SOUTHERN LEHIGH SCHOOL DISTRICT
5775 Main Street
Center Valley, PA 18034

Planned Course for Mathematics

Course: Algebra II

Standards:
This course is aligned to standards within the following Domains of the PA Core Standards:

HS.F	Number and Quantity
HS.D	Algebra
HS.C	Functions
HS.B	Statistics and Probability

Course Description:
The K-12 mathematics program within Southern Lehigh School District will provide opportunities for all students to develop the ability to independently apply mathematical knowledge and skills to real-world situations. A robust and coherent curriculum will prepare students to think and reason mathematically while requiring them to demonstrate a deep understanding of mathematics. Students will develop critical thinking, problem solving, innovation, collaboration, and communication skills. A focus will be placed on using mathematics as a key to understanding the world, in order to meet the challenges of a dynamic society.

In ALGEBRA II students will apply their prior mathematical knowledge to develop a more extensive understanding of algebraic concepts. Topics will focus on the study of the complex number system, properties of linear and non-linear functions and their graphs, equations and inequalities, as well as statistics and probability. Students will be introduced to matrices and determinants to aid in the solution of systems of equations with multiple variables.

Prerequisite(s):
- Earn a minimum grade of a B in Applied Geometry, a C in Geometry, or successful completion of Middle School Geometry

Measurable objectives to be attained by students:
Specific objectives for this course are aligned to the Pennsylvania Core Standards for Mathematics and the Common Core State Standards for Mathematics as outlined in the Scope and Sequence for Algebra II.

Instructional Strategies:
Below is a list of suggested strategies for high-quality instruction in mathematics:

- Instructional components outlined in the *Framework for Teaching* by Charlotte Danielson
- Use Concrete Representational Abstract (CRA) representations
- Promote productive struggle
- Promote mathematical discourse
- Use precise mathematical language

Estimated Instructional Time:
77 minutes per day on an alternating A/B block schedule for one school year

Forms of Assessment to Measure Attainment of Course Objectives:

- Curriculum-based measures
- Benchmark Assessments
- Formative Assessments
- Summative Assessments

Resources:

Student Text Resources:
Larson, Ron, and Laurie Boswell. *Big Ideas Math: A Common Core Curriculum Algebra II*. Big Ideas Learning, LLC, 2019.

- Student Text Printed Version
- Student Text Online Version
- Student Journal

Teacher Resources:
Larson, Ron, and Laurie Boswell. *Big Ideas Math: A Common Core Curriculum Algebra II*. Big Ideas Learning, LLC, 2019.

- Teacher's Guide Printed Version with Online Access
- Assessment Book
- Resources by Chapter

Technology:

- Scientific calculator
- District approved supplemental technology

Other Resources:

- Manipulatives
- Teacher created resources
- District approved supplemental resources