

# Math 21D: Vector Analysis

## Course Syllabus

UC Davis, Fall 2024

Instructor: Dan Romik

Document version: September 30, 2024. (Updated from 09/24/24 version with office hour information and a link to the Academic Assistance and Tutoring Centers web page.)

## 1 Contact information

| Name             | Role                | Email  |
|------------------|---------------------|--|
| Dan Romik        | instructor          | <a href="mailto:romik@math.ucdavis.edu">romik@math.ucdavis.edu</a> |
| Amir Nakhi       | section B01 TA      | <a href="mailto:anakhi@ucdavis.edu">anakhi@ucdavis.edu</a>         |
| Matthew Corbelli | section B02 TA      | <a href="mailto:mdcorbelli@ucdavis.edu">mdcorbelli@ucdavis.edu</a> |
| Zhenhan Zhao     | section B03, B05 TA | <a href="mailto:zhzhao@ucdavis.edu">zhzhao@ucdavis.edu</a>         |
| Bianca Teves     | section B04, B06 TA | <a href="mailto:bcteves@ucdavis.edu">bcteves@ucdavis.edu</a>       |

If you have a simple question, please contact your TA rather than the course instructor. This will result in the quickest response time.

## 2 Summary

- **Course lectures:** MWF 2:10-3:00, Giedt 1001
- **Course sections:** R 6:10-7, Kerr 293 (B01); R 5:10-6, Olson 217 (B02); R 4:10-5, Young 192 (B03); R 6:10-7, Young 192 (B04); R 5:10-6, Young 192 (B05); R 7:10-8, Giedt 1007 (B06)
- **Course instructor:** Dan Romik
- **Course TAs:** Amir Nakhi (B01); Matthew Corbelli (B02); Zhenhan Zhao (B03, B05); Bianca Teves (B04, B06).
- Office hours and tutoring resources:
  - **Instructor office hours:** Thu 1:10-2 in MSB<sup>1</sup> 2218
  - **TA office hours:**
    - \* Amir Nakhi: Thu 12-1:30 in Academic Surge 2142

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<sup>1</sup>MSB = Mathematical Sciences Building

- \* Matthew Corbelli: Fri 3-4 in MSB 3219
- \* Zhenhan Zhao: Thu 11-12 in MSB 3131
- \* Bianca Teves: Wed 4:15-6:15 in MSB 2202
- **Calculus Room.** MWF, 11AM–6PM, MSB 1118. See [this web page](#) for more info.
- **Academic Assistance and Tutoring Centers.** See [this web page](#) for more information.
- **Course assignments:** Weekly homework (30%), 2 midterm exams (40%), and a final exam (30%). See the grading policy in Section 6 below for exam dates and other important details.
- **Course prerequisites:** as described in the [Mathematics Department MAT21D syllabus](#)
- **Course topics:** as described in the [Mathematics Department MAT21D syllabus](#)

### 3 Course textbook

- Thomas' Calculus Early Transcendentals, 15th Edition, by Joel R. Hass, Christopher E. Heil, Maurice D. Weir, Przemyslaw Bogacki. Pearson, 2022. ISBN: 978-0137559893.

### 4 Homework

Homework will be assigned weekly on each Friday during weeks 1–10 of the quarter, and will be due the following Friday. Homework should be uploaded via Gradescope.

In calculating the homework component of your grade, the 3 lowest assignment grades (which includes any missed assignments) will be dropped.

**Late homework policy.** You may submit one homework assignment during the quarter late by up to 24 hours beyond the indicated submission deadline. Such a late submission will be graded without any penalty. For any additional late submissions that are late by up to 24 hours, the assignment will be graded but a 25% late submission grade penalty will be applied. **No homework submissions will be accepted more than 24 hours after the submission deadline.**

**Regrade requests.** Submit requests for regrading of homework or midterm questions via Gradescope. Regrade requests will not be considered if submitted more than 2 weeks after you get your graded assignment back, or after the last day of instruction of the quarter (December 6). Note that the option for regrading is there only to correct genuine grading mistakes. In case of a purely subjective disagreement over how many points should be deducted for a less-than-fully-correct solution, your grade will not be changed.

There will be no regrading for the final exam, but if you believe a clerical error occurred with the grading of your final or with the calculation of your final course grade, email the instructor.

## 5 Exams

There will be two midterm exams and a final exam. Midterm exams will be given at the regular lecture time and place on the day of the exam. The final exam will be given according to the campus [final exam schedule](#). The exam dates and times are:

- Midterm 1: Friday, October 18, 2024 at 2:10-3:00 PM, Giedt 1001
- Midterm 2: Friday, November 8, 2024 at 2:10-3:00 PM, Giedt 1001
- Final exam: Friday, December 13, 2024 at 3:30-5:30, Giedt 1001

## 6 Grading structure and policy

Your final grade will be determined based on the weighted average of your different grade components (homework, midterm 1, midterm 2, final exam) according to the weighting scheme:

|                                   |     |
|-----------------------------------|-----|
| Homework:                         | 30% |
| Higher of the two midterm grades: | 30% |
| Lower of the two midterm grades:  | 10% |
| Final exam:                       | 30% |

The numerical weighted average, represented on a scale of 0-100, will be translated into a final letter grade at the end of the quarter, according to the following table of grade cutoffs:\*

| A final numerical average of ... | ... will translate to a final letter grade of ... |
|----------------------------------|---|
| 90–100                           | A–, A or A+                                       |
| 80-89.999                        | B–, B or B+                                       |
| 65–79.999                        | C–, C or C+                                       |
| 0-64.999                         | F   |

\*A disclaimer: at my discretion, the actual grade cutoffs may end up being shifted from the ones described above, but only in the direction that results in final letter grades being even higher than the ones listed above. But this most probably won't happen, and you should not count on it happening.

**Example.** A student named Darya received the scores 55, 77, 100, 95, 0, 35, 80, 0, 60, 100 out of 100 on the homework assignments. She got the scores 91, 96 on the midterm exams, and a score of 79 on the final exam. (All scores are out of 100.)

Darya's final numerical score will be

$$0.3 \times \left( \frac{\overbrace{55 + 77 + 100 + 95 + 80 + 60 + 100}^{\text{homework}}}{7} \right) + \overbrace{0.3 \times 96 + 0.1 \times 91}^{\text{midterms}} + \overbrace{0.3 \times 79}^{\text{final}} = 85.9.$$

This puts Darya in the B–, B, B+ range of final letter grades.

**IMPORTANT NOTE: No make-up exams or assignments will be given for any reason.**

Please contact me as soon as possible if you missed an exam or assignment due to an excused medical absence or similar emergency, and I will determine (at my discretion) if an adjustment to the grading formula above is appropriate.

For other reasons for missed assignments or exams, please note that the grading policy already makes allowance for the possibility of missing the occasional assignment through the mechanism of dropping the 3 lowest assignment scores. For this reason, **no additional allowance or adjustments to the grading scheme will be made.**

## 7 Ethics policy

- You are expected to be aware of the [UC Davis Code of Academic Conduct](#) and comply with it. Any violation will be reported to the [Office of Student Support and Judicial Affairs](#).
- You are allowed to use any online resource and computer software, including AI chatbots such as ChatGPT, for assistance when solving homework assignments. However, your solution must be typed or handwritten by you and phrased in your own words. Also, be advised that AI chatbots are known to sometimes give incorrect answers, particularly to technical questions. Naturally, do not expect to get credit for an incorrect solution.

## 8 Students with disabilities

Any student with a documented disability (e.g., physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the [Student Disability Center](#) (SDC). Faculty are authorized to provide only the accommodations requested by the SDC. If you have any questions, please contact the SDC at 530-752-3184 or [sdc@ucdavis.edu](mailto:sdc@ucdavis.edu).

## 9 Frequently Asked Questions

- **Do you grade on a curve?**

Short answer: refer to Section 6 above.

Detailed answer: In my experience, students who ask this question do not always interpret what it means to “grade on a curve” in the same way as other students, or in the same way that I interpret

what it means. Therefore answering the question “yes” or “no” creates a risk of confusion and misunderstanding. Instead, I have described my grading methodology in detail in Section 6 above. Refer to this section, and contact me if you have additional questions.

- **Why does your table of letter grades not include D grades? Do you give out D's?**

I almost never give out D's (due to past bad experience with UC Davis policies that make this grade worse than useless for many students), and most likely will not assign any D grades in this course.