

COURSE SYLLABUS

Course Title:	Precalculus	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) <table border="1" style="display: inline-table;"><tr><td>MAT*186</td></tr></table>	MAT*186	Prerequisites:											
	MAT*186													
	Course Type: <table border="1" style="display: inline-table;"><tr><td>L</td></tr></table>	L	C- or better in College Algebra (MAT*172) or placement test score											
	L													
	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: <table border="1" style="display: inline-table;"><tr><td>G/LAS/M</td></tr></table>	G/LAS/M	Corequisites:											
	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	None												
	Credit Hours: <table border="1" style="display: inline-table;"><tr><td>4</td></tr></table>	4	Other Requirements:											
	4													
Developmental: (yes/no) <table border="1" style="display: inline-table;"><tr><td>No</td></tr></table>	No	None												
No														
Contact Hours: <table border="1" style="display: inline-table; margin-left: 20px;"> <tr><td>Lecture:</td><td>4</td></tr> <tr><td>Clinical:</td><td>0</td></tr> <tr><td>Lab:</td><td>0</td></tr> <tr><td>Studio:</td><td>0</td></tr> <tr><td>Other:</td><td>0</td></tr> <tr><td>TOTAL:</td><td>4</td></tr> </table>	Lecture:	4	Clinical:	0	Lab:	0	Studio:	0	Other:	0	TOTAL:	4		
Lecture:	4													
Clinical:	0													
Lab:	0													
Studio:	0													
Other:	0													
TOTAL:	4													
Class Maximum: <table border="1" style="display: inline-table;"><tr><td>30</td></tr></table>	30	None												
30														
Semesters Offered: <table border="1" style="display: inline-table;"><tr><td>F/S</td></tr></table>	F/S													
F/S														
Catalog Course Description:	This course is intended to prepare the student for the theory of Calculus I. Extensive work is done with polynomial and rational functions, including the Fundamental Theorem of Algebra, Rational Roots Theorem, complete factorization, asymptotes and graphing. Detailed coverage of trigonometric functions (both right triangle and circular) includes graphing, trigonometric identities, the solving of equations, the Laws of Sines and Cosines and Inverse trigonometric functions. Other included topics are DeMoivre's Theorem, polar coordinates, mathematical induction, the algebra of matrices and the Binomial Theorem. The graphing calculator is used when appropriate.													
Topical Outline: List course content in outline format.	<ol style="list-style-type: none"> 1. Polynomial functions: remainder, factor, complete factorization and Rational 2. Roots Theorems, Fundamental Theorem of Algebra 3. Rational functions 4. Trigonometric functions: right triangle, circular 5. Trigonometric identities 6. Trigonometric equations 7. Laws of Sines and Cosines 8. Inverse trigonometric functions 													

	<ol style="list-style-type: none"> 9. DeMoivre's Theorem 10. Polar coordinates 11. Mathematical induction 12. Binomial Theorem 13. Algebra of matrices
<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. Solve polynomial, rational and trigonometric equations 2. Graph polynomial, rational and trigonometric functions 3. Use polynomial, rational and trigonometric functions to solve applications 4. Utilize the relationship between rectangular and polar coordinates to graph relations 5. Apply Binomial Theorem and DeMoivre's Theorem to relevant cases 6. Use Mathematical induction appropriately 7. Exhibit familiarity with the algebra of matrices and its uses <hr/> <p>PROGRAM: <i>(Numbering reflects Program Outcomes as they appear in the college catalog)</i></p> <hr/> <p>GENERAL EDUCATION: <i>(Numbering reflects General Education Outcomes as they appear in the college catalog)</i></p> <p>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.</p> <p>Demonstrates: Interprets numerical information and applies sufficient laws of logic and mathematics to solve problems using numbers, symbols, graphs and/or descriptions.</p> <p>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>
<p>Evaluation: List how the above outcomes will be assessed.</p>	<p>Assessment will be based on the following criteria:</p> <p>Teacher-prepared tests, quizzes, final exam, and written projects/writing assignments where assigned</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 Desired: None</p>
<p>Textbook(s)</p>	<p>Refer to current academic year printout.</p>