Recommended Or Required Reading	1.Thomas' Calculus, 12th Edition, G.B Thomas, M.D.Weir, J.Hass and F.R.Giordano, Addison-Wesley, 2012. 2.Calculus: A Complete Course, Robert A. Adams,C Essex 7th Edition,Addison Wesley Longman Toronto 2010.

Weekly Subjects and Related Preparation Studies

Week	Subjects	Related Preparation
1	Functions:Domain of a Function,Functions and Graphs, Even-Odd Functions, Symmetry, Operations on Functions (Sum, difference, multiplication, division and powers),Composite Functions, Piecewise Functions, Polynomials and Rational Functions, Trigonometric Functions	Textbook 1 (Chapter 1)
2	Limits and Contiunity: Limit of a Function and Limit Laws, The Sandwich (The Squeeze theorem), The Precise Definition of a Limit, One-sided Limits, , Limits İnvolving İnfinity, Infinity Limits	Textbook 1 (Chapter 2)
3	Contiunity at a Point, Continuous Functions, The İntermediate Value Theorem Types of Discontiunity, Differentiation:Tangents ,Normal Lines , The Derivative at a Point, The Derivate as a Function, Onesided Derivatives	Textbook 1 (Chapter 3)
4	Differentiable on an Interval, Differentiation Rules, High order Derivatives, Derivatives of Trigonometric Functions, The Chain Rule, Implicit Differentiation, Linearization and Differentials, Increasing Functions and Decrasing Functions	Textbook 1 (Chapter 3)
5	Transcendental Functions:Inverse Functions and Their Derivatives,Logarithms and Exponential Functions and Their Derivatives, Logarithmic Differentiation, Inverse Trigonometric Functions and Their Derivatives, Hyperbolic Functions and Their Derivatives,Inverse Hyperbolic Functions and Their Derivatives	Textbook 1 (Chapter 7)
6	Indeterminate Forms and L'Hospitals Rule, Extrem Values of Functions, Critical Points,	Textbook 1 (Chapter 7)
7	Rolle's Theorem, The Mean Value Theorem, The First Derivative Test for Local Extrema, Concavity , The Second Derivative Test for Concavity, Point of İnflection, The Second Derivative Test for Local Extrema	Textbook 1 (Chapter 4)
8	Asymptotes of Graphs, Graphing of y=f(x), Antiderivatives, Indefinite İntegrals, Integral table	Textbook 1 (Chapter 4)
9	Midterm 1	
10	Integration:Area and Estimating with Finite Sums, Sigma Notation and Limits of Finite Sums, Riemann Sums, Definite İntegral, Properties of Definite İntegral, Area Under the Graph of a nonnegative Function, Average Value of Continuous Functions	Textbook 1 (Chapter 5)
11	Mean Value Theorem fo Definite İntegrals, The Fundamental Theorem of Calculus: Fundamental Theorem Part 1, Fundamental Theorem Part 2, Techniques of Integration: Integration by Substitution, Integration by Parts, Trigonometric Integrals, Reduction Formulas	Textbook 1 (Chapter 8)
12	Midterm 2, Trigonometric Substitutions, Tan (θ/2) subtitutions, Integrations of Rational Functions by Partial Fractions	Textbook 1 (Chapter 8)
13	Applications of definite integrals:Area between two curves, Volumes Using Cross-sections, The Disk Method, the Washer Method, The Ccylindrical Shell method, Arch Length, Areas of Surfaces of Revolution	Textbook 1 (Chapter 6)
14	Improper Integrals, Improper Integrals of Type 1 and Type 2	Textbook 1 (Chapter 8)
15	Final	