



## Fundamentals of Engineering Exam Prep Course

### **Class Times & Location:**

Online with potential Weekly Discussions (Study Sessions) on Wednesdays 5:30 PM – 7:00 PM.

For current course schedules and registration information, see:

<https://ce.arizona.edu/engineering>

### **Description of Course:**

This course is part of University of Arizona’s Continuing and Professional Education program, geared towards helping you start a career in engineering. Passing the FE exam is a requirement for many engineering disciplines in order to become certified as an “Engineer in Training” (EIT). EIT marks the first step towards becoming a licensed or “Professional” engineer.

This course is driven towards maximizing your chance at passing the FE exam during your first try. The class utilizes an online teaching style to optimize your learning time and offer personalized help to best set you up for success.

Note that each engineering discipline has its own FE exam (for which topics vary) and that this course covers the “Other Disciplines” and the “Civil” specific exams.

**Course Format:**

This class will follow an online format. Lectures, discussions, and exams will be completed online. Homework can be completed at home and turned in online; solutions will be posted each week after the homework submission window has closed. Live online lectures/discussions can be held through Zoom upon request from student. In these live sessions, students will be able to engage in a live interaction with the instructors, asking questions about the class content and seeking help/clarification and/or express concerns.

**Course Objective:**

To prepare students for success on FE exam by:

- Lecturing on the 15 subjects covered on the “Other Disciplines” and the 18 subjects on the “Civil” FE Exams.
- Engaging students on an interactive online learning style.
- Incorporating the use of the FE Handbook to become familiar with utilizing it prior to the exam.
- Utilize self-assessment activities to offer students a means to measure their level and depth of understanding.
- Offer immediate online feedback on quizzes to measure performance and indicate correct answers.
- Offer multiple sources for practicing problem-solving to gauge the wide range of style of problems to be expected in the FE exam.
- Offer discussion sessions to answer students’ questions and address their concerns.

**Expected Learning/Course Outcomes:**

- Learn problem-solving skills.
- Learn multiple choice test-taking strategies to arrive at the answer with minimal to no handwork
- Learn how the FE Handbook can be utilized for guidance.
- Gain hours of practice on problem-solving.

**Required Sources:**

- FE Reference Handbook 10.0 by NCEES.

Register or log in to [MyNCEES](#) to download your free copy of the *FE Reference Handbook*.

**Assignments and Examinations:**

Except for special occasions, each week will cover a new topic. Each topic will have an “in-class” assignment solved in the lecture videos, a quiz, and a homework assignment due at the time of the discussion session on the dates shown in the course schedule. Examinations will be administered online, and the solutions can be covered during the same session, as determined by students’ requests.

<b>Weekly Lessons</b>
Lesson 1 Math
Lesson 2 More Math
Lesson 3 Probability and Statistics
Lesson 4 Engineering Economics
Lesson 5 Ethics & Midterm 1
Lesson 6 Chemistry (Other) - Structural Engineering (Civil)
Lesson 7 Safety & Material Science (Other) - Transportation and Traffic Engineering (Civil)
Lesson 8 Dynamics
Midterm 2
Lesson 9 Statics
Lesson 10 Strength of Materials
Lesson 11 Fluid Mechanics
Midterm 3
Lesson 12 Electricity & Magnetism (Other) - Hydraulic & Hydrologic Engineering (Civil)
Lesson 13 Thermodynamics (Other) - Geotechnical Engineering (Civil)
Final Exam & Graduation

**Subject to Change Statement:**

Information contained in the course syllabus may be subject to change with advance notice, as deemed appropriate by the instructor.

*Last updated July, 2020.*