

Engineering Technologies

Mission

The Engineering Technologies Division provides broad-based, comprehensive technical education that prepares graduates for the emerging technological workplace.

Vision

The Engineering Technologies Division will:

- Be courageous and innovative in creating a learning-centered, high-performance unit, which promotes self-directed learning, a commitment to excellence, and professional growth in students, faculty and staff.
- Develop technical-professionals who are life-long learners, possess strong problem solving and critical thinking skills, and understand the globalization of the world in which we live.
- Collaborate with industry partners to continuously review and identify the required competencies for the emerging engineering technicians and technologists.
- Serve as the higher education, technical institute of choice in Oklahoma and the region in the areas of Electrical/Electronics Technology, Engineering Graphics and Design Drafting, Manufacturing Technology, Instrumentation Engineering Technology and Civil Engineering Technology.

Core Values

Excellence – We seek excellence in all our endeavors, and we 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 honesty, and we will be equitable, ethical, and professional.

Service – We believe that serving others is a noble and worthy 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.

Goals, Critical Success Factors, Objectives, and Strategies

Goal One: Create an environment of academic excellence, which fosters student success by continually enhancing the curriculum and advanced classroom technology.

Critical Success Factors

- 100% of the programmatic objectives will have documented assessment instruments by Summer 2004
- 100% of regularly scheduled courses will maintain a course curriculum content guide by Spring 2006
- 100% of programmatic objectives will be reviewed and updated annually prior to the beginning of the fall semester
- All classrooms/laboratories will have dedicated LCD projectors by Fall 2006
- All faculty will have laptop computers by Fall 2005
- All theory based Engineering Technologies courses will be online by Fall 2007
- All courses will utilize Blackboard by Fall 2005
- Update one computer lab per year to appropriate state of the art
- Add 4 conventional lathes and mills, 1 Haas CNC machine, 2 Haas CNC trainers, and appropriate CAM software to Manufacturing Laboratory by Fall 2006
- Add two printers for student access to computer laboratories in the Electrical/Electronics area by fall 2004
- Adequately equip all Engineering Graphics & Design Drafting computer laboratories for course enrollment of 15 students by Spring 2005
- Develop articulation agreement with OSU-Stillwater's MS Control Systems Engineering and MS Engineering and Technology Management programs
- Submit for ABET accreditation evaluation visit by Fall 2007

Objectives:

Objective 1.1 Implement and maintain a library of course documentation that includes: assignments, projects, presentations, etc.

Strategies:

- Implement a faculty development process to insure consistent curriculum development.
- Each course will have a dedicated folder maintained in the ET office.

Objective 1.2 Utilize results from assessment instruments to develop programmatic improvement plans.

Strategies:

- Collect data from instruments per OSU-Okmulgee assessment procedures.
- Utilize data within faculty meetings and the ET Industrial Advisory Board to develop programmatic enhancement plans.

Objective 1.3 Utilize Blackboard to provide students with information regarding course syllabi, performance feedback, information exchange, and announcements of due dates for assignments and tests.

Strategies:

- Provide faculty development training.
- Introduce the use of Blackboard to students in College Cornerstone.

Objective 1.4 Increase use of multi-media technology in the instructional delivery process.

Strategies:

- Install dedicated LCD projectors and network connections in all theory instructional areas.
- Train faculty on use of equipment and encourage the use of multimedia during the learning process.
- Review and evaluate new instructional technology.

Objective 1.5 Develop web-enabled course documentation for appropriate Engineering Technologies courses.

Strategies:

- Identify appropriate courses.
- Assign faculty to work with distance learning office to develop course material.

Objective 1.6 Utilize divisional resources, technology fee allocation, and industry donations to maintain industry standard and appropriate state of the art laboratories and instructional facilities.

Strategies:

- Utilize capstone course to maximize industry donations tech fee allocations to develop appropriate instructional equipment.
- Strategically allocate tech fee funds towards large dollar purchases.

Objective 1.7 Implement procedures and processes to maintain laboratory equipment in good working order, as well as ensure adequate control of inventory on divisional resources and supplies.

Strategies:

- Use work-study student(s) to maintain Electrical/Electronics parts inventory.
- Implement reporting form for use by faculty to report equipment damage/malfunction.
- Develop GIS database locating all equipment and assets.

Objective 1.8 Create pathways to advanced degrees for Engineering Technologies graduates/students.

Strategies:

- Create Bachelor of Technology degrees in Instrumentation Engineering Technology and Civil Engineering Technology.
- Develop articulation agreement with OSU-Stillwater BS Mechanical Engineering Technology program.
- Identify other baccalaureate options for graduates.

Goal Two: Recruit, retain and graduate a demographically diverse population of technical professionals prepared to contribute to the success of Oklahoma and regional industry.

Critical Success Factors

- Fall 2004 new student enrollment of 75
- Fall 2004 total Engineering Technologies headcount of 220
- Matriculate 30% of graduating seniors from related Green Country Career Technology Center technical programs into Engineering Technologies programs
- Retain 93% of students from fall semester to spring semester
- Increase graduation rate (within 8 semesters) by 15% over 5 years

Objectives:

Objective 2.1 Increase new student enrollment through improved articulation agreements with Career Technology centers, targeted and active recruitment activities, and follow-up on contacts generated by Prospective Student Services.

Strategies:

- Post articulation requirements and standards on website.
- Convey to Career Technology programs, the academic standards necessary to successfully transition students to OSU-Okmulgee.
- Evaluate each Career Technology program for articulation.
- Research current trends of other institutions to maintain a competitive edge.
- Leverage the OUS-Okmulgee Bus to allow ET faculty to demonstrate to Career Technology students, technology used during instruction at OSU-Okmulgee.

Objective 2.2 Increase the total headcount through increased enrollment, increased retention, and closer partnership with MAIP campus.

Strategies:

- Regularly visit Thunderbird and other programs conducted at the MAIP campus.
- Provide instructors for MAIP classes when possible.

Objective 2.3 Improve the retention of students through student club and professional society activities, agency and unit activities, and appropriate academic and social interventions.

Strategies:

- Inform students of activities and advantages of organization participation using the web and announcements.

Objective 2.4 Provide a timely and consistent performance feedback of student academic progress.

Strategies:

- Utilize Blackboard online grade book to allow students to check progress.
- Educate students on use of Blackboard during College Cornerstone.

Objective 2.5 Through collaboration with the campus' College Readiness Center, increase the academic preparedness level of 'at-risk' students.

Strategies:

- Involve faculty from each discipline with academic requirements.

Goal Three: Recruit, retain and develop a technically qualified, credentialed and diverse faculty.

Critical Success Factors

- Jointly develop written professional development plans for each faculty member
- All faculty will participate in a minimum of one professional society meeting appropriate to their specialty per year
- All faculty will participate in a minimum of one on-campus in-service training opportunity
- By Fall 2005 all faculty will have an average of 3.1 on questions 11-21 on the course evaluation form

Objectives:

Objective 3.1 Identify and utilize professional development opportunities to inspire faculty to become highly skilled teachers.

Strategies:

- Invite “Master Teachers” to make presentations to share teaching tips and techniques.
- Expand the faculty development courses offered as part of ET’s NSF grant.

Objective 3.2 Identify and utilize professional development opportunities to increase and improve the technical skill level of the faculty.

Strategies:

- Utilize industry-training opportunities for update training.
- Expand professional society memberships and allow time for faculty involvement.

Objective 3.3 Foster an environment that encourages faculty to pursue advanced degrees, write technical journal articles, and write and review textbooks.

Strategies:

- Identify appropriate technical journals and review Request for Papers.
- Support professional societies requests for reviewers submitted through the ASEE ETD list serv.
- Develop flexible schedules that allow faculty time to pursue degrees while meeting the needs of students.

Goal Four: Increase unit fiscal resources.

Critical Success Factors

- Submit proposal for one grant by Fall 2005
- Obtain an average of \$50,000 - \$75,000 in industry donations each academic year

Objectives:

Objective 4.1 Provide professional development opportunities for industry by offering short term and 'for credit' courses both on and off campus.

Strategies:

- Develop instructional equipment that for use in on and off campus courses.
- Leverage industry contacts to develop training opportunities.

Objective 4.2 Actively seek grant opportunities and industry donations for software, equipment, funds and scholarships.

Strategies:

- Utilize internship visits by faculty to create linkages that promote donations.
- Seek support from members of the IAB.
- Market a professional organization scholarship.
- Assign faculty to review 'Request for Proposals' from appropriate agencies and organizations.
- Develop proposals from RFPs.

Goal Five: Increase strategic alliances and partnerships with a technically diverse industry in Oklahoma and the region.

Critical Success Factors

- Consolidate Advisory Board to 25-30 active and strong participants
- Add five new approved internship sites per year
- Conduct three capstone projects per year for industry

Objectives:

Objective 5.1 Stabilize and strengthen the Industry Advisory Board.

Strategies:

- Involve faculty in visiting current and potential industry supporters.

Objective 5.2 Utilize the Internship and Capstone experiences to assist industry in the development of new products or processes, and/or the improvement of existing products or processes.

Strategies:

- Utilize the internship faculty visit to identify potential projects for Capstone.

Goal Six: Embed technical, educational, and leadership skills in the graduates from Engineering Technologies.

Critical Success Factors

- Students will do a minimum of one formal presentation per semester
- Students will demonstrate technical proficiency as documented in the OSU-Okmulgee ET assessment plan

Objectives:

Objective 6.1 Incorporate verbal and written communication assignments across the curriculum.

Strategies:

- Require a minimum of one written and one verbal communication assignment each semester with documentation of student assessment.
- Document assignments/projects in course documentation.

Objective 6.2 Provide rigorous project opportunities for the culminating Capstone course

Strategies:

- Solicit industry support through the Industrial Advisory Board and Internship visits.
- Post project results to the Engineering Technologies web site.