

COLLEGE OF ENGINEERING

STRATEGIC PLAN FOR FY 2010-2014

MISSION

The mission of the UNT College of Engineering is to capitalize on the opportunity for innovation and excellence in teaching, research and service. This will be achieved by a strategic alliance among all of the college's constituencies in the region, the state of Texas and the nation. The constituencies involved include foremost our undergraduate and graduate students as well as academic units and industry, particularly in North Texas, so as to foster economic development and promote an academically diverse environment.

VISION

The vision of the College of Engineering is to have the highest quality teaching and research programs in North Texas and beyond:

- in strategically selected areas of engineering, engineering technology, and computer science that service the community, industry, and the profession;
- in an intellectually stimulating and diverse environment; and
- in support of industry and economic development.

STRATEGIC PLAN

The strategic plan presents strategies, actions and metrics to develop undergraduate and graduate programs, and enhance the research, reputation and advancement of the UNT College of Engineering (CENG) from its current state in FY 2010 to its desired state in FY 2014 consistent with its mission and vision.

Goal 1: Undergraduate Education

CENG will provide a rigorous educational experience to a diverse student body.

Strategies:

- 1.S.1. Develop and sustain excellent undergraduate programs that achieve accreditation
- 1.S.2. Increase the quality of incoming students
- 1.S.3. Increase retention and facilitate timely graduation
- 1.S.4. Increase student involvement in their university and their profession
- 1.S.5. Enhance career development opportunities for students and expand partnerships with employers

Actions:

- 1.A.1. Actively recruit undergraduate students to achieve moderate growth in the size of the CENG undergraduate body
- 1.A.2. Develop a pool of CENG scholarships to attract the best students
- 1.A.3. Increase the opportunities CENG undergraduates have to be engaged in CENG, UNT, and the student professional societies
- 1.A.4. Reduce the student to faculty ratio to 22.5 by hiring qualified faculty
- 1.A.5. Increase the engineering undergraduate enrollment to 8% of the UNT undergraduate enrollment while maintaining a faculty to student ratio of 22.5 to 1
- 1.A.6. Raise the retention rate of underrepresented students to the same levels as all students

Metrics:

- 1.M.1. Average MATH SAT and ACT of freshmen applicants
- 1.M.2. Average MATH SAT and ACT of incoming freshmen
- 1.M.3. Percentage of CENG students under CENG scholarship support
- 1.M.4. Average CENG scholarship funds per student supported
- 1.M.5. Student-to-faculty ratio
- 1.M.6. Percentage of degree programs that are accredited
- 1.M.7. Six-year graduation percentage
- 1.M.8. Retention percentage per year (freshman, sophomore, junior, senior)
- 1.M.9. Number of CENG undergraduate students in the Honors College
- 1.M.10. Number of undergraduate students receiving State, national, or international awards (e.g. Goldwater, Intel, programming competition, etc.)
- 1.M.11. Number and percentage of CENG students who have studied abroad or participated in some other UNT-sponsored international experience
- 1.M.12. Number of undergraduate students participating in paid research experience programs
- 1.M.13. Number of companies who attend the CENG Career Fairs
- 1.M.14. Number of internship opportunities for CENG students

Goal 2: Graduate Education and Research and Scholarship

CENG will provide a rigorous graduate experience to a diverse student body. Students will be engaged in research and scholarship activities. CENG will significantly increase its levels of funded research and scholarly productivity in order to enhance undergraduate and graduate education, contribute to economic growth, and improve CENG's and UNT's standing among peer institutions.

Strategies:

- 2.S.1. Develop and sustain excellent graduate programs
- 2.S.2. Increase the quality of incoming students and facilitate timely graduation
- 2.S.3. Increase the number of doctoral students
- 2.S.4. Engage students in scholarly and research activities
- 2.S.5. Increase the level of funded research activity
- 2.S.6. Increase the scholarly output of tenured and tenure-track faculty
- 2.S.7. Engage in technology transfer

Actions:

- 2.A.1. Actively recruit graduate students, especially doctoral students
- 2.A.2. Support the faculty in identifying funding opportunities and submitting research proposals
- 2.A.3. Strengthen faculty development, recognition and reward systems that value graduate education, research and scholarship
- 2.A.4. Encourage the acquisition of patents and copyrights, and IP transfers through UNT

Metrics:

- 2.M.1. Average GRE, GPA, and (where applicable) TOEFL scores of accepted graduate student applicants
- 2.M.2. Average GRE, GPA, and (where applicable) TOEFL scores of incoming graduate students
- 2.M.3. Percentage of Ph.D. students as part of the total graduate student population
- 2.M.4. Number of Ph.D. students graduating per faculty
- 2.M.5. Average years to graduation for M.S. students
- 2.M.6. Average years to graduation for Ph.D. students
- 2.M.7. Percentage of M.S. students graduating in 2 years
- 2.M.8. Percentage of Ph.D. students graduating in 6 years
- 2.M.9. Journal publications per doctoral graduate
- 2.M.10. Overall publications and other scholarly output per doctoral graduate
- 2.M.11. Percentage of M.S. students completing a thesis
- 2.M.12. Number of CENG graduate students receiving state, national, or international awards (e.g. NASA, NSF or DoD Fellowships)
- 2.M.13. Journal publications per faculty
- 2.M.14. Overall publications and other scholarly output per faculty
- 2.M.15. Patent applications, copyrights and patents awarded per faculty
- 2.M.16. Research expenditures per faculty
- 2.M.17. Percentage of doctoral students who are fully supported by any means (TA, TF, RA, fellowship, etc.)

Goal 3: Enhanced Reputation and Advancement

CENG will distinguish the reputation of its scholarship and research endeavors through an emphasis in the unique creative and innovative abilities represented in its diverse faculty and student body. This focus is inherent; discovery and dissemination of new knowledge represents the essence of the College and it will be manifest through enhanced interactions and relationships with a broad range of external constituents. Such a reputation will inspire involvement and giving by alumni and friends, including corporate partners.

Strategies:

- 3.S.1. Increase the number of faculty in leadership positions in the profession
- 3.S.2. Enhance communication activities designed to increase involvement of alumni and friends in the life of CENG
- 3.S.3. Increase the visibility of CENG through hosted events, media coverage, and participation of industry and academia leaders in CENG activities
- 3.S.4. Align philanthropic priorities and activities that support the CENG strategic goals, including education, research, and scholarship

- 3.S.5. Increase faculty involvement in public service activities, particularly those activities aligned with their technical expertise, that promote positive visibility for the college
- 3.S.6. Increase the number of faculty who involve local industry, in some manner or form, with their instructional or research agenda

Actions:

- 3.A.1. Encourage faculty to take leadership positions in the profession and reward such service
- 3.A.2. Organize and host community outreach events
- 3.A.3. Keep alumni and friends of CENG continuously informed
- 3.A.4. Engage alumni and friends in CENG activities
- 3.A.5. Advertise the successes of CENG faculty and students
- 3.A.6. Identify giving priorities for CENG
- 3.A.7. Increase donations to CENG
- 3.A.8. Encourage faculty to become involved in public service activities and reward such service
- 3.A.9. Encourage the building of interdisciplinary relationships with other programs within UNT and with other institutions
- 3.A.10. Encourage faculty to actively interact with industry (e.g., guest speakers for classes, field trips for students, small scale material/equipment donations, etc.) and reward such interaction

Metrics:

- 3.M.1. Number of leadership positions held by faculty (e.g. senior or fellow level membership in professional societies; membership in journal editorial boards; service as a program manager to a federal research agency; etc.)
- 3.M.2. Number of outreach events hosted or organized (e.g. DC BEST, tours of DP by K-12 schools, Governor's School, etc.)
- 3.M.3. Number of contacts with alumni and friends (e.g. letters, newsletter, holiday cards, Alumni Day recognition, ABET alumni surveys, etc.)
- 3.M.4. Number of alumni and friends involved in CENG activities (e.g. assist in recruiting undergraduate students, present talks to students, serve on industrial advisory boards, serve as adjuncts, etc.)
- 3.M.5. Talks by leaders of academia and industry (guest lecturers, seminar speakers, etc.)
- 3.M.6. Participation of industry leaders in CENG advisory boards
- 3.M.7. Press releases regarding achievements of faculty and students of CENG
- 3.M.8. Donations to CENG – totals, by alumni, by corporations
- 3.M.9. Number of faculty engaged in discipline-specific public service activities
- 3.M.10. Number of faculty/industry interactions (research collaborations, co-ops, internships, etc.)