COURSE OUTLINE: MTH151 - MATHEMATICS

Prepared: Mathematics Department
Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

Course Code: Title	MTH151: MATHEMATICS
Program Number: Name	4040: MACHINE SHOP
Department:	MATHEMATICS
Semesters/Terms:	19F
Course Description:	In this course, emphasis will be placed on teaching mathematics at a level that will help the student in the Machining trade. Some theoretical concepts and topics in algebra, geometry and trigonometry will be covered. These concepts and topics will be reinforced by the use of practical problems to make the current topic relevant to the student`s needs.
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:	MTH127, MTH142, MTH143, MTH145
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
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. Operations with Whole Numbers, Fractions, and Decimals	1.1 Solve problems involving whole and decimal numbers including prime and composite numbers. 1.2 Solve problems involving common fractions including finding lowest common denominator. 1.3 Convert decimal fractions to common fractions and the reverse process. 1.4 Measure and include its error factors.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Understanding measurement and Ration and Proportions	2.1 Use direct and inverse proportion. 2.2 Use variation. 2.3 Use percent in dimensioning. 2.4 Utilize metric system prefix names and symbols. 2.5 Reduce units of measurement within systems.

	2.6 Convert units of measurement from one system to another.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Solving problems involving geometric shapes	3.1 Solve practical problems to find the areas of a triangle or quadrilateral. 3.2 Solve problems involving the circumference, diameter, area or tangent to a circle. 3.3 Compute surface areas and volumes of spheres, cylinders, cones and other solid figures.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Solving triangles using trigonometric ratios	4.1 Define the trigonometric functions. 4.2 Solve the missing parts of a right angle triangle using trigonometric functions.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assigned Work	30%
Tests	70%

Date: June 19, 2019

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