

# AME 526

## Introduction to Mathematical Methods in Engineering II Summer 2020 (May 20 – June 30) T, Th 9:00 am - 11:50 am

**Instructor:** Fokion N. Egofoopoulos, Professor AME Dept.  
Office: OHE 400B  
Tel: 740-0480  
E-mail: egolfopo@usc.edu  
Office Hours: Anytime by appointment

**Teaching Assistant:** Steven Luna  
E-mail: lunastev@usc.edu  
Office Hours: Anytime by appointment

**Recommended Text:** Peter V. O’Neil, “*Advanced Engineering Mathematics*”, 8<sup>th</sup> edition, Cengage Learning, May 2017, ISBN: 978-1-305-63515-9

### Lectures

5/21  
5/26-5/28  
6/2-6/4  
6/9-6/11  
6/16-6/18  
6/23-6/25

### TOPICS

Ordinary Differential Equations (Chapter 1)  
Ordinary Differential Equations, Laplace Transform (Chapters 1, 2)  
Laplace Transform, Series Solutions (Chapters 3, 4)  
Fourier Series, Fourier Integral and Transforms (Chapters 13, 14)  
Partial Differential Equations (Chapters 16, 17, 18)  
Partial Differential Equations, Separation of Variables,  
Similarity Solutions, Transform Methods (Chapter 16, 17, 18)

|                 |                      |                                  |     |
|-----------------|----------------------|----------------------------------|-----|
| <b>Grading:</b> | Homework Assignments |                                  | 30% |
|                 | Midterm Exam         | June 9 (T) (10:30 am - 11:50 am) | 30% |
|                 | Final Exam           | June 30 (T) (9:00 am - 11:00 am) | 40% |

### **Remarks:**

1. The students are required to attend lectures, which will be based on both the textbook and notes.
2. There will be four (4) homework assignments.