

MATH 113
Analytic Geometry and Calculus I
Fall 2009, Section 1

Instructor : David Singman

Office and Hours: Science & Tech I, Room 235, M,W,F 11:00am-12:00pm and by appointment.

E-mail and Telephone: dsingman@gmu.edu, (703)-993-1476. You can leave a voice-mail message if I am unavailable, but it's better to send me an e-mail.

Web site: A web site has been set up for the course. You are responsible for checking the homepage of the site for updates each day. On it I will post announcements relevant to the course such as information on weekly quizzes, copies of quizzes and tests once they are given as well as complete solution sets, MAPLE computer assignments and information on MAPLE, lists of practice problems, this syllabus, etc. You can find it by going to <http://math.gmu.edu>, following the link to “**course information**”, then “**course home pages**” and clicking on the link to our section.

Text: *Thomas' Calculus, Early Transcendentals*, eleventh edition by G. B. Thomas as revised by Weir, Hass, and Giordano.

Prerequisites: Successful completion of the Math Placement Test offered through the Testing Center or a grade of C or better in Math 105. If you are not proficient with algebra and trigonometry before the semester begins, you are not adequately prepared to take Math 113.

Course: This is a basic first course in calculus for science students. Topics include the following: some pre-calculus preliminaries; limits and continuity; derivatives of rational, exponential, logarithmic, trigonometric and inverse trigonometric functions; some applications of the derivative (extrema of functions, mean value theorem, graph sketching, linearization, l'Hôpital's rule for finding limits, Newton's method for finding roots of equations); introduction to integration, including the Fundamental Theorem of Calculus. We will make use of the computer algebra system MAPLE in the course and you will turn in a few MAPLE homework assignments.

Practice Problems: See the list of **Practice Problems**. You should do each of them as the associated section is covered. Your work on these problems will not be collected, however, it is very important that you work each problem yourself. Mathematics can only be learned by working through problems, not by reading someone else's solutions. Quizzes and tests will consist of questions similar in spirit to the problems worked in class (so I consider it very important that everyone attend all classes) and the practice problems. You should make a point of coming for extra help either with me, the TA for the class, or tutors in the tutoring center if you are unsure of how to do some of these problems.

Grading The grade will consist of weekly quizzes given in your recitation section, three class tests (given on **Wed. Sept. 23**, **Wed. Oct. 21**, and **Wed. Dec 2**), some computer lab assignments, and a cumulative final exam (see below for date and time). These will count towards your grade as follows: quizzes 15%, tests $15\% \times 3$, computer assignments 5%, final exam 35%. The quizzes will be written during your recitation section. The lowest two quiz grades will be dropped. No makeup will be given for any reason. Makeups will not be given for class tests. In the event that one exam is missed, the final exam score will count in place of the missed exam.

Final exam: It will be a cumulative exam, held on **Wed. Dec. 16**, 1:30am-4:15pm.

Scale: A^- , A , A^+ 90 - 100; B^- , B , B^+ 80 - 89; C , C^+ 70 - 79; D 60 - 69; F 0 - 59.