

Text *Calculus* third edition, by James Stewart, ISBN 0-534-21801-6.

Calendar The calendar below gives the dates of exams and other important dates for the course. The list of problems below provide a guide to students and instructors as to the material to be covered. The problems marked by *'s are particularly interesting.

Wed, 9 Jan	<i>Review and preview</i> §1 #77-82, §2 #3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27*
Fri, 11 Jan	§1.1 <i>The tangent and velocity problems</i> , §1.1 #3, 5, 7
Mon, 14 Jan	§1.2 <i>The limit of a function</i> , §1.2 #1, 3, 5, 9, 11, 13, 15, 17, 19, 23, 25, 27, 28, 29
Wed, 16 Jan	§1.3 <i>Calculating limits using the limit laws</i> , §1.3 #1, 3, 5, 7, 13, 15, 17, 19, 27, 29, 33, 39, 59, 61, 75*, 76*, 78*
Fri, 18 Jan	§1.3 Continued, §1.4 The rigorous definition of a limit (lightly).
Mon, 21 Jan	Martin Luther King, Jr. holiday
Wed, 23 Jan	§1.5 <i>Continuity</i> , §1.5 #1, 3, 9, 13, 15, 17, 31, 33, 37, 39, 45, 47, 49, 59*, 60*
Fri, 25 Jan	§1.6 <i>Tangents velocities and other rates of change</i> , §1.6 #1, 5, 7, 11, 13, 15, 17
Mon, 28 Jan	§2.1 <i>Derivatives</i> , §2.1 #1, 3, 5, 7, 11, 13, 15, 23, 31, 33, 34, 35, 37, 39, 44, 45, 53, 55, 59*, 60*, 61*
Wed, 30 Jan	§2.2 <i>Differentiation formulas</i> , §2.2 # 1-34 (<i>Learn to differentiate!</i>), 37, 41, 43, 45, 47, 49, 55, 57, 63, 71, 74*, 76*. <i>Last day to drop</i>
Fri, 1 Feb	<i>Review</i>
Mon, 4 Feb	<i>Review</i>
Tue, 5 Feb	<i>First exam</i> , 7:30pm-9:30pm, room TBA
Wed, 6 Feb	§2.3 <i>Rates of change in the natural and social sciences</i> , §2.3 #1, 3, 5, 7, 9, 11, 13
Fri, 8 Feb	Appendix D, Trigonometry review #1, 3, 5, 7, 9, 11, 29, 31, 33, 35, 37, 43, 45, 47, 49, 53, 83*, 85*
Mon, 11 Feb	§2.4 <i>Derivatives of trigonometric functions</i> , §2.4 #1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 33, 35, 37, 43, 45, 47, 53*, 55
Wed, 13 Feb	§2.5 <i>The chain rule</i> , §2.5 1-47 (odds) 49, 51, 67, 69, 71*, 72*, 73*
Fri, 15 Feb	<i>Implicit differentiation</i> , §2.6 #1, 3, 5, 7, 9, 11, 21, 23, 25, 31, 35, 41, 43, 45
Mon, 18 Feb	§2.7 <i>Higher derivatives</i> , §2.7 #1, 3, 5, 7, 23, 25, 27, 29, 31*41, 43, 47, 49, 52*, 53
Wed, 20 Feb	§2.8 <i>Related rates</i> , §2.8 #1, 3, 5, 7, 9, 11, 13, 15, 23, 27, 31
Fri, 22 Feb	<i>Related rates, continued</i>
Mon, 25 Feb	§2.9 <i>Linear approximations</i> , §2.9 #31, 33, 35, 37, 39, 41, 45, 47, 51*, 54
Wed, 27 Feb	§2.10 <i>Newton's method</i> , §2.10 #1, 2, 3, 13, 23, 25, 31*
Fri, 1 Mar	<i>Review</i>
Mon, 4 Mar	<i>Review</i>
Tue, 5 Mar	<i>Second exam</i> , 7:30pm-9:30pm, room TBA

Wed, 6 Mar	§3.1 <i>Maximum and minimum values</i> , §3.1, #1, 3, 5, 7, 9, 11, 13, 15, 21, 29, 31, 33, 35, 37, 39, 45, 47, 49, 51, 62, 63, 67, 69
Fri, 8 Mar	§3.2 <i>The mean value theorem</i> , §3.2 #1, 7, 17, 19, 21, 23*, 24, 25, 27, 31, 33, 35 Last day to withdraw
11–15 Mar	Spring break
Mon, 18 Mar	§3.3 <i>Monotonic functions and the first derivative test</i> , §3.3 #1, 3, 5, 7, 17, 23, 27, 31, 33, 35, 37, 39, 41, 43, 47*, 49*
Wed, 20 Mar	§3.4 <i>Concavity and points of inflection</i> , §3.4 #1, 3, 5, 7, 9, 13, 17, 21, 23, 25, 27, 31*, 32, 35, 39*, 40
Fri, 22 Mar	§3.5 <i>Limits at infinity, horizontal asymptotes</i> , §3.5 #1, 3, 5, 7, 9, 11, 17, 19, 21, 23, 33, 41, 43, 53, 55, 61, 65, 66
Mon, 25 Mar	§3.6 <i>Curve sketching</i> , §3.6 #1, 3, 5, 11, 13, 31, 35
Wed, 27 Mar	§3.8 <i>Applied maximum and minimum problems</i> , §3.8 #1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 29, 33, 35, 43, 44.
Fri, 29 Mar	§3.8, continued
Sun, 31 Mar	Sir Isaac Newton died, 27 March 1727
Mon, 1 Apr	§3.10 <i>Anti-derivatives</i> , §3.10 #1, 3, 5, 7, 15, 17, 19, 21, 23, 27, 37, 39, 43, 49, 55, 59*, 63, 65, 67*
Wed, 3 Apr	§4.1 <i>Sigma notation</i> , §4.1 #1, 3, 11, 13, 19, 21, 23, 37, 39, 41, 47*, 53*, <i>Mathematical induction</i> , Appendix E #1, 7, 9
Fri, 5 Apr	<i>Review</i>
Mon, 8 Apr	<i>Review</i>
Tue, 9 Apr	<i>Third exam, 7:30pm-9:30pm, room TBA</i>
Wed, 10 Apr	§4.2 <i>Area</i> , §4.2 #1, 3, 9, 11, 13, 23, 25*, 26*
Fri, 12 Apr	§4.3 <i>The definite integral</i> , §4.3 #1, 3, 15, 16, 17, 23, 25, 27, 31, 33, 35, 39, 41, 45, 47, 55, 57, 59
Mon, 15 Apr	§4.4 <i>The fundamental theorem of calculus</i> , §4.4 #5, 7, 9, 17, 19, 21, 23, 25, 27, 29, 31, 41, 43, 45, 59, 61, 63, 65, 69, 71, 81, 82, 83a,b,c*, 87, 89
Wed, 17 Apr	§4.5 <i>The substitution rule</i> , §4.5 #1, 3, 5, 7, 9, 11, 39, 41, 43, 53, 55, 63, 65, 67
Fri, 19 Apr	§5.1 <i>Areas between curves</i> , §5.1 #1, 5, 7, 9, 13, 15, 17, 19, 25, 29, 33, 45*, 49
Mon, 22 Apr	§5.2 <i>Volume</i> , §5.2 #1, 3, 5, 7, 13, 15, 17, 19, 25, 27, 33, 35, 47, 49, 51, 52, 61, 68
Wed, 24 Apr	<i>Review</i>
Fri, 26 Apr	<i>Review</i>
Mon, 29 Apr	<i>Final exam, 8:30–10:30pm, room TBA</i>