THE CATHOLIC UNIVERSITY OF AMERICA

Math 111 Syllabus

Instructor: Anthony Christiana

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Course: Math 111 Sec 15

Class Meeting Time: TWR

Prerequisites: Placement exam score 1 or 2, or Grade of P in Math 11 or 21, or a grade of C- or better in Math 110, 108

About Me:

My name is Anthony, and I am a 3rd year PhD Student at GWU. I study pure math, specifically knots!



Course Description:

This is an introductory calculus course meant to provide students with the tools to answer the question: *how does a function change over time?*



Content:

Functions and their graphs; linear functions; functional models; derivative, rate of change and marginal analysis; approximation by differentials; chain rule, implicit differentiation and higher-order derivatives; curve sketching: relative extrema, concavity; absolute extrema; exponential functions and natural logarithms and their derivatives; compound interest. Not open to students who have had 121.

Courses in mathematics support the mission of the university by teaching students to think and reason logically, helping them develop critical thinking skills and knowledge for success with personal and professional development.

Schedule

The pace of the course will be quick, so I have built in chances for us to catch up along the way.

	Tuesday	Wednesday	Thursday
5/20-5/22	2.1 Functions and Their Graphs 2.2 The Algebra of Functions 2.3 Functions and Mathematical Models	2.4 Limits 2.5 One-Sided Limits and Continuity	2.6 The Derivative
5/27-5/29	**Quiz 1:** Algebra, Limits, and Definition of Derivative 3.1 Basic Rules of Differentiation 3.2 The Product and Quotient Rules	3.5 Higher Order Derivatives 4.1 Application of the First Derivative	4.2 Application of the Second Derivative Midterm Review
6/3-6/5	**Midterm:** Limits and Differentiation 4.3 Curve Sketching	4.3 Curve Sketching	3.6 Implicit Differentiation and Related Rates
6/10-6/12	**Quiz 2:** Implicit Differentiation, Related Rates, Curve Sketching 4.4 Optimization 1	4.4-4.5 Optimization 1 & 2	5.1 Exponential Functions 5.2 Logarithmic Functions
6/17-6/19	5.5 Differentiation of Logarithmic Functions 5.3 Compound Interest	Catch-up and Final Review	**Final**

Homework

All homework will be assigned via WebWork for this class. You will need to purchase access to WebWork, which will include access to the associated ebook (our textbook).

WebWork Trouble?: Sometimes WebWork is funny, and something extra-mathematical prevents you from receiving full credit on the problem – for instance, formatting is a huge problem. If you think a problem is broken, send me an email with **Section Number, Problem Number, Screenshot**.

EX: Subject: WebWork Section 2.3 Problem 3 Broken

Grading Breakdown

Homework: 20%

Midterm: 25%

Quizzes: 25%

Final: 30%

The course grade, based on your total score out of 100, is as follows:

00 - 59 F	60 - 69 D;	70 - 72 C-;	73 - 76 C;	77 – 79 C+;
80 - 82 B-;	83 - 86 B;	87 - 89 B+;	90 - 92 A-,	93 - 100 A

UNIVERSITY POLICY

Academic Integrity

Academic dishonesty at The Catholic University of America is not tolerated. As such, academic integrity is not merely avoiding plagiarism or cheating, but it certainly includes those things. Aca- demic integrity means, above all else, taking responsibility for your work, your ideas, and your effort, and giving credit to others for their work, ideas, and effort. If you submit work that is not your own - whether test answers, whole papers, or something in-between - that is considered to be academic dishonesty. University procedures related to academic dishonesty are conducted with respect and dignity, while also preserving accountability, and they presuppose that allparticipants will treat each other with respect and dignity.

- Undergraduate Student Academic Dishonesty Policy
- Graduate Student Academic Dishonesty Policy

Grades and Academic Standing

- Undergraduate policies on grades and academic standing.
- Graduate policies on grades and academic standing.

University Recording Policies

- Recording Classroom Lectures Policy "Recording of classroom lectures is prohibited unless advance written permission is obtained from the class instructor and any guest presenter(s)."
- CUA Recording Policy

Accommodations for Students with Disabilities

Any student who feels they may need a reasonable accommodation based on the impact of a disability should contact the Office of Disability Support Services by emailing at CUA-DSS@cua.edu