

Technology		
One semester (5 credits) required for graduation. Not required for UC/CSU admission		
Course	Course Requirements	Description
<p><u>AP COMPUTER SCIENCE A</u> (CL-APCOM)</p>	<p>Year Course Grade 10-12 HS-Technology, Practical Skills or General Elective CTE This is a Career Technical Education certified course PREREQUISITES-A grade of "A" in Algebra I or a "C" or better in Algebra II or permission from instructor UC/CSU-Subject g-Honors</p>	<p>The AP Computer Science A 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. At the same time, the design and implementation of computer programs is used as a context for introducing other important aspects of computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, the study of standard algorithms and typical applications, and the use of logic and formal methods. Students prepare for the Computer Science AP "A" Exam administered in May by the College Board ©.</p>
<p><u>CIVIL ENGINEERING AND ARCHITECTURE (CP)</u> (GE-CIVIL)</p>	<p>Yearlong Course Grades 10 – 12 HS - Technology, Practical Skills or General Elective CTE This is a Career Technical Education certified course PREREQUISITE – A grade of "C" or better in Intro to Engineering or Architecture or Teacher Approval UC/CSU – subject g</p>	<p>Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architecture design software. This course is part of multiple Career Technical Education pathways offered at OPHS.</p>
<p><u>DIGITAL ELECTRONICS (CP)</u> (GE-DIGITE)</p>	<p>Yearlong Course Grades 10 – 12 HS - Technology, Practical Skills or General Elective CTE This is a Career Technical Education certified course PREREQUISITE – A grade of "C" or better in Intro to Engineering UC/CSU – subject g</p>	<p>From smart phones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices. This is the second course of the four year Engineering track.</p>
<p><u>INTRO TO DIGITAL PHOTOGRAPHY</u> (PS-DIGPHOT)</p>	<p>Grades 9-12 Semester-long course HS-Practical Skills, Technology or General Elective CTE This is a Career Technical Education certified course PREREQUISITE-None</p>	<p>This class will be a general introduction to digital photography. Emphasis will be on how to take "good" photographs using the rule of thirds and basic design concepts. Lessons will include exposure settings, lighting techniques and composition. A camera is not required for enrollment.</p>
<p><u>INTRODUCTION TO ENGINEERING (CP)</u> (GE-INTROENG)</p>	<p>Grade 9-10 Year-long course HS-Technology, Practical Skills or General Elective CTE This is a Career Technical Education certified course PREREQUISITE-None UC/CSU – subject g</p>	<p>This course is designed for the student interested in an engineering related field of study. The major focus of this course is to expose students to the design process, research and analysis, teamwork, various communication methods, engineering standards, and technical documentation. Through hands-on projects, students apply engineering standards while documenting their work in design. Students use industry standard 3D modeling software to help design solutions to solve proposed problems, document their work using an engineer's notebook, and communicate solutions to peers and members of the professional community. The course assumes no previous knowledge, but students should be concurrently enrolled in mathematics and science courses. This course will be the first of a four-year commitment to the Oak Park High School engineering track.</p>

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<p>INTRODUCTION TO PROGRAMMING (CL-COMPPRO)</p>	<p>Semester Course Grade 9-12 HS-Technology, Practical Skills or General Elective CTE This is a Career Technical Education certified course PREREQUISITE-None</p>	<p>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. It requires logical thinking, problem solving, clear expression and is often frustrating. An interactive introductory course for students brand new to programming that teaches the foundations of computer science using the Python language. Not only will this semester course prepare students for AP Computer Science A. but it will teach students how to think computationally and solve complex problems, skills that are important for every student. This course includes: Web-based video classes, activities, and practice exercises; Regular quizzes, projects and exams; Auto-grading, progress tracking and online grade book. Additional programming is developed through Alice 3.3 an interactive programming language developed by Carnegie-Mellon University.</p>
<p>IT ESSENTIALS/ INTRODUCTION TO CYBER SECURITY (CL-ITESSEN)</p>	<p>Grades 9-12 Two-Semester Course HS-Technology, Practical Skills or General Elective CSU-Three (3) CSU transferable credits are awarded by the Ventura Community College District (Moorpark College). Students must achieve an A or B or C in the Oak Park course to receive the credits. CTE This is a Career Technical Education certified course PREREQUISITE-None for first semester/second semester students must complete first semester course</p>	<p>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. Learn about threats in banking, telecommunications, healthcare, other industries, and across borders. Understand technology-based solutions and strategic and network-architecture planning. Grades 9-12 Two-Semester Course HS-Technology, Practical Skills or General Elective CSU-Three (3) CSU transferable credits are awarded by the Ventura Community College District (Moorpark College). Students must achieve an A or B or C in the Oak Park course to receive the credits. PREREQUISITE-None for first semester/second semester students must complete first semester course</p>

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<p><u>OFFICE SYTEMS AND TECHNOLOGIES ROP</u> (CL-COMPAPP)</p>	<p>Semester Course Grade 9-12 HS-Technology, Practical Skills or General Elective CTE This is a Career Technical Education certified course PREREQUISITE-None COLLEGE CREDITS – up to 4.5</p>	<p>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 2016 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 2016 and meets the demand for the most up-to-date skills on the latest Microsoft technologies. Candidates who pass a certification exam show that they can meet globally recognized performance standards. The American Council on Education (ACE) has recommended college credit for select Microsoft Certifications. Approved certifications are applicable to one to six semester hours of college credit in bachelors degree or associate-degree classes on computer applications, information technology, or computer information systems. ACE maintains a network of more than 1,500 cooperating, accredited colleges and universities that agree to consider ACE college credit recommendations. However, each institution has the discretion to accept credit for ACE recommendations as they see fit. Contact the institution you attend (or plan to attend) to inquire about its policy. Semester Course Grade 9-12 HS-Technology, Practical Skills or General Elective PREREQUISITE-None COLLEGE CREDITS – up to 4.5</p>
<p>ROBOTICS (CL-ROBOT)</p>	<p>Semester Course Grades 9-12 HS-Technology, Practical Skill or General Elective PREREQUISITE-None</p>	<p>Autodesk's VEX Robotics Curriculum is divided up into twelve primary units and one optional unit. 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. This curriculum leverages the “coolness” of robotics, and the excitement of head to head competition to inspire and engage students. Students will walk through the design and build a mobile robot to play a sport-like game. During this process they will learn key STEM principles, and robotics concepts. At the culmination of this class, they will compete head-to-head against their peers in the classroom. This modular and project-based curriculum teaches the design process in an engaging, hands-on manner to help teachers challenge, motivate, and inspire their students. By moving students through an actual engineering project, students quickly understand the relevance of what they are learning. The curriculum is created to ensure that students with varying learning styles and levels can accomplish the lesson goals. No prior robotics experience is required; beginners are able to advance sequentially through the units to gradually increase their knowledge and skill level.</p>
<p><u>WEB DESIGN ROP</u> (CL-MULTMED)</p>	<p>Semester Course Grade 9-12 HS-Technology, Practical Skills or General Elective PREREQUISITE-None</p>	<p>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 Adobe Dreamweaver®, Photoshop and Flash. Students research, design and build their own 7-10 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.</p>