

COMPUTER SCIENCE

CS 940 AP ADVANCED PLACEMENT COMPUTER SCIENCE

Two Semester Course

Sophomores, Juniors, Seniors

Prerequisite: Minimum GPA of 3.6 and Recommendation of the Department Chair

This course introduces students to the broad spectrum of technology and computer science. Students will become competent in all areas of computing and how it is used in today's world. Specific areas of study include connected computing, analyzing problems, communications, collaborating, abstraction, programming in Python, algorithms, the internet and global impact of advancement in computer science. Students will create a portfolio of artifacts as a portion of the Advanced Placement Exam. This course serves as preparation for the Advanced Placement Computer Science Principles Exam.

CS 942 AP ADVANCED PLACEMENT COMPUTER SCIENCE A

One Semester Course

Sophomores, Juniors, Seniors

Prerequisite: JAVA H CS 944 and Recommendation of the Department Chair

This is a one semester continuing in-depth study of the concepts introduced in the JAVA H course. Topics covered in this course include recursion, sorting and searching algorithms, designing object-oriented software solutions to problems from various application areas, study of the AP Free Response Case Studies and preparation for the Advanced Placement Examination in Computer Science. All students are required to take the Advanced Placement Exam in JAVA.

CS 944 H JAVA H

One Semester Course

Sophomores, Juniors, Seniors

This is a one semester study of Java language. Topics covered in this course include the basic elements of computer hardware and software, good programming style, Java syntax for declaring classes and objects, constants and variables, arithmetic expressions, algorithmic concepts, conditional and iterative control structures, OOP concepts, designing software solutions to problems and understanding one- and two-dimensional arrays. This semester-one course is intended to prepare students for CS 942 in semester two.

CS 946 INDEPENDENT STUDY COMPUTER SCIENCE

Two Semester Course

Prerequisite: Recommendation of the Department Chair.

In this elective course, students develop information and technology literacy skills, as well as research, writing, presentations, mentoring, lesson planning, and leadership skills through collaboration with the Computer Science department. Projects completed and languages used will be decided based on student interests and departmental needs. The first semester is graded on a pass/fail basis and the second semester is graded with a letter grade.