JOHN F. KENNEDY HIGH SCHOOL
6715 GLORIA DRIVE SACRAMENTO CA 95831
JFK.SCUSD.EDU
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HOME OF THE COUGARS

2023-2024 COURSE SYLLABUS

Advanced Precalculus

Instructor:

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Phone: (916) 395-5090
Classroom: T14

Textbook:

Precalculus, by Blitzer (6th Edition; Houghton Mifflin Company, NY; 2016)

Supplemental Resources:

http://www.khanacademy.org/; Desmos; Etc.

Course Description:

This class is designed to prepare students for college level calculus. Concepts are presented and explored algebraically from graphical and numerical perspectives. Students are expected to participate actively in the development of all concepts. This course is about algebraic and geometric concepts that are important prerequisites for calculus success. In addition, this course is also about algebraic (and trigonometric) mechanics and problem solving to develop the skills and stamina necessary to solve lengthy, multi-step problems, involving a variety of pre-calculus mathematical concepts. Topics covered in this class include the study of functions (polynomial, power, exponential, logarithmic, logistic, rational, irrational, and trigonometric), extensive coverage of trigonometric applications, conic sections, polar coordinates, parametric equations, complex numbers, vectors, matrices, and limits.

(Two semesters; 5 units each semester; 10 units total)

Course Objectives:

Students will acquire and demonstrate knowledge of the concepts, definitions and properties required to meet the precalculus mathematics standards. Students will develop critical thinking and decision-making skills by connecting concepts to practical applications needed to be productive members of society. All students are expected to demonstrate the following objectives:

• Students should be able to work with functions represented in a variety of ways: graphical, numerical, analytical, or verbal. Students should understand the connections among these representations.

• Students should be able to communicate mathematics both orally and in well-written sentences and should be able to explain solutions to problems.

• Students should be able to model a written description of a physical situation with a function.

• Students should be able to use technology (graphing calculators and graphing software) to help solve problems, experiment, interpret results, and verify conclusions.

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• Students should be able to determine the reasonableness of solutions, including sign, size, relative accuracy, and units of measurement.

• Students should develop an appreciation of mathematics as an integrated coherent body of knowledge and as a human accomplishment.

Grading Policy:

Students earn grades. Grades are based on demonstrated mastery of concepts and development of skills, not effort or potential. Student progress will be available on the District Web site in Infinite Campus, it is expected that students and parents to use the District Web site.

The following percentage scale will be used in determining grades:

89.5%-100%	A
79.5%-89.4%	B
69.5%-79.4%	C
59.5%-69.4%	D
0%-59.4%	F

Grading Categories:
The overall course grade will be based on the following percentage distribution.

85% Assessments
15% Assignments

Final Exams:
At the end of each semester students will participate in a final exam/project to demonstrate overall content knowledge acquired during that semester.

*Note: Extra credit will not exceed 2% of the grade in the assignments category.

Instructional Strategies and Activities Include:
· Lecture on concepts and techniques
· Presentation/modeling of examples and strategies
· Large and small group discussions and explorations
· Reading and writing assignments
· Practice and learning through classwork and homework assignments · Applications to demonstrate relevance and extend learning
· Active student engagement in group work and discussions
· Quizzes, and tests to encourage and monitor learning

Calculator use and expectation:
A graphing calculator is strongly recommended (but not required) for this class (preferably a TI-83/84 Plus as

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the text correlates with TI). Students who cannot provide their own calculator will be instructed on how to use free online calculators to use at home and will be loaned a calculator during class for in-class use. The calculator is a tool to aid in learning concepts, not just a means of computation. Graphing calculator use will be allowed on some tests and quizzes during the year. However, when not allowed, student should have a scientific calculator available (ie. TI-30). Absolutely no cell phones will be allowed for calculator use.

Additional Support:

Tutoring will be available from me by appointment. I am also usually available before classes start and immediately after classes end.

Late Work Policy:

Assignments submitted after the posted due date are will only be accepted if the absence is excused through the attendance office (i.e. in Infinite Campus).The late work is also subject to a point deduction not exceeding 50%, the later you turn it in, the less points you can receive.

Missed Assessment Policy:

If a live assessment is missed due to unpreventable circumstances, it is the student's responsibility to contact the teacher as soon as they know they will/have missed the assessment in order to discuss any possible make-up opportunities.

Plagiarism Policy:

Any instances of plagiarism will result in a score of zero. I encourage collaboration on many assignments, but I expect the work you hand in (assignments, assessments, projects, etc.) to be your own.

GENERAL STATEMENTS

Students are expected to be familiar with and adhere to policies in the JFKHS Student Handbook. The student handbook identifies student rights, responsibilities, discipline rules and consequences, behavior, and other information for academic and social success.

Student ignorance does not provide justification for failure to follow the information contained in the student handbook. All material submitted can be retained by the instructor. If you desire copies of any submitted materials, then duplicate copies for yourself before submission. The Principal reserves the right to modify and/or change the course syllabus as needed during the course.

Classroom behavior expectations: The following summarize important expectations for classroom behavior. Students are expected to:

- attend class every day.
- complete all assignments on time.
- be seated and prepared for learning when the bell rings.
- treat their classmates with respect; no put downs or bullying of any kind.
- actively and positively participate in class.
- demonstrate personal responsibility, honesty, and integrity in all of their actions.

Electronic Devices: Electronics (music devices, cell phones, etc.) are to be turned completely off and away. Cell phones are not acceptable calculator devices and their use as such is not permitted under any circumstances.

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Classroom Rules: The following few rules guide classroom behavior and activity.
• Follow teacher directions and requests immediately.
• Keep your hands, feet, and other objects to yourself.
• Remain seated unless you have permission to move about the classroom.

- failure to follow the classroom rules will result in removal from the class, parents/guardians will be notified
    - Disruptive/Distracting/Disrespectful/Defiant
        - 3-phase behavior process
            - Example
        - No cell phones unless authorized/ok'd
            - Example

Homework and Study: Homework and student study is an essential part of your education. Any student expecting to do well in this course should carefully read the text and do all the assigned work.

Tests/Exams: A comprehensive test to measure students' mastery of skills and concepts will be given, as a minimum, at the end of each chapter/unit. Students will be informed of the comprehensive test date at least a week in advance. Unexcused absences before the test date do not excuse a student from taking the test as scheduled. Lastly, a comprehensive end-of-semester final must be taken at the end of each semester. In addition, quizzes will be given periodically to measure skill mastery progress.

Characteristics of a successful Student: Students that are successful in school generally exhibit the following traits:

- Is consistently present for class in body and spirit. (Actively engaged)
- Desires to learn the material presented.
- Learns how to learn. (Know thyself)
- Never stops learning.
- Uses time wisely.

Characteristics of Quality Work: Using the following guidelines will help you master the precalculus objectives. Quality work has the following characteristics.
• Is complete with full solution. That is, all problems are completed or at least attempted.
• The supporting work for each problem is shown completely using proper algebraic conventions and notations.
• The work is done neatly.
• The work is done accurately.

Academic Dishonesty: Academic dishonesty is considered a serious offense in my class. Students cheating will face serious consequences. I encourage collaboration on all assignments, but I expect the work you hand in (assignments, exam/quiz, etc.) to be your own.

PLEASE ACCESS THE GOOGLE FORM TO ELECTRONICALLY SIGN THAT YOU HAVE READ AND UNDERSTAND THE CONTENTS OF THE SYLLABUS.