

**JAMESTOWN COMMUNITY COLLEGE**  
**State University of New York**

---

**INSTITUTIONAL COURSE SYLLABUS**

**Course Title:** Algebra Fundamentals

**Course Abbreviation and Number:** MAT 550

**Credit Hours:** 4 imputed

**Course Type:** Lecture

**Course Description:** Students will learn basic algebra skills necessary for further study in mathematics and other disciplines that involve quantitative problems. Topics include a review of arithmetic and Real numbers, linear equations and inequalities, the Cartesian coordinate system, unit analysis, properties of exponents, polynomial arithmetic, factoring techniques, the quadratic formula, and an introduction to right triangle trigonometry. Problem solving and applications are emphasized.

No requisites.

---

**Student Learning Outcomes:**

Students who demonstrate understanding can:

1. Solve algebraic equations by implementing various algebraic techniques and properties
2. Apply algebraic and problem solving techniques to solve real world applications
3. Use tables, equations, and the Cartesian coordinate system to represent linear relationships
4. Factor polynomials using a variety of techniques
5. Use properties of exponents and perform arithmetic operations on polynomials
6. Implement unit analysis techniques to convert measurements between units
7. Work with angles in both degree and radian measure, and use trigonometric ratios to solve right triangles

---

**Topics Covered:**

- Prealgebra Review (real numbers, arithmetic)
- Linear Equations and Inequalities
- Measurement (Unit analysis)
- Exponents and Polynomials
- Factoring Polynomials
- Quadratic Formula
- Linear relationships and Graphing
- Introductory Right Triangle Trigonometry

---

**Information for Students**

- Expectations of Students
  - [Civility Statement](#)
  - [Student Responsibility Statement](#)
  - [Academic Integrity Statement](#)
- [Accessibility Services](#)  
Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
-------	--------	-----	--------	-----	--------	-----	-----

- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.

---

**Effective Date:** Fall 2021