

MATH 141 *Calculus I, Fall 2009* -- Course Description

Course Webpage: <http://www.math.rochester.edu/courses/141/home>

Textbook:

[ISBN10: 0-495-01166-5] *Calculus, Early Transcendentals* (6th edition), by James Stewart

Description:

Math 141 covers differential calculus, which is the mathematical method for analyzing changing quantities. Rates of change can be given by, for example, slopes, velocities, or acceleration. These quantities are examples of derivatives, which tell us how quickly a quantity is changing. The precise definition of derivative (i.e. instantaneous rate of change) requires an understanding of limits, a notion which also leads to the precise meaning of "continuously changing quantity". Techniques like the product rule, quotient rule, and chain rule enable efficient computation of derivatives which can then be applied to, among other things, the analysis of motion, rates of change, optimization problems, and understanding the shape of a graph.

Exams and Grading

There will be two midterm exams and one final at the following times:

- First Midterm: October 20, 8 AM, Room TBA
- Second Midterm: November 19, 8 AM, Room TBA
- Final Exam: December 15, 12:30 PM, Room TBA

Your grade for the course will be based on your performance on exams, Webwork, and recitation quizzes:

- Two Midterm Exams -- 20% each
- Final Exam -- 40%
- WeBWorK assignments -- 20%

Your course grade will be computed as follows:

Final grade > 90% will guarantee at least an A-
Final grade > 80% will guarantee at least an B-
Final grade > 70% will guarantee at least an C-
Final grade > 60% will guarantee at least an D-
and so on...

Homework: Homework comes in two forms. One form consists of [WeBWorK problems](#). WeBWorK problems are done over the web and provide instant feedback as to whether you have done a problem correctly or not. When you have done a WeBWorK problem correctly, your credit for the problem is immediately recorded in the database. You are encouraged to discuss problems with other students, however WeBWorK problems are individualized for each student, so you must do your own assignment. WeBWorK problems count for 20% of the total grade. There will be 14 WeBWorK assignments, which may consist of up to 25 problems. Webwork can be accessed by going to <http://math.webwork.rochester.edu/webwork2/fall09mth141> The other form of homework consists of problems from the book that are listed on the the course homepage <http://www.math.rochester.edu/courses/141/home> These problems do not have to be handed in, but

they will be discussed in recitation and similar problems will appear on exams. It is important to do both the WeBWorK and the problems from the book.

Extra Help: Because each lecture is based on previous work, it is essential to not fall behind. If you have trouble with some material, seek help in the following ways:

1. Ask your professor, either in class or in office hours
2. Ask your TA, either in recitation or in office hours
3. Attend the MTH 141 LAS Study Group on Mondays at 5pm in Lattimore 106. If you are interested, you can sign up on their website www.rochester.edu/college/las/studygroups.php
4. The math department has a study hall staffed by graduate students on Tuesdays and Thursday from 10AM to 6PM in 1103 Hylan Hall open to students of all math courses.

If you are having any difficulties, seek help immediately -- don't wait or it may be too late to recover!

Recitations: There will be a weekly recitation where homework will be discussed (WeBWorK and supplementary book problems). Recitations start the week of September 7. Sign-up sheets for recitation will be posted on Friday Sept. 4 after 3:00 PM on the wall around the corner of the elevators on the second floor of Hylan Hall. You must sign-up for a recitation. Here is the recitation schedule:

Monday

11:00-11:50 Hylan 1104

12:00-12:50 Hylan 203

1:00-1:50 Hylan 202

Tuesday

12:55-1:45 Hylan 1104

2:00-2:50 Hylan 1104

2:25-3:15, Hylan 1106B

4:50-5:40, Hylan 201

Thursday

3:25-4:15 Hylan 1106B

3:25-4:15 B&L 315

3:25-4:15 B&L 270

6:40-7:30 Hylan 1106B

Friday

12:00-12:50 Hylan 105

2:00-2:50 Hylan 102