COURSE SYLLABUS

Course Title:	Calculus for Business & Social Science I		Date submitted:	11/9/18 (AAC: 18-70)
Department:	STEAM			
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*190	**Prerequisites:**
Course Type:	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		C- in Finite Mathematics (MAT*152) or appropriate placement test score.
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:	3	**Corequisites:**
Developmental: (yes/no)	No	
Lecture:	3	
Clinical:	0	None
Lab:	0	
Studio	0	
Other:	0	
TOTAL:	3	**Other Requirements:**
Class Maximum:	30	None
Semesters Offered:	F/S/Su	

Contact Hours: (applies to the Lecture/Clinical/Lab/Studio/Other/TOTAL rows above)

Catalog Course Description:	This course is designed for students who plan to major in social, biological, behavioral or managerial science. Topics include techniques of differentiation and integration, together with applications of the derivative and definite integral. Logarithmic and exponential functions are also examined for their applications. Note: students transferring to University of Connecticut under the Business Articulation Agreement MUST take Finite Mathematics before this course.
Topical Outline: List course content in outline format.	1. Numbers and functions: algebraic review, especially of linear, quadratic and rational functions 2. Derivatives: limits, rules of differentiation, rate of change 3. More differentiation: product and quotient rules, chain rule, relative maxima and minima, curve sketching, differentials, related rates 4. Integration: the indefinite integral, the definite integral, the definite integral and area 5. More integration: Riemann sums, numerical integration, improper integration, further techniques of integration 6. Exponential and Logarithmic Functions: differentiation, growth and decline applications
Outcomes: Describe measurable skills or knowledge that	**Upon successful completion of this course, the student will be able to do the following:** **COURSE:**

students should be able to demonstrate as evidence that they have mastered the course content.	1. apply the rules for differentiation and integration to functions including the following: polynomials, rationals, radicals, powers, exponentials, logarithmic 2. use derivatives and limits to sketch curves accurately 3. find the area under/between curve(s) using Riemann sums and integration methods 4. use the derivative to find the instantaneous rate of change of a function 5. use the derivative and integral to analyze problems in management science, life and social sciences
	PROGRAM: *(Numbering reflects Program Outcomes as they appear in the college catalog)*

	GENERAL EDUCATION: *(Numbering reflects General Education Outcomes as they appear in the college catalog)*
	
	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.
	
	    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.

Evaluation: List how the above outcomes will be assessed.	**Assessment will be based on the following criteria:** Teacher-prepared tests Quizzes Final exam Written projects/writing assignments where assigned
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.	Required: classrooms with sufficient seating and board access Desired: None
Textbook(s)	Refer to current academic year printout.