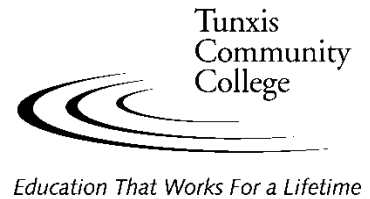


# COURSE SYLLABUS



<b>Course Title:</b>	Manufacturing Math I		<b>Date submitted:</b>	4/30/2018 (18-22)								
<b>Department:</b>	Advanced Manufacturing Technology											
<b>Curriculum:</b>	Technology Studies											
<b>Course Descriptors:</b> Make certain that the course descriptors are consistent with college and Board of Trustees policies, and the current course numbering system.	Course Code: (eg. ACC*101)	MFG*051	<b>Prerequisites:</b>									
	Course Type:	L			<b>Assessment</b>							
	A: Clinical B: Lab D: Distance Learning I: Individual/Independent L: Lecture N: Internship M: Seminar P: Practicum U: Studio X: Combined Lecture/Lab Y: Combined Lecture/ Clinical/Lab Z: Combined Lecture/Studio		<b>Corequisites:</b>									
	Elective Type:	G					<b>None</b>					
	AH: Art History E: English FA: Fine Arts FL: Foreign Language G: General HI: History HU: Humanities LAS: Liberal Arts & Sciences M: Math S: Science SS: Social Science								<b>Other Requirements:</b>			
	Credit Hours:	3									<b>None</b>	
	Developmental: (yes/no)	Yes										
	Lecture:	3										
	Clinical:	0										
	Lab:	0										
Studio:	0											
Other:	0											
TOTAL:	3											
Class Maximum:	30	<b>None</b>										
Semesters Offered:	Fall, Spring											
<b>Ability Based Education (ABE) Statement</b>	At Tunxis Community College students are assessed on the knowledge and skills they have learned. The faculty identified the General Education Abilities critical to students' success in their professional and personal lives. In every class, students are assessed on course abilities, sometimes program abilities, and, in most classes, at least one General Education Ability. Students will receive an evaluation of the degree to which they have demonstrated or not demonstrated that General Education Ability.											
<b>Catalog Course Description:</b>	First course in Manufacturing Mathematics. A study of arithmetic and algebraic operations applied to manufacturing circumstances. Fractions, decimals, tolerances, percentages, signed numbers, powers and roots, the metric system, as well as ratios and proportions are studied in depth.											

**Topical Outline:**  
List course content in outline format.

**INSTRUCTIONAL UNITS:**

- A. Evaluation exercises
- B. Fractions
- C. Addition of fractions
- D. Subtraction of fractions
- E. Multiplication of fractions
- F. Division of fractions
- G. Fraction concept applications
- H. Decimals
- I. Rounding off decimals
- J. Changing fractions to decimals
- K. Decimal equivalent chart
- L. Addition and subtraction of decimals
- M. Multiplication of decimals
- N. Division of decimals
- O. Decimal concept test
- P. Tolerances
- Q. Percent
- R. Signed numbers
- S. Powers and roots
- T. Metrics

**LABORATORIES:**

- A. Evaluation exercises
- B. Use of Fractions
- C. Addition of fractions
- D. Subtraction of fractions
- E. Multiplication of fractions
- F. Division of fractions
- G. Fraction concept applications
- H. Using Decimals
- I. Rounding off decimals
- J. Changing fractions to decimals
- K. Using the Decimal equivalent chart
- L. Adding and subtracting decimals
- M. Multiplying of decimals
- N. Divide decimals
- O. Decimal concept test
- P. Identifying Tolerances
- Q. Determining Percent
- R. Using Signed numbers
- S. Determining Powers and Roots
- T. Understanding Metrics

**Upon successful completion of this course, the student will be able to do the following:**

**COURSE:**

1. demonstrate the ability to add, subtract, multiply and divide fractions
2. demonstrate the ability to add, subtract, multiply and divide decimals
3. demonstrate the ability to change fractions to decimals
4. demonstrate and understanding of tolerances
5. demonstrate and understanding of percentages
6. demonstrate and understanding of signed numbers
7. demonstrate and understanding of powers and roots
8. demonstrate and understanding of the Metric System

**Outcomes:**  
Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.

	<p><b>PROGRAM:</b> (Numbering reflects Program Outcomes as they appear in the college catalog)  <u><b>Electronics Technology Certificate and A.S. Degree</b></u></p> <ol style="list-style-type: none"> <li>1. demonstrate an understanding of Shop Safety</li> <li>2. demonstrate an understanding the theory of electrical structure, voltage, current, resistance, and electrical circuit and their measurement</li> <li>3. demonstrate an understanding of the basic laws of arithmetic</li> <li>4. demonstrate an understanding of several number systems and codes that are the foundation of digital theory and digital applications</li> <li>5. make comparisons with personal computers; as well as, develop an understanding of its origin and growth since conception</li> <li>6. demonstrate an understanding of the fundamentals of Automated Manufacturing systems</li> </ol>
	<p><b>GENERAL EDUCATION:</b> (<i>Numbering reflects General Education Outcomes as they appear in the college catalog</i>)</p> <p>7. <b>Quantitative Reasoning</b> -Students will learn to recognize, understand, and use the quantitative elements they encounter in various aspects of their lives. Students will develop a habit of mind that uses quantitative skills to solve problems and make informed decisions.</p> <p><b>Demonstrates:</b> Interprets numerical information and applies sufficient laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.</p> <p><b>Does Not Demonstrate:</b> Misinterprets numerical information or insufficiently applies laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.</p>
<p><b>Evaluation:</b>          List how the above outcomes will be assessed.</p>	<p><b>Assessment will be based on the following criteria:</b>          quizzes          exams</p>
<p><b>Instructional Resources:</b>          List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.</p>	<p><b>Required:</b> No required resources.</p> <p><b>Desired:</b> None</p>

**Textbook(s)**

Mathematics for Machine Technology; Robert D. Smith, Thomson, [Delmar Learning] latest edition