## Course Information

| Instructor: <br> Email: | Warren Weckesser <br> wweckesser@mail.colgate.edu | Office: <br> Office Hours: |
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|  | Monday, Wednesday, Thursday 1:20-3:00 PM Mregory <br> Other times by appointment, or just drop by to see if I'm available. |  |
| Text: | Multivariable Calculus, Third Edition, McCallum, Hughes-Hallet, Gleason, et al. |  |
| Web Page: | The Student Solutions Manual for this text is also available and recommended. |  |

## Topics Covered:

Chapters $12-16$, plus Sections 17.1 and 17.2. We may skip some sections, and we will cover some topics in a different order than in the text.

## Homework:

Homework will be assigned and collected each week (with a few exceptions). Each assignment handed in will be marked with a "check", a "check minus" or a zero. If it is clear that you have made a concerted effort to do all the problems, you get a "check". Incomplete or excessively sloppy work will be given "check-minus". Assignments not turned, or turned in but obviously executed with very little effort, will be given a zero. Late homework will not be accepted.

Important notes about the homework:

1. Doing the homework diligently every week is probably the most crucial part of the time and effort that you will put into this course.
2. Some of the problems will be similar to the examples covered in the text and in class, but some will be significantly more difficult! The easier exercises help you to learn the basic techniques, while the harder problems will force you to go beyond what I have covered in class, and apply the techniques to new and challenging problems.
3. Collaboration with your classmates on the homework is encouraged! However, collaboration does not mean copying someone else's answers. It means working together so that everyone understands the problems. Each person must write their own solutions.

## Quizzes:

There will be a short quiz (approximately 15 minutes) each week that there is not a midterm exam or some other scheduled activity, such as working in the computer lab. The quizzes will consist of one or two problems based on the homework and lectures. Each quiz is worth five points, and there will be (at least) nine quizzes. When computing the final grade for the course (see below), the sum of all the quizzes is used, but with a maximum of 40 points. This means that $100 \%$ credit ( 40 points) is achieved, for example, by getting 5 on eight quizzes and 0 on one, or by getting 5 on five quizzes and 4 on four, etc.

## Exams:

There will be four midterm exams during the semester. The exams are held in class. The dates for the midterm exams are:

Exam 1 February 12
Exam 2 March 4
Exam 3 April 1
Exam 4 April 22
Let me know immediately if you have any unavoidable conflicts with these dates.
Consult the final exam schedule before making travel plans for the end of the semester, as the date and time of the final exam can not be altered.

## Calculators:

No special calculator is required for this course. Some homework problems may require a calculator, but any basic scientific calculator should be fine. Maple (see below) may also be used.
You will not be permitted to use a calculator on the exams or quizzes.

## The Maple Program:

Maple is a software package for doing symbolic mathematics. Maple can solve many types of equations, plot functions, find derivatives and integrals, and much more. This course will include an introduction to Maple.

## Grading:

Your grade will be based on the following:

| Item | Points |
| :--- | ---: |
| Homework | 10 |
| Quizzes | 40 |
| Exam 1 | 50 |
| Exam 2 | 50 |
| Exam 3 | 50 |
| Exam 4 | 50 |
| Final Exam | 100 |
| Total | 350 |

Your grade for the course will be determined by computing your numerical total and then converting that number to a letter grade, based on the following cutoffs:

| $340-350$ | A+ | $304-314$ | B + | $269-279$ | C + | $234-244$ | D + | $0-209$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $326-339$ | A | $291-303$ | B | $256-268$ | C | $221-233$ | D |  |
| $315-325$ | A- | $280-290$ | B- | $245-255$ | C- | $210-220$ | D- |  |

Reminder: Numerically, the homework makes up the smallest part of the final grade. However, doing the homework is an essential part of the course! It is by working through the homework problems that you will develop the deepest understanding of the material. Consistent and diligent effort on the homework will pay off in higher grades on the quizzes and exams.

