

Syllabus
MAE384 Advanced Mathematical Methods for Engineers - Spring 2018

Lecture: M/W 12:15-1:30 SCOB 152
Recitation: W 10:45-12:00 SCOB 201, 3:05-4:20 LL 109, 4:35-5:50 GWC 535

Instructor: Huei-Ping Huang, ERC 359, Email: hp.huang@asu.edu
Office Hours: Monday 3:00-5:00, Tuesday 4:00-5:00, or by appointment

Course website <http://www.public.asu.edu/~hhuang38/MAE384.html>

Textbook: Advanced Mathematical Methods for Engineers (multiple authors, custom-made for this course), Required

Course Outline

Part I Numerical Methods

- Overview
- Numerical solution of nonlinear equation
- Solution of system of linear equations
- Curve fitting and interpolation
- Numerical differentiation
- Numerical integration
- Numerical solution of ordinary differential equation - initial value problem
- Numerical solution of ordinary differential equation - boundary value problem

Part II Additional topics

- Fourier analysis
- Introduction to partial differential equation; Analytic and numerical solution

Grade: 50% Homework (6 assignments expected), 20% Midterm, 30% Final exam

A general guideline for the minimum requirement (expected course outcome) for a C grade can be found in the First Day Form which will be distributed separately.

Useful links

Please make sure that you are familiar with [ASU policies on academic integrity](#) and campus safety:

ASU policy on academic integrity: <https://provost.asu.edu/academicintegrity>

Campus safety and security: <https://provost.asu.edu/University-Safety-Security>

Grade and grading policies, contacts of SEMTE advising office:

Grade and grading policies: <https://students.asu.edu/grades>

SEMTE advising: <http://semte.engineering.asu.edu/advising/>