

10A Syllabus - Calculus

Lecture Schedule based on *Hughes-Hallet, et al* – Calculus, 4th Edition

Section	Lectures	Topic
1.1	0	Functions and Change
1.2	1	Exponential Functions
1.3	1	New Functions from Old
1.4	1	Logarithmic Functions
1.5	1	Trigonometric Functions
1.6	1	Powers, Polynomials and Rational Functions
1.7	0.5	Introduction to Continuity
1.8	1	Limits
2.1	0.5	How do we measure speed?
2.2	1	The derivative of a point
2.3	1	The Derivative Function
2.4	0.5	Interpretations of the derivative
2.5	1	The Second Derivative
2.6	0.5	Differentiability
3.1	1	Powers and Polynomials
3.2	1	The Exponential Function
3.3	1	The Product and Quotient Rules
3.4	1	The Chain Rule
3.5	1	The Trigonometric Functions
3.6	1	The Chain Rule and Inverse Functions
3.9	1	Linear Approximation and the Derivative
4.1	1	Using First and Second Derivatives
4.3	1	Optimization
4.5	1	Optimization and Modeling

Optional Topics – time permitting.

Section	Lectures	Topic
12.5	0.5	Functions of Three Variables
12.6	1	Limits and Continuity
14.5	1	Gradients and Directional Derivatives in Space
14.8	1	Differentiability

Recommended Calculator : TI-85 or TI-86. At the instructors discretion symbolic manipulation calculators such as TI-89 or TI-92 may be prohibited during exams. For some exams, calculators may not be permitted at all.