

Common Core: Algebra II

Algebra II introduces students to advanced functions, with a focus on developing a strong conceptual grasp of the expressions that define them. Students learn through discovery and application, developing the skills they need to break down complex challenges and demonstrate their knowledge in new situations. Course topics include quadratic equations; polynomial functions; rational expressions and equations; radical expressions and equations; exponential and logarithmic functions; trigonometric identities and functions; modeling with functions; probability and inferential statistics; probability distributions; and sample distributions and confidence intervals. This course supports all students as they simultaneously develop computational fluency, deepen conceptual understanding, and apply Common Core's 8 mathematical practice skills. Students begin each lesson by discovering new concepts through guided instruction, and then confirm their understanding in an interactive, feedback-rich environment. Modeling activities equip students to use tools and analyze a variety of real-world scenarios and mathematical ideas. Journaling activities allow students to reason abstractly and quantitatively, construct arguments, critique reasoning, and communicate precisely. Performance tasks prepare students to synthesize their knowledge in novel, real-world scenarios that require the student to make sense of multifaceted problems and persevere in solving them. Throughout the course students are evaluated through a diversity of assessments specifically designed to prepare them for the content, form, and depth of the Common Core assessments. This course is aligned with the Common Core State Standards for Mathematics.