DCC Calculus I, 2021-2022

- Mat 221 I-9J1, CRN 5793
- Cr. Hrs. 4

Instructor: Robert Haaland, Robert.haaland@sunydutchess.edu
Robert.haaland@wcsdny.org

Room 140 Period 7 (10:17-11:01)

Course Description:

This course is the first of a three-semester sequence developing calculus for the student majoring in engineering, mathematics, or the sciences. Topics include the derivative, limits, continuity, differentiability, the definite integral, the Fundamental Theorem of Calculus, techniques of differentiation (including for transcendental functions), applications of differentiation, mathematical modeling and computer applications.

Course Student Learning Outcomes:

- Compute limits of the elementary functions, including limits involving infinity. Distinguish between ordinary limits and limits of indeterminate forms. Choose an appropriate method of either exact evaluation or numerical approximation.

- Compute derivatives of elementary functions by applying, as appropriate, the formal definition of the derivative, numerical approximation or differentiation rules.

- Apply differentiation and limits to solving basic problems including linear approximation, function behavior, and optimization.

- Evaluate simple definite integrals using, as appropriate, Riemann sums or the Fundamental Theorem of Calculus, and interpret the results.

- Use the language of calculus to explain and interpret the mathematics used in the problem solving process.

- Use a computer algebra system to investigate, illustrate and apply the concepts of calculus.

Student learning outcomes will be assessed using instruments appropriate to the discipline. The instructor will present material and act as a resource and guide for information. The student is responsible for demonstrating achievement of the learning outcomes.

Required Text and Technology:

Required Text (s)

- *Calculus Concepts & Contexts*, James Stewart, (4e, 2010), Brooks/Cole, Cengage Learning

- *Mathematica Basics: An Introduction for using Mathematica at Dutchess Community College*, Halsey

Course Policies:

- The best way to contact me for any issue is by email.
- Come to class on time and prepared to work. You will need to bring your textbook and calculator every day. We will be using both on a regular basis during instruction.
- Attendance is extremely important if you hope to be successful in this class. You are responsible for all material and assignments missed due to being absent or late to class.
- Grades will be calculated using a total points system. Each assignment (test/quiz) will be worth a predetermined number of points, your grade will be calculated by dividing the number of points you earn by the total number of points you could have earned.
- The number of test and quizzes will vary by marking period.
- There will a cumulative final exam at the end of the course.

- I will try to announce the dates of each test at least a couple days in advance. Some exams will be in class and others may be take home assignments. The number of tests per semester is subject to change.
- If you miss a test/assignment due to absence, you **must** contact me by e-mail prior to or on the day of the test/assignment with the reason you are absent. If you do not contact me you will get a grade of **zero** on the test/assignment. If you give an unacceptable reason for the absence (I had to work, I forgot about the test, I overslept) you will get a zero on the test/assignment. If you have an acceptable reason for the absence, it is up to you to make arrangements with me to make up the test/assignment.

- Your final DCC grade will be calculated as follows, Q1 20%, Q2 20%, Q3 20%, Q4 20%, and Final Exam 20%.
- Final grades will be evaluated as follows:

Grade	Numerical Value
A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	70-76
D	60-69
F	0-59

- If you are caught cheating on a test you will receive a grade of zero.
- Homework will be assigned on a regular basis. Many test questions will come from the homework.
- If you need additional help with the course material, see me and we can make arrangements before or after class.
- The Math Center located on the 2nd floor of Washington Center, is an excellent resource for additional help. I would encourage you to use this free service if you are having trouble with the course material.
- All Math center tutoring is done via zoom using the following link https://www.sunydutchess.edu/academics/academicsupport/tutoring/math_and_science_center/

Academic Accommodations

- If you have accommodations, you will continue to use them using JJ's procedures.

Academic Integrity Policy

Dutchess Community College is committed to the principles of honesty, integrity, and ethical behavior. It is expected that students will recognize these values and adhere to all aspects of student conduct and academic honesty inside and outside of the classroom.

Academic dishonesty in any form is regarded by the College as a breach of academic ethics and may result in disciplinary action.

Academic dishonesty includes, but is not limited to, the following:
- Cheating on examinations
- Plagiarism: the representation of another's ideas or writing as one's own. Examples include:
  - presenting all or part of another person's published work as something one has written;
  - paraphrasing or summarizing another's writing without proper acknowledgement (citation);
  - representing another's artistic or technical work or creation as one's own.
- Willingly collaborating with others in any of the above actions which result(s) in work being submitted which is not the student's own.
- Stealing examinations, taking electronic images, falsifying academic records and other such offenses.
- Knowingly permitting another student to use one's work or cheat from one's examination.
- Submitting work previously presented in another course without permission of instructor.
- Unauthorized duplication of computer software.
- Unauthorized use of copyrighted or published material.

If, based on substantial evidence, an instructor deems that a student is responsible for a violation of the Academic Integrity Policy, the instructor may take the following actions:

- The instructor may require that the student repeat the assignment or examination, or
- The instructor may give the student a failing grade for the assignment or examination, or
- The instructor may give the student a failing grade for the course.

As an institution of higher education, it is incumbent on the College to ensure that students understand and uphold the highest standards of academic honesty and that there be accountability in cases where students repeatedly violate those principles. In order to build an

intellectual culture of academic integrity and ensure that students learn appropriate behavior in their academic endeavors, faculty and staff who judge that a student intentionally violates the Academic Integrity Policy shall report said violation to the Office of Academic Affairs.

The Office of Academic Affairs, in consultation with faculty and staff, will be responsible for developing and implementing appropriate academic administrative reporting procedures, educational interventions, disciplinary actions, and appeal processes.

Students' right to privacy will be upheld, and all students shall have the right to appeal any action that results from this process.

COVID-19 Safety Protocols Statement

Only students who are scheduled for an in-person class or have a confirmed appointment are allowed on campus. While on campus, all students must comply with the College's COVID-19 protocols including: requirement to wear face coverings, follow social distancing guidelines and exercise preventative measures that include symptom monitoring and personal safety practices. Every time a student comes to campus they will be required to complete a health screening survey to ensure that they are not symptomatic, have not tested positive, have not been in contact with someone who has tested positive in the last 14 days, and to confirm their recent travel history. This health screening survey must be completed on the day of the class/appointment prior to arriving on campus. Please note that every building will have a check-in process that will require students to show their DCC ID and confirmation of completing the Health Screening Survey, which indicates clearance to enter the building. Please allow adequate time to complete the check-in process to ensure on-time arrival for class. All students must display their DCC ID at all times when on campus.