

# Algebra II / Trigonometry Honors

## Readiness Profile & Course Expectations

**Prerequisites:** Grade of “B” or better in both Algebra I Honors and Geometry Honors (both semesters) OR an approved waiver form on file with the counselor.

Below are some guidelines for choosing the best course for an individual student. This is *not* a placement test and it should *not* be used as the only criteria for making placement decisions.

### Student Background

Students entering **Algebra II / Trigonometry Honors** should *already* have a good understanding of the following concepts, and be able to solve the problems below in the grid quickly without a calculator:

- Simplifying algebraic expressions.
- Graphing linear functions quickly, and other functions by point plotting if necessary.
- Solving linear equations and quadratic equations (factoring and quadratic formula).
- Basic trigonometry including the unit circle.

<p><u>Simplification of Expressions:</u></p> $3x^2y\left(-\frac{2}{3}xyz - 4\right) + 5x^2y$ $\frac{4}{x-3} - \frac{3}{x+2}$ $\left(\frac{2}{3}\right)\left(\frac{-3}{5}\right) + \left(\frac{4}{7}\right)$ $(x-3)^3$	<p><u>Solving Equations:</u></p> $5x - 6 = 13$ $3(x-5) = 2 - 3(5x+2) - x$ $(x-3)(2x+5) = 0$ $x^2 - 4 = 12$ $2x^2 - 3x - 5 = 0$
<p><u>Graphing Functions:</u></p> $y = -2x + 4 \quad 4x - 5y = 7 \quad y = x^2 - x + 3 \quad y = x^3$	

Students entering **Algebra II / Trigonometry Honors** should also consider that this course is specifically designed to meet the needs of students who

- Enjoy the challenges of problem solving (really!).
- Learn concepts quickly, as the class is taught at an accelerated pace.
- Are highly self-motivated and good at working both independently and cooperatively.
- Have great work ethic.
- Possess a high degree of intellectual curiosity.

## Course Content and Expectations

In **Algebra II / Trigonometry Honors**, students will learn concepts such as:

- Cubic and higher-degree polynomials, exponential and logarithmic functions.
- Use matrices to solve systems of equations.
- Rational functions, parametric and polar equations and systems.
- Conic sections (including polar forms).
- Other topics including sequences, series, probability, and complex numbers.
- Trigonometric and inverse trigonometric functions and identities.
- Applications of trigonometry in solving triangle problems, and vectors.
- Applications of the various topics listed above.

Textbook: *Algebra II and Trigonometry*, Addison Wesley 1999 (1990), Forester.

Students will be expected to spend an average of approximately 1.5 to 2 hours outside of class on homework for each class period. Approximately 2 to 4 sections from the text are covered per class. Grades will be calculated within the following guidelines:

- Tests and Quizzes: 60 – 80%
- Homework: 10 – 25%

## Test Scores

Other indicators of potential success include test scores near or above the following values:

- California Standards Tests (CST) for Algebra I and Geometry: Advanced
- MDTP for Algebra II Readiness: 85%
- District Benchmark Tests for Algebra I and Geometry: 85%