

Math 2573

Honors Calculus III

Fall 2020

Instructor: Peter Webb
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Course Site: Canvas course page. Some information on <http://www.math.umn.edu/~webb>

Office Hours: 11:15-12:50 MWF or by appointment.

Text: Susan J. Colley, Vector Calculus (4th edition), Pearson.

Course Content

We will go through Colley's book. We start with basics of linear algebra and linear geometry: equations of lines and planes, matrices, angles and distances between linear objects. This is followed by the derivative when there are several variables, with applications like finding local maxima and minima of functions of several variables. We conclude with integrals of several variables over curves, surfaces and regions of 3-space, the interpretations of these and the theorems of Green, Gauss and Stokes.

Zoom class meetings

We will meet live on MWF at 10:10 and engage in various activities via Zoom. Get the Zoom information from the Canvas site. I prefer it if you join the Zoom meeting via something that authenticates you as being associated to the U of M, such as this Canvas site. You also meet with your TAs (Marshall, Jesse and Anh) on TuTh, and they have their own Canvas sites.

Generally your microphone should be muted to avoid extraneous sounds coming through, but you should have your video on to demonstrate active participation, with your first and last name visible. If anyone has issues complying with this, please discuss it with me outside class.

Asking questions: in principle you could ask a question in the chat, or 'raise your hand', but I recommend unmuting your mic to ask a question. With the first two possibilities I might not notice.

Recording: I think it could help to record classes and then post them on the Canvas site, but I realize this may be something some of you have problems with. If you have any issues with being recorded, please let me know. I realize that for some of you it may be a problem to meet live online, perhaps because of internet issues, in which case recordings will help. If this is your situation, please talk to me about it. Don't just stop attending class without discussing with me, because I will not take a good view unless you do.

Course Assessment

You will be assessed by:

Homework	10%
Quizzes	40%
Mid-term exams	30%
Final exam	20%

There will be three take-home mid-term exams, to be released on Thursday October 8, Thursday November 12 and Thursday December 10. The final exam is on Thursday December 17, and will be held synchronously at the official University scheduled time of 12:00-3:00. It is one of the common final exams. Exams will be open book, and you can use calculators. I do not want you to use sites that will do exam questions for you, and I do not want you to consult with other people. I want your exam submissions to be hand-written.

You will also have homework and quizzes organized by your TA in recitations, see below.

Homework and Quizzes

Homework will be due on Thursdays, starting Sept 17. I will assign a list of homework questions by either Monday or Wednesday the week before, giving 8 or 10 days before the homework is due. The list will consist of about 20 questions, and some of these (about a third of them) will be designated to be handed in, done by uploading them to Gradescope, see below. Your TA will grade these by completion: whether or not you did the question by a genuine attempt, not whether it was correct. There will be about 12 homework assignments.

There will also be a 15 minute quiz held synchronously in most of the Thursday recitation periods on the topics covered in the homework due that day. The quiz may be on any of the homework questions on the list, not just the ones to be handed in. The first quiz will be on Thursday September 17 and quizzes will continue each Thursday unless there is an exam, or unless it is Thanksgiving. There will be 9 quizzes, and the lowest score will be dropped.

Aside from all this, your TA will be in charge of dealing with the precise details of homework and quizzes and is ultimately responsible for this. Your TA determines his own policy for things like what happens if you don't upload homework or a quiz within the time specified, or what happens if you miss a quiz completely, bearing in mind that your lowest quiz score will be dropped.

The following may be helpful: [Gradescope Guide to Scanning and Submitting HW](#)

Failure to upload exams

You have to have a good reason not to upload an exam within the timeframe specified, and the instructor needs to know about it (that means Peter Webb, not your TA). I recognize there may be various reasons why something may go wrong. If you know in advance that you will have trouble doing an exam at the time specified, get permission for it in advance from Peter Webb, otherwise you will be awarded 0. If I excuse you from taking a midterm altogether, one possibility is that your course grade will be determined by giving extra weight to the final exam. I am reluctant to give make up exams, but will do so for reasons sanctioned by the university. This includes university sponsored activities and documented illness. Students missing the final exam will fail the course unless they have a very good reason, in which case see Incompletes below.

Attendance

You are expected to attend all lectures and recitations. I realize there may be people in exceptional situations where online attendance is not possible. If you are in such a situation talk to me (Peter Webb) about it. Attendance may be checked and included in the grade line. We can

see who is attending, and attendance will influence our view when we draw grade lines at the end of the semester.

Expectations of written work

In a number of cases in the homework problems and the questions in the exams you will not get full credit if you simply write down the correct answer. To get full credit you will need to write an explanation of how you got your answer. Where explanations need to be given, these should be written out in sentences i.e. with verbs, capital letters at the beginning, periods at the end, etc. and not in an abbreviated form.

You are encouraged to form study groups. However everything to be handed in must be written up in your own words. If two students hand in identical assignments, they will both receive no credit.

Prerequisites

Grade of at least C- in Math 1572H (or equivalent).

Computers and Calculators

You are not required to have a calculator, although there is a small possibility that some homework questions may ask for one. Exams and homework will be completely open book and you can use whatever whatever book or notes and computational device you want. In quizzes and exams, I do not want you to confer with anyone else, I do not want you to use sites that do questions for you, and I do not want you to consult resources such as Wolfram Alpha.

Incompletes

These will only be given in exceptional circumstances. A student must have satisfactorily completed all but a small portion of the work in the course, have a compelling reason for the incomplete, and must make prior arrangements with the **professor** for how the incomplete will be removed, well before the end of the quarter.

Academic Dishonesty

Academic dishonesty in any portion of the academic work for a course shall be grounds for awarding a grade of F or N for the entire course.

Date of this version of the schedule: 9/5/2020