

Math 132H - Honors Calculus II - Fall 2023

Tuesday and Thursday 1:00 – 2:15 PM in Eng. Lab 304

Professor: Eyal Markman

Office: LGRT 1223G

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Office hours: Tuesday 4:00-5:00pm, Thursday 3:00 PM-4:00 PM, and by appointment. (Please check the web page for any updates).

Course Web Page: <http://people.math.umass.edu/~markman/>

Teaching Assistant: Pranav Kalkunte

TA's e-mail: pkalkunte@umass.edu

TA's Office: LGRT 1423P.

TA's Office Hours: Monday, 1:15 to 2:15 pm, Wednesday 4:00 to 5:00 pm.

Text: *Calculus: Early Transcendentals*, 9th Edition, James Stewart. The online portion of your homework will be done through Enhanced WebAssign based on the textbook. A hard copy of the textbook is not required unless you'd like to. Enhanced WebAssign (Webassign access code + e-book) is required for this course. The e-book and WebAssign access code with instructions how to self-enroll in WebAssign will be emailed to each student.

Calculator: Each student is expected to have and use a graphics calculator.

Exam dates:

Exam 1: Wednesday, October 18, 7:00-9:00 PM

Exam 2: Wednesday, November 15, 7:00-9:00 PM

Final Exam: To be scheduled by the university. The last day of final exams is Friday, December 15.

Make-ups will not be given to accommodate travel plans.

Homework: Most of the homework will be online WebAssign homework. Additional homework problems will be assigned weekly and will be due in the TA discussion class each **Monday**, unless mentioned otherwise. The homework will be graded by a special grader (neither Eyal nor Pranav). Due to lack of funds, it will not be possible to grade all the homework problems assigned. A few of the homework problems will be corrected and graded every week. Nevertheless, for your own benefit, you will be asked to hand in *all* the homework problems assigned. Your grade on each homework assignment will be calculated as follows:

70% The grade on the corrected problems.

30% Credit for handing in *most* of the homework problems assigned. Partial credit will be given.

Late homework will **not** be accepted. Instead, one homework grade will be dropped from the final grade. It will be the lowest grade or an assignments which was not handed in.

Course Grade:

50% Exam1 and Exam2 (25% each).

25% Final Exam

25% Homework

Course Letter-grade Scale:

A	A-	B+	B	B-	C+	C	C-	D+	D	F
90	87	83	79	75	71	67	63	59	55	< 55

Accommodation Statement: The University of Massachusetts Amherst is committed to making reasonable, effective and appropriate accommodations to meet the needs of students with disabilities and help create a barrier-free campus. If you have a disability and require accommodations, please

register with Disability Services (161 Whitmore Administration building; phone 413-545-0892) to have an accommodation letter sent to your faculty. Information on services and materials for registering are also available on their website www.umass.edu/disability.

The University of Massachusetts Amherst is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify me within the first two weeks of the semester so that we may make appropriate arrangements.

Students who receive testing accommodations will take their semester exams on the same day as the scheduled exam starting at 5 pm, rather than 7 pm. The final exam will be taken through the Office of Disability Services. Students who receive testing accommodations will take the final exam with the Office of Disability Services. Please schedule to take your final exam with their office **three weeks before the final exam**.

Title IX Statement: In accordance with Title IX of the Education Amendments of 1972 that prohibits gender-based discrimination in educational settings that receive federal funds, the University of Massachusetts Amherst is committed to providing a safe learning environment for all students, free from all forms of discrimination, including sexual assault, sexual harassment, domestic violence, dating violence, stalking, and retaliation. This includes interactions in person or online through digital platforms and social media. Title IX also protects against discrimination on the basis of pregnancy, childbirth, false pregnancy, miscarriage, abortion, or related conditions, including recovery. There are resources here on campus to support you. A summary of the available Title IX resources (confidential and non-confidential) can be found at the following link: <https://www.umass.edu/titleix/resources>. You do not need to make a formal report to access them. If you need immediate support, you are not alone. Free and confidential support is available 24 hours a day / 7 days a week / 365 days a year at the SASA Hotline 413-545-0800.

Academic Honesty Statement: Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the University of Massachusetts Amherst. Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate department Head or Chair. Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent (http://www.umass.edu/dean_students/codeofconduct/acadhonesty).

Help Resources: The best way to get help is to attend your instructor's or TA's office hours. The Calculus Tutoring Center, located in LGRT 140, is a also resource for students taking Math 132. The Learning Resource Center (LRC) is the central academic support unit for The University of Massachusetts Amherst. The LRC has a variety of free academic support programs including one-on-one peer tutoring, study skills tutoring and Supplemental Instruction (SI) - group review sessions. The

LRC services are peer to peer, and their motto is “Students Helping Students Achieve Academic Success”. All LRC services are free for UMass Amherst undergraduates.

Math 132 Course Topics - Fall 2023

Chapter 5: - Integrals

- 5.2: The definite integral (familiarity from Math 131 - Calculus 1 is assumed, but a homework on WebAssign is assigned)
- 5.3: The Fundamental Theorem of Calculus
- 5.4: Indefinite integrals and the Net Change Theorem
- 5.5: The Substitution Rule

Chapter 6: - Applications of Integration

- 6.1: Area Between Curves
- 6.2: Volumes

Chapter 7: - Techniques of Integration

- 7.1: Integration by Parts
- 7.2: Trigonometric Integrals
- 7.3: Trigonometric Substitution
- 7.4: Integration of Rational Functions by Partial Fractions
- 7.5: Strategy for Integration (Review)
- 7.8: Improper Integrals

Chapter 11: - Infinite Sequences and Series

- 11.1: Sequences
- 11.2: Series
- 11.3: The Integral Test and Estimates of Sums
- 11.4: The Comparison Tests
- 11.5: Alternating Series and Absolute Convergence — *except* subsection Rearrangements
- 11.6: The Ratio and Root Tests
- 11.7: Strategy for Testing Series (Review)
- 11.8: Power Series
- 11.9: Representation of Functions as Power Series
- 11.10: Taylor and Maclaurin Series — *except* subsection Multiplication and Division of Power Series and Binomial Series Functions of Several Variables

Chapter 10: - Parametric Equations and Polar Coordinates

- 10.1: Curves Defined by Parametric Equations
- 10.2: Calculus with Parametric Curves — *only* subsections Tangents and Arc Length (*not* subsections Area and Surface Area)
- 10.3: Polar Coordinates
- 10.4: Calculus in Polar Coordinates