

## **ENGR 3300 Course Syllabus**

### **Course Information**

<i>Course Number/Section</i>	ENGR 3300 - 002
<i>Course Title</i>	Advanced Engineering Mathematics
<i>Term</i>	Spring 2024
<i>Classroom</i>	FO 3.616
<i>Date &amp; Times</i>	Tu/Th: 4:00pm – 5:15pm

### **Professor Contact Information**

<i>Professor</i>	Jung Lee
<i>Office</i>	ECSN 3.510
<i>Email Address</i>	Jung.lee@utdallas.edu
<i>Office Hours</i>	Tu/Th 10:10-11:10am
<i>Other Information</i>	TA: Hao Xie Lab(TA): W 7:00-7:50@ECSW 3.250

---

### **COURSE PRE-REQUISITES, :**

Prerequisites: ([MATH 2415](#) or [MATH 2419](#) or equivalent) and [ENGR 2300](#).  
Prerequisite or Corequisite: [MATH 2420](#).

---

## **General Course Information**

### **Course Description**

**EE 3300 Advanced Engineering Mathematics (3 semester hours)**

Survey of advanced mathematics topics needed in the study of engineering. Topics include review of complex valued functions, scalar and vector fields, introduction to partial differential equations, and Fourier series. Examples are provided from electromagnetics, fluid mechanics, physics and geometry.

### **Student Learning Objectives/Outcomes**

1. Demonstrate the ability to solve advanced engineering problem formulated in physical space and time.
2. Demonstrate the ability to solve advanced engineering problems formulated in frequency space and the complex domain
3. Demonstrate the ability to formulate an engineering problem in terms of advanced engineering mathematics
4. Demonstrate the ability to use automatic computation to evaluate the solution to problems in advanced engineering mathematics.

### **Required Textbooks and Materials**

**Advanced Engineering Mathematics**, 10<sup>th</sup> Ed., Wiley, by Erwin Kreyszig  
ISBN 978-0-470-45836-5

**Class Work** will be posted in the eLearning. Students must have access to eLearning

## Topics:

1. Vector Analysis and Vector Calculus. (Ch. 9 & 10)
2. Fourier Analysis (Ch.11)
3. Partial Differential Equations (Ch.12)
4. Complex Numbers and Functions (Ch.13, 14, 15, & 16)

## Important Dates:

Last day to drop a course w/o "W" 1/31 (W)  
Last day to drop a course w "WP/WF" 4/3 (W)  
Last day of class: 5/3(F) **Reading Day (5/4 Sat)**  
Spring Break 3/11(Mon.) – 3/17(Sun.)  
**Optional Test III: 5/2 (Th)**

## Grading Policy

A: 90.00% or better    B: 80.00% or better    C: 70.00% or better  
≥ 90.00 %,                    ≥ 80.00 %,                    ≥ 70.00 %)

HW (20%) / Quiz (20%)/ Class Participation (10%)  
Test I (25%): Feb. 29(Th) @TI auditorium  
Test II (25%): Apr. 18(Th) @ TI auditorium  
Optional Test III: 5.2 (Th) @TI auditorium

## Course & Instructor Policies

- \* The dates for tests 1 & 2 can be changed at the discretion of the instructor.
- \* The final exam is comprehensive (1 hr. and 15 min.)

### HW: 20%

- \* HW will be assigned weekly. HW will be collected **Tuesday** at the beginning of the class period(8:30am). **Write on one-side of paper** only. Late HW- 33 % off per day. *After two days (Friday & After), HW will not be accepted.*

### QUIZ: 20%

- \* **Quiz will be given every Thursday (10 points each quiz)**
  - Quiz questions(s) will be given during class hour.
  - Missed quiz es cannot be made up
  - **Late Submission(Quiz)** is accepted with penalty (3 points off per 10 min.)
- \* The optional **Test III will replace the lowest exam grade. No Make-up exam/Quiz** will be given. The missed exam will be replaced by the Final exam.

*Late Submission (TEST I, II, and Test III)* will be accepted with penalty (10 % per 10 min.)

- \* Participation grade: Class and Lab attendance is mandatory for each class (Lab) absence, 2% (1%) will be deducted. 1 absence from class and 1 absence from lab are excused.
- \* If you miss **6 consecutive days** of the classes, you get automatic F.
- \* Any **extra points** (if any) will be added to HW score

## 1. HW #1. Student Survey ... 15 pts Due: Jan. 23, Tuesday

Type, print, and bring it to the class

You will be asked to write about you in the following questions as you complete your survey.

- Name, telephone (cell) number, e-mail address, where you can be reached.
- What is your major?
- Where are you from?
- What college mathematics classes have you taken, or are you taking it now? From where?  
(**Calculus II, III, DE**, from UTD, DCC, etc.) since DE is co-requisite, mention it as 'now' if you are taking it now. And where you are taking it.
- What is your current GPA?  
(eg., below 2.0, 2.0 – 2.5, 2.6 - 3.0, 3.0- 3.5, 3.5 - 4.0, or an exact GPA)
- What concerns, if any, you have about this course?
- What is your study plan for this course?
- How many credit hours (or classes) are you taking this semester?
  - If you work, where and how many hours per week? / If you don't work, mention it.
  - If you are on scholarship, what kind and how does it cover for your study?  
If you don't have any scholarship, mention it.
- What is your future plan?
- What else would you like me to know about you?

## Portfolio (Optional) ... 15 pts.

Due: Test III(Dec.2) or before.

Portfolio is a collection of a student's best work for the course.

- 1) **Redo** the **two tests** and **all Quizzes**
- 2) **Five solved problems** from each Chapter (1 problem from chapter 11)
- 3) **Commentary** from the student concerning what you have learned from this course; and
- 4) **Self evaluation**

**This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and UT Dallas Syllabus Policies and Procedures**

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.***

***The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.***