

**SPRINGFIELD PUBLIC SCHOOLS
INTRODUCTION TO COMPUTER PROGRAMMING**

Course Description

This course will be an introduction to computer programming, intended for the student who is interested in learning to write JAVA computer programs to solve problems in a structured environment. This course is designed for students who have an interest and ability in mathematics, science, or business. It will cover basic terminology, history, input/output control, decision control, repetition, functions, arrays, and elementary strings. This course may be taken for math or practical arts credit. Prerequisites: Algebra II, Integrated Algebra II, or Integrated Math 3 and Keyboarding (or demonstrate keyboarding proficiency).

Course Rationale

This course is designed to give the student the opportunity to determine if they have an interest in programming or related fields and to build a foundation for college or vocational pursuits. An understanding of computer programming is a prerequisite for many jobs.

Major Instructional Goals

The intent of the Springfield R-12 Secondary Mathematics Program is to explore, investigate, and understand the importance of mathematics through real-world experiences. In mathematics, students will acquire the knowledge and skills to problem solve, communicate, reason, create models, and make connections.

Grade Level Expectations are addressed throughout this course, and may be cross-referenced with the Missouri Show-Me Standards listed below.

Major Instructional Goals	MO Show-Me Standards
1. The student will investigate the history of computers.	1.2, 1.4, 1.9, 2.7, 3.2, 4.4, 4.8
2. The student will demonstrate an understanding of computer terminology.	1.4, 2.7
3. The student will explore input/output techniques.	1.4, 1.5, 1.8, 1.10, 2.7, 3.2, 4.8
4. The student will investigate several methods of decision control.	1.4, 1.5, 1.8, 1.10, 2.7, 3.2, 3.3, 4.8
5. The student will apply various repetition techniques in structured programming.	1.4, 1.5, 1.6, 1.8, 1.10, 2.7, 3.2, 3.3, 4.8
6. The student will apply modular approach to structured programming.	1.4, 1.5, 1.6, 1.8, 1.10, 2.7, 3.2, 3.3, 4.8
7. The student will investigate the use of single-dimensional arrays.	1.4, 1.5, 1.6, 1.8, 1.10, 2.7, 3.2, 3.3, 4.8