

MAT 4-120 Calculus of a Single Variable I

November-December 2015

Course Outline

Instructor: Professor Tony deLaubenfels

Office: Law 222

Office Hours: 2:30 - 3:30 p.m. Monday through Friday

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E-mail address: tdelaubenfels (tdelaubenfels@cornellcollege.edu from off campus)

Text: Calculus, 2E by Ostebee and Zorn, Houghton-Mifflin. We will cover chapters 4 and 5 in this second course.

Class meetings: We will have Lecture/Discussion each morning from 9 a.m. until around 11 a.m. and afternoon class Monday through Thursday afternoons from 1:15 p.m. until 2:30 p.m. in our Law 221 classroom.

Exam schedule:

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Exam 1	Sections 3.5, 4.1-4.7	Friday, December 4
Exam 2	Sections 4.8, 4.9, 5-1-5.3	Friday, December 11
Final Exam	Section 5.4 – 5.7 + comprehensive	Friday, December 18

Evaluations: Your grade will be based on your performance on homework and exams according to the following schedule:

Exam 1	100 points
Exam 2	80 points
Final Exam	120 points
Homework and Quizzes	<u>100 points</u>
TOTAL possible	400 points

Course objectives:

Upon completion of MAT120 a successful student will be able to

- Solve applied problems including optimization problems using calculus and justify answers
- Demonstrate skills in algebra and knowledge of pre-calculus concepts including familiarity with standard families of functions
- Evaluate limits of indeterminate forms using L'Hopital's Rule
- Apply the definition of integral to calculate and estimate integrals from formulas, graphs, or data
- Use the Fundamental Theorem of Calculus to integrate composite polynomial, trigonometric, exponential, and logarithmic functions
- Use the method of substitution to evaluate integrals
- Express an understanding of what a differential equation is and is used for
- Use Taylor polynomials to represent or estimate functions
- Use software to perform operations relevant to calculus, including symbolic, graphical, and numerical

This course supports the *Educational Priorities and Outcomes of Cornell College* with emphasis on knowledge, inquiry, and reasoning.

Policies:

Homework. Homework assignments and other course related information will be posted on Moodle. Most homework will not be regularly collected, but it will be the basis for our class discussions, quizzes, and exams.

Distractions. Other than our classroom computer, no electronic devices (laptop computers, cell phones, pdas, mp3 players) may be used in our classroom while class is in session. Exceptions will be made in special cases, for example if these are used in an accommodation for a disability.

Drop. I follow the college's policy on 15th day drops. i.e. in order to be eligible for a "third Friday" drop, you must attend class and complete all course work.

Academic Integrity. Cornell College expects all members of the Cornell community to act with academic integrity. An important aspect of academic integrity is respecting the work of others. A student is expected to explicitly acknowledge ideas, claims, observations, or data of others, unless generally known. When a piece of work is submitted for credit, a student is asserting that the submission is her or his work unless there is a citation of a specific source. If there is no appropriate acknowledgment of sources, whether intended or not, this may constitute a violation of the College's requirement for honesty in academic work and may be treated as a case of academic dishonesty. The procedures regarding how the College deals with cases of academic dishonesty appear in *The Compass*, our student handbook, under the heading "Academic Policies – Honesty in Academic Work."

Accommodation. Students who need accommodations for learning disabilities must provide documentation from a professional qualified to diagnose learning disabilities. For more information see cornellcollege.edu/disabilities/documentation/index.shtml. Students requesting services may schedule a meeting with the disabilities services coordinator as early as possible to discuss their needs and develop an individualized accommodation plan. Ideally, this meeting would take place well before the start of classes. At the beginning of each course, the student must notify the instructor within the first three days of the term of any accommodations needed for the duration of the course.