COURSE OUTLINE: MTH162 - PRE-TRADE/TECH MATH1

Prepared: Mathematics Department
Approved: Corey Meunier, Chair, Technology and Skilled Trades

Course Code: Title	MTH162: PRE-TRADES/TECHNOLOGY MATHEMATICS 1
Program Number: Name	4005: PRE-TRADES TECHNOLGY
Department:	MATHEMATICS
Semesters/Terms:	20F
Course Description:	This first level mathematics course for the Pre-trades and Technology programs will allow students to establish their math preparedness level. Students will use a variety of math study skills and problem-solving strategies to become ready for college-level trades or technology math courses. Topics of focus include: fundamental concepts including arithmetic operations and concepts in measurement, ratio, proportion, percents and introductory algebra.
Total Credits:	3
Hours/Week:	3
Total Hours:	45
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Substitutes:	MTH160
This course is a pre-requisite for:	MTH163
Essential Employability Skills (EES) addressed in this course:	EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 10 Manage the use of time and other resources to complete projects.
Course Evaluation:	Passing Grade: 50%, D A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Books and Required Resources:	Calculator - Sharp EL-520XTB (Available in Bookstore)

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Understand how to apply all operations with whole, decimal, and signed numbers as well as	1.1 Add, subtract, multiply, and divide whole numbers, decimals, and signed numbers with and without a calculator. 1.2 Evaluate expressions following the order of operations. 1.3 Differentiate between exact and approximate numbers.

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integrate the rules of rounding with applications.	1.4 Apply the rules of rounding and determining significant digits. 1.5 Convert numbers between decimal form and scientific notation. 1.6 Perform arithmetic operations on numbers in scientific notation. 1.7 Solve problems by translating English sentences into mathematical equations.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Understand the various types of fractions and compute all operations with fractions, with and without a calculator, and use these skills in application questions.	2.1 Define the types of fractions. 2.2 Convert between improper fractions and mixed numbers. 2.3 Convert between fractions and decimals. 2.4 Add, subtract, multiply, and divide fractions with and without a calculator. 2.5 Solve applied problems with fractions by applying problem solving strategies and arithmetic skills.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Understand the importance of ratios and proportions and use these skills to solve applications problems. Learners will also understand both systems of measurement and have the ability to convert between both.	3.1 Solve problems involving ratios, proportions, and percent. 3.2 Utilize metric system prefix names and symbols. 3.3 Reduce units of measurement within systems. 3.4 Convert units of measurement from one system to another.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Use the laws of exponents to simplify expressions and use these skills to learn basic algebraic operations and solving linear and literal equations.	4.1 Simplify algebraic expressions using the laws of exponents. 4.2 Convert powers between exponential and radical form. 4.3 Simplify expressions by removing grouping symbols and combining like terms. 4.4 Add, subtract, and multiply algebraic expressions. 4.5 Divide polynomials by monomials. 4.6 Solve linear equations for one variable. 4.7 Solve literal equations for the indicated variable.
Course Outcome 5	**Learning Objectives for Course Outcome 5**
5. Understand how to use the Cartesian coordinate system and utilize the features of linear functions, including slope and y-intercepts, to develop and find graphical solutions for applications.	5.1 Graph points, lines, and curves on the rectangular coordinate system. 5.2 Find the slope and intercepts of a line. 5.3 Develop the equation for a line. 5.4 Find the approximate graphical solutions to a variety of problems.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments/Quizzes/Attendance	30%

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	Tests	70%
Date:	June 11, 2020	
Addendum:	Please refer to the course outline addendum on the Learning Management System for further information.	

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