

ME 466: Fundamentals of Engineering Examination Review

<i>Course description:</i>	Review of engineering fundamentals and mechanical engineering discipline specific topics to prepare for the Fundamentals of Engineering Examination. S, F grading.
<i>Number of credits:</i>	1
<i>Course Coordinator:</i>	J.L. Ding
<i>Prerequisites:</i>	Certified engineering or computer science major.
<i>Prerequisites by topic:</i>	<ol style="list-style-type: none">1. Mathematics2. Physics3. Probability and statistics4. Computational tools5. Statics6. Dynamics, kinematics, and vibrations7. Mechanics of materials8. Material properties and processing9. Thermodynamics10. Fluid mechanics11. Heat Transfer12. Engineering economics13. Ethics and professional practices14. Measurements, instruments, and controls15. Mechanical design and analyses
<i>Postrequisites:</i>	FE exam
<i>Textbooks/other required materials:</i>	<ol style="list-style-type: none">1. FE Supplied Reference Handbook – free download: http://ncees.org/exams/study-materials/download-fe-supplied-reference-handbook/2. FE Mechanical Review Manual (FEMERM), by Lindeburg. (recommended)3. Publisher: http://ppi2pass.com/fe-mechanical-review-manual-femerm.html4. Mechanical Discipline-Specific Review for the FE/EIT Exam (DSME2), 3rd Ed. (recommended). Publisher: http://ppi2pass.com/mechanical-discipline-specific-review-for-the-fe-eit-exam-dsme2.html
<i>Course objectives:</i>	To prepare students for the FE examination through a review of engineering fundamentals and ME discipline specific subjects.

Topics covered:

1. Probability and statistics
2. Statics
3. Dynamics, kinematics, and vibrations
4. Mechanics of materials
5. Material properties and processing
6. Thermodynamics
7. Fluid mechanics
8. Heat Transfer
9. Engineering economics
10. Ethics and professional practices
11. Measurements, instruments, and controls
12. Mechanical design and analyses

Expected learning outcomes:

Reinforce the learning outcomes from previous courses related to engineering fundamentals and mechanical engineering specific subjects.

Class schedule:

Two 170-minute lecture sessions per week for 8 weeks.

Laboratory schedule:

N/A

Contribution to meeting the professional component: Engineering Topics

Relationship of course to student outcomes:

3 strongly supported; 2 supported; 1 minimally supported

Student Outcomes Pre-Fall 2018
(ABET EC2000)

a	b	c	d	e	f	g	h	i	j	k
1				1	1			1		

Student Outcomes Fall 2018 forward
(ABET EC2019)

1	2	3	4	5	6	7
1			1			1

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