
Lecture: MTWTh, 9:30–10:50 AM in HSS-1330

Recitation Sections/Computer Labs: MTWTh, 12:00–12:50 PM or 1:00–1:50 PM.
Sign up for recitation sections at the break in the middle of the lecture on August 2.

E-mail: ashenk@ucsd.edu (Be sure your active e-mail address is on Student Link.)

Web sites: http://www.math.ucsd.edu/~ashenk/ (The course)
http://www.math.ucsd.edu/~math20d/ (Department MatLab assignments)

Office hours: MTWTh 11:15 AM–12:00 PM and by appointment in APM 5816 (858-534-2654)

Teaching Assistants:
   Dan Robinson (drobinso@math.ucsd.edu), APM 5801
   Aaron Wong (awong@math.ucsd.edu), APM 2250

Texts (on reserve in the Geisel Library):
   Elementary Differential Equations, Seventh Edition by Boyce-Di Prima
   Calculus, Early Transcendentals, Vol. 2, Fourth or Fifth Edition by Stewart

Additional reference, on reserve: Calculus and Analytic Geometry by Al Shenk (Differential equations: Chapters 8 and 17; Infinite sequences and series: Chapter 9)

Graphing calculators: Scientific, nongraphing calculators and graphing calculators such as the Texas Instruments TI-83, TI-85, or TI-86 may be used on quizzes and exams, but calculators, such as the TI-89 and TI-92, which can perform symbolic algebra and calculus, may not be used.

Computer-lab assignments and group projects: Groups for working the computer-lab assignments and group projects should consist of three students, Groups will be set up during recitation/lab sections, August 2.

Computer Lab: The software MatLab will be used for computer-lab assignments and group projects. Instructions for using the computers will be given in PC and/or Macintosh labs at the recitation section times the first four Mondays. The assignments are at http://www.math.ucsd.edu/~math20d/ and the work is due August 25. (Skip Problems 3.3 through 3.8 and 5.1 on the departmental web-based assignment.)

Web tutorials: My web site has tutorials for problems on first-order differential equations and sequences and series. Select “Problem tutorials” in my home page and then “Chapter 10” or “Chapter 11.”

Quizzes (in recitation sections): August 5, August 19, August 31

Midterms (at 9:50 AM in the lectures): August 12 and August 26

Final exam: 8:00–11:00 AM on Saturday, September 3.

Students must work alone on quizzes, midterms, and the final and bring picture ID’s to the exams.

Grading: Homework: 5%; Quizzes: 10%; Group projects: 5%; Computer lab: 10% Midterm 1: 20%; Midterm 2: 20%; Final Exam: 30%.

   Homework, quizzes, projects, and exams grades will be curved. The final exam grade will replace any lower midterm exams with lower grade points.

   A student must pass the exams to pass the course and must earn a C on exams to earn a C in the course.

Web support: The course web page will contain the syllabus, homework assignments, group projects, and—as they occur—lecture note outlines and homework, quiz, and examination solutions.
Tentative schedule

Week 1


**M, 8/2, Recitation sections:** Meet in the computer lab. Formation of groups. Matlab introduction.

**T, 8/3, Lecture:** Separable first-order differential equations and applications.

**T, 8/3, Recitation sections:** Meet in the classrooms. Separable first-order differential equations and applications.

**W, 8/4, Lecture:** Linear first-order differential equations and applications.

**W, 8/4, Recitation sections:** Linear first-order differential equations and applications.

**Th, 8/5, Lecture:** More on first-order differential equations.

**Th, 8/5, Recitation sections:** Homework 1 is due. Quiz 1 on first-order differential equations.

Week 2

**M, 8/9, Lecture:** Homogeneous, second-order, linear differential equations.

**M, 8/9, Recitation sections:** Meet in the computer lab to work on Matlab.

**T, 8/10, Lecture:** Inhomogeneous second-order, linear differential equations.

**T, 8/10, Recitation sections:** Inhomogeneous second-order, linear differential equations.

**W, 8/11, Lecture:** Project 1 is due. More on second-order, linear differential equations.

**W, 8/11, Recitation sections:** Review.

**Th, 8/12, Lecture:** Homework 2 is due. Review and Exam 1 (First- and second-order differential equations).

**Th, 8/12, Recitation sections:** No meetings.

Week 3

**M, 8/16, Lecture:** Laplace transforms.

**M, 8/16, Recitation sections:** Meet in the computer lab to work on Matlab.

**T, 8/17, Lecture:** Laplace transforms, infinite sequences, and geometric series.

**T, 8/17, Recitation sections:** Project 2 is due. Infinite sequences and geometric series.

**W, 8/18, Lecture:** General infinite series. A test for divergence. Absolute convergence. The Integral Test.

**W, 8/18, Recitation sections:** General infinite series. A test for divergence. Absolute convergence. The Integral Test.

**Th, 8/19, Lecture:** The Comparison and the Limit-Comparison Tests.

**Th, 8/19, Recitation sections:** Homework 3 is due. Quiz 2 (Laplace transforms, infinite sequences, geometric series, the divergence test, absolute convergence, the Integral Test).
Week 4
M, 8/23, Recitation sections: Meet in the computer labs to work with MatLab.
T, 8/24, Lecture: Taylor polynomials and Taylor’s Theorem.
T, 8/24, Recitation sections: Taylor polynomials and Taylor’s Theorem.
W, 8/25, Lecture: The web-based computer assignment is due. Review.
W, 8/25, Recitation sections: Review.
Th, 8/26, Lecture: Homework 4 is due. Review and Exam 2 (Laplace transforms, infinite sequences, and infinite series)
Th, 8/26, Recitation sections: No meetings.

Week 5
M, 8/30, Power series.
M, 8/30, Recitation sections: Power series.
T, 8/31, Recitation sections: Power series. Quiz 3 (Taylor polynomials, Taylor’s Theorem, and power series).
Th, 9/2, Lecture: Review
Th, 9/2, Recitation sections: Homework 5 is due. Review.
Sa, 9/3, 8:00–11:00 AM Final exam