

CENTRAL BUCKS SCHOOL DISTRICT
Course of Study
Recommendation for Adoption

Course: Introduction to Python

Date: August 6, 2026

Student Level: High School

Grade Level: 9, 10, 11, 12

Characterization of Course of Study:

Introduction to Python is a high school computer science elective designed for students in grades nine through twelve. The course introduces students to the fundamentals of computer programming, with emphasis on logical thinking, problem solving, algorithmic reasoning, and the design, testing, and revision of Python programs. Students begin with introductory programming concepts and graphics-based applications before progressing to variables, input and output, conditionals, loops, functions, strings, and data structures. As time permits, students may also explore introductory artificial intelligence concepts. The course provides a foundation for continued study in computer science, including Advanced Placement Computer Science A, and may be used to fulfill up to one credit of the mathematics graduation requirement through approved computer science coursework.

Reasons for Proposed Adoption:

Introduction to Python provides an entry point into computer science for high school students. The course supports the district's commitment to expanding access to meaningful computer science learning while strengthening students' computational thinking, mathematical reasoning, and problem-solving skills.

Students develop skills in sequencing, selection, iteration, documentation, functions, strings, and data structures as they learn to design, test, debug, and refine computational artifacts. This progression provides practical programming experience and prepares students for future coursework in computer science.

The course aligns with the K-12 Computer Science framework reflected in the district's course of study, including enduring understandings and standards related to algorithms and programming, data and analysis, abstraction, documentation, and the impact of computing. The curriculum emphasizes active learning, differentiated instruction, ongoing assessment, and opportunities for students to connect programming concepts to prior knowledge, personal interests, and real-world applications.

Principal Approval Date: _____

Curriculum Committee Approval Date: _____

School Board Approval Date: _____