JOHN F. KENNEDY HIGH SCHOOL
COURSE SYLLABUS
DEPARTMENT OF MATHEMATICS

1. COURSE NUMBER, TITLE, UNITS AND PRINCIPAL/DEPARTMENT APPROVED DESCRIPTION

Advanced Algebra II (Two semesters; 5 units each semester; 10 units total)

2. GENERAL INFORMATION

<table>
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<tr>
<th>Term and year:</th>
<th>2013-2014</th>
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<tr>
<td>Instructor:</td>
<td>Ms. Hu</td>
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<tr>
<td>Class Room:</td>
<td>T6</td>
</tr>
<tr>
<td>Phone number:</td>
<td>916-433-5200 x1006</td>
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<tr>
<td>E-mail address:</td>
<td><a href="mailto:wei-hu@sac-city.k12.ca.us">wei-hu@sac-city.k12.ca.us</a></td>
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3. TEXTBOOKS AND/OR RECOMMENDED OR REQUIRED READINGS

Algebra and Trigonometry with Analytic Geometry by Earl W. Swokowski and Jeffery A. Cole Ninth Edition

4. GENERAL OVERVIEW

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.

5. 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:
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.
- 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.

### 6. COURSE REQUIREMENTS, ATTENDANCE AND SPECIFIC GRADING POLICY

*Students earn grades.* Grades are based on demonstrated mastery of concepts and development of skills, not effort or potential. *The major component of your grade is determined by your results on exams and quizzes.* Progress reports are available on the District Web site in Zangle and I expect students and parents to use the District Web site. Unless circumstances warrant otherwise, I will not be giving progress reports to students and parents. Student performance will be based on assignments, which includes homework (based on work collected), in class assignments (based on work collected such as worksheets, activities, accelerated math work), and tests which includes tests, quizzes, and the final exam. The overall course grade will be based on the following percentage distribution.

Assignments (homework and class work): 20%
Exams/Quizzes/Final: 80%

The following percentage scale will be used in determining grades:

- 90% - 100% A
- 80% - 89% B
- 70% - 79% C
- 60% - 69% D
- 0% - 59% F

There is no weighting applied to any score.

Extra credit assignments will not be given to individual students. Any extra credit will be available to the entire class and only for a specific purpose. So, don’t ask for individual extra credit work, assignments, or other considerations. Since I allow you to challenge and retake exams and repeat any quiz as often as you want, extra credit should not be needed.

### 7. DESCRIPTION OF MAJOR ACTIVITIES/EXERCISES/PROJECTS
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

8. 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.
- Students are expected to complete all assignments on time.
- Students are expected to be seated and prepared for learning when the bell rings.
- Students are expected to treat their classmates with respect; no put downs of any kind.
- Students are expected to actively and positively participate in class.
- Students are expected to demonstrate personal responsibility, honesty, and integrity in all of their actions.

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.
- Raise your hand and wait for permission to speak.
- Remain seated unless you have permission to move about the classroom.

Eating (food, candy, etc.) and gum chewing are not permitted in the classroom. You can help keep our room a pleasant place to be by erasing any marks on your desk (paper towels and cleaner are available) and by placing all waste paper in the baskets in the front of the classroom. Your thoughtfulness is appreciated.

All head gear (pull over hoods, hats, etc.) is to be removed and not worn in the classroom. The only hats permitted on campus are school hats (per student handbook). Backpacks and hand bags are to be on the floor, preferably under the desk.
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. Ear pods are to be away (this means off your body). Warning, electronics will be removed from students and students will have to see a vice-principal for return of their electronics.

HOMEWORK AND STUDY: In order to ask intelligent questions and participate in class it is imperative that reading the text and completing assignments be done daily (assignments means class work and homework). 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; mid-chapter tests and quizzes will also be given based on chapter content. In addition, quizzes will be given periodically to measure skill mastery progress.

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.

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.
• Desires to learn the material presented.
• Uses time wisely.
• Does practice work, study, and test preparation faithfully.
• Asks thoughtful questions during class.
• Actively participates in class and gets extra help when needed.

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.

CALCULATOR USE AND EXPECTATION: A graphing calculator is strongly recommended for this class (preferably a TI-83/84 Plus). The calculator is a tool to aid in learning concepts, not just a means of computation. Calculator use will be allowed on tests and quizzes during the year. There are a limited number of TI-83/84 calculators
available for classroom use only. In order to make use of a classroom calculator (if available), a student must present their school ID card at the time they borrow a calculator. No ID card, no calculator! If I am left holding a student ID, it means you owe the school a calculator and you are responsible for its return, or payment if lost or destroyed.

FINAL NOTE: I truly want students to do well in this course, but students are as equally responsible for your individual success as I am. You must communicate with me, attend class regularly, and arrange for additional help when needed. I am generally available at the start of the school day for assistance (I am not available after the school day or during lunch period). The Kennedy math department provides student assistance and will have a posting of days/times and math classes when teachers are available.