



CTE COURSES

2026-2027 OFFERINGS



AUTOMOTIVE TECHNOLOGY

- **9TH GRADE**

SMALL GAS ENGINE SEMESTER CLASS

- **10TH GRADE**

AUTOMOTIVE DIAGNOSTICS AND REPAIR

PATHWAY CONCENTRATOR, ARTICULATED WITH LMC (5 UNITS)

- **11TH AND 12 GRADE**

ROP AUTOMOTIVE ENGINEERING

PATHWAY CAPSTONE, UC/CSU G LEVEL

CYBERSECURITY PATHWAY

AP NETWORKING 10TH AND 11TH GRADERS

THEN

AP CYBERSECURITY 11TH AND 12 GRADERS

GAIN COLLEGE CREDIT THROUGH AP EXAM.

PREPARE FOR INDUSTRY CERTIFICATIONS

Cybersecurity CTE Pathway

AP NETWORKING

Course # 4215

Grade Level: 9-11

Length: Year Class

Graduation: Fulfills elective credits.

College Prep: Fulfills ("g") requirements for UC/CSU

Description: This is equivalent to a college-level Introduction to Networking course. The course interweaves essential networking concepts with relevant, hands-on problem-solving activities to maximize students' understanding of network hardware and configuration, the use of protocols to enable reliable and accurate transmission of data between different hosts around the world, and relevant security practices that secure the transmission of data both within and between computer networks.

This course prepares student to take the AP test in May.

AP CYBERSECURITY

Course # 4216

Grade Level: 10-12

Length: Year Class

Graduation: Fulfills elective credits.

College Prep: Fulfills ("g") requirements for UC/CSU

Description: AP Cybersecurity is a broad introduction to the field of cybersecurity that aligns closely with a standard first-year college introductory cybersecurity course. Students learn about common threats and vulnerabilities, and how those combine to create risk. Students study the ways that individuals and organizations manage risk, and how risk can be mitigated through a defense-in-depth strategy. Students explore specific vulnerabilities, attacks, mitigations, and detection measures across a variety of domains, including physical spaces, computer networks, devices, and data and applications.



Key Details:

- ✓ Must commit to taking both classes, one per year.
- ✓ Is a high demand field which you could study further in college OR go straight into after high school.

COMPUTER SCIENCE CTE PATHWAY

EXPLORING COMPUTER SCIENCE (9TH AND 10TH GRADERS)

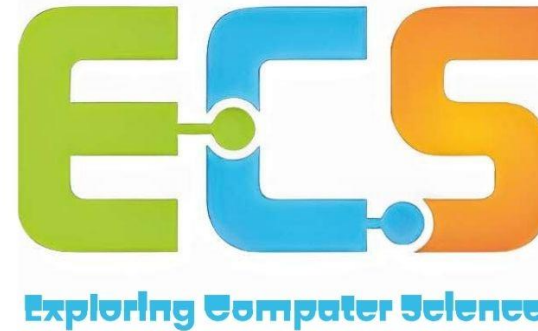
THEN TAKE AP COMPUTER SCIENCE PRINCIPLES

Key Details

- ✓ CTE Pathway
- ✓ Computer Programming
- ✓ Data Modeling
- ✓ Robotics
- ✓ Problem Solving
- ✓ Web Design
- ✓ 3d Design and Printing
- ✓ Human Computer Interaction



LIBERTY HIGH SCHOOL



ROP Exploring Computer Science Course #4079

Grade Level: 9-12

Length: Year Class

Class Prerequisite: Concurrent enrollment in Algebra 1 or have taken Algebra 1

Graduation: Fulfills elective credits.

College Prep: Fulfills ("g") requirement for UC/CSU

Description: This is an introductory course in computer science. This course provides students with foundational knowledge of programming and computer science. Students will explore topics of human computer interaction, problem solving, web design, computer programming, data modeling, and robotics. Throughout the course, students will understand the algorithmic underpinnings of computer applications and gain technical expertise using networking, game design, information support and topics like artificial intelligence and robotics. Social issues in ICT will be introduced such as hacking and cybersecurity, social media usage and protecting personal information, the digital divide, open government data, and ethical computing.

AP Computer Science Principles Course #4753

Grade Level: 9-12

Length: Year Class

Class Prerequisite: Algebra 1 with C or better recommended

Graduation: Fulfills elective credits.

College Prep: Fulfills ("d") requirement for UC/CSU

Description: AP CS Principles is designed to introduce students to the central ideas of computing and CS, to instill ideas and practices of computational thinking, and to have students engage in activities that show how computing and CS change the world. In this course, students will learn how to access the world of mobile services and applications as creators, not just consumers. They will learn to create entertaining and socially useful apps that can be shared with friends and family. In addition to learning to program and how to become better problem solvers, students will also explore the exciting world of computer science from the perspective of mobile computing and its increasingly important effect on society.



AP COMPUTER SCIENCE A

LEARN JAVA

GET COLLEGE CREDIT (ARTICULATED WITH LOS MEDANOS COLLEGE)

LIBERTY HIGH SCHOOL

AP Computer Science A

Explore the foundations of computer science by learning to solve real-world problems through coding in Java, while building skills in algorithms, data structures, and program design—all in a college-level course that has the potential to earn articulated credit.

AP Computer Science A

Course #4747

Grade Level: 10–12

Length: Year Class

Class Prerequisite: AP CSP or Java Programming recommended

Graduation: Fulfills elective credits.

College Prep: Fulfills ("c") requirement for UC/CSU

Description: This course is considered a college level introductory course in computer science. A large part of the course is built around the development of computer programs or parts of programs that correctly solve a given problem. The course also emphasizes the design issues that make programs understandable, adaptable, and when appropriate, reusable. At the same time, the development of useful computer programs and program modules is used as a context for introducing other important concepts in computer science, including the development and analysis of algorithms, the development and use of fundamental data structures and the study of standard algorithms and typical applications. The AP Computer Science A course utilizes Java. Course is articulated as COMSC 051 at LMC. *This course prepares student to take the AP test in May.*

Key Details

- ✓ College Credit Potential
- ✓ Development of Computer Programs
- ✓ Utilizes Java Programming



CTE Pathway:

Arts Media Entertainment

- ROP Art of Video
- ROP Advanced Video

Meets UC/CSU "f" for visual
and performing arts

ROP–Art of Video Production

Students introduced to fundamental concepts of visual and aural aesthetics, and technical requirements of pre-production, production, and post-production.

Students produce a variety of video projects using dedicated audio and video equipment and professional editing applications.

Script & Storyboarding

Production

Post-Production

Course #6183Q

Grades 9-12

ROP-Advanced Video Production

In this advanced course students fulfill all roles of a broadcast studio by building upon skills acquired in Art of Video.

Emphasis is placed on broadcast industry standards, processes, workplace safety, and interpersonal communication.

Course #6188

Grades 11-12



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