



Fundamentals of Engineering

Exam Prep Course (Fall 2025)

Class Times & Location:

In-person and online (via Zoom) with Weekly Personal/Virtual Discussions (Study Sessions) on Wednesdays 5:30 PM – 7:00 PM.

In-person study session location:

The Refinery @ The UA Tech Park

1600 East Idea Lane, 3rd Floor

Tucson, AZ 85713

The refinery building locks down after 5:00 PM. People who are walking out typically let those outside in, however, should you find yourself waiting too long, contact me by phone.

Parking: the parking lot signs say that a UA parking permit is required, but you can park there *after 5 p.m.* without a permit. Please do not park in the lot before 5 p.m.

Zoom study session link:

Meeting Link: <https://arizona.zoom.us/j/7036634384>

Meeting ID: 703-663-4384

Description of Course:

This course is part of University of Arizona's Continuing and Professional Education programs, geared towards helping you start a career in engineering. The fundamental of engineering exam is a requirement for many engineering disciplines 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 both online and in-class teaching styles 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 subjects vary) and that this course covers the "Other Disciplines" and the "Civil" specific exams.

Instructor Contact Information:

Instructor: Tariq Tariq, P.E.
(520) 328-7560
ttariq@arizona.edu

Course Format:

Hybrid class means online content with in-class activities. Pre-recorded Lecture and Quizzes are done online while Discussion and Exams can be done either online or in-person (both options available). Homework is completed at home and the solutions covered during the weekly meetings.

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 gain familiarity with it to know how to utilize it on 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 explain the solution to a given problem.
- Offer multiple sources for practicing problem-solving.
- Offer discussion sessions to answer students’ questions and address their concerns.

Expected Learning Outcomes:

- Strengthened problem-solving skills
- Ability to utilize multiple choice test-taking strategies, when possible, to arrive at the answer with minimal to no hand-work.
- Ability to utilize the FE Handbook for guidance on solving a given problem.
- Hours of practice on problem-solving.

Absence and Class Participation:

Participation in online activities are vital to achieving the learning outcomes ascribed above. The online portion of the course will be administered through the Community d2l page. There you will find the weekly modules including lecture videos, homework assignments, quizzes and other relevant documents.

Although the discussion sessions are optional, they are strongly recommended as it is the instructor's opportunity to engage with the student first-hand to offer help and guidance.

Required Sources:

- FE Reference Handbook 10.5 by NCEES.

You can download a free pdf version by creating an account with NCEES or buy the hardcopy (\$13.95) from the NCEES website: <https://account.ncees.org/register>

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 for the respective week. Examinations will be given in-class and the answers are covered during the same session.

Grades:

This class is not an accredited class, however, completing the assigned tasks and assignments are vital to your success. Quizzes will serve as a measure of your attendance.

Learning progress will be assessed by completion of tasks, assignments as well as self-assessments.

Semester Schedule:

FE Class Schedule (Fall 2025)		Study Session Wednesdays 5:30PM to 7:00PM (AZ Local Time)	
Lesson	Date	Lesson	Study Session
Lesson 1 Math	8/27/2025	Midterm 2	10/22/2025
Lesson 2 More Math	9/3/2025	Lesson 9 Statics	10/29/2025
Lesson 3 Probability and Statistics	9/10/2025	Lesson 10 Strength of Materials	11/5/2025
Lesson 4 Engineering Economics	9/17/2025	Lesson 11 Fluid Mechanics	11/12/2025
Lesson 5 Ethics & Midterm 1	9/24/2025	Midterm 3	11/19/2025
Lesson 6 Chemistry (Other) - Geotechnical Engineering (Civil)	10/1/2025	Lesson 12 Electricity & Magnetism (Other) - Hydraulic & Hydrologic Engineering (Civil)	11/26/2025
Lesson 7 Safety & Material Science (Other) - Transportation and Traffic Engineering (Civil)	10/8/2025	Lesson 13 Thermodynamics (Other) - Structural Engineering (Civil)	12/3/2025
Lesson 8 Dynamics	10/15/2025	Final Exam & Graduation	12/10/2025

Classroom Behavior Policy:

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.). Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who

continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Some learning styles are best served by using personal electronics, such as laptops and iPads. The use of such devices are welcomed as long as they do not serve as a source for distraction.

Threatening Behavior Policy:

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See

<http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

Accessibility and Accommodations:

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

Code of Academic Integrity:

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See:

<http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>. Class

Note Copyright: Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent.

Providing student email addresses to a third party is not permitted. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA email to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of electronic resources provided by The University of Arizona. This conduct may also constitute copyright infringement. UA Nondiscrimination and Anti-harassment Policy: The University is committed to creating and maintaining an environment free of discrimination; see <http://policy.arizona.edu/human-resources/nondiscrimination-andanti-harassment-policy>

Subject to Change Statement:

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