# Developmental Mathematics (TMTH 0374)

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

**Prerequisite/Co-requisite:** None

## Course Description
Topics in mathematics such as arithmetic operations, basic algebra concepts and notation, geometry, and real and complex number systems.

## Required Textbook and Materials
1. MyLabsPlus Standalone Access Code
   a. May be purchased online at **www.lit.mylabsplus.com**
   b. May be purchased at a local bookstore: **ISBN 10: 0558926800**

2. A basic 6-function calculator (+, −, ÷, x, √, %) with a ± key

## Course Objectives
Upon completion of this course, the student will be able to:
1. Perform arithmetic operations in the real number system.

2. Solve applied problems using arithmetic operations in the real number system.

3. Solve geometric problems.

4. Apply basic algebraic concepts to simplify expressions and solve linear equations and inequalities.

5. Perform basic operations in the complex number system.

## Course Outline

A. Module 1
1. Notation, Order, Rounding
2. Applications and Problem Solving
3. Exponential Notation; Order of Operations
4. Factors; Multiples; Divisibility
5. Prime vs. Composite; Prime Factorization
6. Greatest Common Factor and Least Common Multiple

B. Module 2
1. Notation and Simplifying
2. Multiplication and Division
3. Order; Addition and Subtraction

4. Mixed Numerals
5. Applications and Problem Solving
6. Order of Operations
7. Simple Probability

C. Module 3
1. Notation; Order
2. Rounding
3. Order of Operations
4. Fraction Notation; Decimal Notation
5. Applications and Problem Solving

D. Module 4
1. Ratio and Proportion
2. Percent, Decimal, and Fraction Notation

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3. Solving Percent Problems
4. Applications of Percent
5. Simple Interest

E. Module 5
1. Measures of Central Tendency

F. Module 6
1. Perimeter and Area
2. Area of a Shaded Region
3. Applications of Perimeter
4. Applications of Area
5. Circles
6. Applications of Circumference and Area
7. Similar Triangles

G. Module 7
1. The Real Numbers
2. Addition and Subtraction of Real Numbers
3. Applications Involving the Addition and Subtraction of Real Numbers
4. Multiplication and Division of Real Numbers

5. Applications Involving the Multiplication and Division of Real Numbers
6. Order of Operations
7. Introduction to Algebra
8. Properties of Real Numbers
9. Algebraic Expressions
10. Simplifying Algebraic Expressions

H. Module 8
1. Solving One-Step Equations with Addition or Subtraction
2. Solving One-Step Equations with Multiplication or Division
3. Solving Multi-Step Equations
4. Solving More Multi-Step Equations
5. Introduction to Inequalities
6. Solving Inequalities

I. Module 9
1. Complex Numbers
2. Introduction to Functions
3. Function Notation
4. Introduction to Sets

## 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:

| | |
|---|---|
| Tests | 60% |
| Comprehensive Final Exam | 10% |
| Course Assignments | 20% |
| Participation | 10% |

## Course Requirements

1. Attendance is mandatory.

2. The student must purchase all of the required course materials.

3. The student will be expected to have access to the Internet and a computer.

4. Additional course requirements as defined by the individual course instructor.

## Course Policies

1. Cheating of any kind will <u>not</u> be tolerated.

2. No food, drinks, or use of tobacco products in class.

3. Beepers, telephones, headphones, and any other electronic devices must be turned off while in class.

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)

| Week | Topic | Reference |
| --- | --- | --- |
| 1 | Course introduction and policies | Syllabus, other instructor information |
| | TMTH 0374 Pre-Test | |
| | Module 1 | Module 1 Worksheets; MyLabsPlus |
| | Module 1 Test | |
| | Module 2 | Module 2 Worksheets; MyLabsPlus |
| | Module 2 Test | |
| 2 | Module 3 | Module 3 Worksheets; MyLabsPlus |
| | Module 3 Test | |
| | Module 4 | Module 4 Worksheets; MyLabsPlus |
| | Module 4 Test | |
| 3 | Module 5 | Module 5 Worksheets; MyLabsPlus |
| | Module 6 | Module 6 Worksheets; MyLabsPlus |
| | Module 5/6 Test | |
| 4 | Module 7 | Module 7 Worksheets; MyLabsPlus |
| | Module 7 Test | |
| | Module 8 | Module 8 Worksheets; MyLabsPlus |
| 5 | Module 8 | Module 8 Worksheets; MyLabsPlus |
| | Module 8 Test | |
| | Module 9 | Module 9 Worksheets; MyLabsPlus |
| 6 | TMTH 0374 Post-Test (Final Exam) | *Given on the date and time specified by the official exam schedule.* |

## Contact information varies by instructor.