

Mathematics 211 SYLLABUS Fall, 2014

Instructor: Fang Chen

Phone: 770-784-4639

Office Hour: MW 3:00 – 5:00 pm; F 3:00 – 4:00 pm* and by appointments.

Office Location: Pierce 120A

Email: fchen2@emory.edu

Course Content: Mathematics 211 is the third semester of calculus. It revisits and adapts the concepts from first-year calculus in the setting of three-dimensional space. The main topics are geometry in space; vectors; functions of more than one variable including vector fields; the limits, differentiation, and integration of such functions; and applications.

Course Objectives: At the end of the course, a student should be able to do the following: to sketch three-dimensional graphs, to understand how the calculus of single-variable functions generalizes to multivariable functions, to evaluate limits of multivariable functions and vector fields, to differentiate multivariable functions and vector fields, to integrate multivariable functions and vector fields, to discuss the roles of these processes of multivariable calculus in solving problems, to understand better the material of first-year calculus.

Textbook and software: Colley, *Vector Calculus*, 4th ed., Prentice-Hall.

Mathematica for Students (<http://www.wolfram.com/products/student/mathforstudents/licenses.html>)

A free screencast, *Hands-On Start* (<http://www.wolfram.com/broadcast/screencasts/handsonstart/>), teaches basic commands of Mathematica. Other tutorials are found at <http://www.wolfram.com/broadcast/>

Attendance: You are expected to attend all classes and are responsible for all material covered in class as well as any changes made in the schedule regarding quizzes and tests. ***Furthermore you are expected to have done the reading before each class.*** Outlines posted on Blackboard will announce the topics for each lecture and provide a guide on how to approach the material.

Class attendance and consistent preparation for class will determine the success or failure the student realizes in this course.

Blackboard site: There is a course website on the Blackboard: <http://classes.emory.edu> **Math_OX 211 – Fall 2014**. Documents and announcement related to the course will be posted there. Students should check the site at least once a day.

Homework: Homework will be assigned almost every day of class. These exercises will not be collected but are for the benefit of the students. Students may ask questions about the homework during office hours. The instructor may ask to see a student's homework.

It is important for the success of the student that homework be completed as soon after covering the material as possible. Calculators may be used when appropriate, but the student should keep in mind that they are not permitted on the tests. Collaboration is encouraged, but each student should be sure that he or she ultimately can solve problems unaided by notes, the textbook, a calculator, or other people. *Use good style on your homework.*

* except when there is a meeting

In general you need to spend at least 6-8 good hours per week on study not counting the time spent reviewing for quizzes and tests.

Quizzes: All quizzes are announced and in-class. Each quiz is worth 25 points. There will be 9 quizzes of which 8 will be counted. The quiz problems are based on homework.

Tests: There are 3 out-of-class, closed-book, timed tests, each worth 100 points. The tests will be given on the **evenings of the following Thursdays: September 25, October 23, and December 4, 6 – 8 PM.**

Each student is expected to take tests at the scheduled times. Any conflicts or problems will be handled on an individual basis. If the excuse is considered legitimate by your instructor, arrangements will be made to take a test **prior to** the testing time. Emergencies will be handled on an individual basis. **No make-up test will be given after the testing time.**

Documented special accommodations for test taking must be cleared several days prior to the test date so that appropriate arrangements can be made.

Final Examination: There will be a cumulative final examination worth 200 points and it will be given at the time scheduled by the Registrar.

Calculators: In general, calculators **will not** be allowed on quizzes or tests unless the opposite is announced.

Written Work: Thoughts are expressed by sentences. Your written work must be in complete sentences. Use mathematical symbols wherever appropriate; do not use a lot of words. Pay attention to how the problems are worked out in the textbook. Your work should be neat and legible. It is common practice to rewrite solutions once they are found. See the essay, “Clean Writing in Mathematics,” from *Calculus: A Liberal Art*, by W.M. Priestley and the “Calculus Style Guide.” Practice good style in all your work, including uncollected homework.

Grading: The final course grade will be determined as follows:

3 tests @ 100 points each	300
Quizzes (25 x 8)	200
Final exam	200
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Total points	700

A rough guide to assign letter grades:

A: roughly more than 90 %; B: 80 – 89 %; C: 70 – 79 %; D: 60 – 69%; F: below 60 %

Grades of A-, B+, B-, C+, C-, D+ may be assigned.

Office Hours/Outside Help: Students should use office hours to ask specific questions related to this course and/or homework problems. In addition, students may email your instructor privately.

Supplemental Instruction, Tutoring and Study Groups: The SI leaders will be announced. They schedule study sessions to review concepts, to help students discover how best to study. Check the Blackboard for announcements.

Contact Mr. Paul Oser, Director of the Mathematics Center for tutoring hours, most likely M—T H, 3 – 6 pm.

Study groups, organized by students are highly recommended. The meetings should be scheduled weekly and should be part of a regular weekly routine.

THE HONOR CODE OF OXFORD COLLEGE APPLIES TO ALL WORK SUBMITTED FOR CREDIT IN THIS COURSE. BY YOUR SIGNATURE ON SUCH WORK YOU PLEDGE THAT WORK WAS DONE IN ACCORDANCE WITH THE RULES STIPULATED ON THE WORK OR IN THIS SYLLABUS.