

## **SCHOOL OF CIVIL AND ENVIRONMENTAL ENGINEERING**

### **Mission**

The School of Civil and Environmental Engineering educates civil and environmental engineers with knowledge and skills for life-long careers; conducts research and scholarly activities; and shares knowledge through outreach activities.

### **Vision**

The School be recognized as outstanding for its academic, research, and outreach programs and for its respectful focus on students.

### **Core Values**

**Excellence** – We seek excellence in all our endeavors and are committed to continuous improvement.

**Intellectual Freedom** – We believe in ethical and scholarly questioning in an environment that respects the rights of all to freely pursue knowledge.

**Integrity** - We are committed to the principles of truth and integrity, and we will act equitably, ethically, and professionally.

**Service** - We believe that serving others is a worthwhile endeavor.

**Diversity** - We respect others and value diversity of opinion, freedom of expression, and other ethnic and cultural backgrounds.

**Stewardship of Resources** - We are dedicated to the efficient and effective use of resources. We accept the responsibility of the public's trust and are accountable for our actions.

**Focus on Students** - We believe that our students are our most important constituents and that they should be treated with respect.

## Goals, Critical Success Factors, Objectives, and Strategies

**Goal One. Academic Excellence in Instruction. Provide world-class programs that prepare graduates to serve and lead in a global community.**

### **Critical Success Factors:**

- Program accredited by ABET.
- Pass rates on the national Fundamentals of Engineering Exam, and performance of undergraduates on all major components (e.g., mathematics), exceed national averages.
- Graduate engineers who are competitive with the best as evidenced by the following:
  - Average starting salaries at or above those for graduates from peer institutions.
  - Satisfaction of graduates with their education determined from nationally-administered surveys; high percentage of graduates at “satisfied” or high rating.
  - High acceptance rate for our graduates into their postgraduate school of choice: 90% of qualified applicants accepted into first or second graduate school of choice.
- Graduate program at OSU-Tulsa that attracts qualified graduate students from institutions of recognized quality.
- Enhanced quality of graduate programs as indicated by the following:
  - The US News and World Report study of graduate programs.
  - Increase the number of PhD students per faculty member.

### **Objectives:**

**Objective 1.1:** Continuous quality improvement of curriculum and instruction

#### **Strategies:**

- Conduct curriculum review in CY04.
- Review curriculum as necessary.

**Objective 1.2:** Develop and implement faculty incentive program to reward excellence in teaching and research.

#### **Strategies:**

- Convene CIVE faculty committee to develop incentive programs for teaching and research.

**Objective 1.3:** Expand OSU-Tulsa civil engineering course offerings.

#### **Strategies:**

- Enhance undergraduate program at OSU-Tulsa by offering at least 2 CIVE undergraduate courses each semester.

**Objective 1.4:** Maintain full ABET accreditation in all six areas of School’s undergraduate program.

**Strategies:**

- Using ABET framework maintain continuous assessment, improvement, and documentation.
- Ensure that CIVE meets all ABET criteria.

**Objective 1.5:** Recruit and hire sufficient faculty to accomplish CIVE goals.

**Strategies:**

- Hire one construction management faculty at OSU-Stillwater.
- Hire one construction management faculty for Stillwater campus two semesters before Professor Oberlender retires.
- Hire one geotechnical faculty for Stillwater campus two semesters before Professor Snethen retires.
- Hire second geotechnical faculty.
- Hire one materials faculty.

**Objective 1.6:** Establish one chaired professorship.

**Strategies:**

- Continue *Project Excellence* and use a portion of the funds for a chaired position.

**Objective 1.7:** Increase external research funding by 50% over 5 years.

**Strategies:**

- Expand funding for OTC
- Develop marketing plan for OIC

**Goal Two. Academic Excellence in Research and Scholarly Activity. Conduct world-class research and other scholarly activities that advance and apply knowledge to the benefit of society.**

**Critical Success Factors:**

- Research productivity at levels that exceed the average at peer institutions as measured by dollars per FTE, F&A generation, PhD graduates, and peer-reviewed publications.
- Major federal funding in areas of national and state importance for six years for the Oklahoma Transportation Center (OTC).

**Objectives:**

**Objective 2.1:** Expand number of research professors from one to three over 5 years.

**Strategies:**

- Encourage faculty members to pool research funds to hire research professors.

**Objective 2.2:** Increase the scope of opportunities for faculty development.

**Strategies:**

- Increase the financial resources available for faculty development.
- Develop and implement a faculty incentive program for teaching and research.

**Objective 2.3:** Expand and renovate laboratories.

**Strategies:**

- Continue *Project Excellence*
- Build new structures laboratory
- Renovate Engineering Annex for soils and materials research.
- Secure benches and equipment for ATRC environmental lab

**Goal Three. Academic Excellence in Outreach. Provide multi-faceted programs and services that contribute to quality of life and economic development.**

**Critical Success Factors:**

- Number of people served in academic credit courses and continuing education programs increased by 10%.
- Number of small businesses and entrepreneurs served each year increases by 10%.
- External grant support increased by 15%.

***Objectives:***

**Objective 3.1:** Conduct research recognized as relative to economic development in Oklahoma.

**Strategies:**

- Develop continuous financial support for growth of OTC and OIC.

**Objective 3.2:** Increase public awareness of CIVE activities

**Strategies:**

- Increase number of press releases and newsletters by hiring part-time writer/publicist.
- Get involved with ASCE and ASEE K-12 initiatives.

**Goal Four. Student Recruitment and Development. Create a collegial environment that attracts outstanding students and encourages academic excellence, career planning, personal growth, discovery of knowledge, and leadership achievement.**

**Critical Success Factors:**

- The best and brightest are attracted to CIVE as evidenced by:
  - Percentage of new freshmen who were in the top 10% of their high school class compared with peer institution norms.
  - Fifty percent of incoming students will have an ACT score of 29 or higher.
- Success rate of undergraduate students as evidenced by the following:
  - Graduation rates equal or exceed peer institution norms.
  - Freshman retention equal or exceed peer institution norms.
- At least 10% of BS students will have had a significant international experience.
- A majority of eligible undergraduate students will receive and accept at least one internship assignment in industry, government, or other appropriate organization.
- An increasing number of undergraduate students participate on teams that are nationally competitive (e.g., concrete canoe, steel bridge).
- Annual levels of PhD production increased by 60%.
- Significant increase in number of international applicants and enrollees from prominent universities in the respective home countries (e.g., IIT's in India, national universities in Korea and Taiwan).
- Three endowed graduate fellowships.
- One hundred percent of graduate students participation in scholarly activity.

**Objectives:**

**Objective 4.1:** Increase the number of undergraduate admission applications by 2% per year

**Strategies:**

- Participation in CEAT recruitment programs for high schools.
- Increase the amount of undergraduate scholarships by 50% over 5 years.

**Objective 4.2:** Increase the number of graduate students by 50% over 5 years

**Strategies:**

- Increase the number of graduate scholarships by 50% over 5 years.
- Increase funds for research assistants by 50% .

**Objective 4.3:** Increase the retention rates of freshman-to-graduation by 10% over 5 years.

**Strategies:**

- Develop freshman and sophomore student retention plan.
- Establish mentoring programs for freshman and sophomores involving faculty and upper class persons.

- Continue to aggressively recruit incoming freshmen with scholarships

**Objective 4.4:** Maintain a friendly and respectful learning atmosphere.

**Strategies:**

- Conduct team-building program with faculty.

**Objective 4.5:** Continue to promote enrichment of student education experience.

**Strategies:**

- Continue to participate in concrete canoe, steel bridge, and timber bridge contests.
- Encourage student participation in ASCE student chapter.
- Encourage faculty participation in student's activities.

**Goal Five. Economic Development. Contribute to the economic vitality and growth of Oklahoma through collaborative relationships with its public and private enterprises.**

**Critical Success Factors:**

- Significant increase in the number of CIVE graduates who take employment in the State of Oklahoma.

***Objectives:***

**Object 5.1:** Conduct research on topics that affect economic development.

**Strategies:**

- Support OTC and OIC research.

**Goal Six. Diversity. Achieve diversity and create an environment of respect for individuals.**

**Critical Success Factors:**

- The ethnic diversity of the Oklahoma residents in the undergraduate and graduate student bodies reflects the demographics of the State.
- The gender diversity of the undergraduate student body reflects the norms in peer institutions.
- Retention and graduation rates of members of underrepresented groups increase by 20%.
- Effective mentorship programs/resources available to underrepresented groups.
- Existence of self-organized teams of diverse individuals who come together to respond to professional opportunities.

**Goal Seven. Human Resources. Attract, retain and develop faculty who are nationally recognized, or have the potential to be, and ensure the professional growth of faculty and staff by facilitating opportunity and performance.**

**Critical Success Factors:**

- Number of faculty who meet or exceed CIVE promotion and tenure criteria.
- Number of faculty who attract external funding to support scholarship, curriculum development, graduate education, and infrastructure development.
- Number of faculty who engage in scholarship that is validated nationally.
- 100% of faculty receiving major national awards and honors.
- Number of faculty holding national offices in technical and professional societies.
- Number of faculty engaged in advisory committees and review teams.
- Number of staff participating in meaningful professional development programs.
- Number of staff receiving university-level performance awards.

**Objectives:**

**Objective 7-1:** Establish professional development fund for faculty.

**Strategies:**

- Use Project Excellence funds.

**Objective 7-2:** Develop and establish a faculty assessment/incentive program.

**Goal Eight. Fiscal Resources and Infrastructure. Leverage and focus financial and physical resources to achieve national prominence in strategically targeted areas.**

**Critical Stress Factors**

- The Structures Research facility will be constructed, furnished, and occupied.
- Add five technology equipped classrooms.

***Objectives:***

**Objective 8-1:** Build Structures Lab and renovate other labs.

**Objective 8-2:** Recruit nationally to attract, hire, and retain the best faculty members.

**Goal Nine. Partnerships and Collaborations. Strengthen relationships with constituents and professional partners to improve mutually beneficial public and private support.**

**Critical Success Factors:**

- Total annual private gifts from alumni and friends in Project Excellence increased by 25%.
- Total number of donors increased by 25%
- One new endowed chairs/professorships.
- Number of alliances/partnerships with industry, government, and academia increased by 25%.
- Active and effective Board of Visitors.

***Objectives:***

**Objective 9.1:** Leverage funds with other universities, government agencies, and private firms.

**Strategies:**

- Maintain and expand partnerships with other universities, such as OTC.
- Maintain and expand partnerships with ODOT, OTA, and other public entities.
- Develop marketing plan for OIC

**Objective 9-2:** Continue partnerships with OU and Langston University with OTC.

**Objective 9-3:** Expand the Board of Visitors.

**Goal Ten. Image Development. Communicate an image that reflects achievement and pride.**

**Critical Success Factors**

- Print and video-based publicity for program innovation, and student and faculty achievements, increased significantly.
- The number of “hits” on the CIVE webpage each year increased 10 times.

*Objectives:*

**Objective 10.1:** Develop outreach programs for state citizens.

**Strategies:**

- Coordinate CIVE-related outreach programs through CLGT
- Hire part-time writer to publicize activities and programs at CIVE

**Objective 10.2:** CIVE broadly recognized as a friendly, competent, highly focused organization.

**Strategies:**

- Increase number of CIVE newsletters and e-mail progress reports.
- Hire part-time writer/publicist to increase number of press releases

**Objective 10.3:** CIVE maintains a life-long relationship of pride with its students and alumni.

**Strategies:**

- Maintain accurate mailing list of CIVE graduates.
- Hire part-time journalist to write articles about CIVE projects and activities.