Course Name: MAT-016 Intermediate Algebra

Date Updated: 5/2025

Credit Hours/week: 3 hrs./wk.- N3 cr.

BEGINNING: FALL 2025

Catalog Description: A second-level preparatory algebra course designed to prepare students for credit-level mathematics courses. Covered are selected topics, including systems of linear equations, polynomials, factoring, rational expressions, radicals and solving quadratic equations.

Prerequisite: MAT 006, MAT 007, or equivalent

Text: Martin-Gay, Elayn, Developmental Mathematics, 4th Edition, (2020, Pearson) (textbook NOT available for purchase)

Supplementary Material: MyMathLab Access Code - Students who completed MAT 006 or MAT 007 during/after Fall 2020, and within 24 months of taking this course, do not need to purchase the access code.

Calculators are often (not always) permitted for use in mathematics classes. A scientific calculator is the most advanced calculator that you will need for any of your courses. An excellent (and affordable) model is the Texas Instruments TI-30XIIS 2 Line Scientific Calculator.

Graphing calculators are sometimes permitted. However, the TI Nspire is not an acceptable graphing calculator. Only TI 84 models or below are acceptable. Calculators that can solve equations or perform other advanced operations are not allowed. Therefore, no Casio model calculators are allowed. There are also some models of Texas Instrument calculators as well as other brands that will not be allowed due to their capabilities.

Use of a calculator that is not permitted on an exam can lead to issues with academic integrity. If you have a question as to whether or not your calculator is acceptable, you need to ask your professor before your first exam.

Syllabus:

Chapter	Text Sections	Topics
*9	Sect. 9.3	Solving linear equations
	Sect. 9.4, 9.5	Applications of linear equations
	Sect. 9.7	Solving linear inequalities (no compound inequalities)
10	Sect. 10.1-10.5	Graphing lines, intercepts, slope, equations of lines
12	Sect. 12.1, 12.2	Rules for exponents
	Sect. 12.3-12.7	Operations on polynomials (no missing terms for long division)
13	Sect. 13.1-13.5	Factoring of polynomials
	Sect. 13.6, 13.7	Solving polynomial equations by factoring, applications
11	Sect. 11.1-11.4	Systems of equations, applications
14	Sect. 14.1-14.4	Operations on rational expressions
	Sect. 14.5	Solving rational equations
	Sect. 14.7	Complex Fractions
15	Sect. 15.1-15.4	Evaluating, simplifying and operations on radicals (square roots only)
	Sect. 15.5	Radical equations (square roots only)
	Sect.	**Final Exam**

*For Early and Late 7 Week Hybrid classes: Chapters 9 will be completed independently by the student using the review assignment in MyMathLab.

Students are expected to adhere to the policies of the County College of Morris. These can be accessed at: https://www.ccm.edu/compliance-information/academic-policies/

Statement of Expected Course LEARNING OUTCOMES

- **Solve** simple linear equations, systems of equations, quadratic equations, rational equations and radical equations
- **Create and interpret** graphs of linear equations, and write equations for lines.
- **Perform** addition, subtraction, multiplication, and division of rational and radical expressions
- **Simplify** complex fractions and radical expressions