

ASE 380P ANALYTICAL METHODS I
EM386K MATHEMATICAL METHODS IN APPLIED MECHANIS I
APPLIED MATHEMATICS I
Fall 2020, # 13195/ # 13620/ # 13410 , MWF 1:00pm - 2:00pm

Text: M. D. Greenberg, *Foundations of Applied Mathematics*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey 1978.

<https://www.amazon.com/Foundations-Applied-Mathematics-Michael-Greenberg/dp/0486492796>

Week	Topic	Chapter
1	Elementary logic and set theory	
2	Functions and sequences, limits	1
3	Infinite series	2
4	Singular integrals	3
5	Vector spaces	17
6	Linear operators	18
7	Solvability of linear equations	19
8	Metric spaces, elementary topology	4
9	Fourier series	5
10	Fourier and Laplace transforms	6
11	Eigenvalue problems	20
12	Elementary ODE techniques	21
13	Systems of linear ODE's	22
14	Stability and the phase plane	23
15	Review	

IMPORTANT: The above tentative plan is subject to changes.

Homework: Group homework assignments will be assigned weekly or biweekly or triweekly depending on the class pace and the content. You have been assigned a group (of 3 students or more). Only (one) group homework submission (online through Canvas) is allowed for each homework assignment, and all the members of each group will get the same grade for each group homework. **Only online submission is allowed.** 20% of the grade is deducted for every late day (even one minute late). No excuse is accepted unless approved by Dr. Bui before the deadline. You are responsible for uploading/submitting the correct files. Excuses for submitting/uploading incorrect files are not accepted.

Exams: There will be tentatively three (open book) midterm exams. There is no final exam.

Grading: Is based upon the homeworks and exams

TA: Brad Marvin. Office hours: Thursday 11:30pm-12:30pm and Tuesday 2pm-3pm. **Zoom link:** See the Zoom tab on the class Canvas site.

Email: brad_marvin@utexas.edu

Instructor: Dr. Tan Bui, ASE 4.220, Office hours: MWF, 12:00-1:00pm tentatively. **Zoom link:** See the Zoom tab on the class Canvas site.

Email: tanbui@oden.utexas.edu