

Fire Protection and Safety Technology Department

Mission

The Fire Protection and Safety Technology Department provides a broad based program of undergraduate education and outreach that protects the lives and property of society by educating people capable of controlling and minimizing the effect of fire and other hazards.

Vision

The Fire Protection and Safety Technology Department will continue as the leader in the fields of fire protection and safety.

To accomplish this, the department faculty will:

- Educate students to be life long learners, intellectually and ethically prepared to lead their profession;
- Transform the current engineering technology program into an applied engineering, professional school program allowing graduates to pursue professional registration in all states;
- Provide a coordinated continuing education program in Fire Protection and Safety reaching out to all loss control professionals; and
- Coordinate assets located throughout the OSU system to foster research, expand knowledge, and pursue unique opportunities in Fire Protection and Occupational Safety through the creation of a dedicated education and research center.

Core Values

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

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.

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

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

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 1. Academic Excellence – Undergraduate/Graduate/Professional: Continue to provide the best educational program in Fire Protection and Safety in the United States.

Critical Success Factors:

- University Administration supports proposals for program changes and improvements
- Complete all administrative requirements and have the necessary resources in place for the next TAC/ABET general review
- TAC/ABET accreditation
- EAC/ABET accreditation
- Approval from the Oklahoma State Regents for Higher Education (OSHRE)
- Overall instructor and course evaluations of 4.25 on a 5.0 scale
- 50% of graduates having significant involvement in fire or safety related professional society activities
- Two (2) Wentz Research Scholar applications submitted each year
- Submit 1 student paper for presentation at the National Fire Protection Association (NFPA) annual spring conference
- Submit 1 student paper for presentation at the Society for Fire Protection Engineering (SFPE) professional development week
- Establish a national competition for Fire Protection and Safety 4 year educational programs
- 75% of graduates having internship, co-op study or other Fire Protection and Safety work experience
- 50% of current students involved in student chapters of professional societies
- All graduates employed within three months of graduation
- 60% of graduates obtaining multiple job offers prior to graduation
- Establish a Master's degree program approved by the Oklahoma State Regents for Higher Education (OSHRE) [assumes support from administration]
- 10 graduate students

Objectives:

Objective 1.1: Continue offering an ABET-TAC accredited program balanced in the areas of technical theory, practical experience and general education.

Strategies:

- Improve FPST's Continuous Quality Improvement plan.
- Compare the results of course review and other assessment results with ABET accreditation criteria and professional practices and innovations. Evaluate course effectiveness and update courses as needed.
- Conduct annual review of program and ABET criteria in connection with the Industrial Advisory Board meeting.

Objective 1.2: Become an ABET-EAC accredited Applied Engineering program and provide effective preparation for professional registration.

Strategies:

- Define a Fire Protection and Safety Engineering program consistent with the ABET-EAC criteria that emphasizes applications and laboratory experiences.
- Prepare 10-year plan to upgrade curriculum, faculty & facilities to support ABET-EAC.
- Shift faculty focus from “Instruction” to “Research and Instruction.”
- Establish graduate program at the Masters of Science level to support research and the undergraduate program.
- Establish a Professional Engineer preparatory program and evaluate its effectiveness.

Objective 1.3: Update all courses to make best advantage of the laboratory resources available.

Strategies:

- Convert all laboratory courses to use new lab facilities.
- Equip new laboratory facilities to support all courses.
- Evaluate all courses for effective use of laboratories.
- Begin ongoing fund-raising campaign to support new laboratory functions, maintenance and development.
- Establish Advisory Board committee on laboratory experiences.

Objective 1.4: Assess and improve course instructional processes.

Strategies:

- Update course level outcome assessment activities.
- Establish instructor and course baseline assessments.
- Establish action plan to improve course objective areas rated below 85%.
- Establish action plan to improve 2 lowest rated course objective areas.

Objective 1.5: Establish a nationally recognized student presence in the professional societies.

Strategies:

- Provide financial incentives to students for attending national conferences.
- Establish program to identify high quality student projects for development into presentations.
- Establish Industrial Advisory Board committee on student projects.
- Obtain corporate sponsorship of student project development.
- Establish departmental applied research program.

Objective 1.6: Continue greater than 80% graduate employment rate at graduation.

Strategies:

- Create graduate tracking program to identify: curriculum completion, job search progress, job offers, and employment.
- Establish Industrial Advisory Board committee on graduate placement.

Objective 1.7: Improve student retention, development, recognition and mentoring.

Strategies:

- Establish comprehensive student tracking program.
- Provide internship mentoring program.
- Establish student ambassador program to assist in recruiting and retention of first and second year students.

Goal 2. Research & Creative Activities: Establish an effective applied research program

Critical Success Factors:

- University Administration support for research program startup
- Annual research expenditures including in-kind equipment of \$25,000 per FTE
- Submit at least one article per FTE per year to a peer-reviewed publication or professional journal
- Every faculty member to be engaged in research or outreach activity, either on or off campus
- 30% of faculty conducting professional development/continuing education courses each year

Objectives:

Objective 2.1: Establish a research oriented faculty.

Strategies:

- Obtain funding to support faculty research activities.
- Provide release time for faculty research.
- Recruit a research capable faculty.
- Establish faculty research incentives.

Objective 2.2: Establish active research activities.

Strategies:

- Establish formal framework to promote creative activities and research.
- Establish a technical graduate program in Fire Protection and Safety Engineering to support research activities.
- Create the ability for OSU Fire Protection and Safety to provide high quality Fire and Safety data to support research efforts in the profession.
- Collaborate with federal government, national organizations, and other universities to establish a Fire and Safety related research reputation for OSU.
- Establish Advisory Board committee on Research.
- Establish ongoing Laboratory Improvement program to support research and coordinate with and upgrade educational laboratory activities.

Goal 3. Outreach/Service: Develop a comprehensive “one-stop-shop” for all continuing education and training in the areas of Fire Protection and Occupational Safety.

Critical Success Factors:

- University Administration support of proposal
- Establishment of a Center for Fire and Safety
- Create or update 1 outreach course per year
- 30% of faculty conducting professional development/continuing education courses each year

Objectives:

Objective 3.1: Provide continuing education and training to meet current certificate and professional development program needs, including Fire Sprinkler Certificate courses, and Automatic Fire Alarm Certificate courses.

Strategies:

- Review continuing education program in Fire and Safety to identify redundancies, inefficiencies and opportunities across the OSU system.
- Coordinate continuing education with research and laboratory activities.
- Establish business approach to departmental extension activities.
- Implement a comprehensive marketing plan to promote continuing education.

Objective 3.2: Provide continuing education and training to meet potential customer needs throughout the United States.

Strategies:

- Review continuing education program in Fire Protection and Safety to identify opportunities in the national arena.
- Develop new extension courses as needs are recognized on a national/international level.
- Shift focus from local needs.
- Implement a comprehensive marketing plan to promote continuing education to take advantage of identified opportunities.

Objective 3.3: Develop internet based supplemental courseware.

Strategies:

- Provide reduced teaching loads for faculty developing Internet learning components.
- Obtain additional funding to develop the use of technology in the classroom.

Goal 4. Faculty/Staff Development. Maintain a quality workforce and work environment.

Critical Success Factors:

- 5 new faculty members to support growth in to full engineering department
- 1 new faculty member to manage the Fire Protection and Safety laboratories
- 2 new staff members to support engineering department
- 1 new staff member to coordinate departmental outreach functions
- 1 new staff member to provide technician support to departmental laboratories
- Implementation and funding of a departmental staff training and development program
- Implementation and funding of formal departmental faculty development and sabbatical programs

Objectives:

Objective 4.1: Recruit and retain quality faculty.

Strategies:

- Recruit faculty who are qualified to EAC/ABET criteria.
- Recruit faculty with active research interests.
- Obtain office space and laboratory facilities for faculty research.
- Provide dedicated funding for professional development programs.

Objective 4.2: Recruit and retain quality staff.

Strategies:

- Recruit staff personnel to meet clerical and administrative needs.
- Recruit technical staff personnel to operate and maintain laboratory and support equipment.
- Obtain funding for staff development training programs.

Goal 5. Partnerships/Collaboration: Establish a center to coordinate and promote fire and occupational safety research and outreach activities with the academic programs

Critical Success Factors:

- University Administration support of proposal
- Establishment of a Center for Fire and Safety
- Host at least 3 multi-departmental events per year

Objectives:

Objective 5.1: Provide a single coordinated point of contact for all OSU fire related educational and training activities.

Strategies:

- Partner with FST to provide expanded educational opportunities to the Fire Service.
- Partner with FPP to provide dissemination of information to the fire service, fire protection and safety professions.
- Partner with Oklahoma Agricultural Research Station and the OSU Range Research Station to improve the dissemination of information and knowledge regarding prescribe burns, wildland fires, and the Wildland/Urban interface.

Objective 5.2: Provide a single coordinated program for all OSU fire and safety related research activities.

Strategies:

- Partner with Oklahoma Agricultural Research Station and the OSU Range Research Station to improve the knowledge regarding prescribe burns, wildland fires, and the Wildland/Urban interface.
- Partner with the department of Design, Housing and Merchandising in the College of Human Environmental Sciences to expand the knowledge of Firefighter protective clothing and fire service operations and safety.
- Partner with Civil Engineering to support research in the response of structures to fire.
- Collaborate with National Agencies to further the profession, including the Building Fire Research Laboratory (BFRL) at the National Institute of Standards and Technology (NIST), the US Fire Administration (USFA), and the Department of Homeland Security.

Goal 6. Access and Diversity: Recruit, retain and graduate a student body that is more academically prepared and representative of the population of Oklahoma and the nation.

Critical Success Factors:

- Maintain an enrollment of between 200 and 230 students
- Graduate 50 students on the “Professional Engineer” Prep program
- Increase diversity of student population from approximately 2% to 10%
- Increase diversity of faculty in proportion to national population as new hires permit

Objectives:

Objective 6.1: Recruit more undergraduates capable of completing engineering based program.

Strategies:

- Recruit more students into department’s professional engineering preparation course plan.
- Provide scholarships for department’s professional engineering preparation course plan participants.
- Enlist Industrial Advisory Board assistance in student recruitment.
- Establish Alumni based recruitment program.
- Coordinate with professional societies recruitment efforts.

Objective 6.2: *Recruit undergraduates from a wider range of populations.*

Strategies:

- Create a comprehensive program for publicizing activities of FPST in the areas of instruction, extension and research.
- Collaborate with professional societies and other Universities to promote Fire Protection and Safety Engineering professions, namely Society of Fire Protection Engineers, American Society of Safety Engineers, National Fire Protection Association, Department of Fire Protection Engineering, University of Maryland at College Park, and the Department of Fire Protection Engineering and the Center for Fire Safety Studies at Worcester Polytechnic Institute.
- Create an effective recruitment program to attract students from all backgrounds into Fire Protection and Safety.
- Enlist Industrial Advisory Board assistance in student recruitment.
- Establish Alumni based recruitment program.

Objective 6.3: Recruit new faculty members from a wider range of populations.

Strategies:

- Create a comprehensive program for publicizing activities of FPST in the areas of instruction, extension and research.
- Collaborate with professional societies and other Universities to promote Fire Protection and Safety Engineering professions, namely Society of Fire Protection Engineers, American Society of Safety Engineers, National Fire Protection Association, Department of Fire Protection Engineering, University of Maryland at College Park, and the Department of Fire Protection Engineering and the Center for Fire Safety Studies at Worcester Polytechnic Institute.
- Create an effective recruitment program to attract faculty from all areas of Fire Protection and Safety.
- Enlist Industrial Advisory Board assistance in faculty recruitment.
- Establish Alumni based recruitment program.

Goal 7. Image Enhancement: Develop a comprehensive plan to publicize departmental activities.

Critical Success Factors:

- All faculty involved in National or Regional level professional organizations
- 25% of faculty holding leadership positions in National or Regional level professional organizations
- Establish a positive reputation for fire and safety research at OSU
- Improve OSU's reputation for fire and safety education and training through increased attendance in outreach programs
- Increased visibility for OSU in fire and safety professional organizations

Objectives:

Objective 7.1: Create faculty program for professional development including participation and leadership in professional organizations.

Strategies:

- Establish a coordinated program of incentives, release time, and funding to support professional development, research, and outreach.
- Provide funding and release time for activities involving professional societies.
- Obtain corporate sponsorship in support of professional activities.
- Seek assistance from Industrial Advisory Board membership and alumni.

Objective 7.2: Establish mechanism to publicize research, outreach and accomplishments of faculty and students.

Strategies:

- Coordinate with Dept of Public Relations to conduct graduate student research.
- Broadcast what we do, including Live Burns, Webcam coverage of 'dramatic' experiments, weekly update of web site, Mini courses on web for interested people, Student poster sessions at major conventions (NFPA, ASSE, SFPE), National Competition.
- Publicize department service to campus community.
- Publicize department service to Stillwater, Payne County, and Oklahoma.
- Publicize department service to the nation.