DAVIS UNIVERSITY

COURSE SYLLABUS

MAC232: ANALYTIC GEOMETRY AND CALCULUS II

SUMMER QUARTER 2025

QUARTER: SUMMER QUARTER 2025

COURSE SYLLABUS FOR: MAC232 ANALYTIC GEOMETRY AND CALCULUS II

CREDIT HOURS: 5 CREDITS

INSTRUCTOR:

INSTRUCTOR EMAIL:

INSTRUCTOR OFFICE HOURS:

COURSE DESCRIPTION: Topics include conics, translation and rotation of axes, techniques of integration, arc length and other applications of the definite integral, polar coordinates, indeterminate forms and improper integrals, infinite sequences and series and Taylor's Formula.

PREREQUISITES: MAC231 Analytic Geometry and Calculus I

TEXT: *Calculus*, 10th Edition, Ron Larson. ISBN: 1285057090

LATE WORK POLICY: All students are expected to submit homework assignments on time. No late homework will be accepted and the student will receive a "0" (zero) for the homework assignment. Should the student refuse to complete the assigned work for the class, it could result in the student failing the class. All work assigned is expected to be completed on the date assigned. The instructor reserves the right to alter the schedule as necessary.

PLAGIARISM AND COPYRIGHT INFRINGEMENT POLICY: Work that is found to be plagiarized receives a grade of zero and often causes a student to fail a class. Documentation of plagiarism is added to the student's academic file as a violation of accepted student conduct and is subject to disciplinary action. Plagiarism is the use of another person's exact words, or their ideas written in the student's words without giving the original author credit.

Plagiarism can result from any of the following:

- Quote material directly without using quotation marks.
- Paraphrase the original so that many of the phrases are the same as the original. A good rule is no more than 3 or 4 words in a row should be the same as the original.
- Copy the original sentence pattern, substitution synonyms for key words.
- Neglect to indicate the source of the original material.

ASSESSMENTS:

Content	
Assignments	15%
Participation	5%
Exams	50%
Final Exam	30%
Total	100%

COURSE GRADE: **A = 93%-100%**

B = 85%-92%

C = 77%-84%

D = 70%-76%

F = below 70%

TENTATIVE CLASS SCHEDULE:

(Subject to change)

Week	Content Covered	Assignments & Assessment Due
Week 1:	Course Introduction, Inverse Trigonometric Functions: Differentiation Inverse Trigonometric Functions: Integration Hyperbolic Functions Area of a Region Between Two Curves and Volume: The Disk Method	Section Assignments(5.6, 5.7,5.8, 7.1, and 7.2) - Friday
Week 2:	Volume: The Shell Method and Arc Length and Surfaces of Revolution Work and Basic Integration Rules Basic Integration Rules and Integration by Parts Trigonometric Integrals	Section Assignments(7.3-7.5, and 8.1-8.2)- Friday
Week 3:	Partial Fractions Trigonometric Substitution Indeterminate Forms L'Hopital's Rule and Improper Integrals Improper Integrals and Conics and Calculus	Section Assignments(8.5, 8.7-8.8, and 10.1)- Friday Midterm Exam
Week 4:	Plane Curves, Parametric Equations, and Calculus Polar Coordinates, Polar Graphs, Area, Arc length in Polar Coordinates Sequences, Series and Convergence The Integral Test, p-series, Comparisons of Series and Alternating Series	Section Assignments (10.2-10.4, 9.1 -9.4)- Friday
Week 5:	The Ratio and Root tests, and Power Series Power series and Representations of functions by Power Series Taylor Polynomials and Approximations	Section Assignments (9.6-9.9)- Thursday Final Exam- Friday