**BRONX COMMUNITY COLLEGE**

**of the City University of New York**

**DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE**

**SYLLABUS**

**MTH 06 – Intermediate Algebra and Trigonometry (0 credits, 6 hours per week)**

**Prerequisite:** None. Students with Math Proficiency Index less than 40 are strongly encouraged to enroll in Math Start or CUNY Start, before taking college-level mathematics courses.

**Textbooks:** 1. Intermediate Algebra 2e, by Lynn Marecek and Andrea Honeycutt Mathis, OpenStax

<https://openstax.org/details/books/intermediate-algebra-2e>

2. Precalculus by Jay Abramson, OpenStax

<https://openstax.org/details/books/precalculus>

# SECTIONS TOPICS SUGGESTED EXERCISES

Intermediate Algebra 2e Text

[**Chapter 1 Foundations**](https://openstax.org/books/intermediate-algebra-2e/pages/1-introduction) **(4hr)**

1.2 Integers 39/63-66, 71-110, 119-126

1.3 Fractions 54/143-166, 173-182, 209-224,229-234

[**Chapter 2 Solving Linear Equations**](https://openstax.org/books/intermediate-algebra-2e/pages/2-introduction) **(6hr)**

2.1 Use a General Strategy to Solve Linear Equations 113/5-26

2.3 Solve a Formula for a Specific Variable 147/165-194

2.5 Solve Linear Inequalities 186/296-317

[**Chapter 3 Graphs and Functions**](https://openstax.org/books/intermediate-algebra-2e/pages/3-introduction) **(4hr)**

3.1 Graph Linear Equations in Two Variables 252/9-28, 33-68

3.5 Relations and Functions (Only the function notation) 328/307-332

[**Chapter 5 Polynomials and Polynomial Functions**](https://openstax.org/books/intermediate-algebra-2e/pages/5-introduction) **(6hr)**

5.1 Add and Subtract Polynomials 503/1-28, 33-46, 53-68

5.2 Properties of Exponents and Scientific Notation 528/81-126, 131-155, 162-173

5.3 Multiply Polynomials 545/178-271

5.4 Dividing Polynomials 560/288-315

[**Chapter 6 Factoring**](https://openstax.org/books/intermediate-algebra-2e/pages/6-introduction-to-factoring) **(8hr)**

6.1 Greatest Common Factor and Factor by Grouping 582/9-50

6.2 Factor Trinomials 600/61-130, 135-152

6.3 Factor Special Products 615/159-190, 213-220

6.4 General Strategy for Factoring Polynomials 625/233-246, 249-256

6.5 Polynomial Equations 641/277-326

[**Chapter 7 Rational Expressions and Functions**](https://openstax.org/books/intermediate-algebra-2e/pages/7-introduction) **(16hr)**

7.1 Multiply and Divide Rational Expressions 666/1-24, 29-44, 49, 50

7.2 Add and Subtract Rational Expressions 682/75-142

7.3 Simplify Complex Rational Expressions 695/151-194

7.4 Solve Rational Equations 709/197-230

[**Chapter 8 Roots and Radicals**](https://openstax.org/books/intermediate-algebra-2e/pages/8-introduction) **(16hr)**

8.1 Simplify Expressions with Roots 771/1-15, 19-22

8.2 Simplify Radical Expressions 789/55-65

8.3 Simplify Rational Exponents 805/119-162

8.4 Add, Subtract, and Multiply Radical Expressions 818/165-168, 183-186, 191-214(only ⓐ)

8.5 Divide Radical Expressions 832/245, 246, 259-262, 271-282

8.6 Solve Radical Equations 846/287-304, 315-326

8.8 Use the Complex Number System 868/409-476

[**Chapter 9 Quadratic Equations and Functions**](https://openstax.org/books/intermediate-algebra-2e/pages/9-introduction) **(6hr)**

9.1 Solve Quadratic Equations Using the Square Root Property 893/1-30

9.2 Solve Quadratic Equations by Completing the Square 909/75-101

9.3 Solve Quadratic Equations Using the Quadratic Formula 923/113-136

Precalculus Text

[**Chapter 5 Trigonometric Functions**](https://openstax.org/books/precalculus/pages/5-introduction-to-trigonometric-functions) **(6hr)**

5.4 Right Triangle Trigonometry (Only in degree measure) 495/10-41, 52-56

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