

## ASSESSMENT WEBSITE INFORMATION

**College: Engineering**  
**Chair/Director: Tom Parsons**

**Degree Program: Civil Engineering BSCE**

### **DATA SAY:**

Historically, most graduating seniors have voluntarily taken and passed the FE exam. For example, for three consecutive semesters in 1999 and 2000, 100% of General Engineering Program graduates (CE, EE, and ME concentrations) took and passed the FE exam prior to graduation. Since the General Engineering Program began in 1984, about 80 - 85% of all program graduates have voluntarily taken and passed the FE exam. Results from graduating senior surveys starting in 2004 indicated that the previous high passage rate was trending lower and the percentage of graduating seniors (mostly EEs and MEs) taking the FE exam was decreasing. For example, the senior surveys in 2007 indicated that a small percentage of engineering seniors (90% of CEs, 16.7% of EEs, 10% of MEs) were voluntarily taking the FE exam and that a small percentage of graduates (26.9% of all 2007 BSE graduates, 60% of 2007 BSE-CE graduates) passed the FE exam prior to graduation.

### **SO WHAT:**

Efforts need to be made to increase the FE passage rate.

### **HOW WE CHANGED:**

To address performance on the FE exam, a number of steps have been taken. A subcommittee of the College of Engineering Advisory Council, led by the engineering faculty, was formed in 2005 to study the problem and make recommendations to improve the FE pass rate for all BSE graduating seniors. Many different alternatives were examined, and the final recommendation was to have faculty advisors complete a course check-off list before students are given permission to sit for the exam. This approach gave some assurances that students had passed the majority of courses that cover topics on the exam. This procedure was first implemented in fall 2005, but there was not much evidence in subsequent years that this alone impacted passage rates. Thus, the practice was abandoned in 2008. Based on continued poor FE exam participation by some disciplines, additional measures were considered in fall 2007.



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### **HOW WE CHANGED (CONT.):**

There was a concern about the low number (less than 50%) of all engineering seniors that were voluntarily taking the FE exam in 2006 and 2007. Because the FE exam is used as an assessment tool for student outcomes, it was felt that at least 70 to 80% of students should take the exam. Also, the College of Engineering faculty has always been a strong supporter of professional registration and feels that all students should pass the FE exam as the first step toward registration. As a result, a new practice was implemented in spring 2008 requiring all engineering students to take the FE exam while enrolled in Senior Design I. To support the new practice, FE exam review lectures were included in Senior Design I starting in spring 2008, and all costs for the exam are paid by the College of Engineering from student course fees.

### **WHAT WE GOT:**

As a result of these actions, the percentage of civil engineering graduates taking the FE exam has increased to 100% since spring 2008. The percentage of civil engineering graduates passing the FE exam prior to graduation has also increased from the 2007 level of 60%. The percentage of civil engineering graduates passing the exam prior to graduation was

80% in spring/fall 2008,  
100% in spring/fall 2009,  
83.3% (5/6 students) in spring/fall 2010,  
100% (6/6 students) in spring/fall 2011,  
57.1% (4/7 students) in spring/fall 2012, and  
94.1% (16/17 students) in spring 2013.

The overall passage rate for the past four years was 86.1% which significantly exceeds the national average.

