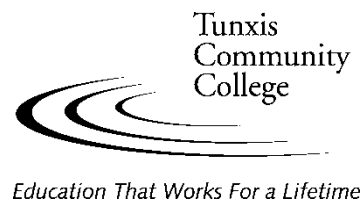


COURSE SYLLABUS



Course Title:	Calculus III: Multivariable		Date submitted:	Spring 2014 (AAC: 14-92)
Department:	Mathematics & Science			
Curriculum:	Mathematics			
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)	MAT*268	Prerequisites:	
	Course Type:	L	C- or better in Calculus II (MAT*256)	
	A: Clinical B: Lab D: Distance Learning I: Individual/Independent L: Lecture N: M: Seminar Internship P: Practicum U: Studio X: Combined Lecture/Lab Y: Combined Lecture/Clinical/Lab Z: Combined Lecture/Studio			
	Elective Type:	G/LAS/M		
	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:	4	Corequisites:	
	Developmental: (yes/no)	No	None	
	Lecture:	4		
	Clinical:	0		
	Lab:	0		
Studio:	0			
Contact Hours:	Other: 0			
	TOTAL: 4	Other Requirements:		
	Class Maximum:	30	None	
	Semesters Offered:	F/Sp		
Catalog Course Description:	A continuation of Calculus II. Included are vectors, the geometry of space and vector functions, along with applications. Partial differentiation and double and triple integration are undertaken, as well as their applications. Line integrals, Green's Theorem and Stoke's Theorem are included.			
Topical Outline: List course content in outline format.	1. Vectors and the geometry of space 2. Vector functions 3. Partial derivatives 4. Multiple integrals 5. Vector Calculus			
Outcomes: Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.	Upon successful completion of this course, the student will be able to do the following: COURSE: <ol style="list-style-type: none"> perform standard operations on vectors and apply them to 3-dimensional coordinate systems find and apply derivatives and integrals of vector functions take and apply partial derivatives find double and triple integrals and apply to 2-dimensional rectangular and polar coordinates as well 			

	<p>as 3-dimensional spaces and figures</p> <ol style="list-style-type: none"> 5. apply the Fundamental Theorem for Line Integrals appropriately 6. apply Green’s and Stoke’s Theorems appropriately <p>PROGRAM: <i>(Numbering reflects Program Outcomes as they appear in the college catalog)</i></p> <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 Projects where assigned
<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: None Desired: None</p>
<p>Textbook(s)</p>	<p>Refer to current academic year printout.</p>