



## COURSE OUTLINE: Calculus for Business & Economics (MA2300) - FALL 2007

Week	Sections in Text	Topics Covered	Homework
1	supplemental material	Review function graphs and applications to business and economics (incl. supply and demand, price-demand, revenue, cost, profit)	problems assigned from supplementary sources
2-4	10.1 10.2 10.3 10.4 10.5 10.6	Introduction to Limits: Graphical approach, One and 2-sided Limits, Continuity, Limits at Infinity, Asymptotes, Computational approach Definition of Derivative, Slope of Tangent, Basic Differentiation Properties, Power Rule, Equation of Tangent Line, Differentials	pp. 511-512: #1-21 odd; 39-53 odd pp. 521-522: #7-23 odd; 35, 59, 71 pp. 535-536: #1-13 odd; 31-45 odd pp. #550-551: #7-17 odd; 31-37 odd pp. 559-560: #1-17odd; 25-47 odd; 81, 83, 89 pp. 567-568: #5, 7, 9, 15, 17, 19,
5-6	11.1 11.2  11.3 11.5* * time permitting	“e” and Continuous Compounding of Interest Review Logarithmic functions; Derivatives of Exponential and Logarithmic Functions Derivative Rules for Products and Quotients Implicit Differentiation	pp. 591-592: #1-11 odd; 17, 19, 21, 25, 27  pp. 601-602: #1-13 odd; 31-41 odd; 51, 53, 58 pp. 609-610: #1-25 odd; 41-47 odd; 67,69, 71, 73 pp. 626 #7-19 odd; 43, 45
7	11.4	Chain Rule (general power rule)	pp. 618-620: #17-35 odd; 45-61 odd; 65, 67, 79, 85, 93, 95, 97
<b>MIDTERM EXAMINATION</b>			
8	10.7 11.7	Derivative Applications: Marginal Analysis, Marginal Propensity to Save and to Consume Elasticity of Demand	pp. 576-578: #1-17 odd pp. 638-639: #13, 15, 17, 19
9-10	12.1 12.2 12.3 12.4	First Derivative and Local Extrema, Increasing and Decreasing Functions Second Derivative, Concavity, Inflection Graphs of Functions (Polynomial, Rational) L’Hopital’s Rule, Indeterminate Form Curve-Sketching Techniques	pp. 657-659: #1-17 odd; 19, 21, 23 pp. 677-679 #1-13 odd; 19, 23, 37, 39, 41 pg. 690: #1-13 odd; 19, 27, 35 pp. 701-702: #1, 2, 7, 9; 23, 27, 37, 45
11	12.5 12.6	Absolute Minimum and Maximum Optimization (Rev, Profit), Inventory Control	pp. 711-712: #1-15 odd; 35, 41,45 pp. 722-723: #11, 13, 17, 19, 23, 27, 29
12-14	13.1 13.2 13.4 13.5 14.1* 14.2*  14.4* *time permitting	Antiderivatives and Indefinite Integrals Integration by [“u”] Substitution The Definite Integral The Fundamental Theorem of Calculus Area Between Curves Applications to Business and Economics; Consumer and Producer Surplus Integration using Tables	pp. 739-740: #1-31odd; 47,49,53,55,57,61 pp. 751-753: #7-37 odd; 67, 69, 71 pg. 772: #17-39 odd pp. #5-37 odd; 49, 51, 53, 61, 63, 79 pp. 801-802: #1,3,7,9,11,13,25,27,29, 31, 79, 81 Pg. 813-814: #1, 3, 5, 7, 25, 29, 37, 39  pp. 826-828: #1-19 odd; 51, 57, 63, 69
15	<b>REVIEW and FINAL EXAMINATION</b>		