Math 201 sections RS & ST Fall 2023

Roadmap Between Texts and Syllabus

"Stewart" = department textbook: Calculus Early Transcendentals, 9th Ed, by Stewart, Clegg and Watson.
ISBN: 781337613927, Cengage

"Strang" = our textbook: Calculus Volume I, by Herman, Strang, et al, ISBN 978-1-938168-02-4, Openstax
https://openstax.org/details/books/calculus-volume-1

	Department Syllabus		Roadmap	Our Syllabus
Time	**Stewart sec**	**Topic to be covered**	**~Strang sec**	**Strang sec/Topic to be covered**
1	1.1	Functions and Their Graphs.	1.1	1.1 Review of Functions
1	1.2	A catalog of Essential Functions.	1.2	1.2 Basic
1	1.3	New Function and Old functions.		1.3 Trigonometric Functions
1	1.4	Exponential Functions.	1.5	1.4 Inverse Functions
1	1.5	Inverse Functions and Logarithms.	1.4 & 1.5	1.5 Expon. & Log. Functions
0.5	2.1	Tangent & Velocity Problem.	2.1	2.1 A Preview of Calculus
2	2.2	Limit of a Function.	2.2	2.2 The Limit of a Function
1	2.3	Calculating Limits using Limit Laws	2.3	2.3 The Limit Laws
1	2.4	The Precise Definition of a Limit.	2.5	2.4 Continuity
1.5	2.5	Continuity	2.4	2.5 The Precise Definition of Limit
1.5	2.6	Limits Involving Infinity; Horizon Asy.	2.2	3.1 Defining the Derivative
2	2.8	The Derivative as a Function.	3.1 & 3.2	3.2 The Derivative as a Function
1	3.1	Derivatives of Poly and Expon Fun.	3.3 & 3.9	3.3 Differentiation Rules
2	3.2	Product Rules and Quotient Rules .	3.3	3.4 Derivatives a Rates of Change
1	3.3	Derivatives of Trigonometric Fun.	3.5	3.5 Derivatives of Trigonometric Functs.
2	3.4	The Chain Rule.	3.6	3.6 The Chain Rule
1	3.5	Implicit Differentiation.	3.8	3.7 Derivatives of Inverse Functions
2.5	3.6	Derivatives of Log and Inverse Fun.	3.7 & 3.9	3.8 Implicit Differentiation
	A46	Derivatives of Log and Inverse Fun.	3.7	3.9 Derivatives of Expon. & Log. Functs.
1	3.7	Rate of Change in Natural & Social Sci.	3.4	4.1 Related Rates
1.5	3.9	Related Rates.	4.1	4.2 Linear Approxs. & Differentials
1	3.10	Linearization and Differentials.	4.2	4.3 Maxima & Minima
1	4.1	Maximum and Minimum Values.	4.3	4.4 The Mean Value Theorem
1	4.2	The Mean Value Theorem.	4.4	4.5 Derivs. & the Shape of Graphs
1	4.3	What Deriva Tell us about Graph Shape.	4.5 & 4.6	4.6 Limits at Infinity & Asymptotes
2	4.4	Indeterminate Forms & L'Hopital's Rule.	4.8	4.7 Applied Optimization Problems
2	4.5	Summary of Curve Sketching.	4.6	4.8 L'Hôpital's Rule
1	4.7	Optimization Problems.	4.7	5.1 Approximating Areas
1.5	4.9	Antiderivatives.	4.10	5.2 The Definite Integral
1	5.1	Area and Distance problems.	5.1	5.3 The Fund. Theorem of Calculus
1	**A36**	Sigma Notation/Finite Sum.	5.1	5.4 Integration Formulas & Net Change
1	5.2	The Definite Integral.	5.2	5.5 Substitution
1.5	5.3	The Fundamental Theorem of Calculus.	5.3	5.6 Integrals Involving Expon. & Log.
1	5.4	Indefinite Integrals & Net Change Thm.	5.4	5.7 Integrals Resulting in Inverse Trig.
2.5	5.5	The Substitution Rule.	5.5	6.1 Area Between Curves
1	6.1	Areas Between Curves.	6.1	
49		**Total hours**.		

Time is measured in 50-minute periods. Each of our classes is in session for two periods per class meeting day.