

Math 1120 - Calculus for Business and Economics

Topics List

Section(s)	Material to Cover in Lecture	# Days
R.1 - R.4	Review of polynomial properties, factoring, rational expressions, polynomial and rational equations	1
R.5-R.7	Review of inequalities, exponents, radicals	1
2.1	Properties of functions, function notation, function evaluation.	1
1.1	Linear functions	1
1.2	Business applications of linear functions including supply and demand curves, linear cost/revenue/profit functions	1
2.4-2.5	Exponential and Logarithmic functions, compound interest, doubling time.	1.5
2.6	Applications of exponential and logarithmic functions, including nominal interest rate and present value.	0.5
3.1-3.2	Limits of functions as independent variable approaches a finite number, continuity from graphs only.	1
3.3	Average and instantaneous rate of change. Applications include marginal cost/revenue/profit.	1
3.4	Definition of the derivative and tangent lines.	1
4.1	Calculating derivatives using elementary rules for differentiation, including marginal cost/revenue/profit applications.	1
5.3a, 4.2	Higher order derivatives and product/quotient rules for differentiation	1
4.3	Chain rule for differentiation	1
4.4-4.5	Derivatives of exponential/logarithmic functions	1
5.1	Increasing/decreasing functions	1
5.2	Relative extrema, first derivative test for relative extrema	1
5.3	Concavity and points of inflection, point of diminishing returns	1
6.1	Absolute extrema, extreme value theorem, second derivative test for relative extrema	1
6.2	Optimization problems relating to business	1
6.3	Applications of derivatives (focusing on elasticity of demand and economic lot size)	1
7.1	Anti-differentiation	1
7.3	Area under curves	0.5
7.4	Fundamental Theorem of Calculus and the Net Change Theorem	1.5
	Days for extra coverage, catch up, quizzes, reviews, exams	8
	Total Days	30