Calculus II MATH 155

4.0 Hours, 4.0 Credits
Department of Mathematics and Statistics
Hunter College

Math 155.02, MTh 9:10-11:00 on Zoom, First class Aug 27.
Links to Zoom meetings will be posted on Blackboard. I will be giving Zoom lectures, record them and post links on the Blackboard.

Instructor: Olga Kharlampovich (okharlampovich@gmail.com; okharlam@hunter.cuny.edu)

Course Description:

This is the second semester of a calculus sequence which is an introduction to differential and integral calculus, suitable for all students majoring in science or mathematics, or any other course of study requiring calculus.

Goals:

The student will be expected to differentiate and manipulate transcendental functions, evaluate definite and indefinite integrals using substitution, integration by parts, trigonometric substitution, and partial fractions, approximate definite integrals using numerical techniques, compute arc lengths of curves and areas of surfaces of revolution in rectangular and polar coordinates, evaluate the convergence of infinite series, and compute and manipulate power series representations of functions.

Prerequisites:

Completion of MATH 150 or the equivalent with a grade of C or better.

Text:

Essential Calculus, 2nd Edition
By: James Stewart ,
Cengage Learning.

Topics to be covered:

Lecture

1	08/27	5.1 Inverse functions
2	08/31	5.2 The natural logarithmic function
3	09/03	5.3 The natural exponential function
4	09/10	5.5 Exponential growth and decay
5	09/14	5.6 Inverse trigonometric functions
6	09/17	5.8 Indeterminate forms and L'Hospitals rule
7	09/21	Quiz 1
8	09/24	6.1 Integration by parts
9	09/29	6.2 Trigonometric integrals and substitutions
10	10/01	6.3 Partial fractions
11	10/05	6.5 Approximate integrals (Just Simpson's rule)
12	10/08	6.6 Improper integrals
13	10/14	Quiz 2
14	10/15	7.4 Arc length
15	10/19	7.5 Area of a surface of revolution
16	10/22	7.6 Applications to physics and engineering (Just Hooke's law)
17	10/26	8.1 Sequences

17		8.2 Series
18	10/29	8.3 The integral and comparison tests
19	11/02	8.4 Other convergence tests
20	11/05	Quiz 3
21	11/09	8.5 Power series
22	11/12	8.6 Representing functions as power series
23	11/16	8.7 Taylor and Maclaurin series
24	11/19	8.8 Applications of Taylor polynomials
25	11/23	Quiz 4
26	11/30	9.1 Parametric curves
26		9.2 Calculus with parametric curves
27	12/03	9.3 Polar coordinates
28	12/07	Quiz 5

Policy on Homework, Exams, Grade:

Homework will be assigned on a regular basis and will count for 10% of your grade. We will use Lumen an online homework system

There will be five quizzes administered on Lumen during class time and a cumulative final exam (that is counted as 2 quizzes) administered on Lumen. Your final grade will be determined by 90% of your average on the exams plus your homework.

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 will count as

your lowest grade, so it will be dropped. If you miss the final exam you will receive a grade of WU. If you miss two exams prior to the final then your status in the course will be in serious jeopardy.

If you stop attending the course and do not withdraw, you will receive a grade of WU.

You may elect to take the course on a credit/no credit basis if you are eligible, but this is subject to the College's rules, which means you that you will not be eligible for credit/no credit grading unless you have taken all the exams, including the Final Exam, and completed most of the homework.

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: If you have a disability that you believe requires special accommodations: 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 AccessABILITY located in Room E1214B to secure necessary academic accommodations. For further information and assistance please call (212- 772- 4857)/TTY (212- 650- 3230).

To obtain a Lumen account (which cost $25):

- Login: [Link to Lumen Learning](#)
- Course ID: **45719**
- Enrollment Key: **integrals**