

Algebra II

Readiness Profile & Course Expectations

Prerequisites: “C” or higher in Algebra I and Geometry.

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** should *already* have a good understanding of the following concepts:

- Solving multi-step algebraic equations (i.e., Solve: $4(3x - 5) = 2(x - 8) - 6x$)
- Multiple methods of graphing linear functions and related vocabulary (i.e., slope-intercept form, etc.)
- Factoring all types of quadratic polynomials (i.e., $2x^2 - 11x + 5 = (2x - 1)(x - 5)$) and simple cubic (third-degree) polynomials
- How to simplify a radical (i.e., $\sqrt{48} = 4\sqrt{3}$)

Students entering **Algebra II** should also be able to solve problems such as

<p><u>Example Equation Problem:</u></p> <p>Solve for x:</p> $\frac{1}{3}x + \frac{1}{4} = x - \frac{1}{6}$	<p><u>Word Problem:</u></p> <p>You have 480 ft of fencing to enclose a rectangular garden. You want the length to be 30 ft greater than the width. Find the length and width if you use all of the fencing.</p>
<p><u>Graphing Problem:</u></p> <p>Graph: $2x + 3y = 12$</p>	<p><u>Number Sense Problem:</u></p> <p>Write the following in increasing order:</p> $-2, 0.2, -\pi, -\sqrt{6}, \frac{6}{5}$

Students entering **Algebra II** are expected to do the following things:

- Be in class and participate every class period.
- Make-up assignments on their own when they are absent.
- Show all work and effort on every assignment.
- Ask questions and self-advocate when they are confused.
- Accept a challenge, analyze and think critically.

Course Content and Expectations

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

- Graphing and solving quadratic and higher degree polynomial functions as well as exponential and logarithmic functions.
- Components and graphs of conic sections (parabola, circle, ellipse, hyperbola).
- Introduction to Trigonometry (including the graphs of sine and cosine functions).

Textbook: *Algebra II*, McDougal Littell 2001, Larson.

Students will be expected to spend an average of approximately 1 to 2 hours outside of class on homework for each class period. Approximately 1 to 2 sections from the text will be covered per class and one chapter every 2 to 3 weeks. Each semester will have approximately 6 tests and 6 quizzes. Grades will be calculated within the following guidelines:

- Tests and Quizzes: 65 – 80%
- Homework: 20 – 30%

There may also be projects such as

- Compound interest real-life application project
- Graphing trigonometric functions design project
- Group presentations

Test Scores

Other indicators of potential success in **Algebra II** include test scores near or above the following values:

- California Standards Tests (CST) for Algebra I and Geometry: Proficient
- MDTP for Algebra II Readiness: 70%
- District Benchmark Tests for Algebra I and Geometry: 70%

Other Comments

Algebra II is a conceptual course that requires a great deal more effort and abstract thought than in previous math courses. Strong Algebra I skills, attendance, and a consistent effort on homework are critical to success. The knowledge, skills, and problem-solving strategies learned in Algebra II will lay a necessary foundation for Pre-Calculus and higher-level math courses.