BRONX COMMUNITY COLLEGE * CITY UNIVERSITY OF NEW YORK
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

SYLLABUS: **MTH 05 Elementary Algebra** (0 credits, 6 hours)
TEXT: Lecture Notes for MTH 05, by Andrew McInerney
(http://fsw01.bcc.cuny.edu/mathdepartment/Courses/Math/MTH05/05text0916a.pdf)
PREREQUISITE: MTH 01 or equivalent and RDL 01 if required. CO-REQUISITE: RDL 02 if required

Learning Objectives: Proficiency in operations with signed numbers, and in the solution and graphical representation of linear equations. Proficiency in polynomial operations, factoring, and the solution and graphical representation of quadratic equations. Proficiency in operations involving integer exponents and the manipulation of radical expressions.

Section / Topic		Exercises
Preparing for Algebra (12 hours)		
I.1	A Review of Fractions	p.4 1—5 p.6 1—4 p.9 1—5 p.14 1—6 p.16 1—6
2.1	Signed Numbers	
2.2	Graphing signed numbers	
2.3	Adding and subtracting signed numbers	p.28 1—15
2.4	Multiplying and dividing signed numbers	p.31 1—6
2.5	Exponents and roots with signed numbers	p.32 1—5
3.1	The order of operations	p.39 1—8
3.2	Algebraic expressions	
3.3	Evaluating algebraic expressions	p.43 1—10
3.4	Translating algebraic expressions	p.46 1—8
Linear statements in one variable (12 hours)		
4.1	Algebraic statements and solutions	p.55 1—15
4.2	Solving linear equations	p.67 1—12, 11—16 (note numbering)
4.3	“Solving” literal equations	p.71 1—5
4.4	Solving linear inequalities	p.82 1—6
Linear statements in two variables (12 hours)		
5.1	Solving linear equations in two variables	p.94 1—8
5.2	Slope and the geometry of lines	p.114 1—11
5.3	Solving linear inequalities in two variables	p.124 1—6
5.4	Solving systems of linear equations	p.135 1—8
Polynomials (8 hours)		
6.1	Introduction to polynomials	p.143 1—8
6.2	Adding and subtracting polynomials	p.148 1—7
6.3	Properties of exponents	p.155 1—8
6.4	Scientific notation	p.159 1—12
6.5	Multiplying Polynomials	p.164 1—12
6.6	Dividing Polynomials (by Monomials only)	p.167 1—5

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Factoring (10 hours)

7.1	An Introduction to Factoring	
7.2	"Factoring out" the GCF	p.176 1—6
7.3	Differences of squares	p.179 1—14
7.4	Quadratic trinomials I. Monic trinomials	p.184 1—15
7.5	Quadratic trinomials II. The ac-method	p.191 1—10
7.6	Factoring by grouping	p.195 1—6

Radicals expressions (8 hours)

8.1	Quadratic equations	
8.2	Radical expressions	p.209 1—15
8.3	Introduction to complex numbers	p.213 1—6
8.4	Arithmetic of radical expressions	p.218 1—16

Quadratic Functions (10 hours)

9.1	Solving Quadratic Equations I.	p.228 1—11
9.2	Solving quadratic equations II. Completing the square	p.234 1—10
9.3	Solving quadratic equations III. The quadratic formula	p.239 1—10
9.4	Solving quadratic equations IV. Factoring	p.242 1—10
9.5	Summary and applications	p.248 1—19
9.6	Quadratic equation in two variables and parabolas	p.255 1—6

Grading Policy. The only assignable grades for MTH 5 are P (pass), R (repeat), F (fail), WU (unofficial withdrawal; excessive absence) or WN (never attended). The CUNY Elementary Algebra Final Exam (CEAFE) is a University Requirement. A P grade is assigned in MTH 5 only if .65(class work) + .35(CEAFE score) >= .70. That is, the CEAFE counts for 35% of the grade, and all other work counts for 65%, and the student must achieve a weighted average of at least 70% to receive a P.

Academic Integrity

Academic dishonesty (such as plagiarism and cheating) is prohibited at Bronx Community College and is punishable by penalties, including failing grades, dismissal and expulsion. For additional information and the full policy on Academic Integrity, please consult the BCC College Catalog.

Accommodations/Disabilities

Bronx Community College respects and welcomes students of all backgrounds and abilities. In the event you encounter any barrier(s) to full participation in this course due to the impact of a disability, please contact the disAbility Services Office as soon as possible this semester. The disAbility Services specialists will meet with you to discuss the barriers you are experiencing and explain the eligibility process for establishing academic accommodations for this course. You can reach the disAbility Services Office at: disability.services@bcc.cuny.edu, Loew Hall, Room 211, (718) 289-5874.

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