

MATH 1131Q
Calculus I
Current Semester

High School Name

Instructor: Your Name Here
Your phone number
Your email address

This course is given in cooperation with the Early College Experience Program
at the University of Connecticut, ece@uconn.edu, 860-486-1045

Meeting Times:

Office Hours:

Text: Single Variable Calculus: Early Transcendentals, 8th edition, James Stewart, 2016, Cengage

Prerequisite: Precalculus or a course in Algebra & Trigonometry

Goals & Expectations: The goal for the semester is to learn, to understand, and to be able to work with the main concepts of Calculus I: limits, continuity, differentiability, and integrability as they apply to algebraic, exponential, logarithmic, and trigonometric functions. This does not mean that you should only be able to work through similar problems to those in the homework, but that you should have the ability to go beyond and to present your knowledge in a clear and coherent manner as well. You should be able to apply the theory and ideas of the course to general questions and problems.

Homework & Quizzes: Mathematics is best learned through practice, most of which will happen outside of the classroom. Homework will be assigned in class with a due date that will generally be the following class. Quizzes will be given periodically.

Exams: There will be three exams. Exam 1 will cover sections 2.1-2.8, and 3.1. Exam 2 will cover 3.2-3.10 (omit 3.7), and 4.8. Exam 3 will cover 4.1-4.4, 4.7, 4.9, and 5.1-5.3. The final exam will be cumulative, covering all previously mentioned material and sections 5.4-5.5, 6.1-6.2. The date of the final exam has not yet been determined and will be announced when it is known.

Late Work & Makeup Policy: Late work will be accepted at discretion of the instructor and may be accompanied by a penalty on the score. No makeups for quizzes or exams will be given unless there is a verifiable excuse. All issues with final exam rescheduling are handled by the Dean of Students office.

Grading: The final grade will be within one full letter grade of the final exam grade with adjustments made to ensure synchronicity with the UConn-Storrs grading standard. Within this framework, the grade for the course will be based as follows:

Homework (20%)
Quizzes (20%)
Exams 1, 2, 3 (12% each)
Final Exam (24%)

Academic Integrity: A fundamental tenet of all educational institutions is academic honesty; academic work depends upon respect for and acknowledgement of the work and ideas of others. Misrepresenting someone else's work as one's own is a serious offense in any academic setting, and it will not be condoned. Sanctions shall include, but are not limited to, a letter sent to the Office of Community Standards of the University, a grade of 0 on the assignment, quiz, or exam, or a grade of F for the course.

Math 1131Q Outline (updated Fall 2018)

Section	Topic
2.1	The Tangent and Velocity Problems
2.2	The Limit of a Function
2.3	Calculating Limits Using the Limit Laws
2.4	The Precise Definition of a Limit
2.5	Continuity
2.6	Limits at Infinity; Horizontal Asymptotes
2.7	Derivatives and Rates of Change
2.8	The Derivative as a Function
3.1	Derivatives of Polynomials and Exponential Functions
3.2	The Product and Quotient Rules
3.3	Derivatives of Trigonometric Functions
3.4	The Chain Rule
3.5	Implicit Differentiation
3.6	Derivatives of Logarithmic Functions
3.8	Exponential Growth and Decay
3.9	Related Rates
3.10	Linear Approximations and Differentials
4.8	Newton's Method
4.1	Maximum and Minimum Values
4.2	The Mean Value Theorem
4.3	How Derivatives Affect the Shape of a Graph
4.4	Indeterminate Forms and l'Hospital's Rule
4.7	Optimization Problems
4.9	Antiderivatives
5.1	Areas and Distances
5.2	The Definite Integral
5.3	The Fundamental Theorem of Calculus
5.4	Indefinite Integrals and the Net Change Theorem
5.5	The Substitution Rule
6.1	Area Between Curves
6.2	Volumes