
Lectures: MTWTh 9:30–10:50 AM in CSB-002

Recitation sections: MW 8:00–8:50 AM. Students whose last names begin with A–L will meet in CSB-005. Those whose last names begin with M–Z will meet in APM B412. There will be no section meetings on June 29.

Web sites:
http://www.math.ucsd.edu/~ashenk/ (This course)
http://cam.ucsd.edu/~elunasin/math20b_s09/math_20bs09.html (A previous Math 20B course)

Instructor: Al Shenk (ashenk@ucsd.edu), APM 5816, (858) 534-2654
Office hours: MTWTh 11:15 AM–12:00 PM and by appointment

Teaching Assistants:
Patrick Driscoll (pdriscoll@math.ucsd.edu), APM 6315
Office hours: Tuesdays 12:00–1:00 PM, Wednesdays 2:00–3:00 PM, and by appointment
Katie Walsh (k3walsh@math.ucsd.edu), APM 6436
Office hours: Tuesdays and Thursdays 1:00–2:00 PM and by appointment

Texts: Calculus, Early Transcendentals by Rogawaski and a supplement on complex exponential functions (A link is on the course web page.)

Calculators: No calculators may be used on quizzes or exams.

Quizzes: 10:00–10:50 AM Monday, July 6, and Monday, July 20.
Midterms: 9:30–10:50 AM Wednesday, July 8, and Wednesday, July 22.
Final exam: 7:00 PM–10:50 PM Friday, July 31.

Grading: Homework: 5%; Quizzes: 10%; Midterm 1: 25%; Midterm 2: 25%; Final Exam: 35%.

Web support: The course web site will contain announcements, the syllabus, interactive examples, and—as they occur—lecture outlines and quiz and examination solutions.

Students must work alone and use no books, notes, or calculators on quizzes, midterm exams, and the final exam, and must bring picture ID’s to the exams.

Homework, quiz, and exam grades will be curved. The final exam grade will replace midterm exam scores 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.

Tentative schedule

Week 1
M, 6/29 Introduction to the class. Review of the definition of the integral, the Fundamental Theorem, integration formulas, and applications. Lecture notes: Sections 5.1–5.5.
T, 6/30 Review (continued) and integration by substitution. Lecture Notes: Sections 5.1–5.5 and 5.6.
W, 7/1 Further integration formulas, Areas and volumes. Lecture notes: Sections 5.7, 6.1, and 6.2.
Th, 7/2 More on volumes. Polar coordinates. Lecture notes: Section 6.3 and 11.3.
Week 2

M, 7/6  Area in polar coordinates. Lecture notes: Section 11.4. QUIZ 1 on Chapters 5 and 6. HOMEWORK 1 is due.

T, 7/7  Numerical integration and integration by parts. Lecture notes: Sections 7.1 and 7.2

W, 7/8  EXAM 1 on Chapters 5–6 and Sections 11.3–11.4.

Th, 7/9  Complex exponential functions (Math 2B Supplement, on line) and integration with trigonometric identities. Lecture notes: 2B Supplement and Section 7.3

Week 3

M, 7/13  The method of partial fractions and improper integrals. Lecture notes: Sections 7.6 and 7.7. HOMEWORK 2 is due.


W, 7/15  Convergence of infinite series with positive terms. Lecture notes: Section 10.3

Th, 7/16  Absolute and conditional convergence, alternating series, and the Ratio Test (no Root Test). Lecture notes: Sections 10.4 and 10.5

Week 4

M, 7/20  Taylor polynomials and power series. Lecture notes: Sections 8.4 and 10.6. QUIZ 2 on Chapter 7 and Sections 10.1–10.5. HOMEWORK 3 is due.

T, 7/21  Taylor series. Exponential growth and decay. Lecture notes: Sections 10.7 and 5.8.

W, 7/22  EXAM 2 on complex exponential functions, Chapter 7, Section 8.4, and Chapter 10.


Week 5

M, 7/27  More on separable differentials equations and numerical methods. Lecture notes: Sections 9.2 and 9.3

T, 7/28  Review

W, 7/29  Review. HOMEWORK 4 is due.

Th, 7/30  Review

F, 7/31  Final exam, 7:00–10:00 PM