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IT Essentials/Cyber Security

Each Semester Course

Grades 9-12

HS-Technology, Practical Skills or
General Elective

PREREQUISITE-None

UC/CSU-Subject g-Honors

Web Design

Semester Course

Grade 9-12

HS-Technology, Practical Skills or
General Elective

PREREQUISITE-None

UC/CSU-Subject g-Honors

This course is designed to develop competency in the use of the Internet, including critical comparison of web sites, web site development, connectivity, and the use of multimedia programs including Students research, design and build their own 5 page live websites. Students create websites using text, images, sound and video files. Students master copyright, fair-use and creative control issues. A detailed understanding of website development from idea to deployment is an integral part of the course.

Oak Park High School

2023-2024



Robotics

Semester Course

Grade 9-12

HS-Technology, Practical Skills or
General Elective PREREQUISITE-None

Learn about the responsibilities of an IT professional. Students who complete this course will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a networked environment. Expanded topics include the Microsoft Windows 7 operating system, security, networking, and troubleshooting. Hands-on lab activities are an essential element of the course. The Virtual Laptop and Virtual Desktop are standalone tools designed to supplement classroom learning and provide an interactive "hands-on" experience in learning environments with limited physical equipment. Second Semester will focus on cyber security which covers the importance of cyber security, the most common risks, and how to mitigate them. Learn what cyber security is and how the industry is growing. Understand how attackers use malware and how to protect individuals from attack.

In a flexible format, students learn about engineering and engineering problem solving. They will be given introductions to the VEX Robotics Design System and Autodesk® Inventor® while learning key STEM principles through a process that captures the excitement and engagement of robotics competition. The curriculum is heavily focused on mechatronic principles; as such, programming is NOT required.



Introduction to Programming

Semester Course Grade 9-12

HS-Technology, Practical Skills or

General Elective PREREQUISITE-None

UC/CSU-Subject G

Students learn the principles, practice and strategies of computer programming. Programming is the art of explaining to a computer what you want it to do, in exact detail and in a language that the computer can understand. Programming is developed through Alice 3.2 an interactive programming language developed by Carnegie-Mellon University. In addition, students will use Edhesive, an online program that teaches the foundations of computer science using the Python language. This semester-long course teaches the foundations of computer science and basic programming. Topics include: What is Computer Science, Big Data, Algorithms, Cybersecurity, Game Development and Graphics.

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Office Applications

Semester Course Grade 9-12

HS-Technology, Practical Skills or

General Elective PREREQUISITE– None

UC/CSU-Subject G

The class includes a survey of computer hardware, the history of computing, computer security and detailed investigations of Windows, Microsoft Word, Excel, PowerPoint, and Internet Explorer. Students focus on the Microsoft Office 2019 Suite with the goal of qualification for taking the Microsoft Office Specialist Exam. A Microsoft Office Specialist (MOS) certification helps validate proficiency in using Microsoft Office 2019 and meets the demand for the most up-to-date skills on the latest Microsoft technologies.



AP Computer Science Principles

Year Course Grade 10-12

HS-Technology, Practical Skills or General Elective

PREREQUISITES-Grade of “A” in Intro to Programming, OR permission from instructor.

UC/CSU-Subject g-Honors

The AP Computer Science Principles course is an introductory course in computer science. Because the design and implementation of computer programs to solve problems involve skills that are fundamental to the study of computer science, a large part of the course is built around the development of computer programs that correctly solve a given problem. These programs should be understandable, adaptable, and, when appropriate, reusable. Students prepare for the Computer Science AP Principles Exam administered in May by the College Board ©.