

MA 123 – Spring 2013 (2013S1)

Course Overview and Policies

Overview

MA-123, Calculus 2A, will run in the first eight weeks of the semester with a final exam held just before spring break. The second part of Calculus 2, MA-124, will run in the second half of the semester starting the day we return from spring break. Each module is two credits with typically four contact hours per week. A final grade will be given at the end of the first module (approximately March 11). Those that pass will continue to MA 124 for the second half of the semester. Students that fail MA 123 at the end of the first eight weeks can immediately retake MA-123 in the second half of the semester.

Required Course Materials for MA-123.

1. James Stewart, "Calculus: Concepts & Contexts, 4E", Cengage.
2. Access code for Enhanced WebAssign.
3. NXT clicker from Turning Technologies

The first two are available as a bundle through the campus bookstore. Visit the bookstore for further information on buying the components separately.

Course Structure

The course is structured with two lecture hours on Monday and Wednesday, a mandatory workshop session on Tuesday, and a problem session (recitation) on Friday. A Thursday lecture hour also appears on your schedule. We do not expect to have any lectures scheduled for Thursdays in this semester but if needed, these scheduled lectures will be notes on the course syllabus. Individual instructors may choose to schedule additional help sessions during the Thursday period, at their discretion.

The work requirements include online assignments (WebAssign), written assignments, participation in the problem-solving workshops, and written exams. The goal is to help students acquire a deeper understanding of mathematics, achieve mastery of the most essential calculus skills, and acquire experience in the application of calculus techniques to problems in science and engineering.

Lectures

Lectures are where the main theoretical concepts and techniques are developed and discussed. To improve the learning experience of lectures we expect students to develop the practice of preparing in advance of lecture by reading the upcoming material in the textbook, viewing related videos available through the course site in moodle, and in sometimes answering related questions through the online assignments. Instructors may use clickers as a means of polling the class on questions related to the new material and gauging how well the concepts are being understood.

Workshops

The role of workshops is to develop problem solving skills; a collection of best practices, methods, and reasoning skills that enable one to formulate a mathematical solution from a problem described in words. Students will collaborate in small groups on more complex open-ended problems. A typical scenario will be for students to spend about 10-15 minutes on a problem, interacting with and receiving hints from the instructor, as needed, followed by a discussion of possible solutions. Students develop a better understanding of how to apply mathematical reasoning in solving problems and acquire practice working in groups and communicating technical ideas to others.

Recitations

These are problem sessions where students can get additional help with mastering the material from lecture and for asking questions related to the online and written assignments. Students should come to these classes prepared to ask specific questions of the Teaching Assistant (TA). These are expected to be hands-on help sessions with students actively working on problems and some examples presented at the board by the TA.

Online Assignments (WebAssign)

The main goal of online exercises is to develop the routine skills necessary to carry out computations in calculus. There are two types of assignments:

WebEx Assignments: There is one WebEx assigned with nearly every lecture and typically due before the start of the following lecture. Check the syllabus for the precise due dates for all assignments. These are typically 5-10 questions per assignment, most of which are reviewing topics from recent lectures. In some WebEx assignments, the last one or two exercises will be based on new material for the upcoming lecture. The grade for WebEx will be the total accumulation of WebEx points as a percentage of the total points available over the duration of the course.

Gateway Assessments (Gates) are scheduled prior to each of the exams; there are three gateway assessments scheduled in MA-123. These assessments serve as a review for the upcoming exam and the grading is done as Pass/Fail with 80% set as the passing mark. Students have three attempts to reach the 80% passing grade.

Written Assignments

Written assignments will focus on more complex open-ended problems similar to what is done in workshops. As with the workshops, the goal is to facilitate the application of calculus techniques and mathematical reasoning in subsequent science and engineering courses. Written assignments are to be turned in on the due dates noted in the syllabus. Solutions will be made available in moodle.

Exams

The written exams will include questions that cover routine skills, theoretical concepts and applications. Do not expect that every exam question to match closely one or more homework or lecture problems previously practiced. Answers on written exams require sufficient supporting work to receive full credit.

Three exams are scheduled, including the final exam. See the syllabus for the exact dates and times.

Exam Rules: Exams are closed book and closed notes; the use of electronic devices (calculators, cell phones) is prohibited. All cell phones and calculators are to be stored out of sight during the exam; rules governing *exam seating* are to be observed. All exams are scheduled for 5:00-6:05 p.m. on Thursday evenings. Room assignments posted on the registrar's website are subject to change and will be announced by email closer to the first exam date.

Excused Absences: Missed exams may be made up if you have a valid excuse, typically a note from the Stevens Health Service or your family physician. Documentation must be presented to your instructor immediately after you return to class. If you know of a conflict in advance, contact your instructor prior to the exam date to arrange a makeup time. Excuses are governed by the conditions of the Stevens Honor Code.