

FIRE PROTECTION AND SAFETY ENGINEERING TECHNOLOGY

The fire protection and safety engineering technology (FPST) curriculum is structured to prepare individuals for assessing and reducing the risk for loss potential from fire, industrial incidents, exposure to toxic materials, and hazardous materials management. Reducing loss potential from fire involves setting design criteria with a particular emphasis on life safety, fire resistivity, automatic detection, or extinguishing systems specification. Reducing the risk of industrial incidents requires the application of specialized assessment techniques, redesign of machinery, processes and procedures, or use of special protective equipment or clothing. Reducing exposure to toxic materials requires sampling air for contaminants, such as toxic chemicals, monitoring noise levels, and developing procedures to address practical approaches for both risk reduction and compliance with state and federal regulations. Addressing hazardous materials management risks includes evaluating proper storage requirements, transportation, spill prevention, control and response, and regulatory reporting. Managing the risks of commercial and industrial operations, emphasizing risk reduction and compliance with laws and regulations, is an increasingly important job activity.

The fire protection and safety engineering technology program began at Oklahoma State University in 1937, the oldest fire-related program in North America. The demand by business and industry for loss control specialists has resulted in the program's evolution, emphasizing risk management for on fire protection, safety and occupational health. The FPST program prepares graduates for careers in loss control. The loss control profession is segmented into three major areas: loss from fire, loss from physical accidents and loss from environmental exposure.

The curriculum immediately introduces students to fire protection and safety studies, allowing them to measure their interests in a fire protection and safety career early in their academic career. The curriculum is rigorous in mathematics and the physical sciences requiring two semesters of calculus and a minimum of one semester of chemistry, and two semesters of physics. Computer usage is an essential component of most fire protection and safety courses. Interested high school students should design their high school programs to prepare them for college-level mathematics and science classes.

The program concludes with the Bachelor of Science in Engineering Technology degree in Fire Protection and Safety Engineering Technology.

Program Educational Objectives

OSU Fire Protection and Safety graduates a few years after graduation will be:

1. Earning and pursuing personal, technical and professional advancement through certifications, licensure, and their employment.
2. Continuing the pursuit of life-long learning through membership and participation in professional organizations.
3. Developing business expertise within their selected employment organization.
4. Successfully applying mathematical, analytical and technical skills to solve complex problems in the selected field.
5. Meeting the highest standards of ethical practice in their profession.

Fire Protection and Safety Technology degree graduates can expect to obtain these student outcomes upon graduation:

- (1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
- (2) an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
- (3) an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- (4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes;
- (5) an ability to function effectively as a member as well as a leader on technical teams; and
- (6) an ability to understand ethical and professional responsibilities and the impact of technical and/or scientific solutions in global, economic, environmental, and societal contexts.

The graduates of the fire protection and safety engineering technology program at Oklahoma State University are consistently recruited by the major businesses and industries of the United States. Graduate placement, salary offers and advancement into managerial positions have been excellent due to the uniqueness and high technical quality of the OSU fire protection and safety engineering technology program.

The Fire Protection and Safety Engineering Technology program is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org> (<http://www.abet.org/>).