



College of
Engineering

Civil, Construction and Environmental Engineering

A Strategic Vision: Target 2025

Approved by the Faculty, October 23, 2017

Introduction...*moving our program forward*

Since 1837, the University of Alabama has been educating some of the finest civil engineers in the world – engineers who have become leaders, positively shaping our profession, and improving the lives of people both near and far. In 2003, the faculty of the Department of Civil, Construction, and Environmental Engineering developed and approved our first formal comprehensive strategic plan titled; *Enhancing the Excellence: Target 2010* with a vision of establishing the department as a “program of choice by being one of the premier programs in the southeast and being competitive on a per faculty basis with other nationally recognized programs.” The strategic plan is regularly reviewed and updated by the Department faculty. The purpose of the strategic plan is to review achievements, consider the future, and define a path forward taking the department from being a premier program in the southeast to being one of national recognition.

This plan defines the faculty’s shared vision for the department in the coming years, including revised vision and mission statements, a new set goals and targets for 2025, and a set of potential strategies to support achievement of the targets and goals, fulfillment of the mission, and realization of the shared vision.

Background...*describing what we have accomplished*

The Department of Civil, Construction, and Environmental Engineering has witnessed unprecedented growth and has transformed itself from a small and reputable program into a large program of regional and national prominence. The faculty and staff of the department have worked conscientiously, successfully, and with focus in advancing and transforming the academic and research programs of the department. As positive evidence of the many successful efforts, consider the following sampling of achievements in the last ten years:

- ✓✓ Today, with an enrollment of over 850 undergraduate and 60 graduate students, the Department enrolls nearly four times as many students as we did in 2002-2003. According to 2016 ASEE data, the Department is now ranked 13th nationally in undergraduate enrollment.
- ✓✓ In academic year 2015-2016 we awarded over 140 undergraduate degrees as compared to 110 undergraduate degrees in academic year 2011-2012.
- ✓✓ The department has grown from a faculty of 12 in academic year 2002-2003 to 24 in 2015---2016.
- ✓✓ In fiscal year 2015-2016, the faculty was awarded over \$5.7M in externally funded research versus \$2.4M in fiscal year 2011-2012.
- ✓✓ Within the last ten years, the department successfully launched a new Bachelor of Science degree in the fields of construction engineering, architectural engineering, and environmental engineering while also developing joint graduate degree programs with both business and law.

Vision...defining what we will be known for

The Department of Civil, Construction, and Environmental Engineering will be a leader in education and research, recognized nationally and internationally for its quality and innovation.

Mission...defining what we do and whom we serve

The Department of Civil, Construction, and Environmental Engineering is dedicated to advancing professions serving the built and natural environment through its innovative, student-centered education and research programs. We are committed to preparing graduates for entry into their chosen profession, educating future leaders, and conducting and disseminating meaningful basic and applied research for the betterment of the state, nation, and global communities.

Goals...defining what we will do to fulfill our mission and realize our vision

The Department of Civil, Construction, and Environmental Engineering will:

- ✓✓ Provide high-quality, innovative, and comprehensive educational experiences for our students;
- ✓✓ Produce an increasing number of exceptional bachelors, masters, and doctoral graduates;
- ✓✓ Increase external funding for sponsored programs that supports research of relevance; and
- ✓✓ Foster an environment supportive of excellence and innovation in education, research, and service.

Targets...defining measureable achievements necessary to meet our goals

The Department of Civil, Construction, and Environmental Engineering aims to achieve the following targets by the year 2025:

- ✓✓ A total enrollment of at least 1000 bachelor's, 85 masters, and 60 doctoral students per year that exceeds the national averages for gender and ethnic diversity.
- ✓✓ Awarding at least 200 bachelors, 60 masters, and 15 doctoral degrees per year to an increasingly diverse student body.
- ✓✓ Nearly all bachelors and at least half of the masters and doctoral graduates have participated in a formal enhanced learning experience (e.g., study abroad, undergraduate research, service learning, outreach programs, leadership development, honors programs, cooperative education, etc.).
- ✓✓ A faculty of at least 30 exhibiting gender and ethnic diversity, with at least four endowed professorships or chairs.
- ✓✓ Nearly all faculty members actively engaged in innovative educational efforts with at least half of the faculty disseminating results of engineering education innovation or research.
- ✓✓ Nearly all faculty and doctoral students actively engaged in externally funded research, including involvement with university research centers, and in disseminating the results of their research.
- ✓✓ A diverse, nationally supported research portfolio, including nationally funded research centers, that generates at least \$10.0M per year in annual external contract and grant expenditures.
- ✓✓ At least one-half of the faculty serving as editors of archival journals, in leadership roles on national or international professional committees, or as leaders of national or international research teams, or elected as fellows of national professional societies.
- ✓✓ National recognition (ranking) by independent sources (e.g., US News and World Report) as a leader in engineering education and research.

Strategies...describing how we will meet targets, accomplish goals, and achieve the vision

The faculty and staff established the following set of strategies that are designed to support our overall effort in meeting our stated targets and accomplishing our goals for 2025:

- ✓✓ Develop, and implement new undergraduate educational initiatives that enhance educational effectiveness and promote professional engineering development.
- ✓✓ Organize a formal support programs to promote student success in the curricula and on the Fundamentals of Engineering exam.
- ✓✓ Develop an integrated and focused marketing and recruiting program for undergraduate, graduate and research programs, including functional, coordinated, and effective websites.
- ✓✓ Organize and conduct engaging recruiting and outreach programs for the summer SITE program, E-Day, and Freshmen Engineering Program students, as well as SWE, NSBE, and other on---campus student engineering organizations that promote and support diversity in engineering.
- ✓✓ Promote the department honors and Accelerated Master Programs (AMP), including integration with the minors, to be more effective in recruiting and retaining students.
- ✓✓ Define, promote, and support suitable enhanced learning programs, including those offered by the College and other appropriate programs, for graduate---level students.
- ✓✓ Implement and continuously improve a program designed specifically for doctoral students that is focused on developing skills necessary for success in the professoriate.
- ✓✓ Develop, maintain, and support a meaningful department seminar program in partnership with related university research centers.
- ✓✓ Increase graduate---level course offerings, including offering appropriate courses through distance education, to support growth in the graduate program.
- ✓✓ Direct the majority of department graduate assistantship funding to support doctoral students, including dual MS-PhD students, and extend priority preference to support doctoral students on external contracts and grants.
- ✓✓ Offer nationally competitive graduate assistantships with incentives for research productivity.
- ✓✓ Target an average time-to-degree of 1.5 years for masters and 4.0 years for doctoral students.
- ✓✓ Promote the Plan II (non-thesis) as a “professional masters” degree for both full and part-time students, including establishing a formal scholarship program to partially support full-time, Professional master’s students.
- ✓✓ Leverage department and research center resources to support faculty research involvement, funding pilot research to support development of external research proposals, and faculty and student travel.
- ✓✓ Explore the possibility of an alternative doctoral residency option for doctoral program.
- ✓✓ Simplify and, in as much as possible, automate effective ABET and SACS outcome assessment processes, including online electronic graduation portfolios, portfolio evaluation, mid---curricula and senior exit surveys.
- ✓✓ Expand and maintain a comprehensive faculty, staff, and student recognition program for achievements in education, research, and service.

***“An investment in knowledge
pays the best interest.”***
Benjamin Franklin