

College of Engineering, Tuskegee University
AENG 0441, CENG 0441, EENG 0441, MENG 0441: EIT Review
Course Policy/Syllabus for Spring 2024

Course	AENG 0441, CENG 0441, EENG 0441, MENG 0441 - EIT Review		
Credit Hour	AENG 0441: 0.0	CENG 0441: 0.0	EENG 0441: 1.0
	MENG 0441: 0.0		
Instructors	Dr. Mohammad Kamal Hossain (Mechanical Engineering) Dr. Li Jiang (Electrical and Computer Engineering)		
Offices	Room 238, Luther H. Foster Hall (Mohammad Hossain) Room 315, Luther H. Foster Hall (Dr. Li Jiang)		
Phone	(334) 727 – 8128 (Dr. Mohammad Hossain) (334) 724-8048 (Dr. Li Jiang)		
E-mail	mhossain@tuskegee.edu (Dr. Mohammad Hossain) ljiang@tuskegee.edu (Dr. Marc Karam)		
Office Hours	MTW: 11:00 am – 12:00 pm (Dr. Mohammad Hossain) T-Th: 3:00 pm – 5:00 pm (Dr. Li Jiang)		
Textbook	<i>FE Review Manual</i> , 3rd Edition. Michael R. Lindberg, Professional Publications Inc., 2011, ISBN: 978-1-59126-333-3.		
Class Time	Wednesday 5:00PM – 7:00PM		
Class Room	LFH Engineering Auditorium-Room: 223		
Prerequisite	Junior Standing. Students should be in junior standing (completion of at least 60 credit hours) to be successful in this course. This will provide the background necessary for understanding the materials presented in this course.		

Grading Policy

Categorical Weights/Percentages: The final grade for the course will be based on class attendance, quizzes, midterm, and a comprehensive final exam. These are weighted as shown below:

	EE	AE/ME/CE
Attendance	20	40
Short Quizzes	25	15
Midterm Exam	25	15
Final Exam	30	30
Total	100	100

Letter Grades: The table below shows approximate overall percentage range of points corresponding to overall letter grades in the course.

90% and Above	80-89%	70-79%	60-69%	Below 60%
A	B	C	D	F

Class Attendance

- It is required that you arrive in the class timely, stay for the whole period and follow proper class room manner to get the full points for attendance and class performance. Eligibility to make up for missed quizzes, or tests, absence due to university business, illness, or any unavoidable emergency must be informed and documented to the instructor by email per guideline below:
 - Any time prior to absence
 - Within 48 hours after absence.
 - **On return from absence, you may request the instructor for make-up of missed assignments tests or quizzes. In any case, make-up must be completed within one week of return from absence. It is your responsibility to ensure that you make up all missed items within the one-week window. No make-up will be permitted after one-week of return from absence.**
- If you are late by more than 10 minutes in a class, you will be considered absent for that class.
- You are not allowed to leave the class until the class is over. If for any emergency you have to leave the classroom, do not stay outside for more than 5 minutes. Otherwise, you will be considered absent for that class.
- Attending the classes regularly, actively following the lectures/discussions and writing down the necessary lecture notes are also highly recommended for the success in the course.

Short Quizzes

- Expect short quizzes of typically **about 20 minutes duration after each class.**
- Question/questions in a particular quiz, given by an instructor, will be generally based on the materials covered by the same instructor.

Midterm Exam

- Midterm Exam will be based on all the topics covered until Midterm Exam.
- It will be held around the middle of the semester during a class period.

Final Exam

- Final Exam will be comprehensive and will be based on all the topics covered in the course throughout the whole semester.
- It will be held during the university defined final Exam time period for this course.

Other Policies

- **Solutions to Quizzes and Exams:** Solutions to the quizzes and exams will be discussed in class and/or with individual students.
- **Class Participation:** The students are highly encouraged to actively participate in the discussion of the relevant course materials in the class. Questions from students will always be welcomed and appreciated.
- **Classroom Attire:** The students are expected to attend classes in attire that meets the Dress Code Policy of Business Casual defined by College of Engineering, Architecture and Physical Sciences. Students who are not attired appropriately will be asked to leave class and may return with appropriate dress. Students may return with the tardy noted; however, students who do not return will receive an absence.
- **Eating/Drinking:** Eating, drinking and smoking of anything are not permitted in the classrooms at any time.
- **Use of Mobile/Cell Phone and Other Electronic Devices:** The use of mobile/cell phone in any form is not allowed in the class, which includes the prohibition of phone ringing, receiving/sending voice/text messages, receiving/sending regular phone calls, talking, using the phone as a calculator, and so on. Other electronic devices, such as iPods, MP3 players, headphones, etc. are also strongly prohibited in the class. However, you may keep and use a true calculator for the purpose of mathematical calculations required for quizzes/exams in the class.
- **Communication:** Your university email address (-----@tuskegee.edu) will be used to send messages (if any) and materials related to the course. University Blackboard will also be utilized to post materials and announcements related to the course.
- **Plagiarism:** Any sort of plagiarism and/or unfair means in the quizzes/exams will be severely punished.

- **Classroom manner:** While class participation is highly encouraged, you are not allowed to create any disturbance in the class in any form (e.g. creating unwanted noise, gossiping, talking with other fellow class mates, and so on).
- **Other:** The instructor has the right to establish the rules and regulations for the classroom for it to be a favorable place for teaching and learning. The classroom is the place for the beginning of professional training.
- All students should utilize Blackboard and set up profiles in Starfish within Blackboard.
- All students are required to utilize TU emails.

Course Objectives:

Review basic knowledge of Mathematics, Chemistry, Computer Science, Statics, Dynamics, Engineering Economics, Engineering Ethics, Fluid Mechanics, Material Sciences, Mechanics of Materials, and Thermodynamics for engineering applications.

Student Outcomes:

At the time of graduation, the students will have:

1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. an ability to communicate effectively with a range of audiences
4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to function effectively on a team whose members together provides leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Outcomes	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Objective 1: Review basic knowledge of Mathematics, Chemistry, Computer Science, Statics, Dynamics, Fluid Mechanics, Material Sciences, Mechanics of Materials, and Thermodynamics for engineering applications.	X						

Tentative Course Outline (*Subject to change*):

Class	Date	Topics/Activity	Instructor
1		Introduction	Hossain/Jiang
2		Introduction to Energy Systems	Li Jiang
3		Direct Current Electricity	Li Jiang
4		Direct Current Electricity/ Alternating Current Electricity	Li Jiang

5		Math 1: Analytic Geometry, Trigonometry, Algebra	M. Hossain
6		Math 2: Probability and Statistics, Calculus, Differential Equations and Transforms	M. Hossain
7	TBA	Mid-Term Exam	Hossain/Jiang
8		Alternating Current Electricity	Li Jiang
9		Statics	M. Hossain
10		Mechanics of Materials	M. Hossain
11		Electronics	Li Jiang
12		Computer Science	Li Jiang
13		Fluid Mechanics	M. Hossain
14		Thermodynamics	M. Hossain
15	TBA	Final Exam	Hossain/Jiang

References/Supporting Books

1. *FE Supplied Reference Handbook (NCEES Handbook)*, Latest Edition/Version.
A free copy of this reference/book can be downloaded from <http://www.ncees.org>
2. *Engineer-In-Training Reference Manual*, 8th Edition, Michael R. Lindberg, Professional Publications, Inc., 2006.
3. *Fundamentals of Engineering Review*, Merle C. Potter, Professional Publications, Inc., 2008.
4. *Fundamentals of Engineering Review*, 11th Edition, Edited by Merle C. Potter, Blue Moose Press, 2003.
5. *Schaum's Outline of College Physics*, 10th Edition, Frederick Bueche and Eugene Hecht, McGraw-Hill, 2005.
6. *Schaum's Outline of Basic Mathematics with Applications to Science and Technology*, 2nd Edition, Haym Kruglak, John Moore, and Ramon Mata-Toledo, McGraw-Hill, 2009.
7. *Schaum's Outline of Physics for Engineering and Science*, 2nd Edition, Michael Browne, McGraw-Hill, 2009.
8. *Schaum's Outline of Beginning Statistics*, 2nd Edition, Larry Stephens, McGraw-Hill, 2009.
9. *Schaum's Outlines of Beginning Chemistry*, 3rd Edition, David E. Goldberg, McGraw-Hill, 2004.
10. *Schaum's Outline of Basic Electricity*, 2nd Edition, Milton Gussow, McGraw-Hill, 2009.
11. *Schaum's Outline of Engineering Economics*, Jose Sepulveda, William Souder and Byron Gottfried, McGraw-Hill, 1984.
12. *Schaum's Outline Series Thermodynamics for Engineers*, 2nd Edition, Merle. C. Potter and Craig W. Somerton, McGraw-Hill, 2006.

Covid Policy-Spring 2024

"Excuses related to Covid infection as well as exposure have to be received from the Dean of Students office. Students should request the excuse for absence from the Dean of Students office as soon as they become aware of covid infection or exposure. Students may request a classes missed memo by completing this form (<https://forms.gle/4ozusHX2tTCUW4yK6>) and then contact the Office of the Dean of Students and Student Conduct (334) 727-8421, via e-mail THarper@Tuskegee.edu or by going into the office located in suite 203 Tompkins Hall."