

Course Description

A. COVER PAGE

1. Course Title Calculus B (AP)	9. Subject Area <input type="checkbox"/> History/Social Science <input type="checkbox"/> English <input checked="" type="checkbox"/> Mathematics <input type="checkbox"/> Laboratory Science <input type="checkbox"/> Language other than English <input type="checkbox"/> Visual & Performing Arts (for 2003) <input type="checkbox"/> College Prep Elective
2. Transcript Title / Abbreviation Calculus B (AP)	
3. Transcript Course Code / Number MA 6551	
4. School Ernest Righetti High School	
5. District Santa Maria Jt. Union High School	
6. City Santa Maria	10. Grade Level(s) Some 11 th but primarily 12 th
7. School / District Web Site www.smjuhsd.k12.ca.us	11. Seeking "Honors" Distinction? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8. School Contact Name: Kevin J. McNamara Title/Position: Math Department Chair and Instructor Phone: (805) 937-2051 Ext.: 2505 Fax: (805) 934-0819 E-mail: kmcnamara@smjuhsd.org	12. Unit Value <input type="checkbox"/> 0.5 (half year or semester equivalent) <input checked="" type="checkbox"/> 1.0 (one year equivalent) <input type="checkbox"/> 2.0 (two year equivalent) <input type="checkbox"/> Other: _____
	13. Date of School Board Approval February 13, 2002
14. Was this course previously approved by UC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If so, year removed from list? _____ Under what course title? _____	
15. Is this course modeled after an UC-approved course from another school? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If so, which school(s)? _____	
16. Pre-Requisites Math Analysis	
17. Co-Requisites Algebra II and Trigonometry	
18. Brief Course Description The course covers all topics required for the Calculus AB Exam. See attached outline.	

Course Title: Calculus B (AP)

Department: ERHS Mathematics

Description of Target Group: This is a two semester course for college bound students who have completed MATH ANALYSIS or its equivalent, and are entering into any mathematical or science related field. All students are encouraged to take the College Board Advanced Placement Exam for Calculus (AB or BC) in May.

Course Length: One semester, 5 units

Course Adoption: UC/CSU "a-g" inclusion

Standards of Expected Student Achievement: Upon completion of this course, students will be able to successfully demonstrate understanding of the following standards:

- I. Integration
 - A. Rieman Sums and Definite Integrals
 - B. The Fundamental Theorem of Calculus
 - C. Simpson's Rule
 - D. Improper Integrals
 - E. Techniques of Integration
 1. Substitution (Including Trigonometric Functions)
 2. Integration by Parts
- II. Applications of Integration
 - A. Area under a curve (or between curves)
 - B. Rectilinear motion (Velocity and Acceleration)
 - C. Volumes by Slicing, Disks and Washers, Cylindrical Shells
 - D. Length of a Curve, Average Value, and Work
 - E. Area of Surface of Revolution
- III. Infinite Series
 - A. Sequences and Series
 - B. Convergence Tests
 - C. Taylor and Maclaurin Series
 - D. Comparison, Ratio and Root Tests
 - E. Alternating Series and Power Series

IV. Polar Coordinates

Methods of Assessment of Student Learning: Assigned homework, written examinations (multiple choice and free response), and the College Board Advanced Placement Examination

Text and Supplementary Materials:

Refer to:Secondary Adopted Texts and Approved Supplementary Books Used in the Santa Maria Joint Union High School District