

Math 1040 Topics

(based on Sullivan's *College Algebra*, 11th edition)

Section	Material to Cover in Lectures	Days
Review	Factoring	1
1.1	Linear Equations and Applications	1
1.2	Solving quadratic equations by factoring, the square root property and the quadratic equation Applications of quadratics	1
1.4	Solving radical equations, equations that are quadratic in form and polynomial equations	2
1.5	Interval notation Solving inequalities	1
1.6	Solving equations and inequalities with absolute value	1
2.1-2.2	Distance and midpoint formulas Graphing equations by plotting points Intercepts Symmetry	1
2.3	Slope of a line Point slope equation of line and slope intercept equation of line Vertical and Horizontal lines Parallel and Perpendicular lines	1
2.4	Completing the square Equations and graphs of circles	2
3.1	Relations, functions, difference quotient, domain Combining functions through addition, subtraction, multiplication and division	1
3.2	Graphs of Functions	1
3.3	Properties of graphs and functions- increasing vs decreasing, maximum and minimum, even and odd, average rate of change and secant lines	1
3.4-3.5	Graphs of functions: Constant, Identity, Square, Cube, Reciprocal, Square root, Cube root, Absolute value Piecewise defined functions Graphing using transformations	3
4.1 and 4.3	Linear and quadratic functions	1
4.5	Quadratic inequalities	1
5.1-5.2	Polynomial functions- degree, real zeros, multiplicity, end behavior and graphs	1
5.6	Synthetic division and the real zeros of a polynomial	1
5.3-5.4	Rational functions and their graphs	2
5.5	Solving polynomial and rational inequalities	2
6.1	Composition of functions	1
6.2	One-to-one functions and inverses	2
6.3	Rules of Exponents and Exponential Functions	1
6.4	Logarithmic functions	2
6.5	Expanding and condensing logarithms	1
6.6	Solving logarithmic and exponential equations	1
6.7-6.8	Solve exponential and logarithmic applications	1
8.1	Solving systems of equations	1
	Days for extra coverage, catch up, reviews, exams	10
	Total days	45