

COURSE SYLLABUS

Course Title:	Mathematics for Electricity and Electronics	Date submitted:	4/30/2018 (18-35)	
Department:	Advanced Manufacturing Technology			
Curriculum:	Technology Studies			
Course Descriptors: 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*133	Prerequisites:	
	Course Type:	L		None
	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			
	Elective Type:	G		
	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			
	Credit Hours:	3	Corequisites:	None
	Developmental: (yes/no)	No		
	Lecture:	3		
	Clinical:	0		
	Lab:	0		
Studio	0			
Other:	0			
Other:	0			
TOTAL:	3			
Class Maximum:	24	Other Requirements:	None	
Semesters Offered:	Fall			
Catalog Course Description:	Mathematics for Electricity and Electronics is intended for the student who needs in-depth knowledge of the mathematics of electronics and electricity. It will review several areas that the student may be familiar with and move into advanced areas that are necessary for the understanding of electronics functions and analysis of complex circuits. The completion of this course will enable the student to move more quickly through future courses that require the use of complex math.			
Topical Outline: List course content in outline format.	<ol style="list-style-type: none"> 1. Arithmetic Operations 2. Decimals and Percentage 3. Powers of Numbers Series Circuits 4. System of Measurement 5. Basic Algebra 6. Computer Number Systems 7. Linear Equations 8. Formulas and Problem Solving 9. Trigonometry for the Right Angle 10. Trigonometry of the Circle 			

	<p>11. Alternating Current 12. Exponents and Logarithms 13. Statistics</p>
<p>Outcomes: Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.</p>	<p>Upon successful completion of this course, the student will be able to do the following:</p> <p>COURSE:</p> <ol style="list-style-type: none"> 1. demonstrate an understanding of the basic laws of arithmetic 2. demonstrate an understanding of the decimal numbering system 3. demonstrate an understanding of the powers of numbers 4. demonstrate knowledge of scientific notation 5. demonstrate knowledge of the meaning of a literal equation 6. demonstrate knowledge of various computer number systems 7. demonstrate an understanding of the trigonometry of the right triangle 8. demonstrate how to translate verbal problems into mathematical equation 9. demonstrate knowledge of the basic geometric concepts of angles 10. demonstrate how to work with reference angle and reference triangle 11. demonstrate knowledge of fractional exponents and how it is applied 12. demonstrate knowledge of a histogram by graphing a frequency distribution <hr/> <p>PROGRAM: <i>(Numbering reflects Program Outcomes as they appear in the college catalog)</i></p> <p>Electronics Technology Certificate and A.S. Degree</p> <ol style="list-style-type: none"> 1. demonstrate an understanding of Shop Safety 2. demonstrate an understanding the theory of electrical structure, voltage, current, resistance, and electrical circuit and their measurement 3. demonstrate an understanding of the basic laws of arithmetic 4. demonstrate an understanding of several number systems and codes that are the foundation of digital theory and digital applications 5. make comparisons with personal computers; as well as, develop an understanding of its origin and growth since conception 6. demonstrate an understanding of the fundamentals of Automated Manufacturing systems <hr/> <p>GENERAL EDUCATION: <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i> No General Education outcomes.</p>
<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria: tests and quizzes</p>

<p>Instructional Resources:</p> <p>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>Required: None</p> <p>Desired: None</p>
<p>Textbook(s)</p>	<p><u>Mathematics for Electricity & Electronics</u>, Kramer, Published by Delmar, Thompson Learning , latest edition</p>