

College of Staten Island
Department of Mathematics

COURSE OUTLINE
MTH 030 - Intermediate Algebra

Spring 2022

Mandatory requirement: MyMathLab Student Access Kit for **Intermediate Algebra**, by George Woodbury, 1st edition

Calculator (No Graphing or Programmable Calculators. Cell phones, laptops, tablets, or other devices may NOT be used as calculators)

Week	Lecture	Section	Topics	Lesson Homework Guide
I	1	1.3	Solving Linear Equations	
	2	1.3	Equations in Fractional Form and Literal Equations	ALL HOMEWORK CAN BE ACCESSED ONLINE USING MyMathLAB
	3	1.3	Solving Absolute Value Equations	
	4	1.4	Problem Solving – Applications of Linear Equations	
II	5	1.5	Solving Linear Inequalities	
	6	1.5	Solving Absolute Value Inequalities	
	7	2.1	Rectangular Coordinate System Graphing using the Table method. Graphing Linear Equations in One Variable	
	8	2.1	Graphing Linear Equations in Two Variables by using Intercept method.	
III	9	2.2	Slope Formula Slopes of Horizontal and Vertical Lines	
	10	2.2	Equation of a Line - Slope Intercept Form $y = mx + b$ Parallel and Perpendicular Lines	
	11	2.2	Graphing Equation of a Line by using Slope Intercept Form $y = mx + b$, Intercepts and One variable equations	
	12	2.3	Equation of a Line – Write in Slope Intercept Form	
IV	13	2.3	Graph and find the Slope Intercept form of the Equation of a Line – given a point and slope Parallel and Perpendicular Lines	

	14	2.4	Graphing Linear Inequalities	
	15		Review	
	16		Exam #1	
V	17	3.1	Solving a System of Two Linear Equations by Graphing	
	18	3.1	Solving a System of Two Linear Equations by Substitution Method	
	19	3.1	Solving a System of Two Linear Equations Addition Method	
	20	4.3	Polynomials - Addition and Subtraction	
VI	21	4.1	Exponents-Product Rule	
			Zero Exponents	
			Power Rule	
		4.3	Multiplying Polynomials	
	22	4.4	Factoring - Common Factor	
		4.5	Factoring Trinomials $a = 1$	
	23	4.5	Factoring Trinomials $a > 1$	
		4.6	Factoring Difference of Squares	
	24	4.8	Solving Equations and Problem Solving	
VII	25	4.8	Solving Equations and Problem Solving	
	26		Review	
	27		Exam #2	
	28	5.1	Simplifying Rational Expressions	
	29	5.2	Rational Expressions – Multiply and Divide	

VIII	30	5.3	Rational Expressions - Addition and Subtraction – like Denominators	
	31	5.3	More Rational Expressions - Addition and Subtraction – Unlike Denominators	
	32	5.3	More Rational Expressions - Addition and Subtraction – Unlike Denominators	
IX	33	5.5	Rational Equations	
	34	5.5 5.6	Rational Equations Applications	
	35	4.2	Negative Exponents – Division Rule	
		5.7	Division of Polynomials	
36	6.1	Roots and Radicals - Simplify		
X	37	6.2	Rational Exponents	
	38	6.3	Simplifying, Adding, and Subtracting Radical Expression	
	39	6.4	Multiply and Divide Radical Expressions	
	40	6.5	Solving Radical Equations	
XI	41		Review	
	42		Exam #3	
	43	6.6	Complex Numbers (no Division)	
	44	7.1	Solving Quadratic Equations by Factoring and Square Roots	
XII	45	7.1	Solving Quadratic Equations using Completing the Square	
	46	7.2	Quadratic Formula	

	47	7.4	Graphing a Parabola by plotting points using vertex point , symmetry and y-intercept	
	48	7.4	Graphing a Parabola using: $y = (x - h)^2 + k$ or $y - k = (x - h)^2$	
XIII	49	9.2	Graphing the Circle	
	50	9.2	Circle: Find the <u>center</u> and <u>radius</u> by Completing the Square Find the <u>equation</u> of a circle given the center and radius	
	51		Review	
	52		Exam #4	
XIV	53		Final Exam Review	
	54		Final Exam Review	
	55		Final Exam Review	
	56		Final Exam Review	