

## Developmental Mathematics II (TMTH 0373)



**Credit:** 3 semester credit hours (3 hours lecture)

**Prerequisite:** A score of 27-38 on the COMPASS or a grade of at least “C” in TMTH 0372.

### Course Description

Topics in mathematics such as arithmetic operations, basic algebraic concepts and notation, geometry, and real and complex number systems.

### Required Textbook and Materials

1. These two items are packaged together under ISBN-10 1256139807. Both are required.
  - a. MyMathLab Standalone Access Code
    - i. ISBN-10 is 1256159263
  - b. My Workbook by Bittinger and Beecher, 8<sup>th</sup> Edition (Developmental Mathematics)
    - i. ISBN-10 is 0321730909
2. Four function calculator (+, -, ÷, ×)

### Course Objectives

Upon completion of this course, the student will be able to:

1. Graph linear equations in two variables and understand the graphs of quadratic equations. (SCANS: C5, C6, C7, C18, C19, F1, F3, F5, F8, F9, F10, F11, F12)
2. Find the slope, y-intercept, equation of a line, and determine whether lines are parallel or perpendicular from their equations. (SCANS: C5, C6, C7, C18, C19, F1, F3, F5, F8, F9, F10, F11, F12)
3. Perform operations on polynomial expressions and radical expressions. (SCANS: C5, C6, C7, C18, C19, F1, F3, F5, F8, F9, F10, F11, F12)
4. Solve problems involving different types of equations and systems of linear equations. (SCANS: C5, C6, C7, C18, C19, F1, F3, F4, F5, F8, F9, F10, F11, F12)
5. Solve problems involving functions, scientific notation, and Pythagorean Theorem. (SCANS: C5, C6, C7, C18, C19, F1, F3, F5, F8, F9, F10, F11, F12)

### SCANS Skills and Competencies

Beginning in the late 1980's, the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job. In 1991 the Commission announced its findings in *What Work Requires in Schools*. In its

## **TMTH 0373**

### Course Syllabi

research, the Commission determined that “workplace know-how” consists of two elements: foundation skills and workplace competencies.

### **Course Outline**

- A. Welcome to College:
  - 1. Introduction of faculty and students
  - 2. Study Skills for Mathematics
- B. Library and Learning Lab
  - 1. Location
  - 2. Hours
  - 3. Available Resources
- C. Graphs of Linear Equations
  - 1. Graphs of Linear Equation
  - 2. Slope and Applications
  - 3. Equations of Lines
  - 4. Graphing Using the Slope and y-intercept
  - 5. Parallel and Perpendicular Lines
- D. Polynomials: Operations
  - 1. Integers as Exponents
  - 2. Exponents and Scientific Notation
  - 3. Introduction to Polynomials
  - 4. Addition and Subtraction of Polynomials
  - 5. Multiplication of Polynomials
  - 6. Special Products
  - 7. Division of Polynomials
- E. Polynomials: Factoring
  - 1. Introduction to Factoring
  - 2. Factoring Trinomials of the Type  $x^2 + bx + c$
  - 3. The ac-Method
  - 4. Factoring Trinomial Squares and Differences of Squares
  - 5. A General Strategy
  - 6. Solving Quadratic Equations by Factoring
  - 7. Applications of Quadratic Equations
- G Systems of Equations
  - 1 Introduction
  - 2 The Elimination Method
  - 3 Applications and Problem Solving
- H Radical Expressions and Equations
  - 1. Introduction to Radical Expressions
  - 2. Multiplying and Simplifying with Radical Expressions
  - 3. Quotients Involving Radical Expressions
  - 4. Addition, Subtraction, Multiplication
  - 5. Applications with Right Triangles
- I Quadratic Equations
  - 1 The Quadratic Formula
  - 2 Applications and Problem Solving
  - 3 Functions

**TMTH 0373**  
Course Syllabi

**Grade Scale**

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

**Course Evaluation**

Final grades will be calculated according to the following criteria:

1. 6 Unit Tests 67%
2. Cumulative Final Exam 11%
3. Course Assignments 11%
4. Daily Grades including attendance 11%

**Course Requirements**

1. The student will complete homework assignments.
2. The student will complete course exams with satisfactory grades.
3. The student will have satisfactory attendance for course completion.

**Course Policies**

1. No food, drinks, or use of tobacco products in class.
2. Beepers, telephones, headphones, and any other electronic devices must be turned off while in class.
3. The students are responsible for initiating and completing the drop process. Students who stop coming to class and fail to drop the course will earn an ‘F’ in the course.
4. Additional class policies as defined by the individual course instructor.

**Disabilities Statement**

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

**Course Schedule** (Subject to Change)

<b>Week of</b>	<b>Topic</b>	<b>Reference</b>
Week 1	Course introduction and policies Chapter 9 Sections 1, 3	
Week 2	Chapter 9 Sections 4, 5, 6 Visit Learning Lab	

**TMTH 0373**  
Course Syllabi

---

Week 3	Chapter 10 Sections 1, 2, 3
Week 4	Chapter 10 Sections 4, 5
Week 5	Chapter 10 Sections 6, 7, 8
Week 6	Chapter 11 Sections 1, 2
Week 7	Chapter 11 Sections 4, 5
Week 8	Chapter 11 Sections 6, 7, 8
Week 9	Chapter 13 Sections 1, 3
Week 10	Chapter 13 Section 4 Chapter 14 Section 1
Week 11	Chapter 14 Sections 2, 3
Week 12	Chapter 14 Sections 4, 6
Week 13	Chapter 15 Sections 3, 5, 7
Week 14	Final Exam Review
Week 15	Final Exam Review
Final Exam	<i>Given on the date and time specified by the official exam schedule</i>

---

**Contact information varies by instructor.**