



COURSE OUTLINE: MTH163 - PRE-TRADE/TECH MATH2

Prepared: Mathematics Department

Approved: Bob Chapman, Chair, Health

Course Code: Title	MTH163: PRE-TRADES/TECHNOLOGY MATHEMATICS 2								
Program Number: Name	4005: PRE-TRADES TECHNOLOGY								
Department:	MATHEMATICS								
Semesters/Terms:	22W								
Course Description:	This course is a continuation of MTH162-3 for Pre-trades and Technology students. Topics of study include: quadratic, exponential and logarithmic equations, geometry, and trigonometric functions. A treatment of trigonometry of right and oblique triangles with applications is included. This course also includes an introduction to statistics.								
Total Credits:	3								
Hours/Week:	3								
Total Hours:	45								
Prerequisites:	MTH162								
Corequisites:	There are no co-requisites for this course.								
Substitutes:	MTH161								
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:	<table border="1"> <thead> <tr> <th>Course Outcome 1</th> <th>Learning Objectives for Course Outcome 1</th> </tr> </thead> <tbody> <tr> <td>1. Solve quadratic equations by factoring, using quadratic formula, and graphically.</td> <td>1.1 Reviewing the quadratic equation. 1.2 Solving quadratic equations by factoring. 1.3 Solving quadratic equations by completing the square. 1.4 Solving quadratic equations by using the quadratic formula. 1.5 Graphing the quadratic functions using the key points.</td> </tr> <tr> <th>Course Outcome 2</th> <th>Learning Objectives for Course Outcome 2</th> </tr> <tr> <td>2. Solve exponential and</td> <td>2.1 Recognize an exponential equation.</td> </tr> </tbody> </table>	Course Outcome 1	Learning Objectives for Course Outcome 1	1. Solve quadratic equations by factoring, using quadratic formula, and graphically.	1.1 Reviewing the quadratic equation. 1.2 Solving quadratic equations by factoring. 1.3 Solving quadratic equations by completing the square. 1.4 Solving quadratic equations by using the quadratic formula. 1.5 Graphing the quadratic functions using the key points.	Course Outcome 2	Learning Objectives for Course Outcome 2	2. Solve exponential and	2.1 Recognize an exponential equation.
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In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2021-2022 academic year.



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	logarithmic equations.	2.2 Identify the base in an exponential equation. 2.3 Evaluate and graph exponential functions. 2.4 Review logarithms and natural logarithms. 2.5 Solve exponential and logarithmic equations.
	Course Outcome 3	Learning Objectives for Course Outcome 3
	3. Solve problems involving perimeter, area, volume, surface area, for simple composite shapes and figures.	3.1 Discuss basic two and three dimensional shapes. 3.2 Review the rules on area, perimeter, volume, surface area for simple composite shapes and figures. 3.3 Solve for perimeter, area, volume, and surface area for the various composite shapes and figures. 3.4 Introduce geometry and right angle triangle trigonometry.
	Course Outcome 4	Learning Objectives for Course Outcome 4
	4. Solve problems using primary trigonometric ratios, the sine law, and the cosine law.	4.1 Evaluate angles and their measure. 4.2 Evaluate other geometric figures. 4.3 Solve for right angle applications and use the Pythagorean Theorem. 4.4 Discuss similar triangles and the trigonometric ratios. 4.5 Determine the values and applications of trigonometric ratios. 4.6 Review the law of sines and the law of cosines. 4.7 Introduce vectors, vector components, vector addition with components and their application.
	Course Outcome 5	Learning Objectives for Course Outcome 5
	5. Interpret, analyze and summarize two variable data graphically and numerically using a variety of tools and strategies.	5.1 Introduction to data analysis. 5.2 Create various representations of data graphically. 5.3 Measure central tendencies (mean, median, and mode), spread and variation. 5.4 Introduce probability and its applications.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments/Quizzes/Attendance	30%
Tests	70%

Date:

December 8, 2021

Addendum:

Please refer to the course outline addendum on the Learning Management System for further information.

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