



DAVIS UNIVERSITY

## COURSE SYLLABUS

### MAC232: ANALYTIC GEOMETRY AND CALCULUS II

**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:** Analytic Geometry and Calculus I

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

**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	Points
Homework	150
Quizzes	200
Exams	400
Final Exam	250
Total	1000

**COURSE GRADE:**

Letter Grade	Range	GPA
A+	97–100	4.0
A	93–96	4.0
A–	90–92	3.7
B+	87–89	3.3
B	83–86	3.0
B–	80–82	2.7
C+	77–79	2.3
C	73–76	2.0
C–	70–72	1.7
D+	67–69	1.3
D	63–66	1.0
D–	60–62	0.7
F	Below 60	0.0

**TENTATIVE COURSE OUTLINE:****(Subject to change)**

<b>Modules/Units</b>	<b>Content Covered</b>	<b>Assignments</b>
<b>Module 1</b>	5.6. Inverse Trigonometric Functions: Differentiation 5.7. Inverse Trigonometric Functions: Integration 7.1. Area of a Region Between Two Curves	Homework 1 Quiz 1
<b>Module 2</b>	7.2. Volume: The Disk Method 7.3. Volume: The Shell Method	Homework 2 Quiz 2
<b>Module 3</b>	7.4. Arc Length and Surfaces of Revolution 7.5. Work 7.6. Moments, Centers of Mass, and Centroids 8.1. Basic Integration Rules	Homework 3 Quiz 3
<b>Module 4</b>	8.2. Integration by Parts 8.3. Trigonometric Integrals 8.4. Trigonometric Substitution	Homework 4 Quiz 4 Exam 1
<b>Module 5</b>	8.5. Partial Fractions 8.7. Indeterminate Forms and L'Hôpital's Rule 8.8. Improper Integrals	Homework 5 Quiz 5
<b>Module 6</b>	9.1. Sequences 9.2. Series and Convergence 9.3. The Integral Test and p-Series	Homework 6 Quiz 6
<b>Module 7</b>	9.4. Comparisons of Series 9.5. Alternating Series 9.6. The Ratio and Root Tests 9.7. Taylor Polynomials and Approximations	Homework 7 Quiz 7
<b>Module 8</b>	9.8. Power Series 9.9. Representation of Functions by Power Series 9.10. Taylor and Maclaurin Series	Homework 8 Quiz 8 Exam 2

<b>Module 9</b>	10.2. Plane Curves and Parametric Equations 10.3. Parametric Equations and Calculus 10.4. Polar Coordinates and Polar Graphs 10.5. Area and Arc Length in Polar Coordinates	Homework 9 Quiz 9 Final Exam
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