



COLLEGE OF BASIC
AND APPLIED SCIENCES

STRATEGIC PLAN

2015-2020



VISION

To be nationally and internationally known for excellent teaching, distinctive research, and quality scholarship in the basic and applied science fields. We accomplish this in an environment that promotes diversity, collegiality, community and global engagement, and interdisciplinary collaboration.

MISSION

Teaching and research in the College of Basic and Applied Sciences (CBAS) are central to the mission and success of Middle Tennessee State University. We will provide a transformative and experiential education to all MTSU students. The College will inspire, support, and mentor students, staff, and faculty to think critically and creatively, to confront challenges boldly, and to be ambitious. In implementing its mission, the College will:

1. Through a broad range of challenging undergraduate programs and distinctive graduate degrees we prepare students for leadership and successful careers in higher education positions as well as scientific and technical fields in industry, teaching, government, and health services; and
2. employ a diverse faculty community of exceptional teacher-scholars, nationally and internationally recognized for their teaching and research;
3. use its resources to help address scientific, environmental, educational, and health-related challenges in the Middle Tennessee area, throughout the nation, and across the globe

CORE VALUES

STUDENT-CENTERED: students are the focus of college priorities, resource decisions, and planning. We are stewards of student needs and advocates for student academic success and professional development.

INTEGRITY: integrity involves honesty and fairness, consistency in instruction, ethics of scholarship, freedom for inquiry, and open and truthful engagement with the community through effective communication, policies and practices.

ACADEMIC QUALITY: academic excellence is providing of the highest quality educational and learning experiences made possible by academically and professionally qualified faculty and staff, opportunities for contextual learning, state-of-the-art facilities, and effective resources necessary to support learning at the highest level.

INNOVATION: innovation is the creative and deliberate application of teaching, research, scholarship and service for effective education, and the development of useful products or processes providing a value added to the community.

DIVERSITY: Diversity enriches a learning environment focused on preparing individuals to live, work and lead in a global society.

FLEXIBILITY: flexibility in our curriculum and teaching methods to the styles and needs of the learner.

RESPECT: respect for individuals through attentiveness to attitudes, behaviors, thoughts words and interactions.

COMMUNITY: community is the students, faculty, and administration working collaboratively, combining their talents and ideas to improve the overall quality of our shared experience.

KEY PRIORITIES

Excellence in teaching, research, and service is our mission. A world-class faculty is central to realizing the vision of the college. This plan details the College's top priorities and supports the achievement of the highest level of success in the following 5 key areas.

- 1. Recruit, support, retain develop a diverse, aspiring and engaged faculty;**
- 2. Promote and enhance the profile of our research and scholarship;**
- 3. Deliver an outstanding undergraduate education with emphasis on "hands on" experiences, student research opportunities and international experiences all leading to student success;**
- 4. Develop and support acclaimed graduate programs in fields of national and international demand; and**
- 5. Nurture multifaceted partnerships with an enduring, positive impact on the community**

Key Priority #1 - Recruit, support, retain and develop a diverse, aspiring and engaged faculty

The success of the College depends upon the collegial efforts of a highly motivated and well-supported community of faculty who are dedicated teachers and successful scholars. CBAS is committed to recruiting new faculty who are poised to contribute successfully to the mission of a highly comprehensive university that is noted for using research and scholarship for the benefit of society and for bridging theory and practice. Such a recruitment strategy demands offering competitive salaries and ensuring Middle Tennessee State University is a welcoming institution that recognizes the importance of work/life balance. We are a community in which diversity is considered fundamental to the learning and discovery process. Hiring with an appreciation of the value of diversity is one of our core commitments.

Retaining an ambitious and engaged faculty means offering support throughout a career—from mentoring for success in tenure and promotion processes through support for continued achievement as a senior faculty member. This demands an enhanced commitment to providing and maintaining appropriate facilities for research success, increasing support staff, offering appropriate research/teaching/service balances to acknowledge individual faculty members' varying strengths, and nurturing a collegial community that recognizes the value of both fundamental research and interdisciplinary efforts.

Our success in these efforts will be measured in our progress in several key areas, including but not limited to:

GOALS:

1. **Expand hiring and retention of faculty from underrepresented groups.**
2. **Establish and expand mentoring programs for new tenure-track faculty.**
3. **Provide a College Faculty Award for faculty who exemplify excellence in research and teaching.**
4. **Increase in the number of tenure-track faculty and endowed faculty chairs in the college commensurate with increased enrollment and the advancement of research initiatives.**
5. **Improved research facilities and enhanced start-up funds for research scientists.**
6. **Enhance the teaching facilities while also providing support for faculty for professional development, in particular in the formulation of new strategies and technologies for the classroom.**
7. **Increase fundraising success to offer enhanced research support for all research active faculty.**
8. **Improved teaching and research facilities.**

Key Priority #2 - Promote and enhance the profile of our research and scholarship

A core component of Middle Tennessee State University's strategic plan is its commitment to advancing the intellectual reputation of the institution. The College of Basic and Applied Sciences will lead the way in realizing this goal.

In hiring highly talented faculty, creating the conditions that will lead to their retention, and supporting all faculty so that their research, scholarship, and creative activity flourishes, we demonstrate and ensure that CBAS is the center of both pedagogical and intellectual innovation at MTSU.

Our success therefore depends upon our commitment to setting and realizing ambitious goals for ourselves, our departments and programs, our research centers, and our students. We affirm that knowledge today is generated not only in the traditional disciplines, but also at the intersection of multiple disciplines through interdisciplinary collaborations. The many research efforts of the College of Basic and Applied Sciences are well-poised to answer compelling social, scientific, cultural, and aesthetic questions in all of their complexity. Our faculty, staff, students and alumni are our ambassadors to the world. The more often we showcase our MTSU-generated work at high-profile national and international venues, the more Middle Tennessee State University is recognized as a frontrunner in research and innovation. The more positive publicity that we receive for our work, the more we are perceived as a College where cutting-edge knowledge is created. We, as researchers, assume the responsibility for creating new knowledge while affirming that the responsibility for publicizing them is shared with the College and University.

The College will be relentless in promoting the successes of its faculty, students, alumni, and staff. It will use its resources to facilitate their achievements and their acclaim. It will also

face the difficult challenge of deciding where to focus its resources and will do so in a collegial manner.

Our success in these endeavors will be measured in metrics such as:

GOALS:

1. **Increase scholarly publications (20% over 5 years) in internationally and nationally recognized journals and prominent presses.**
2. **Enhance grant funding (20% over 5 years) by increasing the number of grants submitted and awarded by state, national and international prominent grants and fellowships.**
3. **Increase financial support for the dissemination of faculty scholarship and creative activity to national and international audiences.**
4. **Institute a competitive seed grant program for projects with high potential to attract external funding.**
5. **Support the development of research centers and organized research units that attract external research funding.**
6. **Continue to increase faculty start-up funding to attract the best candidates possible and to ensure their research success.**
7. **Increase faculty participation in advisory boards and at national and international conferences (15% over 5 years).**
8. **Expand CBAS's research presence through increased research exchanges and partnerships, and other inter-institutional collaborations.**

Key Priority #3 - Deliver an outstanding undergraduate education with emphasis on "hands on" experiences, student research opportunities, and international experiences all leading to student success

The College of Basic and Applied Sciences is central to the educational experience of all MTSU undergraduates. MTSU has long been noted for the strength of its undergraduate programs, and CBAS is the academic home to a large undergraduate population. Students from the other undergraduate colleges complete their general education science coursework in CBAS, where they experience the best the sciences have to offer and are educated to be effective communicators, creative thinkers, and engaged citizens. Science faculty are widely recognized as superb teachers and mentors. This plan reinforces and builds upon that strong foundation.

All undergraduates who complete their degrees with a major from the College will have an education in the basic and applied sciences that will equip them for success in their personal, civic, and professional lives. The College's courses of study will provide deep knowledge in students' major fields of interest and hone students' skills in writing, critical thinking, and research techniques. Our College's graduates will possess the flexibility of mind that is a key to future intellectual growth and employability in a changing economy. While the disciplines are the vital structures in which knowledge is often generated and from which it is disseminated, the intersections and interstices of those traditional disciplines are also important as the locations of new knowledge creation and research opportunity. We aspire to give our students an education that encompasses both disciplinary and interdisciplinary perspectives.

We will guarantee that every student who follows a major course of study in the College has the opportunity to participate in research and/or scholarly activity. Undergraduates will be encouraged to collaborate with each other, with faculty, and with research staff in the generation of knowledge. The College affirms that careers, social lives, and service opportunities increasingly cross national and cultural boundaries. All students in the College will be offered multiple opportunities for experiential learning during their course of study. For many, that will involve study abroad, internships, or volunteer opportunities.

Our commitment to superb undergraduate education will be demonstrated in ways that include:

GOALS

- 1. Enhance the visibility of the College as a desirable choice for STEM education for well-qualified high school students, undergraduate and graduate students, and transfer students.**
- 2. Enhance the educational experience by reviewing and updating the core curriculum and strengthening and streamlining various major curricula.**
- 3. Review and address curricular barriers to student success by employing such practices as expanding supplemental instruction programs and developing recitation courses for large class that will enable students to meet in smaller groups.**
- 4. Provide a seamless curriculum with coordinated predictable scheduling, attention to logical prerequisites and outcome requirements, explicit knowledge transfer from course to course, and faculty exchanges between classes that allows students to complete their degree in a timely manner.**
- 5. Deliver an innovative curriculum to our undergraduate students that provides exposure to inquiry across the disciplines**
- 6. Provide teaching that focuses on clearly-defined high expectations, opportunity, support and flexibility through the use of appropriate technology to enhance instruction and student learning.**
- 7. Promote uniform excellence in advisement and mentoring by promoting best practices and developing college-wide initiatives that help our students make the most of what our college and University offer.**
- 8. Use excellent advising and mentoring to encourage and challenge students to maintain flexibility for a variety of career paths and curricular options.**
- 9. Broaden the experiential learning opportunities for students through study abroad, research experiences, service learning, and internships/co-ops.**
- 10. Develop innovative degree programs that take advantage of existing strengths and interdisciplinary opportunities.**

Key Priority #4 - Develop and support acclaimed graduate programs in fields of national and international demand

Middle Tennessee State University embraces a vision of high-quality graduate education to support the professional and personal ambitions of its students. Increasingly, a graduate degree is a key to securing and maintaining a career, advancing oneself intellectually and professionally, and understanding the complexity of scientific and social problems as they evolve.

The College of Basic and Applied Sciences seeks to become a leader in graduate education in select fields across the basic and applied sciences. It is neither expected nor desirable that every department and program in the College will offer graduate degrees. In those that do, the College will ensure that graduate programs are designed with a clear and unique identity that responds to student demand, as well as national and international needs. As a comprehensive university, MTSU is poised to succeed most dramatically when it marshals its resources carefully. CBAS rigorously evaluates its existing graduate programs and supports their success and improvement. In selectively expanding its graduate programs with a commitment to offering a distinctive education, differentiated carefully from programs available at other institutions, CBAS will attract and retain outstanding faculty, best utilize their expertise, and respect the time and resources of its students.

CBAS will support new graduate initiatives and reaffirm its commitment to existing programs when they demonstrate their vitality and viability through careful planning, dynamic faculty leadership, a clear engagement with student interest and sensitivity to student career planning, and a proven ability to marshal and manage resources. The College affirms that offering high-quality graduate education depends upon the maintenance and expansion of exceptional facilities, and the support of high-achieving students through scholarships, teaching and research assistantships, and other forms of financial assistance.

We will assess our progress on achieving our goals in graduate education through examining metrics that include:

GOALS

- 1. Increases the number of graduate assistantships to permit growth in the college's graduate student population (PhD programs to 30 GTA's).**
- 2. Increase graduate student stipends to the mean level of our peer institutions (Master's - \$13,000; PhD - \$20,000, if use Conference USA schools stipends are much higher).**
- 3. Increase the number of incoming and continuing graduate students who are supported by training grants, fellowships, and research assistantships.**
- 4. Enhance the PhD program experience by reviewing, updating and streamlining the core curriculum.**
- 5. Increase the number of Accelerated Master's Programs**
- 6. Work with appropriate constituents to secure adequate space (laboratory, office) to support a growing population of graduate students in the college.**
- 7. Develop a communication strategy that showcases the achievements of graduate students in the college. Increase recognition of graduate students through awards (e.g., Best Thesis and Dissertation Award) and travel/research grants.**
- 8. Create opportunities for students to identify and apply for sources of funding through fellowships and scholarships.**
- 9. Provide teacher training and development for graduate teaching assistants (GTA).**
- 10. Ensure that faculty members are developed and evaluated on their mentorship and rewarded for outstanding mentorship of graduate students.**
- 11. Foster a greater intellectual community that includes graduate students.**

Key Priority #5 - Nurture multifaceted partnerships with an enduring, positive impact on the community

The College of Basic and Applied Sciences commits itself to changing the world in positive ways through its research and scholarly activity and by educating students to be similarly engaged through their own work and service. While considerable energy within and around the College will be directed toward opportunities for national and international impact, this will only complement and bolster our commitment to partnering with the local community on projects and processes that will lead to a better quality of life for all of our neighbors. We affirm our responsibility for being good citizens of Middle Tennessee and the city of Murfreesboro.

Our faculty, staff, and students are committed to leaving a positive legacy through our work, teaching, and service. While we recognize the many and diverse ways this may be achieved, we also affirm that the Murfreesboro community provides a clear and compelling arena for demonstrating that commitment.

Through internships, service learning projects, and educational outreach programs such as Expanding Your Horizons, our students have life-and community-changing opportunities to learn through doing and to find connections between the classroom and the world beyond. Our faculty and staff are similarly challenged to break down the figurative walls surrounding campus and integrate their work with the needs and potentials of the neighborhoods around MTSU.

Possible avenues for expanded local partnerships and alumni relations include:

GOALS

- 1. Increase CBAS public events (including development of a calendar) programing that will engage and respond to the interests of the college, university and community.**
- 2. Enhance and update the college web site and its official image using social media.**
- 3. Expand the communications and marketing efforts of CBAS.**
- 4. Increase communication and interactions with alumni, partners and stakeholders.**
- 5. Increase engagement with the local area schools to translate our specialized knowledge into learning opportunities for the pre-K-12 population.**
- 6. Increase service learning opportunities that are sensitively constructed with community partners.**
- 7. Increase donated funds/endowments for scholarships.**
- 8. Provide new and enhanced opportunities for faculty, staff, and students to become entrepreneurs in partnership with the business community.**