

**Midland College Syllabus**  
**TECM 1301 Industrial Mathematics**  
**SCH (3/0)**

**Course Description:** Basic math skills applicable to industrial occupations. Includes fraction and decimal manipulation, measurement, percentage, and problem solving techniques for equations and ratio/proportion applications. Students will convert between decimals and fractions; use measuring tools; calculate ratios and proportions in a technical application; transpose linear equations to solve for unknowns.

Students **MUST** actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity will be reported as never attended and dropped from the course.

**Text, References, and supplies.**

**Practical Math**  
**4th Edition**  
**ISBN: 978-0-8269-2250-2**

**Recommended:**  
 Scientific Calculator

**Goals and Objectives**

Upon successful completion of the course, students will have the ability to accomplish the following competencies accurately and efficiently:

<b>Competencies</b>	<b>Purpose and/or sample of real life applications</b>	<b>Projects or supporting laboratory exercises</b>	<b>Used throughout the course</b>
Understand fundamentals of our number systems. Common fractions and mixed numbers, binary and hexadecimal.	An understanding of our number system is essential.	Making calculations and measurements using fractional values.	Yes
Comprehend the importance of how real numbers including integers, fractions, exponents, etc., are used in the analysis of real world problems.	The ability to understand real numbers is essential in the solution of problems	Demonstrate knowledge of how to work practical math problems requiring the use of real numbers.	Yes
Convert numbers to different units of measurements (standard and/or metric)	Using the American and SI systems of measurement	Perform arithmetic operations with customary linear units and compound numbers	Yes
Using symbolism and algebraic expressions	Learning the knowledge and use of formulas and symbols for solving math problems	Practice by solving problems	Yes

Understand and perform calculations involving percentages, ratios, and proportions	Learn geometric variables for the forming of objects and how to measure them	Calculate area, perimeter, circumference, volume, and seam lengths	Yes
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**Students may perform the following tasks in order to maintain safe lab and classroom spaces:**

- Participate in shop and classroom maintenance which may include, but not limited to sweeping, mopping, disposing of trash, cleaning work benches, organize tools and equipment, organize tool room, disinfect classroom tables and chairs.
- Disassemble discontinued lab training vehicles or equipment for salvage.
- Repurpose lab vehicles to be utilized in lab assignments.
- Other course related tasks as assigned by instructor.

**Student Contributions:** The college scholastic dishonesty and academic misconduct, and the absence policies will be followed as printed in the **Student Responsibilities and Class Policies** section of the current Midland College Catalog & Handbook.

Make-up work and exams will be allowed **solely** at the discretion of the instructor.

**Grading/Evaluation**

Attendance, in-class participation, plus performance on homework assignments, quizzes and exams form the basis for grading, and are weighted as shown:

In-class Participation, Attendance, and Punctuality	10%
Unit Tests and Homework	50%
Mid-Term Exam	20%
Final Exam	<u>20%</u>
Total	100%

**Administrative Information:**

Curt Pervier, Dean of Applied Technology  
 Lisa Hays, Division Secretary  
 (432) 685-4676  
 Fax: (432) 685-6472

\*Syllabus subject to change as deemed necessary by the instructor to ensure learning objectives and course goals are met.

**Non-Discrimination Statement**

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual has been designated to handle inquiries regarding the non-discrimination policies:

**Tana Baker**

Title IX Coordinator/Compliance Officer  
 3600 N. Garfield, SSC 131  
 Midland, Texas 79705  
 (432) 685-4781  
[tbaker@midland.edu](mailto:tbaker@midland.edu)

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

**Americans with Disabilities Act (ADA) Statement:**

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit [www.midland.edu/accommodation](http://www.midland.edu/accommodation) and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.