

**OFFICIAL SYLLABUS**  
**MATH 120**  
**COLLEGE ALGEBRA**

Adopted Fall 2017

**Catalog Description:**

Cartesian coordinates, graphing, lines, parabolas, functions, inverses, roots of polynomials, rational functions and inequalities, linear systems, matrices, determinants.

**Prerequisite:** ACT Math 23 or higher, AD 095 with a grade of C or better, or satisfactory placement test score.

**Textbook:** College Algebra, 10<sup>th</sup> Edition, by Larson, ISBN: 978-1-337-28229-1

Sec	Title	Suggested Assignment
1.2	Linear Equations in One Variable	7 – 43 odd, 65, 73, 75, 77
1.3	Modeling with Linear Equations	3 – 45 odd, 53, 55, 59, 61, 63
1.4	Quadratic Equations and Applications	7 – 41 odd, 59 – 87 every other odd, 97 – 107 odd, 123, 125, 127
1.5	Complex Numbers	7 – 75 odd
1.6	Other Types of Equations	5 – 37 odd, 45, 47, 51 – 63 odd, 83 – 89 odd, 93
1.7	Linear Inequalities in One Variable	5 – 11 odd, 15 – 39 every other odd, 43 – 57 odd, 77 – 87 odd
1.8	Other Types of Inequalities	5 – 11 odd, 13 – 49 every other odd
1.1	Graphs of Equations	7 – 35 odd, 59 – 71 odd
2.1	Linear Equations in Two Variables	9 – 31 odd, 35- 63 every other odd, 65 – 77 odd, 110
2.2	Functions	5 – 17 odd, 21 – 49 every other odd, 73, 75, 77
2.3	Analyzing Graphs of Functions	7 – 25 odd, 33 – 39 odd, 55 – 63 odd, 67 – 75 odd
2.4	A Library of Parent Functions	11, 13, 27, 29, 35, 37, 39
2.5	Transformations of Functions	5, 6, 9 – 55 odd
2.6	Combinations of Function: Composite Functions	5 – 23 odd, 29 – 53 odd
2.7	Inverse Functions	7 – 29 odd, 33 – 39 odd, 45, 47, 49, 55 – 67 odd, 79, 83, 85, 87

Sec	Title	Suggested Assignment
3.1	Quadratic Functions and Models	5 – 8 all, 11 – 23 every other odd, 35 – 43 odd, 57, 61
3.2	Polynomial Functions of Higher Degree	9 – 14 all, 15 – 27 odd, 33 – 47 odd, 53 – 59 odd, 71 – 83 odd, 106
3.3	Polynomial and Synthetic Division	11 – 21 odd, 25 – 41 every other odd, 45 – 57 odd, 63, 65, 67, 77
3.4	Zeros of Polynomial Functions	9 – 27 odd, 29, 33, 35, 41, 43, 47, 49, 55, 57, 61 – 69 odd, 79 – 85 odd, 99 – 102 all, 120
4.1	Rational Functions and Asymptotes	7 – 27 every other odd, 29 – 36 all, 37, 50, 51, 53
4.2	Graphs of Rational Functions	5 – 45 every other odd, 47 – 55 odd, 67 – 73 odd
6.1	Linear (and Nonlinear) Systems of Equations	(Linear Systems only) 5, 7, 8, 15 – 23 odd, 33, 35, 70
6.2	Two-Variable Linear Systems	5 – 29 odd, 31 – 34 all, 41, 43, 49, 51
7.1	Matrices and Systems of Equations	(Definition and Order of a Matrix only) 7 – 14 all
7.2	Operations with Matrices	5 – 21 odd, 35, 37, 39, 47 – 59 odd
7.4	The Determinant of a Square Matrix	5 – 21 odd, 37, 39, 45 – 51 odd
7.5	Applications of Matrices and Determinants	(Cramer’s Rule only for 2 x 2 system) 7 – 10 all

**NOTE: Suggested problems may be adjusted accordingly by the instructor.**