Mathematics 170: Syllabus and Approximate Schedule

Week	Section	Topics
1	1.1	Preliminaries
	1.2	Elementary Functions
	1.2–1.3	
2	1.3	Graphing
	2.1	Exponential Growth and Decay
	2.2	Sequences
3		**Labor Day**
	2.2–2.3	
	2.3	More Population Models
4	3.1	Limits
	3.1–3.2	
	3.2	Continuity
5	3.3	Limits at Infinity
	3.4	The Sandwich Theorem and Some Trigonometric Limits
	3.5	Properties of Continuous Functions
6	4.1	Formal Definition of the Derivative
		Review
		MIDTERM 1
7	4.2	The Power Rule, the Basic Rules of Differentiation, and the Derivatives of Polynomials
	4.3	The Product and Quotient Rules, and Derivatives of Rational and Power Functions
	4.4	The Chain Rule and Higher Derivatives
8	4.5	Derivatives of Trigonometric Functions
	4.6	Derivatives of Exponential Functions
	4.7	Derivatives of Inverse Functions, Logarithmic Functions, and the Inverse Tangent Function
9	4.8	Linear Approximation and Error Propagation
	5.1	Extrema and the Mean-Value Theorem
	5.1–5.2	
10	5.2	Monotonicity and Concavity
	5.3	Extrema, Inflection Points, and Graphing
	5.3–5.4	
11	5.4	Optimization
		Review
		MIDTERM 2
12	5.5	L'Hospital's Rule
	5.8	Antiderivatives
	6.1	The Definite Integral
13	6.1–6.2	
	6.2	The Fundamental Theorem of Calculus
	6.3	Applications of Integration
14	6.3–7.1	
	7.1	The Substitution Rule
		Thanksgiving
15	7.2	Integration by Parts and Practicing Integration
	7.3	Rational Functions and Partial Fractions
		Review