10C Syllabus - Calculus

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

Section	Lectures	Topic
8.6	1.5	Distribution Functions
8.7	1.5	Probability, Mean and Median
9.1	1	Geometric Series
10.1	1	Taylor Polynomials
12.1	1	Functions of Two Variables
12.2	1	Graphs of Functions of Two Variables
12.3	1	Contour Diagrams
12.4	1	Linear Functions
13.1	1	Displacement Vectors
13.2	1	Vectors in General
13.3	1	The Dot Product
13.4	1	The Cross Product
14.1	1	The Partial Derivative
14.2	1	Computing Partial Derivatives Algebraically
14.3	1	Local Linearity and the Differential
14.4	1.5	Gradients and Directional Derivatives in the Plane
14.6	1	The Chain Rule
14.7	1	Second-Order Partial Derivatives
15.1	1.5	Local Extrema
15.2	1.5	Optimization
15.3	1.5	Constrained Optimization: Lagrange Multipliers

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.