CALCULUS III
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CLASS POLICIES

Attendance – Students attain maximum academic benefit through regular attendance. Therefore, students are expected to attend all class sessions that they are scheduled. Students are advised that attendance at each class is expected and will be recorded. Failure to attend each class could jeopardize the student's successful completion of the course. Absence will not be considered a valid excuse for not being prepared for the next class. If an unexpected emergency preventing attendance arises, the instructor should be notified on the day of the missed class.

Tests/Make-up Tests – If a student emails me at gbuthusi@rcgc.edu with a documented excused absence no later than the day of the missed test that student will then have 24 hours to make up the test. Also the final exam can replace a missed or lowest test grade.

Grading Distribution

Category	Percent of Final Grade
Test #1	25%
Test #2	25%
Test #3	25%
Final Exam	25%

Grading Scale
The following grading scale will be used in this course:

93% - 100% = A	73% - 76% = C
90% - 92% = A-	70% - 72% = C-
87% - 89% = B+	67% - 69% = D+
83% - 86% = B	63% - 66% = D
80% - 82% = B-	60% - 62% = D-
77% - 79% = C+	Below 60% = F

Homework – Students should expect to spend at least two hours working outside of class for every hour spent in class. Specific assignments will be given in class. Solutions to odd numbered problems can be found at **calcchat.com.** Homework is to be completed for each section covered to fully understand the material. It will NOT be collected.

Electronics – Cell phone and texting devices detract from active learning time in the classroom and therefore, are not permitted during class time. A calculator can be used in this course and TI-83 is recommended.

Academic Integrity – In its most elementary form, academic integrity encompasses the principles of an honest, fair and continuing pursuit of the truth, and means that students are expected to do and be responsible for their own work. Therefore, cheating, plagiarism, fabrication, collusion or any other violation of academic integrity is not acceptable and the instructor will impose an academic sanction which is reasonable and commensurate with the violation

MAT 221 TOPICAL OUTLINE

Chapter 11   <u>Vectors and Geometry of Space</u>
- 11.1   Vectors in the Plane
- 11.2   Space Coordinates and Vectors in Space
- 11.3   The Dot Product of Two Vectors
- 11.4   The Cross Product of Two Vectors in Space
- 11.5   Lines and Planes in Space
- 11.6   Surfaces in Space
- 11.7   Cylindrical and Spherical Coordinates

Chapter 12   <u>Vector-Valued Functions</u>
- 12.1   Vector-Valued Functions
- 12.2   Differentiation and Integration of Vector-Valued Functions
- 12.3   Velocity and Acceleration
- 12.4   Tangent Vectors and Normal Vectors
- 12.5   Arc Length and Curvature

Chapter 13   <u>Functions of Several Variables</u>
- 13.1   Introduction to Functions of Several Variables
- 13.2   Limits and Continuity
- 13.3   Partial Derivatives
- 13.4   Differentials
- 13.5   Chain Rules for Functions of Several Variables
- 13.6   Directional Derivatives and Gradients
- 13.7   Tangent Planes and Normal Lines
- 13.8   Extrema of Functions of Two Variables
- 13.9   Applications of Extrema of Functions of Two Variables
- 13.10   Lagrange Multipliers

Chapter 14   <u>Multiple Integration</u>
- 14.1   Iterated Integrals and Area in the Plane
- 14.2   Double Integrals and Volume
- 14.3   Change of Variables: Polar Coordinates
- 14.4   Center of Mass and Moments of Inertia
- 14.5   Surface Area
- 14.6   Triple Integrals and Applications
- 14.7   Triple Integrals in Cylindrical and Spherical Coordinates
- 14.8   Change of Variables: Jacobians

Chapter 15   <u>Vector Analysis</u>
- 15.1   Vector Fields
- 15.2   Line Integrals
- 15.3   Conservative Vector Fields and Independence of Path
- 15.4   Green's Theorem
- 15.5   Parametric Surfaces
- 15.6   Surface Integrals
- 15.7   Divergence Theorem
- 15.8   Stoke's Theorem