



Course Number and Title: MAT 213 Math for Teachers III

Campus Location:

Georgetown, Dover, Wilmington

Effective Date:

2021-51

Prerequisite:

MAT 212

Co-Requisites:

None

Course Credits and Hours:

4.00 credits

4.00 lecture hours/week

0.00 lab hours/week

Course Description:

This course is designed for prospective early childhood or elementary teachers. Topics include polynomials, quadratic equations, systems of linear equations, the rectangular coordinate system, functions, graphs of linear and quadratic functions, the use of functions as models, linear inequalities, and consumer mathematics.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:

Scientific calculator

Schedule Type:

Classroom Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Solve algebraic equations and inequalities. (CCC 2, 6)
2. Analyze the graphical representation of linear, quadratic, and exponential functions. (CCC 2, 6)
3. Develop, solve, and interpret systems of linear equations and inequalities. (CCC 2, 6)
4. Apply mathematics of finance to consumer issues. (CCC 2, 6)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Solve algebraic equations and inequalities.
 1. Use order of operations to solve linear equations and inequalities.
 2. Use linear equations and inequalities to solve a variety of application problems.
2. Analyze the graphical representation of linear, quadratic, and exponential functions.
 1. Differentiate between relations and functions.
 2. Determine the domain and range of a function.
 3. Sketch graphs of linear, quadratic, and exponential functions.
 4. Derive the equation for a linear function given its graph.
 5. Derive the equation for a linear function given two points or one point and its slope.
 6. Derive the equation for a line parallel or perpendicular to a given line.
 7. Determine the x- and y-intercepts of a function.
 8. Predict outcomes based on the linear, quadratic, or exponential representation of a function.
 9. Solve application problems involving linear functions.
 10. Solve application problems involving quadratic functions.
3. Develop, solve, and interpret systems of linear equations and inequalities.
 1. Evaluate systems of linear equations algebraically and graphically.
 2. Graph linear inequalities.
 3. Graph systems of inequalities, and shade the feasible region.
 4. Design a mathematical function to model given data.
 5. Construct functions that model real world applications.
4. Apply mathematics of finance to consumer issues.
 1. Determine the appropriate application of simple and compound interest.
 2. Solve problems for present and future value involving simple and compound interest.
 3. Solve problems involving consumer credit.

Evaluation Criteria/Policies:

The grade will be determined using the Delaware Tech grading system:

90	-	100	=	A
80	-	89	=	B
70	-	79	=	C
0	-	69	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Final Course Grade:

Calculated using the following weighted average

Evaluation Measure	Percentage of final grade
Tests and Projects (Summative) (Equally Weighted)	80%
Formative assessments	10%
Homework (Formative)	10%
TOTAL	100%

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

None

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.