

Information Technology Course Descriptions

Fundamentals of Computer Science

TEA # 03580140

Course # 0444

Grade Placement: 9-12

Credit: 1

Fundamentals of Computer Science is intended as a first course for those students just beginning the study of computer science. Students will learn about the computing tools that are used every day. Students will foster their creativity and innovation through opportunities to design, implement, and present solutions to real-world problems. Students will collaborate and use computer science concepts to access, analyze, and evaluate information needed to solve problems. Students will learn the problem-solving and reasoning skills that are the foundation of computer science. By using computer science knowledge and skills that support the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create solutions, and evaluate the results. Students will learn digital citizenship by researching current laws and regulations and by practicing integrity and respect. Students will gain an understanding of the principles of computer science through the study of technology operations and concepts. The six strands include creativity and innovation; communication and collaboration; research and information fluency; critical thinking; problem solving, and decision making; digital citizenship; and technology operations and concepts.

AP Computer Science Principles

TEA # A3580300

Course # 0442

Grade Placement: 10-12

Credit: 1 (LOTE Credit)

Recommended Prerequisite: Algebra I

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. It is important to note that the AP Computer Science Principles course does not have a designated programming language. Teachers have the flexibility to choose a programming language(s) that is most appropriate for their students to use in the classroom.

Note: This course can satisfy a Math and Language Other Than English (LOTE) credit requirements for students on the Foundation High School Program. Students are encouraged to meet with their Academic Counselor to ensure they are following the appropriate math course sequence and can apply this course to their math graduation requirements.

AP Computer Science A

TEA # A3580110 & A3580120

Course # 0443M & 0443L

Grade Placement: 11-12

Credit: 2 (LOTE and Math Credit)

Recommended Prerequisite: Algebra I

AP Computer Science A introduces students to computer science through programming. Fundamental topics in this course include 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.

Note: This course can satisfy a Math and Language Other Than English (LOTE) credit requirements for students on the Foundation High School Program. Students are encouraged to meet with their Academic Counselor to ensure they are following the appropriate math course sequence and can apply this course to their math graduation requirements.