

Math 2163: Calculus III

Jeff Mermin's Section 61171

MWF 11:30-12:20, North Classroom Building 203

Instructor: Jeff Mermin
office: 414 MSCS
email: mermin@math.okstate.edu
Course web page: <https://math.okstate.edu/people/mermin/2163/>
Achieve: <https://achieve.macmillanlearning.com/courses/>

Office Hours My office hours will be announced around the beginning of the second week of classes. In the interim, I will hold office hours on Wednesday from 2:30 to 3:30, on Thursday from 11:30 to 12:30, and on Friday from 12:30 to 1:30.

If at any time you want to meet with me but can't make the scheduled office hours, please email me to make an appointment. (My schedule is crowded but flexible; if you suggest a couple of times I can usually manage to make one of them work.) Alternatively, I am available any time I'm in my office with the door open.

Subject matter This course deals with vector arithmetic and vector-valued functions, and extends calculus and analytic geometry to three-dimensional space.

Relationship to other courses Math 2144 and 2153 (Calculus I and II) are prerequisites for this course. This is the last course in the calculus sequence. Many advanced math classes are available after Math 2163.

Textbook *Calculus: Early Transcendentals* (Fourth edition) by Jon Rogawski.

Canvas I intend to use Canvas as little as possible. I have created reading assignments and Achieve assignments there in the hopes that these will appear on your calendars, but all updates and files will appear on the course web page (<https://math.okstate.edu/people/mermin/2163/>)

Grading Your course grade will be out of 1000 points, assigned as follows:

- 150 Achieve Homework
- 150 Classwork, quizzes, and major written assignments
- 150 Midterm, Friday, Sep. 22
- 150 Midterm, Friday, Nov. 3
- 150 Midterm, Friday, Dec. 1
- 250 Final, Monday, Dec. 11, 10:00 – 11:50 AM.

A total score of 900 will guarantee you an A, an 800 will guarantee a B, etc.

Reading Reading the material in the textbook prior to its appearance in class can help you tremendously. I will update the course web page every weekend with detailed descriptions of what I expect you to take from the text before each class meeting. Please take the reading assignments at least as seriously as the graded ones.

Quizzes 15-minute quizzes will be given most Fridays. They will be open-book and open-notes.

The point of the quizzes is less to assign a grade than for me to determine where the class stands as I prepare during the weekend. As such, they will frequently include questions on topics that were covered in that day's assigned reading, even if they have not yet been discussed during class meetings. Questions on topics that have been discussed in class will often be very challenging. Grades will be curved appropriately.

Sometimes, after a few minutes, I will allow you to work together on quizzes. When this happens, you may turn in jointly written solutions, in groups of arbitrary size.

I will drop your lowest quiz grade. If there are ten or more quizzes, I will count only your eight highest quiz grades. My intent is for quizzes to count for 100 points, but I reserve the right to change this to anything between 50 and 150 as circumstances warrant.

Achieve Homework You should self-enroll in Achieve; you will need the invitation link

<https://achieve.macmillanlearning.com/courses/o8awgj>

There will be homework due on Achieve almost every class day. Typically these assignments will be due roughly one class day after their material is introduced; however, you will find it much easier to succeed if you start them as early as possible.

Most problems will offer you unlimited attempts, with a small penalty for each incorrect answer.

Achieve grades are subject to a curve at the end of the year. Historically, it has been rare for this curve to affect any student's grade by more than ten points in either direction.

Classwork and Written Homework

Over the course of the year, there will be several written homework assignments. I expect to distribute these approximately a week before they're due; I encourage you to work together with your classmates and submit jointly written solutions in groups of up to five. The written homework is chosen not only to help you master the material, but also to help you practice communicating your understanding in a clear, logical way. Thus, your grades will be primarily determined by how easily the grader can follow your reasoning, rather than by the numerical correctness of your answers.

For some ideas about what I am looking for in written homework, see "Instructions for the grader" and "Guidelines for good mathematical writing" on the course web page.

My intent is for the written assignments to be worth 50 points, but I reserve the right to change this number to anything between 0 and 100, should it become necessary.

I prefer not to collect in-class work (other than the Friday quizzes). But I reserve the right to do so, should it become necessary. Any in-class assignment I collect will be worth no more than 10 points toward the final grade.

Late policy Because the course builds on itself, it is important that you not fall behind. Thus, late written homework will in general not be accepted. However, I will allow you ten "grace days" on written homework in case of illness or other circumstances. Achieve has a mechanism wherein you can turn work in after the due date, in exchange for a penalty. I encourage you to use this sparingly.

Collaboration Mathematics is a collaborative venture; you are encouraged to work together with friends and/or classmates on homework, including written homework. However, you must **write up your work yourself** and **acknowledge anyone who helped you**. For your own protection, you should insist that both you and your collaborators truly understand everything you claim. When you collaborate, please do so safely.

Illness policy If you cannot attend a regular class due to illness or another emergency, no documentation is necessary. If you aren't sure whether or not you're too ill to attend class, please see a doctor (and don't come to class).

If you cannot attend one of the exams due to illness or another emergency, you must provide documentation to arrange a make-up.

If you need to miss *many* classes, let me know as soon as possible, so that I may plan how to accommodate the situation. We will need to discuss the situation once you are healthy again; in the meantime, you should concentrate on getting better.

Calculators Calculators will be neither necessary nor allowed on exams. You are welcome to use calculators on any other work for the course, though I strongly recommend that you practice without them.

Where to go for help You have many resources for this course. I hope you will bring questions to me in office hours. Most students find it helpful to talk to classmates and work problems together.

Free Tutoring: The Mathematics Learning Success Center (MLSC) offers a free in-person drop-in tutoring, no appointments necessary. The MLSC is located on the 5th floor of Edmon Low Library. See their website

for more information: cas.okstate.edu/mlsc. The MLSC is a great place to meet with classmates to study. Our undergraduate tutors are trained to help you become an independent learner, so please bring your course materials and come ready to engage with the mathematics.

Academic integrity Don't cheat, or help other students cheat. Please read my "rules for written assignments" at

<https://math.okstate.edu/people/mermin/2163/airules.pdf>.

(This document is part of the course syllabus.)

In general, you should be familiar with the University's general policies on academic integrity. You can find additional resources on this subject at <https://academicaffairs.okstate.edu/academic-integrity/index.html>. To boil it down: don't cheat. Don't copy work from other students or allow other students to copy your work. Don't copy work that you find in online or printed sources and present it as your own. You are welcome to collaborate with other students when completing homework and studying for quizzes and exams. You are encouraged to seek help at the MLSC when you need it. You are also free to use online resources, such as YouTube videos, that offer additional explanations and examples related to something that you are trying to learn. However, it is a violation of academic integrity to submit work that you do not understand. If I have concerns about something that you have submitted then I may ask you to meet with me to explain your reasoning.

There are online sites that provide access to complete solutions to homework exercises and allow users to upload problems and request solutions to them. There are also AI tools such as ChatGPT, Bing AI, and Bard that may provide solutions to problems posed to them. It is a violation of academic integrity to use such sites or tools in any way in connection with this class. In particular, you may not upload problems to them nor copy solutions from them.

Before quizzes and exams, you must put all unauthorized materials and devices away in a backpack or place them on a table at the front of the room. Having any unauthorized materials or devices out during a quiz or exam is a violation of academic integrity, whether or not you make any attempt to use them.

Links and attachments The course syllabus consists of three documents; please read them all.

This course information sheet may be found at

<https://math.okstate.edu/people/mermin/2163/courseinfo.pdf>

The document on academic integrity is available at

<https://math.okstate.edu/people/mermin/2163/airules.pdf>

Finally, the OSU syllabus attachment is on the web at

<https://academicaffairs.okstate.edu/site-files/documents/fall-2023-syllabus-attachment-final-7-27-2023.pdf>

This has a lot of important information, including instructions about disability accommodations. Please contact me privately during the first week of the course if you need accommodations as the result of a disability.