Calculus I MATH 150

Department of Mathematics and Statistics

Hunter College Fall 2026

4.0 hours, 4 credits

Ms.Zummo

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Office Hours:

Course Description: This is a one semester introduction to differential and integral calculus, suitable for all students majoring in science or mathematics, or any other course of study requiring calculus.

Expected Learning Objectives:

The student will learn to:

- Compute limits and determine continuity of functions of one variable.
- Differentiate functions using the definition of the derivative, the power rule, the product and quotient rules, the chain rule, and implicit differentiation.
- Apply the Mean Value Theorem and the Intermediate Value Theorem to solve problems.
- Apply derivatives to related rates, curve sketching and optimization, and linear approximation problems.
- Find antiderivatives and evaluate definite integrals using Riemann sums and the Fundamental Theorem of Calculus.

Prerequisites: MATH 12550 with a grade of B- or better or Math 12400, Math 12500, or Math 12550, with a grade of C or better, AND corequisite Math 14000 or appropriate score on the Hunter College Math Placement Exam.

Required Textbook: Essential Calculus: Early Transcendentals, 2nd Edition, James Stewart, Cengage Publishing. **(E-book is accessible with WebAssign Access Code Purchase.)**

Required Online Homework System:

WebAssign, Cengage

Homework:

Homework will be assigned on a regular basis and will count as 10% of your grade. We will use WebAssign which is an online homework system. Use the following information to enroll in the class.

1) Log into your Brightspace account and click on the link for this course (you will not need a course key to register for WebAssign).

2) Sign into your Cengage account or create an account. If creating an account, we highly recommend using your school email address!

3) After you sign in, it will take you to the purchase page. You can either purchase single term , multi term (if taking more than one semester of Calculus), or Cengage Unlimited.

Students will also have free access for the first two weeks of the semester.

You should begin working in WebAssign **IMMEDIATELY.** The deadline for completing the online homework sets is prior to the day of the quizzes or exams that will test those topics. **DO NOT ASK FOR AN EXTENSION**. You must do the homework problems before they are tested. If you have not done the homework before it is due, you are not using the homework effectively.

PRICING FOR STUDENTS

We have a special discount in place for Hunter College for students to purchase WebAssign. In order for students to receive it, they **MUST HAVE HUNTER COLLEGE LISTED AS THEIR INSTITUTION IN THEIR CENGAGE ACCOUNT.**

The prices are: $99.20 for single term (if you only plan to take Math 150, Calculus I)

$119.28 for multi (if you plan to take Math 155, Calculus II

Exams & Grades:

A. There will be three exams and a *cumulative* final exam. Your final average will be based on 85% of the average of the exams plus 10% of your homework grade plus 5% for quizzes. The final will be worth two of the other exams. The final exam will be on the final exam day and time scheduled by Hunter College for that particular section, based on the class meeting time. Check the Hunter final examination schedule. Your lowest exam grade will be dropped. (If the final is the lowest grade, it will be counted as one exam). If you miss an exam, that exam will count as your lowest grade, so it will be dropped. **THERE ARE NO MAKE-UP EXAMS**. If you miss **two** exams prior to the final your status in the course will be in serious jeopardy. Projects for "extra credit" will not be assigned to individual students. Such a policy is unfair to students who are not given the option.

B. If you stop attending the course and do not withdraw, you will receive a grade of WU. This course is not eligible for Pass/No Credit grading.

C. If you miss the final exam, you will receive a grade of WU.

D. Under normal circumstances, only students averaging C or above in a course who miss the final exam for documented emergencies and have taken at least two in-class exams are eligible to apply for Incompletes.

E. Graphing calculators are NOT allowed.

Dolciani Mathematics Learning Center: The DMLC is located on the 7th floor of the library, is an extremely valuable resource to Hunter math students. They offer a wide range of services, including in-person and online tutoring in Calculus. There are also a number of workshops-on problem solving, learning skills, among others. Their web page is https://www.hunter.cuny.edu/dolciani,

Academic Integrity:

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

Disabilities:

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is

recommended that all students with documented disabilities (Emotional, Medical, Physical and/or Learning) consult the Office of Access ABILITY located in Room 1214B Hunter East to secure necessary academic accommodations. For further information and assistance please call (212-772-4857)/TTY (212-650-3230).

Hunter College Policy Sexual Misconduct:

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are
entitled to the rights outlined in the Bill of Rights for Hunter College.

a. Sexual Violence:

Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).

b. All Other Forms of Sexual Misconduct:

Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123. CUNY Policy on Sexual Misconduct Link:
http://www.cuny.edu/about/administration/offices/la/Policy-on-SexualMisconduct-12-1-14-with-links.pdf

Calculus I MATH 150 Syllabus

Lecture-by-Lecture

Department of Mathematics and Statistics

Hunter College

Text: Essential Calculus, 2nd Edition, James Stewart, Cengage

NOTE THIS IS SUBJECT TO CHANGE.

LECTURE	SEC.	TOPIC
8/31	1	1.3 The Limit of Limits
9/2	2	1.4 Calculating Limits
9/9	3	1.5 Continuity
9/14	4	1.6 Limits involving Infinity (QUIZ # 1-sec.1.3, 1.4)
9/16	5	2.1 Derivatives and Rates of Change
9/23	6	2.2 The Derivative as a Function (QUIZ #2 – sec.1.5, 1.6)
9/28	7	2.3 Basic Differentiation Formulas
	7	2.4 The Product and Quotient Rules
9/30	8	2.5 The Chain Rule (QUIZ # 3-sec.2.1, 2.2)
10/5	9	2.6 Implicit Differentiation (Quiz #4-sec.2.3, 2.4, 2.5)
10/7	10	2.7 Related Rates
10/13	11	Exam I (up to 2.7)
10/14	12	2.8 Linear Approximations and Differentials 3.1 Exponential Functions
10/19	13	3.2 Inverse Functions and Logarithms
10/21	14	3.3 Derivatives of Logarithmic and Exponential
10/26	15	3.7 Indeterminate Forms & L'Hôpital's Rule (Quiz #5-sec.2.8,3.1,3.2)

10/28	**16**	**4.1 Maximum and Minimum Values** **4.2 The Mean Value Theorem**
11/2	**17**	**4.3 Derivatives and Shape of Graphs** **4.4 Curve Sketching**
11/4	**18**	**Exam II (last exam → 4.4)**
11/9	**19**	**4.5 Optimization Problems**
11/11	**20**	**4.7 Antiderivatives**
11/16	**21**	**5.1 Areas and Distances**
11/18	**22**	**5.2 The Definite Integral**
11/23	**23**	**5.3 Evaluating Definitive Integrals (Quiz#6-sec 4.5,4.7,5.1)**
11/30	**24**	**5.4 The Fundamental Theorem of Calculus**
12/2	**25**	**5.5 The Substitution Rule (Quiz #7-sec.5.2,5.3,5.4)**
12/7	**26**	**REVIEW**
12/9	**27**	**Exam III (up to 5.5)**
12/14	**28**	**REVIEW**
FINAL EXAM TBA		

PLEASE READ THE INDICATED SECTIONS BEFORE IT IS COVERED IN CLASS.

Syllabus:

Chapter 1: Functions and Limits

1.3 The Limit of a Functions

1.4 Calculating Limits

1.5 Continuity

1.6 Limits involving Infinity

Chapter 2: Derivatives

2.1 Derivatives and Rates of Change

2.2 The Derivative as a Function

2.3 Basic Differentiation Formulas

2.4 The Product and Quotient Rules

2.5 The Chain Rule

2.6 Implicit Differentiation

2.7 Related Rates

2.8 Linear Approximations and Differentials

Chapter 3: Inverse Functions: Exponential, Logarithmic & Inverse Trigonometric Functions

3.1 Exponential Functions

3.2 Inverse Functions and Logarithms

3.3 Derivatives of Logarithmic and Exponential Functions

3.7 Indeterminate Forms & L'Hôpital's Rule

Chapter 4: Applications of Differentiation

4.1 Maximum and Minimum Values

4.2 The Mean Value Theorem

4.3 Derivatives and the Shapes of Graphs

4.4 Curve Sketching

4.5 Optimization Problems

4.7 Antiderivatives

Chapter 5: Integrals

5.1 Areas and Distances

5.2 The Definite Integrals

5.3 Evaluating Definite Integrals

5.4 Fundamental Theorem of Calculus

5.5 The Substitution Rule