

## Math 273: Calculus 3

- Instructor:* Joan E. Hart  
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- Office Hours:* M T W 10:20 - 11:20 am  
You are also welcome to make appointments for other times.
- Course:* Multivariate calculus. Topics include vectors and vector functions, partial derivatives and multiple integrals, line and surface integrals. Prerequisite: 67-172 with a grade of C or above. Credit: 4 sem. hrs.
- Text:* *Calculus: Concepts and Contexts* (3rd edition) by Stewart.  
We will cover selected sections from chapters 9 through 13.
- Calculators:* Department policy allows the use of TI-83 Plus calculators on exams; more powerful machines, including the TI-89 and TI-92, may **not** be used; machines having a built-in USB port, including the T-84 Plus, may **not** be used. Cell phone calculators may **not** be used.
- Course Structure:*  
Daily homework  
3 collected problem sets  
5 quizzes, each 20 minutes long  
3 midterm exams, each 60 minutes long  
1 cumulative final exam
- Grading:* 2 problem sets =  $\frac{1}{2}$  a midterm exam  
The problem set due when you feel the worst is dropped.  
4 quizzes =  $\frac{1}{2}$  a midterm exam  
The quiz during which you feel the worst is dropped.  
1 final exam = 1 midterm exam<sup>†</sup>  
<sup>†</sup>or, if it helps you, 1 final exam =  $1\frac{1}{2}$  midterm exams  
A = 90-100% of the total points, B = 80-89%, C = 70-79%, D = 60-69%
- Make-Ups:* **NO** make-ups for quizzes. **NO** make-ups for exams will be given unless I have agreed to give you one **before** the scheduled exam time.
- Final Exam:* The exam is Friday, December 15, 2006, at our usual class time. Make travel plans accordingly.
- Problem sets:* **NO** late problem sets will be accepted.
- Homework:* It is very important to do the daily homework exercises. We will go over questions from these exercises in class, and you will profit from working on the problems before we give away their punchlines in class.
- Attendance:* A passing grade normally requires attendance at no fewer than 80% of the classes held.

- Goals:*
- To master the techniques of calculus we cover.
  - To be able to use calculus to solve applied problems.
  - To understand the main concepts of the course well enough to explain them to a younger sibling.
  - To improve your abilities to solve problems that require several steps.
  - To learn to communicate mathematics. You should be able to
    - (1) learn mathematics by reading materials such as your textbook;
    - (2) write coherent, complete, and logically organized solutions to problems, including those in your homework;
    - (3) learn mathematics by discussing it with friends, classmates, and me.

*Study suggestions:*

Plan to spend *at least* eight hours per week outside of class studying calculus. Before each class, read the section of the text to be covered. Between each class and the next, review your notes and work the assigned exercises. It is very important to do these exercises. We will go over questions from these exercises in class, but you will benefit most by working on the problems **before** we give away their punchlines in class. Think about the fundamental ideas and *why* the techniques work as well as how to apply them. Each exam will contain problems unlike those you have done before, but understanding the ideas will enable you to do all the problems.

**Important Dates:**

Note: All exams and quizzes are on Fridays.

Two problem set due dates are Fridays, and one is a *Tuesday*.

<i>Midterm Exams:</i>	Exam 1	Sept. 29
	Exam 2	Oct. 20
	Exam 3	Nov. 10
<i>Final Exam:</i>		Dec. 15
<i>Quizzes:</i>	Quiz 1	Sept. 15
	Quiz 2	Oct. 6
	Quiz 3	Oct. 13
	Quiz 4	Oct. 27
	Quiz 5	Dec. 1
<i>Problem sets:</i>	Problem set 1	Sept. 22
	Problem set 2	Nov. 3
	Problem set 3	Nov. 21 ( <i>Tuesday</i> )

“Use all your practice sessions to build up the level of concentration. . . . When I finish a practice session, or a race, I immediately resail the entire course in my mind. I think of all the good things we have done and I try to come up with solutions to any problems that have come up. . . . Over the years I have learned that if you leave something undone it will worry you. . . . and you can’t enjoy the peace of mind and confidence that comes when you know the boat is ready to sail.”

Buddy Melges, *Sailing Smart*