

Mathematics 141, Fall 2009 (Section #19759)
Honors Calculus I (5 credits)

Instructor: Jeremy Martin (you can call me “Prof. Martin” or “Jeremy”)

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Office hours: Tuesdays and Fridays, 11:00 AM – 12:00 PM, or by appointment

Meeting times: MTWRF 10:00 – 10:50 AM, 156 Snow Hall.

Course description: Math 141 is an honors course in differential and integral calculus of one variable, including some applications. This is a good course to take if you have a strong mathematics background and are considering majoring in mathematics or a related field, such as computer science, physics, engineering or economics. For complete departmental information on the various calculus courses at KU, see <http://www.math.ku.edu/academics/undergraduate/calculus-sequences.html>.

Website: The class website is:

<http://www.math.ku.edu/~jmartin/math141/>

Bookmark the website and check it frequently! You are responsible for all information posted on the website, including announcements, homework assignments, and exam information.

E-mail: I will periodically send class information (announcements, homework hints, etc.) to all students’ KU e-mail accounts. You are responsible for checking your e-mail regularly so as to receive this information.

What’s the difference between Math 141 and Math 121? The topics covered in Math 141 are the same as those in Math 121 (Calculus I), and the courses share common gateway, midterm, and final exams. Math 141 will involve less review of precalculus than Math 121, and will cover many topics more quickly or in greater depth. In addition, the course will include more challenging homework problems and three writing projects emphasizing mathematical modeling.

Textbook: *Calculus: Concepts and Contexts*, University of Kansas edition, by James Stewart. Available at KU Bookstore (<http://www.kubookstore.com>; 1-800-458-1111). There are many different editions of this book, so be sure you have the right one (consult Prof. Martin if you’re unsure). We will cover most of Chapters 1–6, although we will spend very little time on the precalculus review material in Chapter 1.

Calculator: Some homework and in-class assignments will require the use of a graphing calculator such as the Texas Instruments TI-83 or TI-84. **No calculators or other aids will be permitted on the gateway, midterm, or final exams.**

Homework: Regular homework is due every Tuesday at 5:00 PM. You may turn in homework in class on Tuesday or drop it off at Prof. Martin's office (623 Snow). The first assignment is due on **Tuesday, August 25**. *Late homework will not be accepted.* There will be about fourteen problem sets over the semester; your two lowest scores (including missed assignments) will be dropped.

The course website will include lists of required and optional homework problems. You should turn in only the required problems. About five problems from each homework assignment will be checked for correctness (but you won't know in advance which ones). Getting those problems right is worth half the points; the remaining half will be awarded for making a good-faith effort to solve all of the required problems.

In addition to the regular homework problems, I'll post a series of more challenging "honors problems" on the course website. You can accumulate up to 50 points by doing the honors problems. (You can certainly do more!)

Tests: There will be a short test, worth 50 points, in class on **Wednesday, September 9**. This is intended mainly to give you some early sense of how you are doing in the class. There will be a longer test, worth 100 points, in class on **Friday, November 6**.

Projects: There will be three writing projects over the course of the semester (dates TBA). Each project will require you to model and solve a real or simulated problem using calculus and to write a clear, detailed explanation aimed at convincing someone who does not necessarily know any calculus. You will work on each project in small groups (determined randomly). The projects will be worth a total of 100 points.

Gateway Exam: The Gateway Exam is an online exam focusing on the technical rules of differentiation (mostly covered in Chapter 3 of the textbook). The exam consists of two parts: an unproctored *preliminary exam* (worth 10 points) that you can take from any computer with an Internet connection, and a *proctored exam* (worth 90 points) that you must take in the Gateway Lab, Snow 159. You will have multiple chances to pass both exams, but you *must* pass the preliminary exam before attempting the proctored exam. The Gateway Lab opens for all Math 121/141 students on **Monday, September 21**. The deadline for passing the preliminary exam is **Friday, October 9**, and the deadline for passing the proctored exam is **Friday, October 23**. For complete information, see <http://www.math.ku.edu/academics/gateways.html>.

Midterm exam: All Math 121/141 students will take a common midterm exam on **Tuesday, October 13, 5:45–7:45 PM**, location TBA. The midterm exam will cover material from sections 1.1–4.1 of the textbook, and is worth 200 points.

Final exam: All Math 121/141 students will take a common final exam on **Monday, December 14, 4:30–7:00 PM**, location TBA. The final exam will cover material from sections 1.1–6.7 of the textbook, and is worth 300 points.

Grades: Your final score in the class will be calculated as follows:

- Regular homework: 100 points
- Honors problems: 50 points
- Test #1: 50 points
- Test #2: 100 points
- Projects: 100 points
- Gateway exam: 100 points
- Midterm exam: 200 points
- Final exam: 300 points
- **Total: 1000 points**

Earning an A typically requires 900 points, a B will require 800 points, etc. I may lower these requirements at my discretion.

Grades for all assignments will be posted on Blackboard as soon as they're available. If you find a discrepancy between a grade written on your assignment and the grade posted on Blackboard, notify Prof. Martin ASAP.

Aids permitted on tests and exams: Neither calculators, books, nor notes are allowed on the Gateway, midterm, or final exams.

Makeup work: Your enrollment in this course is a commitment to hand in all work by its announced due date. If, for some legitimate and unavoidable reason, you are unable to turn in a homework assignment on its due date or to attend a scheduled test, midterm or final exam, you must notify Prof. Martin *in advance* to make appropriate arrangements.

Approximate time commitment: This is a 5-credit course, so I would guess that most students will need to spend about 10 (or more) hours per week outside of class to get a decent grade. In addition to spending time on homework problems, you should get into the habit of reading a section or two ahead in the book, so as to be better prepared for lecture.

Incompletes: A grade of I is a rare occurrence and is reserved for cases in which a student has completed most of the course work at an acceptable level, but is prevented from completing the course due to *extraordinary* circumstances. If you think an I may be warranted, you must consult Prof. Martin *before* the final exam. Note that a grade of I cannot be made up by taking the course again.

Dropping the course: Through September 10, you may drop a course and have it removed from your record. From September 11 through November 16, you may withdraw from a course (a grade of W will appear on your transcript). After November 16, dropping is not permitted. For complete details, consult the KU Registrar's office (151 Strong Hall; 785-864-4423; <http://www.registrar.ku.edu>).

Academic honesty and collaboration: You are required to abide by all KU policies on academic integrity: see <http://documents.ku.edu/policies/governance/USRR.htm#art2sect6>. Cheating, plagiarism or other academic misconduct will result in a failing grade on the assignment in question, and usually further disciplinary sanctions, possibly including a failing grade in the course.

You are encouraged to collaborate with other students on the homework assignments. However, intellectual honesty requires that each student write up his or her own solutions and acknowledge all collaborators. It is a violation of academic integrity to copy another student's homework, or to let someone else copy yours.

Students with disabilities: The KU Office of Disability Resources (22 Strong Hall; 785-864-2620 (V/TTY); <http://www.disability.ku.edu>) coordinates accommodations and services for all students who are eligible. If you have a disability for which you wish to request accommodations, please contact Disability Resources as soon as possible. Please also contact Prof. Martin privately in regard to your needs in this course.

Religious holidays: If you plan to observe a religious holiday which conflicts in any way with the course schedule or requirements, contact Prof. Martin at the beginning of the semester to discuss alternative accommodations.

Intellectual property: Course materials prepared by the instructor, together with the content of all lectures and review sessions, are the intellectual property of the instructor. Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited. Upon reasonable request, the instructor will usually grant permission to record lectures, on the condition that such recording is used only as a study aid by the student making the recording, and is not modified or distributed in any way.