

## Developmental Math (TMTH 0374/ 0174)



**LAMAR INSTITUTE  
OF TECHNOLOGY**

### CREDIT

TMTH 0374

3 Semester Credit Hours (3 hours lecture)

TMTH 0174

1 Semester Credit Hours (1 hour lab)

### MODE OF INSTRUCTION

Online

### PREREQUISITE/CO-REQUISITE:

Must be co-enrolled in TMTH 0174 BASE NCBO.

### COURSE DESCRIPTION

The course supports students in developing skills, strategies, and reasoning needed to succeed in mathematics, including communication and appropriate use of technology. Topics include the study of numeracy and the real number system; algebraic concepts, notation, and reasoning, quantitative relationships; mathematical models; and problem solving.

### COURSE OBJECTIVES

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

1. Use appropriate symbolic notation and vocabulary to communicate, interpret, and explain mathematical concepts.
2. Define, represent, and perform operations on real numbers, applying numeric reasoning to investigate and describe quantitative relationships and solve real world problems in a variety of contexts.
3. Use algebraic reasoning to solve problems that require ratios, rates, percentages, and proportions in a variety of contexts using multiple representations.
4. Apply algebraic reasoning to manipulate expressions and equations to solve real world problems.
5. Use graphs, tables, and technology to analyze, interpret, and compare data sets.
6. Construct and use mathematics models in verbal, algebraic, graphical and tabular form to solve problems in a variety of contexts and to make predictions and decisions.

### INSTRUCTOR CONTACT INFORMATION

|                  |                                                                  |
|------------------|------------------------------------------------------------------|
| Instructor:      | Widad Abdelwahab                                                 |
| Email:           | <a href="mailto:whabedelwahab@lit.edu">whabedelwahab@lit.edu</a> |
| Office Phone:    | 409-241-7873                                                     |
| Office Location: | Building TA5 and Room 106                                        |

Office Hours:               Virtual office hours by appointment. During the semester I will be creating virtual meetings (optional). I will send message through blackboard.

Approved: Initials/date

□□□□We will be communicating with announcements and messages through Blackboard.□

2. Do NOT use your personal e-mail to contact me. I will not respond to any personal e-mail.
3. I will check my messages Monday through Friday (not on weekends).
4. I will try to respond to you within 24 hours but please do not leave things for the last minute!
5. You must log in to blackboard to check for new messages, announcements, and work on the assignments.
6. I will be asking you to respond to messages with "I understand"

## REQUIRED TEXTBOOK AND MATERIALS

1. A Pearson MyMathLab Standalone Access Code
2. Once a student has access to this class (TMTH 0374) in Blackboard, they will be able to access the Pearson website
3. *Additional information regarding MyMathLab can be found under the **Start Here** section of your TMTH 0374 Blackboard course.*
4. There is NO TEXTBOOK for this class but you will be responsible for printing out the PowerPoints from MyMathLab.
5. A basic scientific calculator. Images of acceptable calculators for use in TMTH 0374 may be found under the **Start Here** section of your TMTH 0374 Blackboard course.
6. You will NOT be allowed to use a graphing calculator or your device's calculator.
7. **A binder, notebook paper, a folder, pencils, and erasers. Optional: highlighters**

## ATTENDANCE POLICY

Blackboard logon and access to course everyday.

## Course Requirements

1. The student must enroll in MyMathLab through blackboard..
2. The student will be expected to have access to the Internet and a computer with webcam and microphone.
3. Blackboard logon and access to course a minimum of 7 times per week.
4. The due dates will be posted under tests and assignments calendar on blackboard.

## STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week. Online students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

**COURSE CALENDAR – Subject to Change.**

| Week   | TOPIC                                                                                                                                                                                                                                                                                                                                                     | <b>ASSIGNMENTS<br/>(Due on this Date)</b><br>Please print a copy of the “ <b>Due Dates for TMTH 0374</b> ” worksheet located under the <i>Weekly Assignments and section</i> of your TMTH 0374 Blackboard course for all due dates.<br>Your MyMathLab course also contains a list of all due dates. |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Week 1 | Course introduction and policies<br>Introduction to Real Numbers                                                                                                                                                                                                                                                                                          | Work on all introductory activities and the first week assignments                                                                                                                                                                                                                                  |
| Week 2 | Section 6.1: Lecture Video and PowerPoints<br>Section 6.1: a) The Real Numbers Sets<br>Section 6.1: b) Additive Inverse, Absolut Value, and order<br>Section 6.1:c) Applications and Problem Solving<br>Test #1 (Section 6.1)<br>Start on Section 6.2<br>Section 6.2: Lecture Video and PowerPoints                                                       |                                                                                                                                                                                                                                                                                                     |
| Week 3 | Section 6.2: a) Apply Properties of Real Numbers<br>Section 6.2: b) Perform Operation of Signed Numbers<br>Section 6.2: c) Order of Operations Rules<br>Section 6.2: d) Solve Applications Involving Properties of Real Numbers<br>Section 6.2: Properties of real numbers<br>Test #2(Section 6.2)<br>Start on Section 5.1                                |                                                                                                                                                                                                                                                                                                     |
| Week 4 | Section 5.1: Lecture Video and PowerPoints<br>Section 5.1: Prime and Composite Numbers<br>Section 5.4: Lecture Video and PowerPoints<br>Section 5.4: Greatest Common Factor and Least Common Multiple<br>Test #3 (Section 5.1 and 5.4)<br>Section 6.3: Lecture Video and PowerPoints<br>Section 6.3: a) Rational Numbers                                  |                                                                                                                                                                                                                                                                                                     |
| Week 5 | Section 6.3: b) Write Equivalent Fractions<br>Section 6.3: c) Add, Subtract, Multiply and Divide Rational Numbers<br>Section 6.3: d) Application and Problem Solving<br>Section 6.3: e) Converting Decimal to Fractions and Fractions to Decimal.<br>Section 6.3: f) Fraction Notation, Decimal Notation<br>Test # 4(Section 6.3)<br>Start on Section 6.4 |                                                                                                                                                                                                                                                                                                     |

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| Week 6  | <p>Section 6.4: Lecture Videos and PowerPoints</p> <p>Section 6.4: a) Identify the rational and Irrational Numbers</p> <p>Section 6.4: b) Solve Applications Involving Square Roots</p> <p>Section 6.4: c) Add and Subtract Square Roots</p> <p>Test #5 (Section 6.4)</p>                                                                                                                                                                                                                       |  |
| Week 7  | <p>Section 6.5: Lecture Video and PowerPoints</p> <p>Section 6.5: a) Perform Calculations Involving Percents</p> <p>Section 6.5: b) Perform Operations of Arithmetic with Decimal Numbers</p> <p>Section 6.5: c) Rounding Whole Numbers and Decimals</p> <p>Section 6.5: d) Convert between the notations</p> <p>Section 6.5: e) Solve Applications Involving Decimals and Percents</p> <p>Section 6.5: f) Using Order of Operations Rules with Decimal Numbers</p> <p>Test #6(Section 6.5)</p> |  |
| Week 8  | <p>Section 7.1: Lecture Video and PowerPoints</p> <p>Section 7.6: Lecture Video and PowerPoints</p> <p>Section 7.1: a) Introduction to Algebra</p> <p>Section 7.1: b) Properties of Real Numbers</p> <p>Section 7.6: c) Algebraic Expressions</p> <p>Section 7.6: d) Simplifying Algebraic Expressions</p> <p>Section 7.1: e) Identify a linear equation as a conditional equation, an identity, or a contradiction</p>                                                                         |  |
| Week 9  | <p>Section 7.1: f) Solve a linear Equation.</p> <p>Section 7.1: g) Solve a literal equation or a formula for a specified variable</p> <p>Section 7.1: h) Use a linear model in an application.</p> <p>Test #7 (Section 7.1 and 7.6)</p> <p>Section 7.2: Lecture Video and PowerPoints</p> <p>Section 7.2: a) Translate verbal expressions involving the operations into symbolic mathematical expressions.</p> <p>Section 7.2: b) Solve applications to find unknown numbers</p>                |  |
| Week 10 | Section 7.3: Lecture Video and PowerPoints                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
|         | Section 7.3: a) Write Comparison of Two Quantities as a Ratio                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|         | Section 7.3: b) Find the Unit Price                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|         | Section 7.3: c) Solve Proportion                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |
|         | <p>Test #8 (Section 7.2 &amp; 7.3)</p> <p>Section 11.1: Lecture Video and PowerPoints</p> <p>Section 11.1: a) Find probability of events</p>                                                                                                                                                                                                                                                                                                                                                    |  |

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|         | Section 11.1: b) Determine the odds in favor of events and against events<br>Section 11.1: c) Find probabilities of events using tables and diagrams<br>Section 11.2: Lecture Video and PowerPoints<br>Section 11.2: Determine The probability Involving not and Involving Or<br>Test # 9 (Section 11.1 & 11.2) |                                           |
| Week 11 | Section 12.1: Lecture Video and PowerPoints                                                                                                                                                                                                                                                                     |                                           |
|         | Section 12.1: Visual display of data                                                                                                                                                                                                                                                                            |                                           |
|         | Section 12.2: Lecture Video and PowerPoints                                                                                                                                                                                                                                                                     |                                           |
|         | Section 12.2: Measures of central tendency                                                                                                                                                                                                                                                                      |                                           |
|         | Section 13.1: Lecture Video and PowerPoints                                                                                                                                                                                                                                                                     |                                           |
|         | Section 13.1: Simple interest                                                                                                                                                                                                                                                                                   |                                           |
|         | Test #10 (Section 12.1, 12.2, and 13.1)                                                                                                                                                                                                                                                                         |                                           |
|         |                                                                                                                                                                                                                                                                                                                 |                                           |
|         | Final Exam Review<br>Final Exam                                                                                                                                                                                                                                                                                 | Optional to replace the lowest test grade |
|         |                                                                                                                                                                                                                                                                                                                 |                                           |

### COURSE EVALUATION

Final grade will be calculated according to the following criteria:

☑ Online Tests 60% (Module tests will be taken on MyMathLab using Respondus Lockdown Browser).

More information will be given by the instructor.

☑ Course Assignments 40%

### GRADE SCALE

- 90-100    A
- 80-89    B ☐ 70-79    C
- 60-69    F
- 0-59    F

### TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimumcomputer-requirements>. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

### AI Statement

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of

these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI / ChatGPT in their courses.

### **DISABILITIES STATEMENT**

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

### **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

### **ACADEMIC DISHONESTY**

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at <http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty>.

### **ARTIFICIAL INTELLIGENCE STATEMENT**

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses

### **STARFISH**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard

or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

**ADDITIONAL COURSE POLICIES/INFORMATION** [On  
blackboard](#)