Programming and Software Development CTE

Career Tech Student Organization: SkillsUSA
Career Readiness Indicator Credential: Microsoft Technology Associate (MTA) –
Intro to Programming Using Python and Intro to Programming Using Java

Information Technology	
Course Code: 10001G1000	1 Credit
Prerequisite: None	Course Fee: None
Information Technology Fundamentals is a one-credit course that introduces students to the knowledge base and technical skills for information technology careers. Students study the nature of business and demonstrate knowledge of the functions of information systems in business. Emphasis is placed on maintaining a safe working environment and on building interpersonal skills needed for working in the information technology environment. Students demonstrate appropriate knowledge and behaviors regarding legal responsibilities of information technology professionals. They explore a variety of information technology career opportunities and develop a personal career plan to meet career goals and objectives.	

Object-Oriented Programming I	
Course Code: 10152G1003	1 Credit
Prerequisite: None	Course Fee: None
Object Oriented Programming I is designed to provide students with an understanding of Object-Oriented programming concepts (classes and objects) that are used to structure a software program using reusable pieces of code. This course will focus on the Python programming language to learn programming foundations such as data types, functions, conditional statements, loops, etc., as well as program documentation, program design and development, and debugging. The Python language will be introduced using video, practice labs, and coding projects.	

Computer Science Principles, AP	
Course Code: 10019E1000	1 Credit
Prerequisite: Geometry and Algebra I	Exam Fee: $105
AP Computer Science Principles is equivalent to a first-semester, college-level breadth course, which follows the curriculum established by the College Board Advanced Placement (AP) program for computer science. AP Computer Science Principles introduces students to the breadth of the field of computer science. In this course, students will learn to design and evaluate solutions and to apply computer science to solve problems through the development of algorithms and programs. They will incorporate abstraction into programs and use data to discover new knowledge. Students will also explain how computing innovations and computing systems, including the Internet, work, explore their potential impacts, and contribute to a computing culture that is collaborative and ethical. The AP Computer Science Principles Exam is required and will be administered in May.	

Computer Science A, AP	
Course Code: 10157E1000	1 Credit
Prerequisite: Algebra II w/ Stats	Exam Fee: $105

AP Computer Science A is equivalent to a first semester, college level course in computer science. This course introduces students to computer science with fundamental topics that includes the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design using the Java programming language. The AP Computer Science A Exam is required and will be administered in May.