

COURSE SYLLABUS

Course Title:	Introduction to Automated Manufacturing		Date submitted:	May 2019 (AAC: 19-25)				
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*170	Prerequisites:					
	Course Type:	L			Math for Electricity & Electronics (MFG*133), Circuit Theory (MFG*137), Digital Fundamentals (MFG*138), Circuit Theory II (MFG*139), and Robotics (MFG*140) OR consent of the instructor			
	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	Corequisites:					
	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					None	
	Developmental: (yes/no)	No						
	Lecture:	3						
	Clinical:	0						
	Lab:	0						
	Studio:	0						
	Other:	0						
TOTAL:	3							
Class Maximum:	24	Other Requirements:						
Semesters Offered:	Fall, Spring				None			
Catalog Course Description:	Introduction to Automated Manufacturing introduces the role that PC computers; PLC's (Programmable Logic Controller); microprocessors and controllers; sensors; local area networks (LANs); Flexible Manufacturing Cells (FMC); and automated manufacturing systems (AMS), including material handling, storage and retrieval, assembly, and inspection plays in the modern day manufacturing environment.. Topics include Flexible Manufacturing System (FMS); Major components of a FMS; FMS Configurations; Major components in a FMS Computer Control System (CCS); and Introduction to Local Area Networks.							
Topical Outline: List course content in outline format.	1. Introduction to Automated Manufacturing Systems (AMS) 2. Flexible Manufacturing System (FMS)							

	3. Introduction to Local Area Networks	
<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> <ol style="list-style-type: none"> 1. Demonstrate an understanding of the fundamentals of Automated Manufacturing systems. 2. Demonstrate a basic understanding of the fundamentals of Flexible Manufacturing System (FMS). 3. Demonstrate a basic understanding of Local Area Networks. 	
	<p>PROGRAM: <i>Electronics Technology Certificate and A.S. Degree</i></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. 	
	<p>GENERAL EDUCATION: <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i></p> <p>None</p>	
<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria:</p> <ol style="list-style-type: none"> 1. Quizzes 2. Exams 3. Lab assignments 	
<p>Instructional Resources: 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: Manufacturing lab with automated manufacturing equipment and software.</p> <p>Desired:None</p>	
<p>Textbook(s)</p>	<p>None</p>	