Calculus II MATH 155

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

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:

Single Variable Calculus, 2nd Edition, **with MyMathlab**,
By: Briggs, Cochran, Gillett ,
Pearson Publishing.

Topics to be covered:

Chapter 6:

6.3 Volumes by Slicing

6.5 Length of Curves

6.6 Surface Area

9.3 Infinite Series

9.4 The Divergence and Integral Tests

9.5 The Ration, Root and Comparison Tests

9.6 Alternating Series

Chapter 10

10.1 Approximating Functions with Polynomials

10.2 Properties of Power Series

10.3 Taylor Series

10.4 Working with Taylor Series

Chapter 11:

11.1 Parametric Equations

11.2 Polar Coordinates

11.3 Calculus in Polar Coordinates

Suggested policy on Homework, Exams, Grade:

Homework will be assigned on a regular basis and will count for 10% of your grade. We will use MyMathlab, an online homework system. You will receive details about how to login to MyMathlab.

There will be three exams and a cumulative final exam. Your final grade will be determined by 90% of your average on the exams plus your homework. The final will be worth two of the other exams.

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).