

## Syllabus

**Text:** *Applied Calculus* (3<sup>rd</sup> ed), by Hughes-Hallett

**My Office:** 563 Lake Hall      **Phone:** 617-373-4592 (Office)      **e-mail:** [kesir.m@neu.edu](mailto:kesir.m@neu.edu)

**Class Meetings:** 8:00-9:05 Mon-Wed-Thu in 205 SH

**Office Hours:** Mon 9:30-10:30, Wed 10:00-12:00 in 563 Lake Hall.

Prerequisites: Knowledge of basic algebra at the level of MTHU121, including an introduction to functions and their graphs. A placement quiz will be given at the start of the course: you can use the result to gauge your preparation.

Differential Calculus is the study of rate of change, and its uses.

Integral Calculus is the study of amount given the rate of flow.

Goals: To develop graphical, numerical, and algorithmic understanding of

1. The basic ideas of differential calculus, including Average and instantaneous rates of change, Definition of the derivative of a function at a point, the Derivative function.
2. Basic functions – such as polynomial, exponential, logarithmic, trigonometric, using the graphing calculator as a tool.
3. Applying calculus to optimize functions (max and min), to motion problems, mathematical models of physical/biological processes.
4. The basic ideas of integral calculus: accumulated change, amount from flow, area under a curve (introduction).
5. Students completing the course should be able to recognize and use the concepts and methods of calculus when they occur in their disciplines.

### Grades and Organizational Stuff

There will 4 quizzes on the following dates: 1.22.2007, 2.5.2007, 3.14.2007 and 3.28.2007. Each quiz will take 30 minutes and each will form 7.5% of your overall grade.

There will be 2 Tests on 2.15.2007 and 4.11.2007, each will be 1 hour, in class tests. Each of the two tests will form 15% of your overall grade.

The last 40% of your grade will be the final, scheduled for 4.25.2007 at 3:30 pm (Room TBA).

You need a graphing calculator for that course like TI 83. Some functions on TI-89 or 92 or other calculator (symbolic differentiation/integration) are not allowed on quizzes or exams.

### Detailed Course Content

1.Functions	1.2,1.3
2.Rates of Change	2.1-2.3
3.Analytic tools for determining rate of change	3.1-3.5(1.4 and 1.5 reviewed with 3.4)
4.Applications	4.1-4.4,4.7
5.Differential Equations	7.1, 10.1-10.5
6.Integration	5.1-5.5,7.3

**Final:** Two hours, required of all scheduled for Apr 25, 3:30 PM. All students without

legitimate conflicts will take the exam at the scheduled time. I must approve any exception (an alternative final exam) by two weeks before the exam.

**Homeworks:** Doing the homework is required. Homework is **not** optional. You are responsible for having done the problems from the section discussed in the previous class. Doing the homework is also important for the quizzes. Discussion of homework will form the first part of class.

**Reading assignments:** You will be asked to read chapters in advance of our class discussion of them. You can prepare questions for discussion.

**Attendance:** Your regular attendance is expected. It is your responsibility to know assignments and other class information including any changes to the syllabus the instructor may make as they are announced in class. Students are responsible for all information given, even when they are absent. Feel free to use e-mail to ask me if you miss a class.

**To talk to someone else:** If you have a concern about the course or the instructor that cannot be resolved by speaking to the instructor, the next step is to speak with the course coordinator (Prof. Frampton, [j.frampton@neu.edu](mailto:j.frampton@neu.edu)). If the course coordinator does not settle the matter, please contact Prof. Alex Martsinkovsky, Undergraduate Director, Mathematics Department, 447 LA, x5679.

**Tutoring:** The following free tutoring is available to all students.

1. Tutoring at the Mathematics Tutorial Center, 540B Nightingale (x2328). All tutoring is done on a first come first served basis. Students must come in person to schedule appointments. Tutoring begins about September 18.

([http://www.math.neu.edu/undergrad/math\\_tutoring.html](http://www.math.neu.edu/undergrad/math_tutoring.html))

2. Snell Library Tutoring Center: sign up for a single tutor for the whole semester, who arranges time with you. (242 SL, X4900).

**Academic Honesty** from Student Code of Conduct: see Student Handbook: "A necessary prerequisite to the attainment of the goals of the University is maintaining complete honesty in all academic work. Students are expected to present as their own only that which is clearly their own work in tests and in any material submitted for credit. Students may not assist others in presenting work that is not their own. ....Offenders are subject to disciplinary action."

In Math U141, academic dishonesty on a quiz or exam leads to a zero on the quiz or exam, that cannot be made up, as well as a letter detailing the incident to the Office of Judicial Affairs. The minimum penalty for a finding of academic dishonesty by the Student Court includes one-year disciplinary probation.

**Changing grades, incomplete:** It is University policy that no grade, including an incomplete, may be changed after one year. Exceptions must be authorized by the Academic Standing Committee. Note that an "Incomplete" grade request requires a written understanding (contract) between the Instructor and student with details about what material will be made up and how. They are normally appropriate only for a student who is doing well, but becomes ill, or has a family emergency late in the semester. Incompletes in Math U141 must be approved by the course coordinator, who may consult the Assistant. Chair.

**Closing Remarks:** Please do not fall behind, come to class.

``All students without legitimate conflicts will take the final exam at the scheduled time. Do not make travel plans that conflict with the final exam." You are required to attend class, and encouraged to participate. All cell-phones must be turned off; and if you are late, try not to disrupt the class. If, for some reason, you must leave early, let me know beforehand.