

## Fire Protection and Safety Technology

Prepared by J.D. Brown

Degree Program(s) Assessed	Assessment Methods	Number of Individuals Assessed
Bachelor of Science, Engineering Technology, Fire Protection and Safety	Exit Interviews	33
	National Exams	6
	Alumni listserv	NA
	Portfolio	40

### Analysis and Findings:

The assessment plan was revised in the spring of 2002. Some of the assessment methods will not yield meaningful results until data has been collected for a few years. For example, *portfolio data* was collected for the freshman class in FPST 1213. However that data will not be correlated with performance in other classes or yield meaningful insights until those students have taken subsequent FPST coursework. *Midlevel assessment* will begin in 2005. The enrollment management plan for the department was approved to begin with the freshman class of 2003. No *graduate survey* was performed during this period. A survey including graduates of the last 3 years will be undertaken in the late fall to assess the effects of recent curriculum changes.

### National Exams

National exams are a broad assessment of the quality and depth of the student's preparation.

Three students took the Fundamentals of Engineering Exam (FE) and reported their impressions (scores not yet reported). Engineering technology students typically do not take this exam and may not be allowed to take the exam in many states. Success in this exam indicates exceptional preparation often through independent study.

One current student and three former students (recent graduates) took the Associate Safety Professional (ASP) exams and passed (scores not revealed).

The students taking the FE felt ill prepared in dynamics, thermodynamics.

The students taking the ASP felt generally well prepared and felt that their OSU education was sufficient in coursework and content in order for them to be successful in that exam. However they felt somewhat weak in some System Safety Techniques, particularly Fault Tree Analysis.

### Listserv

Model code issues are frequently addressed, as are regulatory issues. Fire alarm questions are often basic questions that indicate a lack of adequate preparation. Issues regarding suppression system design are often related to interpretation of codes and are complex.

A significant amount of discussion concerns pursuing professional certification. Many still feel that certification and licensure should have been emphasized more in the curriculum.

Graduates feel the program should place increased emphasis on issues and techniques surrounding model fire and building codes.

### Exit Interviews

- Seven (of 33) graduates commented the Industrial Hygiene (FPST 2344) and Industrial Hygiene Instrumentation (FPST 4133) were repetitive, contained the same material and assignments or similar.

- Seven graduates commented that labs and equipment require replacement, repair, or modernization.
- Four graduates commented that the program needs to emphasize and push the PE/FE exam and preparation for the exam.
- Three graduates commented that the internship program needs to be formalized and enhanced
- Three graduates recommended splitting the Fire Protection and Safety topics in the upper division to allow more specialization.
- Three graduates recommended increasing the amount of material on Fire Alarms and detection systems.

#### **Uses of Assessment Results:**

- Beginning in Fall 03 and continuing in Spring 04, new lab facilities are being brought on line, new equipment installed and all Lab courses being revised to use new facilities and equipment. This has been ongoing and was hampered by construction delays which have placed the building 1 year behind scheduled completion. The fire alarm laboratory will be a significant improvement over current facilities. This should enhance student experience in an area which has been consistently identified as a weakness.
- The department held a strategic planning session last fall to integrate the results of prior assessment periods into individual courses and build continuity throughout the curriculum
- FPST 3143 *Structural Design for Fire and Life Safety* was revised to include more material from the International Building Code.
- FPST 4333 *System Safety* will be revised during the next offering (Spring Semester) to include more detailed instruction in methodology of some techniques including fault tree analysis.
- Instructors have been given the results of the exit interviews and changes will be made in individual courses as appropriate.
- The department has developed an advising track through the curriculum that will better prepare those students who wish to pursue the FE/PE certifications as a career objective. This involves taking more rigorous alternatives for some courses.
- Students preparing for national exams were encouraged to utilize the College of Engineering's review sessions. This, coupled with course advisement tailored to student career objectives will benefit student success on these exams. Commencing Fall 03, Professional Engineering Exam preparation track is in place to prepare student for successful completion of the FE exam.
- Starting Fall 2003, FPST 4133 is no longer required for all students. Students may choose between Industrial Hygiene Instrumentation (FPST 4133) and Advanced Sprinklers (FPST 3113) allowing some specialization.
- Starting Fall 2003, the number of upper division controlled electives have been increased from 2 (6 hours) to 3 (9 hours) to allow more choice in areas of specialization.
- Internship program will be reviewed during the 2003-2004 academic year.
- Fire Alarm course material is in the process of being completely revised coupled with the anticipated delivery of 20 new Fire Alarm Panel workstations from Notifier. This is in conjunction with moving into the new lab facilities.
- All items will be reviewed during the faculty's next curriculum retreat in August 2003.