ChEn 2450: Numerical Methods Syllabus  
Summer Semester 2013

Class Meeting Times
• Tuesdays & Thursdays, WEB L126: 10:40am-12:00 pm
• Classes will be screencasted with links on the website
  • [http://www.che.utah.edu/~aabboud/2450/Screencasts.html](http://www.che.utah.edu/~aabboud/2450/Screencasts.html)
• Help Session in ICC: TBD
• Final Exam: Thursday August 1st, 3:00-5:00 pm WEB L126

Instructor
• Alex Abboud
  • awabboud.utah@gmail.com
• Office Location: INSCC 350-15
• Office Hours: I will not hold specific office hours. I have an open door policy, come by with questions if I am not busy, or schedule an appointment.

Teaching Assistant
• Ben Schroeder
  • benjamin.schroeder@utah.edu
• Office Location: INSCC 350-14

Course Website
• I will keep a website maintained where homework assignments and solutions will be posted, along with slides and screencasts of lecture, and any supplemental material.
• In addition to the website I will send some updates to the class through Email, check your university Email address often.
• Professor Sutherland has set up a great wiki site to help out students in this course
  • [http://www.che.utah.edu/~sutherland/wiki](http://www.che.utah.edu/~sutherland/wiki)

Prerequisites
• Algebra & Calculus
• Math 2250 - Ordinary Differential Equations & Linear Algebra
• This class will use MATLAB extensively. A recommended prerequisite is ChEn 1703, which gives an introduction to MATLAB.

Course Objectives & topics
• Solution of linear systems of equations
• Interpolation
• Regression
• Solution of nonlinear equations
• Numerical Differentiation
• Numerical Integration
• Solution of ordinary differential equations (ODEs)
• Solution of elliptic and parabolic partial differential equations (PDEs)

**Text Book**
• Highly recommended (but not required)
• Supplemental

**Grading Policy (tentative)**
• 30% Midterms (2 or 3)
• 50% Homework
• 20% Final
Grading is based on the standard scale, normalized to the highest grade
  • 93-100: A   90-93: A-
  • 87-90: B+   83-87: B   80-83: B-
  • 77-80: C+   73-77: C   70-73: C-
  • 67-70: D+   63-67: D   60-63: D-
  • below 60: F
• I reserve the right to change this if plans change.

**Homework**
• Homework needs to be submitted to the website by the beginning of the class, otherwise it will be considered late. I require the m-files you used along with a write-up that is preferably in pdf format. I feel the homework in this course is very useful to you as engineering students going forward with your careers. It is important to finish all of your assignments, so I will allow for late work up to 24 hours at a 50% penalty.
• All plots must have axises labeled.
• I will post solutions on the website 24 hours after the due date for the assignment.
• You are encouraged to work together and discuss problems, but each student must submit his/her own work. Copying others' work is plagiarism and will not be tolerated. Consequences of cheating and plagiarism include failure in this class and possible dismissal from the university.

**College Guidelines**
• Withdrawal, ADA policies, etc: [http://www.coe.utah.edu/SemesterGuidlines](http://www.coe.utah.edu/SemesterGuidlines)