Syllabus

Math 227 Spring '24

Text: **Calculus (Multivariable Calculus)**, **8th** edition by Stewart

Instructor: Jed Herman Office: SCI D 287 eherman@uwsp.edu

Office Hours: MWTh 3:00-3:50, Th 12:00 – 12:50
Office Hours will be available in person and can be made available via zoom on request

Class times & room: MWThF 1:00 – 1:50 pm in SCI A225

Mathematics-specific Learning Objectives

- Work effectively in different coordinate systems, particularly in three dimensions
- Apply known calculus techniques in a multivariate environment
- Present and communicate calculus ideas effectively to others
- Work in small groups to answer mathematical problems

Calculators

A graphing calculator will be required for this course. If you are going to purchase a calculator for this course, a good one might be one from the **TI-8x** series. All calculators are slightly different. Be sure that you have a manual (many manuals are available online).

The computer software *Mathematica* will be used extensively in this course, so you will occasionally need to go to the computer lab to do at portions of your assignments. The program is not very user-friendly, but it can do amazing things.

Grading

Grading will be based on an overall percentage score, using the following scale:

90%+ A- or better	80%-89.9% B-, B or B+
70%-79.9% C-, C or C+	60%-69.9% D-, D or D+
<60% F	

I reserve the right to adjust the final percentage +/- up to about 2%, based on my assessment of your effort and/or participation in the class and course in general.

To get your overall score, you will be graded on the following:

Participation/Daily (in class) Homework	1/7*
"Quizzes" (8, drop one)	1/7*
Class Presentations	1/7*
5 total exams (counting final)	5/7*
Total	100%

Note: you cannot simply add your points together for each activity – a homework point and an exam point, for example, are not worth the same part of your grade.

Grading (continued)

*Also note: there are 8 scores total, but only 7 count towards your grade. I will drop your lowest one. This means 1) you can bomb one test and still do fine in the class, or 2) if you are happy with your grade on the last day of class, you can skip the final (as a reward for consistently good work).

Canvas Grading:

Canvas provides a useful location to submit assignments and record grades. It even has an automatic feature to "total" the assignments stored on it, producing some sort of mis-shapen "Grade" which students sometimes think is related to their course grade. It is not. **DO NOT LOOK AT THE CANVAS COURSE TOTAL AND EXPECT IT TO REFLECT YOUR ACTUAL COURSE GRADE**. When we get towards the end of the semester I will add a few columns to the Canvas grades which show where you stand.

"Quizzes"

There are 8 Quizzes in this course. The word quiz is in quotes because these are *really* homework assignments. You will know ahead of time what problems will be on the quiz – they are on the homework sheet handout. Quizzes are open notes, so if you do the quiz problems ahead of time you will have an easy time with the quizzes. Or you can challenge yourself to solving problems in a timed setting.

Quizzes are taken on Canvas and will open on Fridays (or possibly a day or so earlier). They are timed – you will have 30 minutes to finish them. The actual problems on *your* quiz will be randomized – so you don't know which problems from the set will appear – but expect about three problems for most quizzes. Type your answer first, followed by work – you don't need to write EVERY step, but you need some work for almost all problems – some intermediate steps or some sentences or whatever. If you find it hard to use the math options in Canvas, use shorthand like x^2 or sqrt(x) or whatever.

You can work with others *preparing* for the quiz, but once you take it, do your own work. Getting help during the quizzes or helping someone else during their quiz is an academic violation and can have consequences. If you are unsure of these instructions, ask your instructor!

Daily Homework

There will be one (or two) homework problems to do before class almost every class day. These are prep questions, exercises chosen to prepare you for the day's material. You can compare your work with your classmates – and classmates *can help* you – but you must turn in your own written solutions to the problems. **Turn these in on Canvas before class** – scan or take pictures of your work and upload it to the appropriate place. Don't ignore these assignments – they are a significant part of your grade!

Class Participation

Your instructor believes in *active learning* – students learn more from *doing* than from *watching*. To that end, most days will have class work – typically a group worksheet or class discussions on the topics of the day. You are expected to be in class and participate in the day's activities. *This is part of your grade!*

If you are in class and trying, you will get credit for that day's worksheet. If you have to miss class, you will need to submit the worksheet on Canvas (see Daily Homework for more on how to submit assignments on Canvas). If you came to class and worked on the worksheet you *may* submit it on Canvas, but it's not necessary.

These worksheets are always graded on effort rather than accuracy. Learning is messy, and being occasionally wrong on a worksheet is very normal. Being wrong all the time is less desirable, but mistakes on your worksheet won't hurt your grade.

Presentations

Another *active* way to learn is to *present solutions* to problems. You will be expected to do this a few times during the semester. The list of problems is on the homework handout.

You are expected to present from several different. Specifically: you must present at least **FOUR TIMES** in the semester. These presentations can come from the material for the first exam (Chapters 12/13, marked A on schedule), second exam (Chapter 14, marked B), third exam (Chapter 15, marked C), or the fourth exam (Chapter 16, marked D). YOUR PRESENTATIONS MUST COME FROM AT LEAST THREE DIFFERENT EXAMS.

You may do extra presentations; if you do so, the best will be scored normally and the rest will give a little extra credit.

There is a fifth time period for presentations: the last week of classes. You are allowed to present one additional time during this period (maybe two times, depending on demand – but don't count on it!). These can come from any exam period and count accordingly.

These rules may seem confusing, so here's a summary:

- 4+ presentations
- At least one from three different exam periods (A, B, C, D)
- (*) presentations can be from any exam period and count towards that period; you may present once during this week (maybe twice).
- extras beyond 4 presentations: your best presentations will be scored; others will offer a little extra credit

- YOU MAY PRESENT WITH A PARTNER IF YOU WISH

Presentations (continued)

You will need to reserve your problem and day on Canvas – be sure to check whether someone else has taken your problem! Except in very rare cases, duplication of a previously presented problem is not allowed.

Presentations can be a little nerve-wracking, so it is acceptable to present with someone else. Both of you need to contribute to the presentation, and both of you will get the same grade for that presentation.

Exams

There will be five exams and a cumulative final. The exams are scheduled for the following days: February 16, March 13, April 12, and May 3; the final is on Wednesday, May 15 **at 2:15 pm to 4:15 pm**. Note that the actual dates of in class exams may vary slightly.

Extra Credit

There will be a Canvas discussion board topic listed for weekly homework/quiz preparation. If you post a question or an answer to a question on this board, you will receive extra credit (max +1 point per week can be earned). Your SUBJECT LINE should include the problem number, and your MESSAGE should include a restatement (full or partial) of the problem. This way, other students will be able to read and learn from the postings. *To be eligible for the extra credit, your posting must have content – a posting such as "I agree" or "That doesn't seem right" does not earn any extra credit on homework.*

Discussion Boards

There will be three kinds of discussion boards set up for this course on Canvas:

1) Boards for reserving presentation problems and presentation days. *Remember to check that nobody else already reserved/did the problem!* (If you are presenting with someone else, make sure to note that in your post)

2) Boards for homework problems are optional and can earn you extra credit. See section on Extra Credit (above)

Make sure to post the problem number and state or summarize the problem statement when you post a question!

3) General discussion boards are optional and offer no grade benefit. They are set up to allow you to ask your professor questions, or to offer a place for discussions not about the material (e.g., organizing study sessions, complaints about the book, etc.)

All boards will be monitored after the fact. That is, you will post directly to the board, and I will monitor periodically throughout the week. Certain standards apply to postings:

- Postings are never anonymous
- Postings must not contain inappropriate (foul, rude, hostile) language

Violation of these rules may constitute academic misconduct (see below).

Attendance:

You are expected to regularly attend class. When circumstances arise to prevent you from coming to class, you should let your instructor know (email is best, but in an emergency you can contact the Dean of Students office, 715-346-2611).

Note: missing an exam or scheduled presentation day will only be allowed in exceptional circumstances and will require ACCEPTABLE DOCUMENTATION as to the reason for the absence.

Academic Misconduct Policy

I expect you to complete the coursework for this course. Failure to complete an assignment will result in zero points awarded for that assignment. Late assignments may lose points, at the discretion of the instructor. Also see the following link: http://www.uwsp.edu/admin/stuaffairs/rights/rightsChap14.pdf

Student Rights and Responsibilities

All students are expected to know the UWSP student responsibilities found on the Dean of Students webpage. Information on Academic Concerns is available at https://www.uwsp.edu/dos/Pages/stu-academic.aspx. Information on Conduct Concerns and on Personal Concerns are also available on the Dean of Students site.

Inclusivity and Accommodations

It is my intent that all students from diverse backgrounds and perspectives be served by this course, that students' learning needs be addressed both in and out of class, and that the diversity brought by everyone in this class be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of diversity. I encourage you to make suggestions to this end. Please let me know ways to improve the effectiveness of the course for you personally, or for other students or student groups.

If you have experienced a bias incident (an act of conduct, speech, or expression to which a bias motive is evident as a contributing factor regardless of whether the act is criminal) at UWSP, you have the right to report it using this link. You may also contact the Dean of Students office directly at dos@uwsp.edu.

UWSP is committed to providing reasonable and appropriate **accommodations** to students with disabilities and temporary impairments. If you have a disability or acquire an impairment or injury during the semester and you need assistance, please contact the * Disability Resource Center as soon as possible, in room 108 of the Collins Classroom Center (CCC), at 715-346-3365, or at DATC@uwsp.edu. You may also want to visit their website, Disability Resource Center (DRC) - University of Wisconsin-Stevens Point (uwsp.edu).