: Reforming Graduate Education by Integrating Teaching, Res., &amp; Industry Apps to Deepen Scientific Understanding</td>
<td>$558,370</td>
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<tr>
<td>2 Tom Cheatham</td>
<td>Computer Science</td>
<td>Partnerships for Innovation in Information Technology</td>
<td>$599,075</td>
</tr>
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<td>3 Tibor Koritsanszky</td>
<td>Chemistry</td>
<td>MRI: Acquisition of a Neutron Single Crystal Diffractometer</td>
<td>$2,216,000</td>
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<td>4 Bruce Cahoon</td>
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<td>$271,392</td>
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<td>5 Robert Carlton</td>
<td>Basic &amp; Applied Sciences</td>
<td>Robert E. Noyce Scholarship Program CPATH CDP: Project MT - Real World</td>
<td>$899,972</td>
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<td>6 Richard Detmer</td>
<td>Computer Science</td>
<td>Project Based Computer Science Curriculum (Supplement)</td>
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<td>7 Rick Vanosdall</td>
<td>TMSTEC</td>
<td>Robert E. Noyce Master Teacher</td>
<td>$1,496,765</td>
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<td>8 Tom Cheatham</td>
<td>Basic &amp; Applied Sciences</td>
<td>STEPPing Up Undergraduate Research</td>
<td>$325,593</td>
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<td>9 Andrew Brower</td>
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<td>Molecular Systematics and Biogeography of South American Pronophiline Butterflies</td>
<td>$111,000</td>
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<td>10 Jeffrey Leblond</td>
<td>Biology</td>
<td>Sterol Biosynthesis in the Marine Dinoflagellate, Karenia brevis</td>
<td>$156,246</td>
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<td>11 Richard Detmer</td>
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<td>CPATH CDP: ProjectMT-A-Real-World, Project-Based Computer Science Curriculum</td>
<td>$149,777</td>
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<tr>
<td>12 Cen Li</td>
<td>Computer Science</td>
<td>Promoting Peer Collaboration Through peerSpace-A Novel Online Social Network Based Learning Environment</td>
<td>$149,745</td>
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</table>
OFFICE OF RESEARCH
2007-2008 Distinguished Research and Creative Activity Awards

Each year the MTSU Foundation makes many generous awards to faculty who have been outstanding in their field of endeavor. There are four such awards that recognize individuals for scholarly accomplishments each year, including three for distinction in research and one for superlative creative activity.

Research:

Dr. Don Morgan

Dr. Morgan, a Professor of Health and Human Performance, earned his B.M.E. from Northwestern University, M.S. from the University of Tennessee, and Ph.D. from Arizona State University. An exercise physiologist, Dr. Morgan conducts research focusing on the energy demands of human locomotion and the relationship between physical activity and health across the lifespan. He is also the Founder and Director of the Center for Physical Activity and Health in Youth at MTSU.

Dr. Morgan has published over 60 peer-reviewed articles in journals such as *Medicine and Science in Sports and Exercise*, *Journal of Applied Physiology*, *Developmental Medicine and Child Neurology*, and *Pediatric Exercise Science*. He has also given more than 160 scientific presentations at professional meetings, been a frequent invited speaker at public outreach events on physical activity and fitness, and participated in the development of television programming emphasizing the importance of physical activity as a cornerstone of health.

Dr. Morgan’s current research efforts have focused on using aquatic therapy to improve the functional mobility and physical fitness of youth with spastic cerebral palsy.

Dr. Abdul Khaliq

Dr. Khaliq has a distinguished record of internationally-recognized research activities. In particular, over the past five years he has published research articles in leading refereed journals and his research is frequently cited in books, journals, and PhD theses. He has been invited to present at national and international conferences, and also organized mini-symposiums at national and international conferences. Last year, he organized four mini-symposiums at the 6th International Congress on Industrial and Applied Mathematics (ICIAM07) in Zurich, Switzerland on July 16-19, 2007. Speakers were from top ranked world class institutions such as Oxford University-England, and Princeton University, USA. These mini symposiums and his research talk were highlighted in the SIAM news October 2007. His area of expertise is *Numerical Analysis and Scientific Computing* with specialization in the development of stable and efficient numerical methods for large-scale systems of Partial Differential Equations (PDEs) with applications to mathematical finance and mathematical biology. Because of the caliber and breadth of his research and scholarship, he is on editorial boards of six world class research journals. His future research plans include: stochastic PDEs, multi-scale modeling, and simulation in mathematical biology and mathematical finance.
Dr. Philip Edward Phillips

Dr. Phillips is associate professor of English. He earned his B.A., *cum laude* in English, with minors in Latin and Philosophy, at Belmont University and his M.A. and Ph.D. in English and American literature at Vanderbilt University. He came to MTSU in 1999, and he teaches courses in Milton, medieval and Renaissance literature, American, British, and European literature, and composition. His research areas include Milton and the epic tradition, Boethius and the vernacular translation traditions of *The Consolation of Philosophy*, and Poe and the literary aesthetics of early nineteenth-century American literature. He actively serves as a member of the Honors faculty and as a doctoral member of the graduate faculty, and he supports undergraduate research as a faculty mentor.

Dr. Phillips has served as the Chair of the Graduate Council, the Director of Graduate Admissions in English, and the interim Graduate Advisor in English. He is also co-editor of *Carmina Philosophiae*, a multi-disciplinary, peer-reviewed journal on Boethius, his age, and his influence.

He regularly presents his research and organizes panels at such conferences as the International Congress on Medieval Studies, the Medieval and Early Modern English Studies Association of Korea, and the Modern Language Association Convention. He is organizing a panel on Boethius for the 2009 Medieval Academy of America convention.

Dr. Kim Nofsinger

Dr. Nofsinger is the Director of Dance. Prior teaching appointments include Ohio University, University of Minnesota at Duluth, State University of New York – Geneseo, Illinois State University, Winona State University and Connecticut College.

Dr. Nofsinger has an MFA in Performance and Choreography from Arizona State University where he holds the distinction of being the first graduate student to receive a grant from the Institute for Arts and Technology. Mr. Nofsinger is the Artistic Director of Shelter Repertory Dance Theatre, which he founded in 2001. His choreography has been produced throughout the United States and abroad in Spain, France, Belgium, Germany and Austria. In 1999, his duet *Permission* was selected by the American Dance Guild as one of the outstanding works produced in the United States that year. In March 2006, he was selected to perform in the Modern Atlanta Dance Festival. Some of his works are dramatic, others are whimsical and touching, still others are pure physical exuberance. Yet consistent in the range of this work are the premises that dances are evoked by an understanding of the human condition and that art should teach you more about yourself. He believes it is the responsibility of the artist to capture the truth of life and distill it into very tangible moments that reflect upon the nature of the human condition.
Dr. Mark Anshel

Dr. Anshel is a Professor in the Department of Health and Human Performance, with a joint appointment in the Department of Psychology, and is a doctoral faculty member. His primary teaching areas are research courses that prepare graduate students to conduct their master’s thesis and doctoral dissertation, specifically, research methods and experimental design. He also teaches undergraduate and graduate courses in sport and exercise psychology.

His primary areas of research over the years has focused on coping with stressful events in sport and other performance settings, such as law enforcement. He has developed a coping model that describes the coping process, which has been repeatedly tested and validated. An additional area of extensive research, in more recent years since arriving to MTSU in June 2002, has been to test the effectiveness of exercise interventions on changes in fitness and exercise adherence, and has authored “The Disconnected Values Model” (2007, 2008) that has been shown to promote exercise participation and adherence. Dr. Anshel has authored over 115 articles in scholarly (refereed) journals, 11 books, 22 book chapters, and has authored 6 research grants. He generated an MTSU grant, funded by President McPhee’s discretionary fund, to provide a two-year MTSU Faculty-Staff Wellness Program (Sept. 2006-Aug. 2008), that included approximately 480 MTSU employees and several research articles.

Dr. Angela Mertig

Dr. Mertig, Professor of Sociology, earned a B.A. in Sociology/Anthropology and History from Ripon College (1987) and an M.A. (1990) and Ph.D. (1995) in Sociology from Washington State University. Prior to joining the MTSU faculty in 2004, she held a joint appointment in the Departments of Sociology and Fisheries & Wildlife at Michigan State University and was directly affiliated with the Michigan Department of Natural Resources Wildlife Division.

Dr. Mertig is a nationally recognized environmental sociologist. She has published extensively on the American environmental movement and public attitudes toward the environment. Among her most cited works on environmentalism are a co-edited textbook on the movement, American Environmentalism (1992), a book chapter in the leading handbook in the field of environmental sociology (The Handbook of Environmental Sociology, 2002), and an article in the Journal of Social Issues (2000) on measuring environmental attitudes which has been cited over 160 times.

Her recent work includes research on attitudes toward wildlife and domesticated animals, wildlife management issues, and animal welfare, as well as research on land use practices and other behaviors that impact humans, animals and the environment.
OFFICE OF RESEARCH
2008-2009 Distinguished Research and Creative Activity Awards

Research:

Dr. Don Hong

Dr Hong earned his Ph.D. in Mathematics from Texas A&M University and has held a post doctoral position at the University of Texas-Austin. Before joining MTSU as Professor of Mathematical Science in 2005, Dr. Hong served on the faculty at East Tennessee State University, where he received the CAS Research Award as an Assistant, Associate, and then Full Professor. He has also held Visiting Professor positions at Vanderbilt University.

Dr. Hong's research areas include Approximation Theory and Computational Science, Wavelets and Medical Data Processing, and Bioinformatics. He has solved a conjecture given by Carl de Boor who is a member of National Academies of Science and Engineering and a National Medalist of Science in 2003. The conjecture about the approximation power of bivariate spline spaces established Hong as an international scholar in approximation theory.

In the past five years, Dr. Hong has received over $150,000 in external research grants as the principal investigator from NSF and other agencies. He also serves as the faculty advisor of the Actuarial Science (ACSI) Program.

Creative Activity:

Dr. Paul Osterfield

Composer Paul Osterfield earned degrees from Cornell University, Indiana University, the Cleveland Institute of Music, and served on the faculty at Ithaca College. He currently serves as Associate Professor of Music Composition and Theory. He has given composition seminars and master classes at colleges and universities throughout the southern United States.

Dr. Osterfield's music is abstract, ranging from slow, ethereal music with constantly shifting instrumental colors to vibrant music with driving rhythms. His compositions have been performed throughout the United States and internationally by ensembles such as the Blakemore Trio, the Stones River Chamber Players, the University of Nebraska Kearney Trio, and the Cleveland Orchestra at their Family Key Concert series.

Dr. Osterfield has recently composed works for saxophonist Jason Kush, pianist Lynn Rice-See, percussionist Stuart Gerber, flutists Lisa A. Jelle and Deanna R. Little, and tenor H. Stephen Smith. Recordings of Dr. Osterfield’s works are available commercially on Equilibrium and Capstone Records. A recent artist in residence at the MacDowell Colony, Mr. Osterfield has also received awards from BMI, ASCAP, Cornell University, the National Federation of Music Clubs, and the Library of Congress.
There are several venues for students to share and discuss their research and creations. The most notable of these is the Posters-at-the-State-Capitol event. This year 7 students, whose work was previously presented or shared in on-campus venues and who were competitively selected, presented their research to our legislators and TBR administrative officials. This represents an honor for the students and serves to create a favorable impression of our students to our legislators.

The annual Posters on the Hill presentation in Washington, DC chooses only two students to represent each state.

For the third year in a row, MTSU was represented at the national research exhibition. Psychology major Amy Petty traveled to Washington, DC to meet with Representative Bart Gordon and present her research on prescription drug misuse to our nation’s legislators. Amy also presented her findings at the state competition in Nashville.
The Office of Research has taken a leadership role in transforming Scholars Day, the campus celebration of scholarly activity, to a student-centered, faculty-supported, week-long event called **Scholars Week**.

The activities began on March 30th, 2009. Each day of the week a different college was featured, offering discipline-specific venues and formats for presentation of scholarship and creative projects. The Friday event was a poster and multimedia session for faculty, graduate, and undergraduate students with a total of 184 entries. The College of Basic and Applied Sciences led the pack with a total 79 entries. First ($150), second ($100), and third ($50) prizes were awarded to graduate and undergraduate students in each college for outstanding presentations.

### SCHOLARS WEEK 2009

#### Schedule of Events

**Monday, March 30**

**Featured College: Business**
Poster Session (S.Lobby BAS): 12:30 - 2:30
Contact: Dr. Charles Baum (x2527)

**Tuesday, March 31**

**Featured College: Basic and Applied Sciences**
Hands-On Learning Showcase: 11:00 am - 1:00 pm (KUC Quad)
In case of rain: KUC 1st & 2nd floor lobbies
Contact: Ms. Megan Hall (x8643)

**Featured College: Education and Behavioral Science**
Speaker: Sandra Titus, Ph.D.
Director, Intramural Research Office of Research Integrity DHHS
2 - 3 pm, Tom H. Jackson Building
Contact: Ms. Tara Prairie (494-8918)

**Wednesday, April 1**

**Featured College: Liberal Arts**
Talks, Panels, and Performances
Honors Building Room 106 and 116, 9:00 am - 5:30 pm
Contact: Dr. Mark Byrnes (x2351)

**Thursday, April 2**

**Featured College: Mass Communication**
Open Mic - Main Atrium, noon - 3pm.
Contact Dr. Daniel Pfeifer (x5944)

**Friday, April 3**

University-Wide Poster and Multimedia Exposition
Murphy Center Track Area
12:40 pm – 2:45 pm

Judging from 12:40 pm to 2:15 pm
Awards at 3:00 pm
College of Graduate Studies

The mind is not a vessel to be filled, but a fire to be lighted—Plutarch
Graduate Initiatives

Since our 2007 report, the College of Graduate Studies has grown in enrollment by 527 students, which is a 22% increase in total enrollment. We continue to be a recognized leader in graduate education and the largest public graduate school in the middle Tennessee region, enrolling almost 2,900 students in 65 graduate degree and certificate programs, that encompass over 70 areas of study.

In addition to a comprehensive range of master’s and specialist degrees, MTSU offers six doctoral degrees, including Ph.D. programs in Economics, English, Public History, Human Performance, and Literacy Studies. We also offer a Doctorate of Arts in Chemistry that is being phased out. We are participants with other TBR universities in offering three online degree programs: Master of Education, Master of Nursing, and Master of Professional Studies.

Evidence of MTSU’s leadership in graduate education is reflected by the election of Dean Michael Allen to the position of President of the Tennessee Conference of Graduate Schools. Dean Allen has also been tapped to serve on the Governmental Relations Advisory Committee of the National Council of Graduate Schools. Because of our ongoing success implementing Banner, other TBR and University of Tennessee institutions continue to request assistance or consultation from College of Graduate Studies’ staff members as they implement Banner on their campuses. We are pleased to be able to respond to these requests and to develop procedures that serve as models for other graduate schools.

The college continues to grow in size and reputation. In Fall 2007 graduate enrollment set a record for the fourth consecutive year and MTSU had the largest graduate enrollment of all public universities in middle Tennessee. This trend has continued (see table pg 54) with significant increases in enrollment in both Fall 2008 (10.7%) and Fall 2009 (10.5%). This rate of growth is even more impressive when compared to the most recently reported national trends in graduate enrollment (10 year average = 3.2%, 2007-2008 average = 3.0%). At the same time, record numbers of first time graduate students are choosing to enroll at MTSU and we are also graduating record numbers of students (see table pg 55).
The College of Graduate Studies remains committed to growing enrollment and continues to adhere to a strategic plan aimed at increasing both the quantity and quality of students pursuing graduate degrees at MTSU. Included in this strategy are innovative approaches to course and program delivery, identification of new and emerging sources of prospective students, and development of new graduate programs in areas of competitive advantage, which support the academic master plan of the university. We believe that it is reasonable to expect continued growth in graduate enrollment and degree conferral during the coming year corresponding with continued growth in the importance of graduate education at MTSU.

The College of Graduate Studies continues to play a primary role, along with the Office of Institutional Effectiveness, Planning and Research in the ongoing review of graduate programs. During the past two years, the Master of Science programs in Exercise Science, HPER, Aviation Administration, Mathematics
and Computer Science, along with M.A. programs in English and Economics, and Ph.D. programs in English, Human Performance, and Economics were evaluated through a process that included the development of a self-study focused on specific indicators of quality in graduate education and on-campus reviews by selected external experts. We continue to partner with the Teaching, Learning and Instructional Technology Center to provide graduate assistants with the skills and resources to assure success in college-level teaching. The College of Graduate Studies is also responsible for the funding and administration of all graduate research and teaching assistantships. Although the economic and budget constraints being experienced in the state of Tennessee have prevented any significant increase in the number of assistantships available to graduate programs, the College of Graduate Studies, with the support of the University administration, has been successful in maintaining existing assistantships.
Development of new programs of graduate study in areas of need and demand continues to be a priority of the college. We are pleased to report that the Tennessee Higher Education Commission has approved three new doctoral degrees at MTSU. With the implementation of these Ph.D. degree programs in Molecular Biosciences, Computational Science, and Mathematics and Science Education, we will have a total of eight doctoral degrees, all at the Ph.D. level. The Doctor of Arts degree in Chemistry will begin phase-out with the start of the Ph.D. in Mathematics and Science Education. The approval of these doctoral degree programs in the sciences reflects recognition by the Tennessee Board of Regents and the Tennessee Higher Education Commission of the evolving role of graduate education and research at MTSU. We are also pleased to report that during the 2008 – 2009 academic year MTSU successfully completed the external review process for each of the degree proposals initiated during 2007 and received TBR approval for the following degrees. Each is currently awaiting final approval by the Tennessee Higher Education Commission:

- M.S. in Health and Human Performance
  - Teaching Physical Education concentration
  - Health Behavior and Promotion concentration
- M.S. in Leisure and Sport Management
  - Leisure Services Management concentration
  - Sport Industry concentration
- M.S. in Horse Science
- M.A. in International Affairs
- M.S. in Information Systems

In addition to these proposals, the college is currently in the feasibility study stage for several other graduate degree programs in areas that support the mission of the university.
Three years ago, with the arrival of Dean Michael Allen, the college renewed its commitment to leadership in graduate education at MTSU. This commitment included a focus on greater levels of service to our constituents, increased levels of efficiency in operations, and a renewed emphasis on planned growth in graduate programs on campus. As we look forward, we believe that we can and must continue to focus our energies on these goals. The appointment of Dr. Peter Cunningham as Associate Dean and the promotion of Mr. Rick Henegar to Director of Graduate Admissions further enhance the college’s continuing commitment to these goals. In conjunction with these changes in personnel and staff duties, the CGS continues to focus on operational efficiency as we confront the budgetary constraints brought about by the national economic downturn.

**Mission Statement:**

The College of Graduate Studies, in partnership with other academic units at Middle Tennessee State University, regional institutions of higher education, and private and public agencies and corporations, is committed to a leadership role in graduate education. This on-going process will result in the development of the technically skilled entrepreneurial workforce required for sustaining regional, national, and global economies. This mission will be accomplished through seamless integration of teaching and learning with outstanding scholarship of the University’s faculty and students, continued emphasis on enhanced, quality programs, and development of innovative programs with interdisciplinary focus.

To accomplish this mission, the College of Graduate Studies (CGS) serves as the central collegiate component for uniting the entire graduate academic community at MTSU. In consultation with the faculty, the Dean of Graduate Studies establishes policies and procedures to promote excellence in graduate education and contributes assistance to help ensure that each graduate program provides the optimal educational experiences for its graduate students, including the distribution of graduate assistantship funds and the provision of graduate fellowships.

Four goals have been set that will guide the improvement and strengthening of MTSU’s graduate programming efforts. The efforts reported in this summary are correlated with these goals. Planning and actions related to the goals of the College of Graduate Studies have been underway during the reporting period that will ensure that these goals are realized. We list the more notable of these by goal number.
Goal 1: Increase Degree Offerings

Continue to establish graduate degree programs that contribute to academic quality and strength in areas of strategic need in the state and nation through individual and joint collaborative efforts

- Proposals for three new Ph.D. degrees (Computational Science, Molecular Biosciences, and Mathematics and Science Education) have been developed and approved by the Tennessee Board of Regents following rigorous external reviews. They have recently been approved by the Tennessee Higher Education Commission and will begin to admit students in 2010. These degree programs will significantly enhance the University’s ability to compete for external research funding and prepare individuals for leadership positions in science and mathematics.

- Proposals to create new master’s degree programs in Horse Science, International Affairs, Health and Human Performance, and Leisure and Sport Management have been approved by the Tennessee Board of Regents and await approval by the Tennessee Higher Education Commission. The proposed degrees in Horse Science and International Affairs build upon strong undergraduate programs and respond to increasingly important aspects of business and industry in Middle Tennessee. The proposals to establish master’s degrees in Health & Human Performance and Leisure and Sport Management are in response to external reviews that recommended restructuring of the existing M.S. in HPER. The existing M.S. in HHPER is to be phased out upon final approval of the new degrees.

MTSU submitted a proposal to establish a master’s degree program in Information Systems as part of a restructuring of the existing M.S. in Accounting/Information Systems. After external review the proposal was approved by the Tennessee Board of Regents and is awaiting final approval by the Tennessee Higher Education Commission. Upon approval of the new degree, the existing degree will be redesignated as a Master’s of Accountancy (MAcc.).

- The joint MTSU/TSU/APSU Master’s of Social Work admitted its first class of students in Fall 2009. All available slots in the MTSU portion of the degree were filled and planning is underway to expand the program next year.

The Graduate Council and university administrators continue to consider proposals to establish new graduate degrees and concentrations and to restructure existing graduate degree programs in response to strategic needs in middle Tennessee, student demand, and economic constraints.
Goal 2: Increase Graduate Enrollment and Retention

Continue to increase graduate student enrollment focusing on increasing the number of applicants and the diversity and academic qualifications of enrollees within a “graduate student friendly” environment.

MTSU set records for the number of graduate degrees awarded, including 24 students receiving their doctoral degrees.

• Graduate enrollment grew by 22% since 2007, increasing total graduate enrollment by over 500 students. The growth in enrollment is particularly noteworthy because it was not offset by increasing graduation rates. For example, a record 810 students graduated in 08-09, and 1087 first-time graduate students replaced them in Fall 2009, for a total of 2890 graduate students enrolled.

The College of Graduate Studies has committed to increasing the diversity of MTSU’s graduate student body through intensified recruitment of international students.

Recruiting trips to China, Taiwan, Thailand, Vietnam, Korea, India, and the Middle East have begun to establish MTSU as a university of choice for international students interested in a variety of majors. Regular meetings with cultural attachés at embassies and consulates in Washington D.C. also result in increasing numbers of graduate applicants sponsored by their governments.

Several years ago the College of Graduate Studies assumed responsibility for admission processing of international students. During the past summer, the college also took on the responsibility for managing the immigration documents and processing for international graduate students. While requiring significant resources, this change allows us to further implement the “one-stop shop” approach for admission of all graduate students.

As a result of these and other initiatives, new international graduate student enrollment increased over 52% between Fall 2008 and Fall 2009.

• We continue to revise and improve the College of Graduate Studies website by adding content and providing links to forms and materials used by graduate students and faculty members. We also continue to revise our pages to create a more “user friendly” experience.

• The College of Graduate Studies has instituted an annual workshop for Graduate Program Directors and support staff in each department.
Goal 3: Enrich the Graduate Experience

- The College continues to offer a variety of workshops to assist graduate students in development of "soft skills", including such topics as Academic Integrity, Thesis/Dissertation Writing, GRE Preparation, TA and RA Training, and Mentoring. We continue to develop additional workshops and resources as needs are identified.

- Thesis and Dissertation handbooks are being revised in order to provide additional guidance to students.

Beginning in Fall 2009 the College of Graduate Studies is employing a “thesis consultant” to assist students at this important stage of their studies. This individual will be available to students and faculty to answer questions, provide reference and formatting assistance, and conduct workshops.

Goal 4: Enhance the Assistantship Program

Continue to improve the number and duration of graduate assistantships and increase stipend amounts

- Although the economic climate and budgetary constraints prevented large increases in the number or value of graduate assistantships, the College was able to meet commitments made in previous new program proposals. The University has also been able to commit the resources necessary to fully fund graduate assistantships associated with new Ph.D. proposals when they begin in 2010.

- As part of the College’s ongoing effort to increase support of graduate students, we continue to advocate for the writing of assistantship stipends and fees into grant proposals whenever possible. In 2008-2009, 9 graduate assistantships were funded by external grants.
APPENDICES
Organizational Chart
College of Graduate Studies

Michael Allen
Dean

Peter Cunningham
Associate Dean

Melissa Hawkins
Admin Assistant

Lisa Mitchell
Information Specialist

Rick Henegar
Director of Graduate Admissions

Mandy Castellote
Secretary II

Graduate Assistants
and Student Workers

Karissa Garrison
Graduate Analyst

Felisia Griner
Graduate Analyst

Anita Hermes
Senior Graduate Analyst

Melissa Lowrance
Graduate Analyst

Lynn Parker
Graduate Analyst

Glenda Vandygrift
Graduate Analyst
# APPENDICES

## College of Graduate Studies Coordinators

<table>
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<tr>
<th>COORDINATOR</th>
<th>DEGREE</th>
<th>PROGRAM</th>
<th>DEPARTMENT</th>
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<tr>
<td>Karissa Garrison</td>
<td>MS, MS</td>
<td>Accounting &amp; Information Systems, Computer Information Systems</td>
<td>Accounting, Computer Information Systems</td>
</tr>
<tr>
<td><a href="mailto:kgarriso@mtsu.edu">kgarriso@mtsu.edu</a></td>
<td>615-898-2843</td>
<td>MBA, MA, PhD, MA, PhD</td>
<td>Business Administration, Business Education, Economics &amp; Finance, English, Health Care Management</td>
</tr>
<tr>
<td>Glenda Vandygrift</td>
<td>NONE, CERT</td>
<td>ALL NON-DEGREE</td>
<td>Sociology &amp; Anthropology</td>
</tr>
<tr>
<td><a href="mailto:gvandgr@mtsu.edu">gvandgr@mtsu.edu</a></td>
<td>615-898-5494</td>
<td>MA, PhD, MS</td>
<td>History/Public History, Mass Communications, Professional Studies</td>
</tr>
<tr>
<td>Felisia Griner</td>
<td>EdS, MED</td>
<td>Administration &amp; Supervision</td>
<td>Educational Leadership</td>
</tr>
<tr>
<td><a href="mailto:fsims@mtsu.edu">fsims@mtsu.edu</a></td>
<td>615-898-2218</td>
<td>EdS, MED, MED</td>
<td>Curriculum &amp; Instruction, Adv Studies in Teaching &amp; Learning, Reading</td>
</tr>
<tr>
<td>Melissa Lowrance</td>
<td>MS</td>
<td>International Students</td>
<td>All Programs</td>
</tr>
<tr>
<td><a href="mailto:mnewell@mtsu.edu">mnewell@mtsu.edu</a></td>
<td>615-898-2068</td>
<td>MED, PhD</td>
<td>Adv Studies in Teaching &amp; Learning, Music</td>
</tr>
<tr>
<td>Lynn Parker</td>
<td>MS, PhD</td>
<td>Exercise Science, Human Performance</td>
<td>Health &amp; Human Performance</td>
</tr>
<tr>
<td><a href="mailto:lparker@mtsu.edu">lparker@mtsu.edu</a></td>
<td>615-898-5589</td>
<td>MED, MS, MA</td>
<td>Aerospace Education, Aviation Administration, Geosciences, Human Sciences</td>
</tr>
<tr>
<td>Anita Hermes</td>
<td>MS, DA</td>
<td>Biology, Chemistry</td>
<td>All Programs</td>
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<tr>
<td><a href="mailto:ahermes@mtsu.edu">ahermes@mtsu.edu</a></td>
<td>615-898-5352</td>
<td>MS, MCJ, MS</td>
<td>Computer Science, Criminal Justice Administration, Engineering Technology</td>
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PAGE 64
Scholars Week Organizing Committee

- Chair: Executive Vice President and Provost Dr. Kaylene Gebert
- Technical Chair: Dr. Andrienne Friedli
- Charlie Baum (Business)
- Robert Carlton (Basic and Applied Sciences)
- Wasimuddin Qureshi (Research Services)
- Daniel Pfeifer (Mass Comm)
- Peter Cunningham (Grad Studies)
- Carolyn Hix (Basic & Applied Sci)
- Wil Langston (Ed. & Behav. Sci)
- Norman Weatherby (Ed. & Behav. Sci)
- Kris McCusker (Liberal Arts)
- Kevin Smith (Liberal Arts)
- Tara Prairie (Office of Compliance)
- Jason Vance (Library)
- James T. Harris (Coordinator, Physics)
- Peggy Duszynski (Coordinator, Undergraduate Research Center)
APPENDICES

Graduate Council Members 2008-2009

Clare Bratten
Electronic Media Communications

Cosette Collier
Recording Industry

Dorothy Craig
Educational Leadership

Teri Davis
Psychology

Jackie Eller
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