## MATH 1241 Syllabus(4 Tests) - CALCULUS I

## <u>IMPORTANT NOTE!</u> This course has a **REQUIRED** Common Final Exam. The date and location of this exam will be announced in class and posted on the registrar's website. Be sure you are available to take the exam.

Text: Essential Calculus: Early Transcendentals, by James Stewart, 2<sup>nd</sup> Edition

Lecture 1:	1.2, 1.3, 1.4	1.2 1.3	A Catalog of Essential Functions A Limit of a Function
Lecture 2:	1.4, 1.5	1.4 C 1.5 C	Calculating Limits Continuity
Lecture 3:	1.6, 2.1	1.6	Limits Involving Infinity Derivatives and Pates of Change
Lecture 4:	2.2	2.1	The Derivative of a Function
Lecture 5:	Review		
Lecture 6:	TEST I		
Lecture 7:	2.3, 2.4	2.3 2.4 2.5 2.6 2.7 2.8	Basic Differentiation Formulas Product and Quotient Rules Chain Rule Implicit Differentiation Related Rates Linear Approximations and Differentials
Lecture 8:	2.4, 2.5		
Lecture 9:	2.5, 2.6		
Lecture 10:	2.6, 2.7		
Lecture 11:	2.7		
Lecture 12:	2.7, 2.8		
Lecture 13:	Review		
Lecture 14:	TEST II	(All o	f Chapter 2)
Lecture 15:	3.1, 3.2	3.1 3.2	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions
Lecture 15: Lecture 16:	3.1, 3.2 3.2, 3.3	3.1 3.2 3.3 3.4 3.5	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonomatric Eulections
Lecture 15: Lecture 16: Lecture 17:	3.1, 3.2 3.2, 3.3 3.3, 3.4	3.1 3.2 3.3 3.4 3.5 3.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule
Lecture 15: Lecture 16: Lecture 17: Lecture 18:	<ul><li>3.1, 3.2</li><li>3.2, 3.3</li><li>3.3, 3.4</li><li>3.5, 3.7</li></ul>	3.1 3.2 3.3 3.4 3.5 3.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19:	<ul> <li>3.1, 3.2</li> <li>3.2, 3.3</li> <li>3.3, 3.4</li> <li>3.5, 3.7</li> <li>3.7, Review</li> </ul>	3.1 3.2 3.3 3.4 3.5 3.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20:	<ul> <li>3.1, 3.2</li> <li>3.2, 3.3</li> <li>3.3, 3.4</li> <li>3.5, 3.7</li> <li>3.7, Review</li> <li>TEST III</li> </ul>	3.1 3.2 3.3 3.4 3.5 3.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20: Lecture 21:	<ul> <li>3.1, 3.2</li> <li>3.2, 3.3</li> <li>3.3, 3.4</li> <li>3.5, 3.7</li> <li>3.7, Review</li> <li>TEST III</li> <li>4.1, 4.2</li> </ul>	3.1 3.2 3.3 3.4 3.5 3.7 4.1	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule Maximum and Minimum Values The Maan Value Theorem
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20: Lecture 21: Lecture 22:	<ul> <li>3.1, 3.2</li> <li>3.2, 3.3</li> <li>3.3, 3.4</li> <li>3.5, 3.7</li> <li>3.7, Review</li> <li>TEST III</li> <li>4.1, 4.2</li> <li>4.2, 4.3</li> </ul>	3.1 3.2 3.3 3.4 3.5 3.7 4.1 4.2 4.3 4.4	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule Maximum and Minimum Values The Mean Value Theorem Derivatives and the Shapes of Graphs Curve Sketching
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20: Lecture 21: Lecture 22: Lecture 23:	3.1, 3.2 3.2, 3.3 3.3, 3.4 3.5, 3.7 3.7, Review TEST III 4.1, 4.2 4.2, 4.3 4.3, 4.4	3.1 3.2 3.3 3.4 3.5 3.7 4.1 4.2 4.3 4.4 4.5 4.6	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule Maximum and Minimum Values The Mean Value Theorem Derivatives and the Shapes of Graphs Curve Sketching Optimization Problem Newton's Method
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20: Lecture 21: Lecture 21: Lecture 22: Lecture 23: Lecture 24:	3.1, 3.2 3.2, 3.3 3.3, 3.4 3.5, 3.7 3.7, Review TEST III 4.1, 4.2 4.2, 4.3 4.3, 4.4 4.5	3.1 3.2 3.3 3.4 3.5 3.7 4.1 4.2 4.3 4.4 4.5 4.6 4.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule Maximum and Minimum Values The Mean Value Theorem Derivatives and the Shapes of Graphs Curve Sketching Optimization Problem Newton's Method Antiderivatives
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20: Lecture 21: Lecture 21: Lecture 22: Lecture 23: Lecture 24: Lecture 25	3.1, 3.2 3.2, 3.3 3.3, 3.4 3.5, 3.7 3.7, Review TEST III 4.1, 4.2 4.2, 4.3 4.3, 4.4 4.5 4.6, 4.7	3.1 3.2 3.3 3.4 3.5 3.7 4.1 4.2 4.3 4.4 4.5 4.6 4.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule Maximum and Minimum Values The Mean Value Theorem Derivatives and the Shapes of Graphs Curve Sketching Optimization Problem Newton's Method Antiderivatives
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20: Lecture 21: Lecture 21: Lecture 22: Lecture 23: Lecture 24: Lecture 25 Lecture 26:	3.1, 3.2 3.2, 3.3 3.3, 3.4 3.5, 3.7 3.7, Review TEST III 4.1, 4.2 4.2, 4.3 4.3, 4.4 4.5 4.6, 4.7 4.7, Review	3.1 3.2 3.3 3.4 3.5 3.7 4.1 4.2 4.3 4.4 4.5 4.6 4.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule Maximum and Minimum Values The Mean Value Theorem Derivatives and the Shapes of Graphs Curve Sketching Optimization Problem Newton's Method Antiderivatives
Lecture 15: Lecture 16: Lecture 17: Lecture 18: Lecture 19: Lecture 20: Lecture 21: Lecture 21: Lecture 22: Lecture 23: Lecture 24: Lecture 25 Lecture 26: Lecture 27:	3.1, 3.2 3.2, 3.3 3.3, 3.4 3.5, 3.7 3.7, Review TEST III 4.1, 4.2 4.2, 4.3 4.3, 4.4 4.5 4.6, 4.7 4.7, Review Test IV	3.1 3.2 3.3 3.4 3.5 3.7 4.1 4.2 4.3 4.4 4.5 4.6 4.7	Exponential functions Inverse Functions and Logarithms Derivatives of Logarithms and Exponential Functions Exponential Growth and Decay Inverse Trigonometric Functions Indeterminate Forms and L'Hospital's Rule Maximum and Minimum Values The Mean Value Theorem Derivatives and the Shapes of Graphs Curve Sketching Optimization Problem Newton's Method Antiderivatives