

Instructors:

Nina Dokeva (Science Center 385, x 2388, ndokeva@clarkson.edu)
Michael Felland (Science Center 365, x 2383, felland@clarkson.edu)
Joseph Skufca (Science Center 387, x 2399, jskufca@clarkson.edu)
Donald Straight (Science Center 339, x 2386, straigdc@clarkson.edu)

Blackboard and Reserves:

Announcements, assignments, office and help hours, and scores will be posted at:

<http://blackboard.clarkson.edu>

Your first assignment (Homework 0) is to register for this course on Blackboard. Solutions to homework, lecture quizzes, exams and certain review materials will be placed on reserve at the ERC and will be available at:

<http://eres.clarkson.nynln.net/eres/>

Text:

James Stewart, *Calculus—Early Transcendentals* (5th edition, Brooks/Cole)
(There is also a student solution manual.)

Topics covered:

We will cover Chapters 1-5 of the text: Function concept, basic functions, limit, derivatives, differentiation rules, application of derivatives to maxima/minima and curve sketching, integral concept, Fundamental theorems, method of substitution.

Exams:

Hourly exams will be given October 5, November 2, and November 30 from 7-8 p.m. (Locations TBA). Date of the final will be announced later. (No exemptions from final.)

No books, notes or calculators will be allowed. An unexcused missed exam will receive a grade of zero. If you are absent, you must contact your lecture instructor as soon as possible (advanced notice, if possible, is preferred). Any appeal of the grading must be made in writing within three lectures from the day after the exams are returned.

Attendance Policy:

You must attend the lecture and recitation sections for which you are registered to receive credit for attendance and quizzes. To have an absence excused, you must submit an Explanation of Absence form (available on Blackboard) to your lecture instructor. Approval of an excuse is at the discretion of the lecture instructor.

Homework:

Homework will be assigned for each lecture, due at start of the lecture. Late homework will not be accepted. Homework missed due to excused absences will be dropped. Graders' judgments on homework grading are final and not open to appeal; grading errors (e.g. incorrectly totaling of points) and entry errors will be corrected. Each homework assignment will be graded on a five point scale—three points for the number of problems attempted and two points for the graded problem(s). The lowest two homework scores will be dropped.

Quizzes:

Quizzes will be given in recitation and lectures. Recitation quizzes will be collected at each recitation. Quizzes will be given at the end of most lectures and will be collected and graded occasionally. Quizzes missed due to excused absences will be dropped.

Calculus ABCs:

In order to pass this course with a grade of C or better, you must pass a “Calculus ABC” test with a score of 90% or better. The exam covers material from pre-calculus which is absolutely a basic prerequisite to this course (the material is basic essentials—which is why the 90% score is just a passing grade and not an “A”). The exams will be given on five evenings during the semester (August 31, September 7, September 13, October 11, and November 8) and during finals week. You must take the exam until you have passed it. Any student who has not passed the ABC on one of the first three times offered will be enrolled in Ma 041.

Grading:

Your final grade in Ma 131 will be based on a weighted average of homework scores (6%), recitation quizzes (10%), lecture quizzes (4%), three hourly exams (20% each for the two highest, 10% for the lowest), and the final exam (30%). Grades will be assigned as follows:

90-100%	A
85-89%	B+
80-84%	B
75-79%	C+
70-74%	C
65-69%	D+
60-64%	D
Below 60%	F

The grading scale is guaranteed: if at the end of course any slight changes are needed to make numerical scores accurately reflect knowledge, the cutoffs could be moved.

Note: To receive a grade of C or higher, you must pass the ABC Exam I with a score of 90% or higher.

Academic Integrity:

The Clarkson Code of Ethics states:

“The Clarkson student will not present, as his or her own, the work of another, or any work that has not been honestly performed, will not take any examination by improper means, and will not aid and abet another in any dishonesty.”

We take this very seriously. A violation will result in a strict penalty and will be reported to the Academic Integrity Committee.

Course Learning Objectives:

At end of the semester you should understand the concepts of derivative and integral. You should know the derivative as a limit of a difference quotient and be able to interpret it geometrically and as a rate of change. You should be able to compute derivatives of the elementary functions with facility and accuracy. You should know how to use derivatives to solve certain graphing and applied problems. You should know the integral as a Riemann sum and be able to interpret it geometrically and as total change. You should be able to compute integrals by finding antiderivatives and making simple substitutions with facility and accuracy.

Course Outcomes:

Upon completing this course you should:

- Be familiar with the elementary functions (polynomials, rational, trig, logarithmic and exponential)—properties, evaluations and graphs.
- Calculate limits and derivatives via limits.
- Know the derivatives of elementary functions and be able to accurately find derivatives using the differentiation rules.
- Be able to find maxima/minima, intervals of increase/decrease, and concavity for elementary functions.
- Be able to set-up models and solve elementary related rates and optimization problems.
- From the graph of a function be able to make a rough sketch of its derivative; from the graph of a derivative be able to roughly sketch a possible function.
- Be able to recognize elementary antiderivatives.
- Be able to compute integrals by finding elementary antiderivatives.
- Understand functions defined by integrals and find their derivatives.
- Be able to determine integrals by simple substitution.

Note: Students who have not passed the ABC exam on one of the first three times it is given will be placed in Ma 041.