COMPUTER SCIENCE IN JAVASCRIPT

Prerequisite: None   Credit: 1   Time: Full Year

This course is an introduction to the practice of writing computer programs and understanding how computer language works. Students will learn the syntax and commands used for creating computer programs and software. Java Script is the programming language used in this course and topics include objects, classes and data structures.

CYBERSECURITY   NOT OFFERED 2026-2027

Prerequisite: None   Credit: 1
Time: Full Year

As our world becomes increasingly dependent upon technology, cybersecurity is a topic of growing importance. This course prepares students with crucial skills to be responsible citizens in a digital future and introduces foundational cybersecurity topics including networking fundamentals, software security, and basics of cryptography, all through the CodeHS web-based platform.

MOBILE APPS

Prerequisite: Java Script (recommended) or Departmental approval   Credit: 1/2
Time: ½ Year

Mobile applications are becoming increasingly important to our consumption of media, news, social interaction, and learning. In this course, students learn how to create mobile apps using React Native, build applications to run on their own smartphones, and create an app to solve a specific problem!

VIDEO GAME DESIGN IN JAVA SCRIPT

Prerequisite: Java Script (recommended) or Departmental approval   Credit: 1/2
Time: ½ Year

The CodeHS video game design curriculum teaches the foundations of creating video games in JavaScript. While this course is introductory, it is an advanced-level course. Its curriculum teaches the foundations of computer science and basic programming, with an emphasis on helping students develop logical thinking and problem solving skills. Once students complete the course, they will have learned material equivalent to a semester college introductory course in Computer Science and be able to program in JavaScript.

INTRODUCTION TO ARTIFICIAL INTELLIGENCE

Prerequisite: Java Script (recommended) or Departmental approval   Credit: ½
Time: ½ Year

The Introduction to Artificial Intelligence course teaches students important programming concepts that enable the use of Artificial Intelligence in computer science and society at large. Students will learn how to incorporate basic Artificial Intelligence algorithms in their own work, and consider the social and ethical implications of how Artificial Intelligence is used, and how it plans to be used. Students will develop a series of projects that illustrate the variety of ways Artificial Intelligence can be used to optimize and predict information and processes.

WEB DESIGN

Prerequisite: Algebra I or Departmental approval   Credit: 1
Time: Full Year

Students will learn the languages HTML and CSS, and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi page websites. Students will learn the foundations of user interface design, rapid prototyping and user testing, and will work together to create professional, mobile responsive websites.

CALCULATE YOUR FUTURE   **PENDING BOARD APPROVAL**

Prerequisite: Algebra 2   Credit: 1

Time: Full Year

Students apply algebra, probability and statistics to real-world financial situations, learning how mathematical concepts guide everyday decisions about earning, saving, investing, borrowing, and managing risk. Through hands-on projects and spreadsheet modeling, students explore topics such as compound interest, credit, insurance, and the stock market. This course, designed for students who have completed Algebra 2, builds the practical and analytical skills needed to make informed financial decisions and understand the mathematics that will shape their financial future.

ADVANCED PLACEMENT (AP) STATISTICS (Recommended grades: 11, 12)

Co-requisite: Algebra II (R or H)   Credit: 1

Time: Full Year

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: 1. Exploring Data: Observing patterns and departures from patterns, 2. Planning a Study: Deciding what and how to measure, 3. Anticipating Patterns: Producing models using probability theory and simulation, and 4. Statistical Inference: Confirming models. Students who successfully complete the course and score a 3 or higher on the AP examination may receive credit, advanced placement, or both for a one-semester introductory college statistics course. Please note that a summer assignment will be provided following the conclusion of the prior school year. All assignments will be posted on the school website.

ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES

Prerequisite: Algebra I or Departmental approval   Credit: 1

Time: Full Year

This course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, this course prepares students for college and career. Students are expected to take the AP Computer Science Principles examination. Students who successfully complete the course and score a 3 or higher on the AP examination may receive credit, advanced placement, or both, for a one-semester introductory college statistics course.

ADVANCED PLACEMENT COMPUTER SCIENCE A (Recommended grades: 11,12)

Prerequisite: Intro to Computer Science (Javascript thereafter)   Credit: 1

Time: Full Year

This is an introductory college level course in computer science. Because the development of computer programs to solve problems is a skill fundamental to the study of computer science, a large part of the course involves the development of computer programs or parts of programs. The course emphasizes the design issues that make programs understandable, adaptable, and when appropriate, reusable. Students learn how to design and implement computer-based solutions to problems, use and implement commonly-used and appropriate algorithms and data structures, develop and select appropriate algorithms and data structures, and code fluently in an object-orientated paradigm using the Java programming language. Please note that a summer assignment will be provided following the conclusion of the prior school year. All assignments will be posted on the Walt Whitman website.

AP CYBERSECURITY   **PENDING NCAA APPROVAL**   **PENDING BOARD APPROVAL**

Prerequisite: Algebra I or Departmental approval   Credit: 1

Time: Full Year

This college-level course introduces students to the core principles and practices of cybersecurity through real-world, scenario-based learning. Students explore how to identify vulnerabilities, assess risk, detect and respond to cyberattacks, and design layered defenses across networks and systems. The course emphasizes problem-solving, collaboration, and evidence-based reasoning while preparing students for both postsecondary study and cybersecurity career pathways. Students will take the AP Cybersecurity Exam at the end of the course and may earn the AP Cybersecurity Credential.