

**Math 2300 08, Multivariable Calculus, Fall 2023**  
**TR 9:30–10:45, SC1307**

## Syllabus

**Instructor: Shih-Kai Chiu**

**Office:** Stevenson Center SC1428

**E-mail:** shih-kai.chiu@vanderbilt.edu

**Office Hours:** TR 11am–11:30am and 2pm–3pm or by appointment

**Textbook:** James Stewart, Calculus, 9th edition

### 1. Goals

Multivariable calculus is a fundamental course with applications in Physics, Engineering, Computer Science as well as pure and applied Mathematics. The main topics of this course are: vectors and the geometry of a three dimensional space, vector functions, partial derivatives, multiple integrals and vector calculus. We will cover most of the material from Chapters 12–16. A (tentative) week by week list of the sections covered can be found at the end of the syllabus.

### 2. Credit

Math 2300 is a 3 credit course. Total credit for this course and MATH 2310 or 2501 will not exceed 4 credit hours; total credit for this course and MATH 2500 will not exceed 5 credit hours. Credit hours reduced from second course taken (or from test or transfer credit) as appropriate.

### 3. Pre- or co-requisite

Math 1301 or Math 2200.

### 4. Textbook

James Stewart, Calculus, 9th edition

### 5. Webpage

The course website is accessible through Vanderbilt’s course management system, Brightspace. Access Brightspace at <http://brightspace.vanderbilt.edu>. Here you can find: the syllabus, homework assignments, announcements, links to Zoom meetings for office hours and exams, and record of your grades.

### 6. Attendance and Participation Policy

1. **Attendance** is very important for this class, as it will help you better understand the concepts covered in lectures, and is expected for each class meeting,. If you miss a class, you are responsible for any assignments/announcements made/material covered, as stated in the College of Arts & Science policy on “Class Attendance” in the Undergraduate Catalog. I strongly encourage you to actively participate by asking questions and getting involved in class discussions, as this will help you with the learning curve. I am expecting you to read in advance the materials to be covered in the class. This will make the lecture interactive and will allow me to focus more on problem solving and discussing the topics that you found more challenging.

2. **Reading the textbook is essential for the understanding of the material!**

For a good understanding of the material and a better preparation for the exams, it is expected spending **at least nine hours weekly** for reading the textbook and doing the assigned homework.

## 7. Office Hours

Everybody is strongly encouraged to attend scheduled office hours or to make special appointments if difficulties arise. Do not wait until it's too late! Small deficiencies at the beginning tend rapidly to grow to big ones. I will be happy to provide individual edification during the office hours. The regular office hours will be held in my office, in person, TR 11am-11:30am or 2pm-3pm, no appointment needed. You can also schedule a meeting outside the regular times, either in person, or on Zoom. You can also schedule a meeting outside the regular times, either in person (observing social distancing), or on Zoom. These meetings should be arranged at least 24 hours in advance.

## 8. Homework

**You can not take breaks during a math course! Everything is related!**

1. A list of homework problems, for the section discussed that day, will be posted on Brightspace after each lecture.
2. You should submit the homework using the Gradescope tool on Brightspace (see the instructions posted on Brightspace) as a of **single** pdf file. Be careful at **the format and the size** of the file, and make sure you complete the outline of the submitted file.
3. The homework should be submitted weekly, by **11:59pm on Fridays**. No late homework will be accepted after that.
4. You should start solving and writing the problems the same day. This will ensure a better understanding of the following lecture.
5. You are encouraged to work together with your classmates on the homework assignments. However, you must write up the solutions in your own words. Copying answers from other students or another source (plagiarism), or allowing your answers to be copied will be considered a violation of the Honor Code.
6. For each homework, an arbitrary selection of five problems will be graded. Each homework will be out of 10 points. The grades will be recorded on Brightspace. No homework grade will be dropped.
7. Write your solutions in a clean, concise manner. Make sure the arguments are sound, without any holes in reasoning.
8. If you have questions regarding the homework assignments, you can address them during the office hours, or during the lectures.

## 9. Exams

- **Midterms:** There will be two in class midterms during the semester:

Midterm 1    **Thursday, October 5**  
Midterm 2    **Thursday, November 9**

1. The midterms will be administered in class.
2. **The exam dates and times are not flexible and there will be no make-up exams.**
3. Absences from exams due to illness or personal crisis must be adequately documented.
4. If a student misses a midterm exam due to a documented situation, the student will be allowed to take a make-up exam within the next two weeks following the missed midterm.

- **Final Exam:    Wednesday, December 13, 9:00am**

1. The final exam is comprehensive.
2. There will be NO ALTERNATIVE EXAM for the final examination.
3. It is your responsibility to arrange your schedule to be able to take the exams at the scheduled times. If a student misses the final exam, the student will receive an “Incomplete” and take the final exam at the beginning of the following semester.
4. No notes, books, electronics, calculators, etc. are allowed for the exams.

- **Review sessions:** Review Sessions will be given before each test, upon request. A Review Session for the Final Exam will be scheduled later this semester.

## 10. Grading questions

Questions concerning the grading of a homework assignment should be addressed immediately by contacting the instructor.

## 11. Grades

The maximum total score for this class is 500 points. It will be obtained from the following grades:

Test 1	100
Test 2	100
Final	150
Homework	150
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TOTAL	500

No scores will be dropped. The grades for the course will be assigned in terms of the total grade as follows:

A's	90% - 100%	C's	70% - 79%	F	< 59%
B's	80% - 89%	D's	60% - 69%		

## 12. Important Dates

First day of classes	Wednesday, August 23
Fall 2023 open enrollment period ends	Monday, September 5
<b>Midterm 1</b>	Thursday, October 5
Mid-semester deficiency reports due	Wednesday, October 11
Fall Break (classes do not meet):	October 19 through 22
Last day to withdraw from a course (with a grade of W)	Friday, October 27
<b>Midterm 2</b>	Thursday, November 9
Dead week begins	Friday, December 1
Last day of classes	Thursday, December 7
<b>Final Exam</b>	Wednesday, December 13, 9am

## 13. Feedback

Please do not hesitate to provide me with feedback on any other aspect of the course.

## 14. Complaint Procedure

If you have any problems with the course, please come and talk to the instructor. Most issues can be resolved with a straightforward discussion. Any complaint that cannot be resolved directly should be referred to Henry Chan, Director of Undergraduate Studies, SC1332.

## 15. Academic Integrity

All work submitted for credit must be the student's own and is subject to the provisions of the Vanderbilt Honor Code. Details can be found at the Honor Council website.

## 16. Accommodation Procedure

If you believe you may require special accommodations for a condition that may impact your work in this course, please contact the Equal Opportunity, Affirmative Action, and Disability Services Department located in Suite 108 of Baker Building, (615) 322-4705. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

## 17. Enrollment Policy

The last day for students to add a math course or to make other changes in YES is Tuesday, August 30th. Between August 31st and September 6th, any adjustments in level or in grading status must be completed using the Change of Course Request Form. If only the "DROP" section of the form is filled out, the instructor may "sign" the form. If a student wishes to make any change that involves filling in the "ADD" section of the form (whether or not it also involves filling in the "DROP" section), then the student must contact the DUS (Henry Chan). Per Math Department policy, the only change to a math course that will be approved is a change to the level of the course (e.g. switching from Math 1301 to Math 1300 or vice versa).

## 28. Syllabus Policy

This syllabus is intended as a guide for students throughout the semester and will be followed as closely as possible. However, the instructor reserves the right to modify the course as the need arises.

## Math 2300 08 – Fall 2023

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### Tentative Daily Schedule:

Week 1	Aug 24	Sec 12.1
Week 2	Aug 29	Sec 12.2, 12.3
	Aug 31	Sec 12.4, 12.5
Week 3	Sep 5	Sec 12.5, 12.6
	Sep 7	Sec 12.6, 13.1
Week 4	Sep 12	Sec 13.2, 13.3
	Sep 14	Sec 13.3, 13.4
Week 5	Sep 19	Sec 14.1, 14.2
	Sep 21	Sec 14.2, 14.3
Week 6	Sep 26	Sec 14.3, 14.4
	Sep 28	Sec 14.5, 14.6
Week 7	Oct 3	Sec 14.6, 14.7; <b>Review Session</b>
	Oct 5	<b>Midterm 1</b>
Week 8	Oct 10	Sec 14.7, 14.8
	Oct 12	Sec 15.1, 15.2
Week 9	Oct 17	Sec 15.2, 15.3
	Oct 19	<b>No class, Fall Break</b>
Week 10	Oct 24	Sec 15.3, 15.5
	Oct 26	Sec 15.6, 15.7
Week 11	Oct 31	Sec 15.7, 15.8
	Nov 2	Sec 16.1, 16.2
Week 12	Nov 7	Sec 16.2, 16.3; <b>Review Session</b>
	Nov 9	<b>Midterm 2</b>
Week 13	Nov 14	Sec 16.3, 16.4
	Nov 16	Sec 16.4, 16.5
Week 14	Nov 21	<b>Thanksgiving Break</b>
	Nov 23	<b>Thanksgiving Break</b>
Week 15	Nov 28	Sec 16.6, 16.7
	Nov 30	Sec 16.7, 16.9
Week 16	Dec 5	Sec 16.9, 16.8
	Dec 7	<b>Review Session</b>
<b>FINAL EXAM</b>	<b>Dec 13</b>	<b>Room SC1307, 9:00am</b>