



AMBROSE
UNIVERSITY COLLEGE

FACULTY OF
ARTS & SCIENCE

Syllabus

MATHEMATICS 149- Introductory Calculus

Calendar Description: (3-2) A

This course teaches functions and graphing, integrals and derivatives, as well as exponential, trigonometric, and logarithmic functions.

Prerequisite: Math 30

Note: Students may not receive credit for both MA 149 and the former MA 151

Instructor: John Wiest

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Text: *Single Variable Calculus*

Jon Rogawski

W.H. Freeman & Co.

The course consists of 3 hours of lecture and 1 hour of lab/tutorial per week. All quizzes will be written during lab/tutorial hours. The best 4 marks on quizzes will be taken in for grades. Attendance at lectures and tutorials will help ensure success on quizzes and exams. If any quiz/exam is missed due to illness or death in the family, a doctor or counselor's note is required before a rewrite will be allowed.

Marking:	Quizzes (best 4 out of 5)	20%
	Midterm	30%
	Final (cumulative)	50%

Grading Scheme

A	90-100%	C	63-66%
A-	85-89%	C-	60-62%
B+	80-84%	D+	54-59%
B	76-79%	D	50-53%
B-	70-75%	F	Below 50%
C+	67-69%		

The following is a tentative schedule for the topics that will be covered in the course.

<u>Week of</u>	<u>Topic</u>
Sept. 15	Real Numbers, Functions and Graphs; Linear and Quadratic Functions; The Basic Classes of Functions
Sept. 22*	Trigonometric Functions
Sept. 29	Inverse Functions; Exponential and Logarithmic Functions; Limits
Oct. 06*	Limits; Basic Limit Laws; Continuity; Evaluating Limits; Trigonometric Limits
Oct. 13	Intermediate Value Theorem; Definition of the Derivative; Differentiation Rules; Rates of Change; Higher Derivatives
Oct. 20*	Derivatives of Trigonometric Functions; The Chain Rule; Implicit differentiation; Derivative of the Inverse
Oct. 27	Derivatives of Exponential and Logarithmic Functions Related Rates
Nov. 03	Linear Approximation; Extreme Values; Mean Value Theorem
Nov. 10	Graph Sketching; Optimization;
Nov. 17*	L'Hopital's Rule; Antiderivatives; Approximating Area;
Nov. 24	The Definite Integral; The Fundamental Theorem of Calculus
Dec. 01*	The Method of Substitution; Area between two curves
Dec. 08	Review

Weeks with a (*) are those in which a quiz will be administered. The midterm will likely be somewhere in the week of November 03.