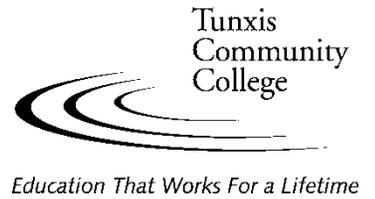


COURSE SYLLABUS



Course Title:	Programming for Engineers		Date submitted:	March 2014 (AAC: 14-27)	
Department:	Business and Technology				
Curriculum:	Engineering Science				
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)	EGR*115	Prerequisites: C- or better in MAT*137 Intermediate Algebra		
	Course Type:	X			
	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/LAS			
	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:		
	Developmental: (yes/no)	No	None.		
	Lecture:	2			
	Clinical:	0			
	Lab:	1			
Studio:	0				
Contact Hours:	Other: 0				
	TOTAL: 3	Other Requirements:			
	Class Maximum: 24	None			
	Semesters Offered: F/Sp				
Catalog Course Description:	Introduces engineering students to structured and object-oriented programming methods. Students will examine and solve a variety of engineering problems. Students will design, code and execute modular programs using an object-oriented language such as C++ or Java. The course will include the use of abstract data types in solving classical engineering problems.				
Topical Outline: List course content in outline format.	<ol style="list-style-type: none"> 1. Introduction to Computing and Engineering Problem Solving 2. Introduction to C++ 3. The software development life cycle and problem solving methodology 4. Control Structures <ol style="list-style-type: none"> A. Condition structures B. Repetition structures 5. Working with data files 6. Functions 				

	<ol style="list-style-type: none"> 7. Arrays 8. Classes
<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 software development life cycle and problem solving methodology 2. demonstrate an understanding of structured and object-oriented design methodologies 3. design, code and execute modular programs utilizing object-oriented programming techniques to solve engineering problems <p>PROGRAM: <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i></p> <ol style="list-style-type: none"> 3. analyze data and scientific information using critical thinking skills and problem-solving techniques 7. use logic and organization when acquiring information, analyzing a situation, and solving problems <p>GENERAL EDUCATION: <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i></p> <ol style="list-style-type: none"> 7. Quantitative Reasoning -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. <ul style="list-style-type: none"> Demonstrates: Interprets numerical information and applies sufficient laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions. Does Not Demonstrate: Misinterprets numerical information or insufficiently applies laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.
<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria:</p> <ul style="list-style-type: none"> Quizzes Exams Programming Assignments and Projects
<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: Computer Lab</p> <p>Desired:</p>
<p>Textbook(s)</p>	<p>Refer to current academic year printout.</p>