

MATH 1341 Syllabus
Calculus I for Sci/Engr
Fall 2009

Text: J. Stewart, *Calculus: Concepts & Contexts, Volume I*, 4th ed. (the bookstore has a special edition prepared especially for Northeastern; it is in two volumes - you will be using volume 1 for MATH 1341 and MATH 1342.)

Classes: M W Th 8:00 - 9:05 AM, 404 Robinson Hall

Instructor: Federico Galetto, 541 Nightingale Hall, galetto.f@husky.neu.edu

Office hours: M W 12 - 1:30 PM or by appointment

Objectives: the course will begin with a brief review/discussion of functions and then move on to the standard topics of calculus I. In particular you will be introduced to limits and derivatives, the calculation of derivatives, applications of differentiation to solving the kinds of problems encountered in science and engineering and an introduction to integration. This is not a theoretical course but some proofs and mathematical reasoning will be introduced when they are required for better understanding.

Homework: homework will be assigned at each class. You are responsible for knowing how to solve all the problems assigned, whether they are reviewed in class or not. You are expected to keep up with the homework in order to perform well on the weekly quizzes and exams. Homework may be collected to check on your progress and will be used to determine a student's grade if he or she is on the borderline of two grades.

Quizzes and exams: there will be weekly quizzes, a midterm and a final exam. Quizzes will usually be held during the first 20 minutes of class each Thursday. If any class is canceled for any reason (e.g. snow, instructor illness), any scheduled quiz or exam will take place during the next class meeting. The two lowest quiz grades will be dropped. If you miss a quiz you will get a zero for that quiz and there will be no make up quizzes (except in the case of documented conditions). The midterm exam will be a one hour exam; the day of the midterm exam will be announced in class. All students without legitimate conflicts approved by the instructor will take the final exam at the scheduled time: TBA. **Do not make advance travel arrangements for any dates during finals week.** The last day to file a final exam conflict form is September 23, 2009.

Grading: your grade in the course will be determined as follows: quizzes 40%, midterm exam 20%, final exam 40% and you will be graded according to the following scale: 93 and over = A; 90-92 = A-; 87-89 = B+; 83-86 = B; 80-82 = B-; 77-79 = C+; 73-76 = C; 70-72 = C-; 67-69 = D+; 63-66 = D; 60-62 = D-; and below 60 = F. Additional points may be awarded for active class participation. Notice there is no extra credit. Last day to drop the course without a W grade is September 29, 2009. Last day to drop the course with a W grade is November 20, 2009.

Attendance: you are expected to attend every class. You are responsible for knowing all topics covered in class and all announcements made in class; if you miss a class, immediately contact your instructor or a classmate to discuss what you missed and how to catch up. If you come in late do not disrupt the class. As a courtesy to your classmates, keep your cell phones, notebooks and other electronic devices turned off during class.

Extra Materials: some problems from the book require the use of a graphing calculator or graphing software. The Math Department has a computer lab located in 553 Lake Hall. As a general rule, calculators are not allowed during quizzes and exams.

Academic Honesty: cheating will not be tolerated. All incidents of cheating will be reported to the Office of Judicial Affairs. The University's cheating policy and related disciplinary actions are detailed in the Student Handbook.

Tutoring: tutoring is available free of charge in the Mathematics Tutoring Center in 540B Nightingale Hall. Hours of operation will be announced. All tutoring is done on a first come first served basis. Students must go in person to schedule appointments. No appointments can be made by phone.

Miscellaneous: it is your responsibility to be aware of any changes to the syllabus that are announced in class. You are also responsible for all announcements made via email (make sure your mailbox is not full and check your spam filters). If you have any concern that is not or cannot be resolved by speaking with your instructor, the next step is to speak with the course coordinator: Prof. A. Ding (439 LA, a.ding@neu.edu). It is University policy that no grade, including an incomplete, can be changed after one year. Exceptions must be authorized by the Academic Standing Committee.

Topics and Assignments: all information contained in this list is provisional and might change during the course of the semester. All changes will be announced in class.

Section	Homework
1.1 Representing Functions	p. 21: 1,2,9,25,27,30,45-47,49,59,60,66
1.7 Parametric Curves	p. 76: 1,2,5-7,9-11,18,22,27,31,32
2.2 Limit of a Function	p. 102: 1,3,4,20,21
2.3 Calculating Limits Using Limit Laws	p. 111: 1,3,6,7,15,17,18,20
2.6 Derivatives and Rates of Change	p. 142: 1,5-9,11,12,17,27,29-31,33-36,42,50
2.7 Derivative as a Function	p. 155: 2-7,9,12,36,41,43
2.8 What f' Says About f	p. 172: 1-5,12,14,19,22,25,27-30
3.1 Polynomials and Exponential Functions	p. 181: 3-25(odds),29,36,41,42,45,54,61
3.2 Product and Quotient Rules	p. 188: 3,6,7,10,11,23,24,33,39,42,48,58(a)
3.3 Trig Functions	p. 195: 1,4,6,7,10,21,27,30,33,39
3.4 The Chain Rule	p. 205: 1-31(odds),61,52,70,75
3.5 Implicit Differentiation	p. 214: 5,9,15-18,22,55
3.6 Inverse Trig Functions	p. 217: 17,20,21,25,34,41
3.7 Log Functions	p. 226: 3-15(odds),26,34-38
3.8 Rates of Change	p. 237: 1,5,10,13,16,18,24,33
3.9 Linear Approximation	p. 245: 1,2,5,9,28-30,36
4.1 Related Rates	p. 260: 8,10,11,13,16,20,29,34,42
4.2 Maxima and Minima	p. 268: 6,9,23,24,29,32,45-51(odds)
4.3 Derivatives and Curves	p. 279: 6,7,16,17,21,29,30,33,35,41,58
4.4 Graphing with Calculus and Calculator	p. 288: 1,4,8,11,22,23
4.6 Optimization Applications	p. 305: 3,4,12,14,18,26,54
4.7 Newton's Method	p. 315: 4,8,10,14,15
4.8 Antiderivatives	p. 321: 1,11,15,27,34,37,42,48,50,57
5.1 Areas and Distances	p. 341: 3,4,18,19
5.2 The Definite Integral	p. 353: 3,11,17,18,21,22,31,37,40
5.3 Evaluating Definite Integrals	p. 363: 3,6,11,17,19,22,23,40,49,52,57,59,61,63
5.4 The Fundamental Theorem of Calculus	p. 372: 2,5,8,9,21,26
5.5 Substitution	p. 392: 1-15(odds),18,21,22,24,31,32,34,45,47,51