

Math 213 Calculus III Sections 005--008

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Office Hours: Mondays and Wednesdays 11-12, or by appointment (if you want to set up an appointment with me, you might find my [Availability Calendar](#) useful).

Lecture: MWF 10:00--10:50, CB 110

Recitations:

Section 005	Rachel Petrik	TR 08:00--08:50	CB 337
Section 006	McCabe Olsen	TR 09:00--09:50	CB 337
Section 007	Rachel Petrik	TR 10:00--10:50	CB 337
Section 008	McCabe Olsen	TR 11:00--11:50	CB 337

What is Calculus III?

MA 213 is a course in Multivariable Calculus, i.e. the calculus of functions of two or three variables. The main topics covered are:

- Rudiments of Analytical Geometry (lines, planes, quadric surfaces in the 3-space)
- Functions of several variables, partial derivatives, chain rule(s), maxima and minima
- Integration in 2 and 3 dimensions, including integration in polar, cylindrical, and spherical coordinates
- Vector Calculus, Line Integrals, and Green's Theorem

Learning Outcomes

By the end of the semester, MA 213 students are expected to know the main theorems and techniques covered in Calculus III and be able to use them when and where appropriate. Successful students will be able to use these results in new situations and will demonstrate a degree of independent thinking.

Course Components

Three weekly 50-minute lectures and two weekly 50 minute recitations. Regular attendance of both lectures and recitations is required and necessary for success in the course.

Textbook:

James Stewart, *Calculus: Single and Multi-Variable* (Custom edition for UK). This is a version of the full James Stewart's Calculus, 8th edition. You can use the full version, but the UK custom edition is somewhat cheaper. If you bought your textbook from the UK bookstore, you have access to Stewart's eBook version. To access this eBook, you need a WebAssign account. The instructions can be found [here](#). You will need a class key. This key is 5323 8348. WebAssign gives you free access for two weeks after the start of class. To continue to use WebAssign after that, you will need to enter the access code that came with the textbook you bought or purchase access online. Note that the eBook version is not required for this course.

Homework:

The homework has two equally important components, one graded, the other non-graded.

The graded component is using the WebWork online homework system. Most of you will be familiar with WebWork as it was used in Calculus I and II. For those who are new to WebWork, please see a brief introduction [here](#). The due dates for the WebWork sets are [here](#). Please note that if the due date is indicated, say, as Sep 6, the actual WebWork deadline is September 7, 3:00 AM. The answers will then be available 15 minutes later, on

September 7, 3:15 AM. Please be aware that technical problems are always possible. It is not safe to do the homework at the last moment.

In addition to the WebWork sets, you will find a list of problems from Stewart [here](#). Although these problems will not be graded, working on them will substantially improve your performance in this class (see Exams below).

Exams:

There will be three midterm exams and a final exam. The dates and times are as follows:

- First Midterm Exam: Sep 20, 5:00-7:00 PM
- Second Midterm Exam: Oct 18, 5:00-7:00 PM
- Third Midterm Exam: Nov 15, 5:00-7:00 PM
- Final (comprehensive) Exam: Dec 11, 8:30-10:30 PM

For a detailed exam schedule click [here](#). **Exam problems will be selected from WebWork problems and the assigned problems from Stewart.**

Grading:

The course grade will be computed as follows:

- Each exam will be assigned 100 points for a total of 400 points
- The WebWork homework will be assigned a total of 60 points
- Another 40 points will be assigned as a Recitation Grade. The recitation instructor will inform the students how the Recitation Grade will be determined

The maximum total points is therefore 500. The course percent grade will be determined by dividing the grade total by 5. The letter grade will be determined by applying the usual 10% scale to the percent grade.

Getting help:

Please be aware of the following opportunities to seek and get the help you need with Calculus III:

- Each MA 213 instructor holds office hours either at specific times or by appointment. Specifics are to be found in the instructor's syllabus. Links to most instructors' syllabi are available through the schedule of individual sections, click [here](#).
- Help is also available in the [Mathskeller](#).

Students with Disabilities:

If you have a documented disability that requires academic accommodations, please see your instructor as soon as possible. In order to receive accommodations in this course, you must provide your instructor with a Letter of Accommodation from the Disability Resource Center. The Disability Resource Center coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754 and via email at drc@uky.edu. To access their web site click [here](#).

Academic Integrity and Cheating:

Please see the University of Kentucky Policy on Academic Integrity and Cheating [here](#).

Links:

Quadric surfaces: [an interactive gallery](#)