

MATH 1570 - Applied Calculus 1

Summer 2026 Syllabus, Section 01, CRN 30661,

Credit hours: 4

Instructor

Paul Nachim

Professional Qualifications:

Master of Science, Mathematics, Youngstown State University, 1990

Lecturer

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Communication Expectations:

I prefer to be contacted by email or in person

How to Refer to me:

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Course Description

1570. Applied Calculus 1. The elements of differential and integral calculus, with emphasis on applications. Analytical geometry, differentiation and integration techniques and series representations. Introduction to differential equations, transform calculus, and Fourier analysis. This is a basic methods course particularly adapted for those who require applied topics in mathematics. Not applicable toward the Mathematics major. Credit will not be given for both MATH 1552 and MATH 1570. Prereq.: At least Level 70 on the YSU Mathematics Placement Test or "C" or better in either MATH 1510 and MATH 1511, MATH 1510C and MATH 1511C, or MATH 1513. 4 s.h.

Course Readings

Group	Title	Author	ISBN
Optional	Technical Calculus with Analytic Geometry (5th Edition).	Peter Kuhfittig	1-133-94519-8

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Tentative Coverage of Topics

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Mon	5/11	Sections 1.3, 2.1	Introduction Functions and Lines	
Wed	5/13	Section 2.2	Limits of Functions	
Mon	5/18	Sections 2.2, 2.3, 2.4	Limits and Graphs Definition of the Derivative	
Wed	5/20	Sections 2.5	Derivatives of Polynomials	
Mon	5/25	No Class		
Wed	5/27	Section 2.7	Differentiation Rules	

Mon	6/1	Sections 2.6, 2.9	Rates of Change Higher-Order Derivatives Applications
Wed	6/3	Sections 3.1, 3.2, 3.3	Curve Sketching Analysis 1
Mon	6/8	Sections 3.1, 3.2, 3.3	Curve Sketching Analysis 2
Wed	6/10	Section 3.4	Applications of Minima and Maxima
Mon	6/15	Section 3.5	Relative Rates
Wed	6/17	Sections 2.8, 3.6	Implicit Differentiation Differentials Applications
Mon	6/22		Cumulative Review
Wed	6/24		Midterm Exam (Tentative Date Only)
Mon	6/29	Sections 4.1, 4.2, 4.3	Antiderivatives
Wed	7/1	Section 4.5	Integration Formulas
Mon	7/6	Section 4.4	The Definite Integral
Wed	7/8	Sections 4.6	Area Between Curves
Mon	7/13	Sections 4.6, (4.7), 4.8	Applications of Integration
Wed	7/15		Catchup Applications
Mon	7/20	Sections 6.2, 6.3	Derivatives of Trigonometric Functions
Wed	7/22	Sections 6.3, 6.5	More Differentiation
Mon	7/27	Sections 6.7, 6.8	Differentiation of Logarithmic and Exponential Functions
Wed	7/29	Sections 6.9, 6.10, 8.1	Applications Parametric Equations Vectors
Mon	8/3	Sections 7.1, 7.2	Integration Techniques 1
Wed	8/5	Sections 7.1, 7.2, 7.3	Integration Techniques 2
Mon	8/10		Course Review
Wed	8/12		Final Exam

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.