**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) **(8hr)**

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

2.7 Solve Absolute Value Inequalities 211/434-489

[**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 328/299-302, 307-332

[**Chapter 4 Systems of Linear Equations**](https://openstax.org/books/intermediate-algebra-2e/pages/4-introduction) **(2hr)**

4.1 Solve Systems of Linear Equations with Two Variables 390/30-35, 46-55

[**Chapter 5 Polynomials and Polynomial Functions**](https://openstax.org/books/intermediate-algebra-2e/pages/5-introduction) **(4hr)**

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

[**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) **(14hr)**

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 868/409-412

[**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)**

5.1 Angles 455/26-42   
5.4 Right Triangle Trigonometry 495/10-41, 52-56

**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](mailto:disability.services@bcc.cuny.edu), Loew Hall, Room 211, (718) 289-5874.

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