COURSE SYLLABUS

Tunxis Community College

Education That Works For a Lifetime

Course Title:	Calculus II	**Date submitted:**	May 2020 (AAC: 20-27)
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*256
Course Type:	L/D

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/LA/M

AH: Art History E: English FA: Fine Arts G: General HI: History HU: Humanities LA: Liberal Arts FL: Foreign Language M: Math S: Science SS: Social Science

Credit Hours:	4
Developmental: (yes/no)	No
Contact Hours: Lecture:	4
Clinical:	0
Lab:	0
Studio	0
Other:	0
TOTAL:	4
Class Maximum:	30
Semesters Offered:	F/Sp

Prerequisites:

C- or better in MAT*254 Calculus I

Corequisites:

none

Other Requirements:

none

Catalog Course Description:

A continuation of Calculus I. Topics include applications of integration, integration techniques, infinite series, parametric equations and polar coordinates.

Topical Outline: List course content in outline format.

1. Applications of Integration
2. Integration Techniques and Improper Integrals
3. Infinite Series
4. Parametric Equations and Polar Coordinates
5. Differential Equations (if time permits)

Outcomes: Describe measurable skills or knowledge that students should be able to demonstrate as

Course Outcomes: Upon successful completion of this course, the student will be able to do the following:

1. Compute the area between two curves
2. Compute Volume using the Shell and Disk method

evidence that they have mastered the course content.	3. Compute Arclength 4. Solve Work problems 5. Apply Basic Integration Rules 6. Apply midpoint and Simpson's Rule 7. Apply various techniques of Integration: Substitution, Integration by parts, partial fractions 8. Apply l'Hopital's Rule 9. Work with sequences and series, convergence, comparison, alternating series, Taylor series, Power series, Maclauring series, ratio and root tests 10. Work with Parametric equations and Polar coordinates 11. Compute Areas and lengths in Polar Coordinates
	PROGRAM: *does not apply*
	GENERAL EDUCATION: *(Numbering reflects General Education Outcomes as they appear in the college catalog)* **7. <u>Quantitative Reasoning</u> -** uses numerical information, laws of logic, and mathematics to solve problems
Evaluation: List how the above outcomes will be assessed.	**Assessment will be based on the following criteria:** quizzes, tests, exams and projects
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.	**None**
Textbook(s)	Refer to current academic year printout