Calculus I *Calendar*
MA113 *Spring 2002*

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

Wed, 6 Mar	§3.1 *Maximum and minimum values*, §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 *The mean value theorem*, §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 *Monotonic functions and the first derivative test*, §3.3 #1, 3, 5, 7, 17, 23, 27, 31, 33, 35, 37, 39, 41, 43, 47*, 49*
Wed, 20 Mar	§3.4 *Concavity and points of inflection*, §3.4 #1, 3, 5, 7, 9, 13, 17, 21, 23, 25, 27, 31*, 32, 35, 39*, 40
Fri, 22 Mar	§3.5 *Limits at infinity, horizontal asymptotes*, §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 *Curve sketching*, §3.6 #1, 3, 5, 11, 13, 31, 35
Wed, 27 Mar	§3.8 *Applied maximum and minimum problems*, §3.8 #1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 29, 33, 35
Fri, 29 Mar	§3.8, continued
Sun, 31 Mar	Sir Isaac Newton died, 27 March 17 27
Mon, 1 Apr	§3.10 *Anti-derivatives*, §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 *Sigma notation*, §4.1 #1, 3, 11, 13, 19, 21, 23, 37, 39, 41, 47*, 53*, *Mathematical induction*, Appendix E #1, 7, 9
Fri, 5 Apr	*Review*
Mon, 8 Apr	*Review*
Tue, 9 Apr	*Third exam,* 7:30pm-9:30pm, room TBA
Wed, 10 Apr	§4.2 *Area*, §4.2 #1, 3, 9, 11, 13, 23, 25*, 26*
Fri, 12 Apr	§4.3 *The definite integral*, §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 *The fundamental theorem of calculus*, §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 *The substition rule*, §4.5 #1, 3, 5, 7, 9, 11, 39, 41, 43, 53, 55, 63, 65, 67
Fri, 19 Apr	§5.1 *Areas between curves*, §5.1 #1, 5, 7, 9, 13, 15, 17, 19, 25, 29, 33, 45*, 49
Mon, 22 Apr	§5.2 *Volume*, §5.2 #1, 3, 5, 7, 13, 15, 17, 19, 25, 27, 33, 35, 47, 49, 51, 52, 61, 68
Wed, 24 Apr	Review
Fri, 26 Apr	*Review*
Mon, 29 Apr	*Final exam*, 8:30–9:30pm, room TBA