

CALCULUS III: Math 126 C and D - Spring 2021

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Office Hours: Wednesdays 2:30-3:30pm via link: washington.zoom.us/j/99394759500 also 20 minutes before and after live-streams via normal link (*i.e.* MWF 11:10-11:30, 1:20-1:40 via washington.zoom.us/j/94293770755).

Text: The only **required** material is a webassign access code which goes with the textbook, *Multivariable Calculus*, by James Stewart, 8th Edition. If you took Math 125 at UW and already purchased full access, then there is nothing new to purchase. If you are new to UW calculus, then you will need to purchase access. Single-term access is now available for \$40 through the UW bookstore. See my course website for links on the least expensive options.

Course Objectives: Math 126 covers a collection of somewhat diverse topics: vectors and vector functions, polar coordinates, calculus on vector functions, dot products and cross products, lines and planes, curvature, multi-variable functions, partial derivatives, optimization, tangent planes, double integrals, Taylor polynomials and Taylor series.

Grading:

The weight for each part of the course is given below. An example to show you how to compute your grade is also given.

example student percentages

Category	Weight	Your Percentages	Your Scores
Homework/Participation	15	95%	= 14.25
Quizzes	15	85%	= 12.75
Exam 1 (TUE, Apr 13)	14	75%	= 10.36
Exam 2 (TUE, Apr 27)	14	42%	= 5.88
Exam 3 (TUE, May 11)	14	84%	= 11.76
Exam 4 (TUE, May 25)	14	72%	= 10.08
Exam 5 (SAT, June 5)	14	93%	= 13.02
Total	100		= 78.10

This example student would get a 78.10 out of 100 for the course which is approximately a 2.5 on my estimated grade scale (see the course website). I expect the median to be around 3.0. A grade of 2.0 is needed to move on to other courses that require Math 126. **You need to get a course percentage above 70% to guarantee a grade above 2.0.** If you score below 50% in the course, then you will get a grade of 0.0.

Quiz Sections: You are expected to attend all quiz sections. Most quiz sections will involved working through “test preps” which are collections of old exam problems. You will attempt them on your own, then compare answers in breakout rooms, then discuss the solutions with your TA. These same test prep problems likely will appear on quizzes (and maybe exams), so there is a strong incentive to attend these sessions. This is also a great chance to get help from classmates which is an extremely valuable learning tool.

Participation:

You are expected to:

- Watch pre-recorded lectures and take notes in a “lecture” notebook like you would in a normal live class.
- Keep a “homework” notebook where you write your organized and presentable homework solutions.
- Visit the discussion boards regularly to ask questions, answer questions and see your classmates’ questions.

I will ask for ‘proof’ of this participation 5 times this quarter in Participation Assignments on Canvas (the day after each exam). In the Participation Assignments, you will upload a picture of one page of notes, one page of homework solutions and one screenshot of the discussion board. I will drop 1 of these (in case you forget). Participation is only 3% of your grade, but you should definitely do it. The real reason I am doing this is to give you 5 times this quarter where you can reflect on your participation, plus this gives me good information to review when you ask me about ways to do better in the course. For any student on the line between passing and not passing, this is something I look at, so use this to show me you deserve to pass.

Homework:

Homework assignments will be assigned and collected via Webassign. Please log into webassign this week and add yourself to the course roster via the link: <https://www.webassign.net/washington/login.html>

Homework will generally close at 11:00 pm on Tuesdays and Thursdays (see the course calendar for specific due dates). Make sure to log onto Webassign as soon as possible and attempt the first several homework problems to make sure you understand how everything works. Assignments are typically visible 7-10 days before they close. The due date is just the last time you can submit answers. A good student will start each assignment 4-6 days before it closes (after watching the corresponding video) and always, always complete the assignments 1-2 days before it closes. Never be working on the assignment on the last day, that is dangerous (what if your wifi goes out) and you'll be behind, so don't wait.

Quizzes:

We will have 5 quizzes. They will typically consist of 3-5 problems. Usually 1-2 of the problems will be directly from quiz section test preps and the other problems will be similar to lecture examples. Some numbers will be randomized in these quizzes (so everyone will have different final answers). These quizzes are open book and open resources. You can re-watch videos and double-triple check your answers. The quizzes should take less than 20 minutes, but you get 4 hours to complete them from the moment you start. **You only get one submission and there is NO partial credit for quizzes, so make sure to check your work before submitting!** I will drop your lowest quiz. Mostly this is another way for to check in on your participation, encourage watching the videos and give you a less time-constrained way to show what you know.

Exams:

The exams will be 55 minutes long and will be online and will be given at your usual quiz section time with the exception of Exam 5 which will be on Saturday, June 5th at 5:00-5:55pm. Exams will open 5 minutes before the start of your normal quiz section and close 5 minutes after your normal quiz section (you get 55 minutes from when you start within this time). The exams are designed to be completed in 30-40 minutes, you will have a space to type in your final answers, then you will also upload your work so we can access partial credit. You will have the option to log into Zoom with your TA during the exam in case you have questions (but this is not required). I have a low-exam adjustment policy where I replace the lowest exam by 75% of the average of the other exams in your final grade computation. So you can have one very "bad" exam and still pass the course. Basically if you average around 66% on your top four exams and do well on homework and participation, then you'll be able to get to that 70% course percentage needed to get a 2.0.

Calculators and notes:

A Ti-30x IIS Calculator (about \$15 at the bookstore) is the ONLY calculator that we allow on the exams! A single, **hand-written** 8.5 x 11 inch sheet of notes is allowed during exams. You may write on both sides.

Late Work and Make-Ups: In all circumstances, prompt and detailed communication is important.

- *For exams*, let me know at least one week in advance of a major well-documented situation and we will see if there is an option for you to take the exam in the same day. Otherwise, if you miss an exam due to **unavoidable, compelling, and well-documented** circumstances, your other exams will be weighted more heavily.
- *For quizzes and participation* assignments on Canvas, there is an automatic 50% penalty per day for each day you are late. So don't be late on those! Do also remember that I drop your lowest score for quizzes and participation so you also have that safety net.
- *For homework* in a typical quarter I do NOT give homework extensions for any reason whatsoever. In order to account for any small issues of you forgetting an assignment or incorrectly clicking on a multiple choice, at the end of the term I will round up by 3% on everyone's homework grade (but no one gets a homework grade above 100%). During the pandemic I have softened on the extension policy as follows: You are allowed to automatically request a 3-day extension for any homework assignment, this must be requested within three days of when the assignment closes and you will get a 30% penalty on any problem completed after the official closing time.

Respect Issues: As I tell my kids, treat others like you yourself would like to be treated. So please be polite and respectful when asking questions or sending emails. We should all be working together.

Class Philosophy: There are two vital rules for success in my classroom.

1. THE HOMEWORK IS THE KEY: Mathematics is truly learned when **YOU** completely solve a problem yourself AND understand the underlying concepts and tools so as to be able to apply them to related problems. The lecture, tutorial sessions, and office hours are valuable tools in guiding you towards learning and discovery, but ultimately the concepts and solutions must be absorbed, understood, and applied by you alone. Treat each problem as an exam question and ask yourself, “Can I answer this question without any help and do I understand the underlying principles that this problem conveys?” If your answer is no to either of these question (or if you hesitate at all), then you need more studying and practice.

2. ASK FOR HELP: Most students will hit a wall at some point during the course. Some can't handle the large workload, while others find difficulty with specific concepts in the course. When these times arrive remember to ask for help. Come to your T.A., come to me, ask your classmates for help, visit the math study center and/or visit the student counseling center. If you are still stumped send me an email. Please, please, please find help earlier rather than later. I think you will find that our discussion board is a life-saver, please us it!

Resources:

- For our Math 126 C and D Canvas Course page (all lecture videos, zoom links, quizzes, discussion boards, etc) go to: [Math 126 C and D Canvas Page](#).
- For my materials page which contains old exams, review sheets, and copies of handwritten lecture notes go to: [Dr. Loveless Materials Page](#). Specifically here is a direct link to the [Course Calendar](#) - I encourage you to print this out.
- For academic planning visit [UW Advising Office](#).
- For math academic planning visit [UW Advising Office](#).
- For Disability Resources for Students visit [UW DRS Office](#).
- For technology help, contact the [UW Student Tech Loan Program](#).
- For personal help, coping, and mental health visit [UW Counseling](#).