

## Syllabus for Mathematics 2443-002 - Calculus IV - Fall 2000

Please read this syllabus carefully. You will be responsible for all the information given here, and for any modifications to it that may be announced in class.

**Text:** The textbook for this course is *Calculus*, (3<sup>rd</sup> edition), by James Stewart.

**Instructor:** Darryl McCullough, Professor of Mathematics

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*Office hours:* Mon, Wed 10:30-11:15, 2:30-3:15, and by appointment.

**Class Participation:** Seat assignments are distributed on the first day of classes, and should be used for all lectures and tests. If you are unable to see or hear properly or are otherwise dissatisfied with your seat assignment, please consult me about a reassignment.

You are expected to attend all lectures, and are responsible for all information given out during them. As explained under “Grading System” later in this syllabus, excessive absences will result in points lost from your class participation grade, while superior attendance will add a few extra points to your total.

This course requires your full effort, so it is expected that you will give your complete attention to the instructor for the full class period. Activities such as eating, sleeping, reading the newspaper, listening to headsets, conversing with other students, and so on do not constitute class participation. Students engaging in such behavior during the lecture may be counted as absent.

**Homework:** *It is absolutely essential to work a large number of problems on a regular basis.* Problem assignments for each topic of the course are given on the class schedule. You will maintain a notebook of solved problems with the following properties:

1. Use standard sized blank, ruled, or graph paper, secured in a loose leaf notebook so that you can insert new pages and replace old pages with corrected ones. I suggest that you put only a few problems on each page.
2. Each problem should be clearly and uniquely identified in the format c.s #n, where “c” is the chapter, “s” is the section, and “n” is the problem number. For example, problem 13 in section 9.4 should be labeled as 9.4 #13. The problems should be *in the order* in which they appear in the book.
3. The problem itself should be written out, in abbreviated form if appropriate, followed by your solution. Your homework solutions need not be polished masterpieces of mathematical exposition, but should be legible, and the solutions

*should clearly indicate the steps used to arrive at the solution.* If you can write a clear explanation of what you are doing, you will understand it. If you understand it, you will retain it.

The homework notebooks will be collected on September 15, October 16, and November 20. They will be cursorily examined, with a few problems checked, and this will constitute 15% of your grade.

Homework is collected and examined solely as a learning device to help you master the ideas and techniques of calculus. As a university level student, it is essential for you to allocate your time so as to learn the most with the least effort. For example, crossing out something you want to remove is much faster than erasing, even though the result might not look as pleasing to the eye. It is not important to work every single problem; in fact, it is better to work extra problems for the topics that give you difficulty and fewer for those that come more easily to you. Of course, at a minimum, you will need to work several problems of each different type to ensure that you do not omit any ideas or techniques.

You may consult with other students about the homework problems, indeed I encourage you to do so. However, you should write up the solutions in your own words. It is a complete waste of time to just copy from a solutions manual or from someone else's work. If you decide to turn in work that is not your own, I cannot stop you, but you will not learn the material adequately and you will pay a heavy price on the exams which constitute 75% of your course grade.

Answers to the odd-numbered problems appear at the end of the textbook. For help, you should come to my office hours, or make an appointment with me to come at another time. Email is the best way to contact me.

**Testing:** *The exams will test understanding of some of the theoretical ideas and additional techniques presented in the lectures. These are part of the course and should be learned along with the basic problem-solving techniques used in the homework problems.* Examinations will be given during the regular lecture hour on the following dates, covering the listed sections.

Exam 1	Wednesday, September 20	Sections 12.1-12.8
Exam 2	Monday, October 23	Sections 13.1-13.9
Exam 3	Friday, December 1	Sections 14.1-14.7

Do not arrange travel plans that prevent you from taking any of the exams at the scheduled time. Check the grading of your exams carefully when they are returned; all grading errors should be brought to my attention as soon as possible.

The final examination will be held in the usual lecture room on Friday, December 15, 1:30–3:30 p. m. University regulations require that you take it at that time. Do not arrange travel plans that prevent you from attending the final examination. It will

cover all sections listed in the class schedule, with additional weighting to sections 14.8 and 14.9, since these sections will not be covered on the three in-class examinations.

All tests must be taken at the scheduled times, except in extraordinary circumstances. If you cannot take a test at the scheduled time, you should contact me *in advance of the test time*.

**Grading system:** There will be 300 points possible as follows:

Points:	Percent:	
30	10	Class participation
45	15	Homework
50	16.67	Exam 1
50	16.67	Exam 2
50	16.67	Exam 3
75	25	Final exam
300	100	Total possible

The class participation grade will be determined as follows. If you have 4 absences or less, you will receive the full 30 points of class participation credit, plus three bonus points for each class fewer than 4 missed (thus you can earn up to 12 bonus points for superior class participation). The 5<sup>th</sup> through 10<sup>th</sup> absences will each subtract 5 points from the 30 points of class participation grade.

Course grades will be determined according to the following scale:

Total points:	Percent:	Grade:
262.5–300.0	87.50–100.00	A
232.5–262.0	77.50– 87.34	B
202.5–232.0	67.50– 77.34	C
165.0–202.0	55.00– 67.34	D
0.0–164.5	0.00– 54.84	F

Grades are calculated by computer but errors in recording or entering scores can occur. Please keep your tests and homework so that you can verify the posted totals at the end of the semester, if you think that an error may have occurred.

**Withdrawal Policy:** Until September 1, there is no record of a grade for dropped courses. From September 5 through October 27, you may withdraw and receive a “W” grade, *no matter what scores you have so far achieved*. After October 27, University regulations specify that you may withdraw only in “very unusual circumstances,” and only with the permission of the Dean. *Avoidance of a low grade is not sufficient reason to obtain permission to withdraw after October 27.*

**Grade of Incomplete:** The grade of “I” is a special-purpose grade given when a specific task needs to be completed to finish the coursework. This is typically a term

paper or other special assignment, so rarely makes sense in a mathematics course. An “I” cannot be given to avoid receiving a low grade.

**Calculators:** This is a course of mathematical concepts and techniques, not a course of mechanical computation, so we will have little use for calculators. A few of the homework problems may require the use of a basic scientific calculator, which can perform numerical calculations, and can give values of the trigonometric, inverse trigonometric, exponential, and logarithm functions. Such a calculator can be purchased at discount stores for a few dollars. A basic scientific calculator can be used during exams, although it is not necessary to have one. However, since knowing the graphs of the standard functions from trigonometry and calculus is an essential skill, *use of graphing calculators during exams is prohibited*. Use of any calculator with the capability to store formulas or other information is also prohibited during exams.

**Academic Misconduct:** Cases of academic misconduct are inexcusable and will be punished to the maximum extent possible under University regulations. *Don't do it*.

**Students with Disabilities:** If you have a disability that may interfere with the demonstration of your abilities, please contact me as soon as possible to arrange accommodations necessary to ensure your full participation in the course.

**Final Grades:** You may pick up your graded final exam from me at any time before the end of the next semester. You will be able to obtain your grades from our course website as soon as they are available.

**Internet Resources:** On the Internet there are numerous websites that contain calculus theory, tutorials, and problems with solutions. The “Teaching” page on my website has links to some calculus sites, and if you follow the link to the UC Davis Calculus Page, there is a much longer list there.

**Advice:** It is important to think about the subject daily or almost daily (you will learn much more in two hours a day for seven days than in seven hours a day for two days). Working problems is your most important learning technique. Work sessions with fellow students can be very productive, as long as one avoids the pitfall of becoming dependent on others. Experience has shown the importance of keeping completely caught up; cramming is even less effective in mathematics than in other courses. If you need extra help, go to my office hours or arrange an appointment with me immediately; do not compound your difficulties by delaying.