CTE Standards

Course Development and Updating Course Outlines

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CTE Standards Continuum

Reminders as you review Pathway Standards

1. The standards are not a course outline

2. Courses need not cover every standard

3. Course lessons should map back to a standard

4. Some pathways have significant changes, some have minimal changes

5. The purpose is to review the new standards and ensure your course(s) align to standards

CTE Course Outline

Web-based tool: ctecourse.scoe.net

Login Page

CTE Course Outline

Page 1

CTE Course Outline

Home Page

Home	Page 1	Page 2	Page 3	Page 4	Program of Study	Outline	REVIEW / SHARE

Your CTE Course Outlines are listed below. Select a course to resume working on a course outline you've already started. To sort in alphabetical order click a column header, then click again to reverse the order. Filter the list using the text boxes in the first row.

You can save a course outline as a PDF file from the "Review/Share" tab.

Use the button at the bottom of this page to start a new course outline.

Questions? Contact us at help@cranepathways.org or (916) 205-5079.

	Course Name	Last Updated
1	Automotive Engineering	1/9/2017
2	Building and Construction Trades II	10/11/2016
3	Computer Science/Programming	4/1/2016
4	Computer Science: Media Design	4/1/2016
5	Culinary II	4/14/2016
6	Culinary III	4/21/2016
7	Public Safety	1/12/2017

Create a new course outline

CTE Course Outline

Page 2 – Course hours & O*Net Codes

CTE Course Outline

Page 3 – Course description, prereqs, texts

COURSE: Automotive Engineering

Instructions: Update as needed and click the "Save / Go to Next Screen" button.

Course Description

Enter a description below.

Automotive Engineering is a study of the Interaction of science and technology as they apply to the automotive transportation system and the engineered sub-systems that are responsible for the functioning of the automobile. These Include Integrated mechanical, electrical, chemical, and computer engineered systems. The mathematics and specific concepts associated with these systems will also be explored. Students will develop their understanding of science, as it applies to the study of engineered automotive systems, by building on their knowledge of physics and mathematics while conducting investigative research. Students will be engaged In a theoretical program that integrates academic study with technical skills. This course Is proposed to prepare and motivate students to pursue a post-secondary education in science and engineering programs.

Prerequisites

Add prerequisites by school, as needed. Use the checkbox in the last column to remove a row.

High School | **Prerequisite**
All Schools | Algebra 1

Add another prerequisite

Recommended Texts

Add at least one recommended text (up to three). Use the checkbox in the last column to remove a row.

#1: Automotive Maintenance & Light Repair Rob Thompson   Delmar   2013

Recommend another text

Save / Go to Next Screen   Cancel Changes

CTE Course Outline

Page 4 - A-G approval, articulation, certifications, methods of instruction

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COURSE: Automotive Engineering

Instructions: Update as needed and click the "Save / Go to Next Screen" button.

A-G Approval

Has this course been submitted to UC for A-G approval?   ○ Yes   ◉ No

Articulation

Should course be submitted for articulation?   ○ Yes   ◉ No

Industry Certifications

Does course lead to industry certifications? If so, please enter them below. Use the checkbox in the last column to remove a row.

#1: no ☐

Add another industry certification

Methods of Instruction / Student Evaluation   (optional)

Which methods of instruction will be used?
- ☑ Direct instruction
- ☑ Group and individual applied projects
- ☑ Multimedia

CTE Course Outline

Program of Study

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Create a new course outline

CTE Course Outline

Outline

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COURSE: Automotive Engineering

Instructions: Build your course outline unit by unit. As you add each unit you'll be prompted for standards and details.

Course Outline

Add a new unit to your course outline by entering the unit title below.

New Unit: [_____] * [Add]

Change unit order by clicking on the unit title and dragging it to its new location in the list. Update a unit by clicking the related "Edit" link. This will allow you to edit the unit title and update related details, hours and standards. This is also where you can *delete* a unit if necessary.

I.	The Automobile	Unit Hours: 15	Edit
II.	Automotive Careers and ASE	Unit Hours: 10	Edit
III.	Basic Hand Tools	Unit Hours: 10	Edit
IV.	Power Tools and Equipment	Unit Hours: 10	Edit
V.	The Auto Shop and Safety	Unit Hours: 20	Edit
VI.	Automotive Measurement and Mathematics	Unit Hours: 20	Edit
VII.	Service Information and Work Orders	Unit Hours: 20	Edit
VIII.	Basic Electricity and Electronics	Unit Hours: 20	Edit
IX.	Fasteners, Gaskets, Seals, and Sealants	Unit Hours: 10	Edit
X.	Engine Fundamentals	Unit Hours: 10	Edit
XI.	Vehicle Maintenance, Fluid Service, and Recycling	Unit Hours: 5	Edit
XII.	Electric Car	Unit Hours: 30	Edit

Hours: The sum of the hours entered for each unit above must match the total number of course hours.

CTE Course Outline

Review/Share

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COURSE: Automotive Engineering

Review and Share

Please review your CTE Course Outline below. Use the Edit links to update section-by-section, as needed. At the bottom of this page, you can:

- share a summary of this course outline by email
- delete this course outline

Open a summarized .pdf file in a separate browser window or tab.

PAGE 1   Edit

Course Name:	Automotive Engineering
Industry Sector:	Transportation Sector
Career Pathway:	Systems Diagnostics, Service and Repair
CALPADS Code:	5669: Advanced Automotive Service
District:	Sacramento City Unified
Contact Name:	Chris Almeida
Position Title:	Consultant
Phone:	9162086024
Email / Login:	tcalmeida@live.com

PAGE 2   Edit

Course Hours:	Classroom: 100 + Lab/CC/CVE: 80 = **180**
O*NET Codes:	17-2141.02: Automotive Engineers
	17-3027.01: Automotive Engineering Technicians
	49-3023.00: Automotive Service Technicians and Mechanics
	49-3023.02: Automotive Specialty Technicians

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COURSE: Automotive Engineering

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Contact Name:	Chris Almeida
Position Title:	Consultant
Phone:	9162086024
Email / Login:	tcalmeida@live.com

PAGE 2   Edit

| Course Hours: | Classroom: 100 + Lab/Work Based Learning: 80 = **180** |
| O*NET Codes: | 17-3027.01: Automotive Engineering Technicians |

CTE Course Outline

The finished product!

Sacramento City Unified School District – Career Technical Education

COMPUTER SCIENCE: MEDIA DESIGN

DATE: December 5, 2016

INDUSTRY SECTOR: Information and Communication Technologies Sector

PATHWAY: Software and Systems Development

CALPADS TITLE: 3D Media Design 1

CALPADS CODE: 4607

HOURS:

Total	Classroom	Laboratory/CC/CVE
180	120	60

JOB TITLE	O*NET CODE	JOB TITLE	O*NET CODE
Web Developers	15-1134.00	Software Developers, Systems Software	15-1133.00
Information Security Analysts	15-1122.00	Computer Systems Engineers/Architects	15-1199.02

COURSE DESCRIPTION:

This course will provide instruction to students on how to design, code, and test interactive media. Students will implement graphics programming techniques for object movement that mimic the laws of physics and modeled with higher order algebraic equations. Students will know and understand the 2-D and 3-D mathematical underpinnings of transformations. Students will design effective graphical interfaces and event handling strategies from various input devices (mouse, keyboard, controller, etc.). Students will incorporate digital and multimedia output, programmatically. Students will design algorithm-based solutions to complex problems and execute, test, and debug their computer code. Students will utilize abstract datatypes, structured/object oriented programming, in one or more programming languages. Students will utilize procedures/functions, parameters, variables, iteration, recursion and file I/O methods.

This course also emphasizes the understanding and the interdisciplinary nature of media-related computer programming. The course utilizes industry standard programming languages and tools and student who have a strong background in digital media and design can fully apply their knowledge to media design projects. Students will also develop critical thinking, problem solving, effective communication, and collaboration skills.

A-G APPROVAL: G

ARTICULATION:

College	Course Code
Sac City College	na

PREREQUISITES:

School	Prerequisite
All Schools	Math 1 or Algebra 1

Sacramento City Unified School District - Career Technical Education   1