

ShareWorld Learning Center  
 Calculus AB & BC  
 06/13~08/03/2022

Instructor: Michael Lee

Textbook:

FINNEY DEMANA WAITS KENNEDY  
 CALCULUS  
 A COMPLETE COURSE  
 SECOND EDITION  
 ISBN 0-201-44140-3, 0-2014-4140-3

Date	Syllabus	Date	Syllabus
06/13	Chapter 1: Prerequisites for Calculus 1.1 Lines 1.2 Functions and Graphs 1.3 Exponential Functions 1.4 Parametric Equations 1.5 Functions and Logarithms 1.6 Trigonometric Functions Homework: TBD	06/15	Chapter 2: Limits and Continuity 2.1 Rates of Change and Limits 2.2 Limits Involving Infinity 2.3 Continuity 2.4 Rates of Change and Tangent Lines Homework: TBD
06/20	Chapter 3: Derivatives 3.1 Derivative of a Function 3.2 Differentiability 3.3 Rules for Differentiation 3.4 Velocity and Other Rates of Change 3.5 Derivatives of Trigonometric Functions 3.6 Chain Rule 3.7 Implicit Differentiation 3.8 Derivatives of Inverse Trigonometric Functions 3.9 Derivatives of Exponential and Logarithmic Functions Homework: TBD	06/22	Continue Chapter 3: Derivatives 3.1 Derivative of a Function 3.2 Differentiability 3.3 Rules for Differentiation 3.4 Velocity and Other Rates of Change 3.5 Derivatives of Trigonometric Functions 3.6 Chain Rule 3.7 Implicit Differentiation 3.8 Derivatives of Inverse Trigonometric Functions 3.9 Derivatives of Exponential and Logarithmic Functions Homework: TBD
06/27	Chapter 4: Applications of Derivatives 4.1 Extreme Values of Functions 4.2 Mean Value Theorem 4.3 Connecting $f'$ and $f''$ with the Graph of $f$ 4.4 Modeling and Optimization 4.5 Linearization and Newton's Method 4.6 Related Rate	06/29	Continue Chapter 4: Applications of Derivatives 4.1 Extreme Values of Functions 4.2 Mean Value Theorem 4.3 Connecting $f'$ and $f''$ with the Graph of $f$ 4.4 Modeling and Optimization 4.5 Linearization and Newton's Method 4.6 Related Rate

	Homework: TBD		Homework: TBD
07/04	Happy 4 <sup>th</sup> of July!	07/06	Chapter 5: The Definite Integral 5.1 Estimating with Finite Sums 5.2 Definite Integrals 5.3 Definite Integrals and Antiderivatives 5.4 Fundamental Theorem of Calculus 5.5 Trapezoidal Rule Homework: TBD
07/11	Continue Chapter 5: The Definite Integral 5.1 Estimating with Finite Sums 5.2 Definite Integrals 5.3 Definite Integrals and Antiderivatives 5.4 Fundamental Theorem of Calculus 5.5 Trapezoidal Rule Homework: TBD	07/13	Continue Chapter 5: The Definite Integral 5.1 Estimating with Finite Sums 5.2 Definite Integrals 5.3 Definite Integrals and Antiderivatives 5.4 Fundamental Theorem of Calculus 5.5 Trapezoidal Rule Homework: TBD
07/18	Chapter 6: Differential Equations and Mathematical Modeling 6.1 Antiderivatives and Slope Fields 6.2 Integration by Substitution 6.3 Integration by Parts 6.4 Exponential Growth and Decay 6.5 Population Growth 6.6 Numerical Methods Homework: TBD	07/20	Continue Chapter 6: Differential Equations and Mathematical Modeling 6.1 Antiderivatives and Slope Fields 6.2 Integration by Substitution 6.3 Integration by Parts 6.4 Exponential Growth and Decay 6.5 Population Growth 6.6 Numerical Methods Homework: TBD
07/25	Chapter 7: Applications of Definite Integrals 7.1 Integral as Net Changes 7.2 Areas in the Plane 7.3 Volumes 7.4 Lengths of Curves 7.5 Applications from Science and Statistics Homework: TBD	07/27	Continue Chapter 7: Applications of Definite Integrals 7.1 Integral as Net Changes 7.2 Areas in the Plane 7.3 Volumes 7.4 Lengths of Curves 7.5 Applications from Science and Statistics Homework: TBD
08/01	Chapter 8: L'Hopital's Rule 8.1 L'Hopital's Rule 8.2 Relative Rates of Growth 8.3 Improper Integrals 8.4 Partial Fractions and Integral Tables Homework: TBD	08/03	Continue Chapter 8: L'Hopital's Rule 8.1 L'Hopital's Rule 8.2 Relative Rates of Growth 8.3 Improper Integrals 8.4 Partial Fractions and Integral Tables Homework: TBD