

# MAT 120 Calculus of a Single Variable Part I

Block 4 November-December 2018

**Instructor:** Professor Scott Jordan

**Email:** sjordan@cornellcollege.edu

**Office:** Law Hall 204

**Office Hours:** By appointment.

**Text:** *Calculus from Graphical, Numerical, and Symbolic Points of View* (2<sup>nd</sup> edition) by Ostebee and Zorn

**Class Meeting Times:** There will be Lecture/Discussion each morning from 9:15 a.m. until around 11 a.m. and afternoon class Monday through Friday from 1 p.m. until 2:30 p.m. We will meet in Law Hall 221.

**Prerequisite(s):** The prerequisite for MAT 120 is three and one-half years of high school mathematics, including trigonometry.

**Course Description from the Cornell Catalog:** Differential and integral calculus of functions of one real variable and analytic geometry of two variables. This course emphasizes review of pre-calculus material and is appropriate for students who feel they need more time in order to succeed in calculus.

## Course Objectives:

Upon completion of MAT 120 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, reasoning, and communication.

## How to be successful in MAT 120:

Accept responsibility for your own learning.

Be prepared for class - read the text before class.

Complete assignments on time.

Don't get behind. Complete assignments as soon as possible. Seek help as soon as you realize you need it.

**Homework:**

Homework is critical to your understanding of this course. The assignments are to help you prepare for the quizzes, exams, and the final exam. Make sure that your homework is worth grading. Failure to follow the following homework submission format will result in the loss of points and may result in refusal of the submission entirely. Each homework packet will be worth two points. Homework will be graded based on completion. The points will be distributed according to the following table.

Problems Missing	Homework Score
0-5	2
+5	1
No submission	0

Homework is to be turned in electronically in Moodle. Homework will need to be submitted as a single PDF file. Multiple files submission and other file types will not be accepted and you will receive a zero.

**Quizzes:**

Quizzes will be taken in class. It will contain questions that pertain to any material previously covered.

**Homework and Quiz Policies:**

1. Problem numbers should be easily identified in the left margin so I can easily pick them out. Failure to do this will result in the loss of one point.
2. No late homework will be accepted.
3. A horizontal line drawn across the paper should intersect only one problem. There will be one point taken off if the homework does not pass this horizontal line test.
4. It is your responsibility to ensure that pages in the submitted homework packets are in order, each section is clearly marked, and that it contains all the necessary work. If your homework packet fails on any of these areas, you will lose points. If the packet is missing pages, you will not be able to get credit for those missing pages.

**Exams:**

There will be three exams taken in class. Calculators, headphones, and other electronic devices are not allowed during exams.

**Attendance:** Attendance for this class is mandatory. If you have to miss class do to some school sponsored event, please let me know ahead of time. Failure to come to class will result in the loss of points. Each class meeting will be worth one point. That means that most days you can get up to 2 points in attendance.

**Grade Distribution:**

Attendance	5%
Homework	15%
Quizzes	30%
Exams	50%

**Letter Grade Distribution:**

Range	Letter	Range	Letter
>= 93.00	A	73.00 - 76.99	C
90.00 - 92.99	A-	70.00 - 72.99	C-
87.00 - 89.99	B+	67.00 - 69.99	D+
83.00 - 86.99	B	63.00 - 66.99	D
80.00 - 82.99	B-	60.00 - 62.99	D-
77.00 - 79.99	C+	<= 59.99	F

I reserve the right to adjust this grade distribution as needed.

**Course Policies:**

- **Changes in the syllabus**

I reserve the right to make changes to any part of this syllabus. Changes will be announced in class and through class wide email. If changes are made, a revised syllabus will be posted in Moodle.

- **Textbook**

There will be times during the day when we will work from the textbook. You are required to bring it to class every day.

- **Communication and availability**

I am available most of the day. I leave my office sometime between 4-5 pm. I may be available to answer emails between 9-10 pm. If you email me after that time, don't expect a response till the next day.

- **Distractions**

Other than our classroom computer, no electronic devices (laptop computers, cell phones, pdas, and 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 every class meeting 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 acknowledgement 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 Catalogue, under the heading "Academic Honesty."

- **Accommodations**

Cornell College makes reasonable accommodations for persons with disabilities. Students should notify the Coordinator of Academic Support and Advising and their course instructor of any disability related accommodations within the first three days of the term for which the accommodations are required, due to the fast pace of the block format. For more information on the documentation required to establish the need for accommodations and the process of requesting the accommodations, see <http://www.cornellcollege.edu/academic-support-and-advising/disabilities/index.shtml>.