GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: MATH 219B DIVISION: 20 ALSO LISTED AS:

TERM EFFECTIVE: Summer 2024 CURRICULUM APPROVAL DATE: 04/09/2024

SHORT TITLE: PREP FOR CALC II

LONG TITLE: Preparation for Calculus II

Units	Number of Weeks	Type	Contact Hours/Week	Total Contact Hours
1 TO 2	18	Lecture:	1 TO 2	18 TO 36
		Lab:	0	0
		Other:	0	0
		Total:	1 TO 2	18 TO 36

Out of Class Hrs:	36.00 TO 72.00
Total Learning Hrs:	54.00 TO 108.00

COURSE DESCRIPTION:

This is a course for students enrolling in MATH 1B: Single Variable Calculus and Analytical Geometry II, who wish to refresh or re-learn fundamental pre-calculus and Math 1A concepts. The focus is on portions of pre-calculus, trigonometry and Math 1A needed to do well in Math 1B. This is a Pass/No Pass course.

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: T - Support - Degree Applicable

GRADING MODES
- P - Pass/No Pass

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:
- 02 - Lecture and/or discussion
- 05 - Hybrid
- 71 - Dist. Ed Internet Simultaneous
- 72 - Dist. Ed Internet Delayed

STUDENT LEARNING OUTCOMES:

By the end of this course, a student should:

1. Graph and transform a combination of polynomial, trigonometric, exponential, logarithmic and other types of functions, identify the intersection points, and shade the region enclosed by the functions.

2. Find the partial fraction decomposition of a rational function.

3. Differentiate and integrate a function with the techniques learned in Math 1A.

COURSE OBJECTIVES:

By the end of this course, a student should:

1. Graph polynomial, rational, root, logarithmic, exponential, absolute value , trigonometric and other functions using transformations and other techniques, and identify intersection points of two or more curves and shade the regions bounded by two or more curves.

2. Perform decomposition of fractions and solving systems of equations

3. Use trig identities to simplify trigonometric expressions and solve trigonometric equations, and evaluate composite trigonometric and trig inverse expressions.

4. Solve an exponential and/or logarithmic equation and use exponential and logarithmic equations to solve application problems.

5. Differentiate a variety of functions using the techniques of differentiation, and evaluate definite and indefinite integrals using basic integration formulas, properties of integrals, and integration by substitution.

COURSE CONTENT:

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Hours: 3

Solving polynomial equations and graphing polynomial functions

Hours: 4

Solving rational equations and graphing rational functions

Hours: 4

Solving exponential and logarithmic equations and application problems and graphing exponential and logarithmic functions.

Hours: 5

Solving systems of equations and finding the partial fraction decomposition of a rational function.

Hours: 2

Final Exam or Project

2 unit course includes 1 unit plus:

Hours: 4

Solving trig and trig inverse expressions and equations and graphing trig and inverse functions

Hours: 4

Finding the derivative of a function using techniques learned in Math 1A

Hours: 4

Evaluate a definite or indefinite integral using basic integration formulas and by substitution.

Hours 6

Graph the region bounded by curves and set up an integral that will capture the area of the region.

METHODS OF INSTRUCTION:
Lecture, Group work, Discussion

OUT OF CLASS ASSIGNMENTS:
Required Outside Hours: 36 - 72 Hours
1. Analyze and study pertinent textbook material, solved examples and lecture notes.
2. Apply principles and skills covered in class by solving regularly-assigned homework problems.
3. Regularly synthesize course materials in preparation for exams.
4. Implement projects to apply concepts learned in class.

METHODS OF EVALUATION:
Problem-solving assignments
Evaluation Percent 50
Evaluation Description
Worksheets and group projects

Objective examinations
Evaluation Percent 50
Evaluation Description
Exams and quizzes

REPRESENTATIVE TEXTBOOKS:
Precalculus, Concepts Through Functions, A Unit Circle Approach to Trigonometry, 5th Ed., Sullivan and Sullivan, Pearson, 2023.
ISBN: ISBN-13: 9780137945139
Rationale: This book will be used as a reference
Grade 12 Grade Verified by: Ken Wagman

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:
CSU GE:
IGETC:
CSU TRANSFER:
Not Transferable
Not Transferable
UC TRANSFER:
Not Transferable
Not Transferable

SUPPLEMENTAL DATA:

Basic Skills: N
Classification: Y
Noncredit Category: Y
Cooperative Education: N
Program Status: 2 Stand-alone
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department:
CSU Crosswalk Course Number:
Prior to College Level:
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: E
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000644151
Sports/Physical Education Course: N
Taxonomy of Program: 170200