

**Course Name:** Spring 09-PreCal (which is the continuation of Fall 09 PreCal class)

**Objectives:** This course provides students with the following topics:

- Trigonometric Equations
- Formulas
  - (1) Sum and Difference Formulas
  - (2) Double angle Formulas
  - (3) Half-angle Formulas
  - (4) Product-to-Sum Formulas
  - (5) Sum-to-Product Formulas
- The Law of Sines and the Law of Cosines
- Area of a triangle
- Sequences
  - (1) Definition of a sequence and the  $n$ th term of a sequence
  - (2) Two special sequences: arithmetic sequences and geometric sequences
  - (3) Sum of the first  $n$  terms of an arithmetic sequence and a geometric sequence
  - (4) Other summations
- Proofs
  - (1) Proof by contradiction
  - (2) Mathematical induction

**Attendance Policy:** Students are expected to attend each scheduled class meeting. Regular attendance is essential to your success in this course. If you are not in class, you are responsible for the material covered.

**Lecture Notes:** Well written lecture notes will be posted online before or after each class. Students are required to read them before doing homework.

**Homework:** Homework will be posted online after each class and must be turned in next class. It will be graded and the results will be posted online. It is the essential for the students to do the homework as exercises in order to digest the material covered in the class.

**Quizzes:** A weekly-quiz will be given at the end of each class except the first and the last class. Each quiz is worth of 10 points. Quiz questions will be similar to the questions in the previous homework assignment. Each quiz will be graded and its score will be posted online afterward.

**Makeup Quizzes:** If a student misses a class, he/she can make it up within two days by printing out the quiz, work it out at home with parent's supervision, and then email it to the teacher for grading with parent's signature on the top of the quiz.

**Final Exam:** The final exam will be given at the last class. To be prepared for the final exam, student are required to do all problems on the review sheet posted online.

**Awards:** For the quizzes: Top three scored students will be awarded at the last class of the semester.  
 For the final exam: Top three scored students will be awarded at the beginning of the next semester.