CALIFORNIA COMMUNITY COLLEGES
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PROGRAM APPROVAL APPLICATION

NEW or SUBSTANTIAL CHANGE or LOCALLY APPROVED

(This application may not exceed 3 pages)

Fill In Form

Electric Vehicle Technician Proposed Program Title	Angela Allison Voting Member
Golden West College College	Interim Dean of CTE & Business Title
Coast Community College District District	714-895-8156 Phone Number
Spring 2016 Projected Program Start Date	aallison@gwc.cccd.edu E-mail Address

Goal(s) of Program (Check all that apply):

- [x] Career Technical Education (CTE)
- [ ] Transfer
- [ ] Other

Type of Program (Check all that apply):

- [ ] A.S. Degree
- [ ] A.A. Degree

Certificate of Achievement:

- [ ] 18+ semester (or 27+ quarter) units
- [x] 12-18 semester (or 18-27 quarter) units

Reason for Approval Request: (Check One)

- [x] New Program
- [ ] Substantial Change
- [ ] Locally Approved

Program Information

Recommended Taxonomy of Program (TOP) Code	0948.40
Units for Major-Degree	Click here to enter text.
Total Units for Degree	Click here to enter text.
Required Units-Certificate	12

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Written Form

1. Insert the description of the program as it will appear in the catalog.

   This certificate will follow the completion of the Engine Performance and Emission Specialist Certificate (already being offered). The students will have completed Engine Repair, Basic Electrical, Basic Engine Performance, and Advance Electrical prior to starting the new Certificate.

   This program allows the students to develop skills specific to electric vehicle (EV) theory and provides an introduction to advanced EV designs and propulsion systems. The courses include: EV design and construction; the testing, assembly, operation, and maintenance of EVs; the influence of battery management design; advanced technology batteries and intelligent charging systems; and alternative EV drive systems. Appropriate safety related instruction will be included in each segment. This course is designed to help the field technician prepare for the Automotive Service of Excellence (ASE) Light Duty Hybrid / Electric Vehicle Technician (ASE-L3) exam.

2. Provide a brief rationale for the program.

   This certificate advances student skills in electric vehicle (EV) theory and provides an introduction to advanced EV designs and propulsion systems. The intent is to keep content current with increasing market trends and advanced level certifications recognized by the Automotive Service of Excellence (ASE). The objective it to meet the newest level of advanced level certification offered by ASE Achievement. This certificate will be offered within our AA degree program and has been vetted and encouraged through our Advisory committee meeting for the past 3 years.

3. List all courses required for program completion, including core requirements, restricted electives and prerequisites. (Push Enter after each entry to begin a new line)

Courses	Course No.	Course Title	Units
Heating and Air Conditioning	G160	Heating and Air Conditioning	4
Automotive Hybrid Vehicle Theory	G170	Automotive Hybrid Vehicle Theory	3
Electric Vehicles	G173	Electric Vehicles	5

4. Summarize the Labor Market Information and employment outlook (including citation of the source of the data) for students exiting the program.

   New and accurate data in this field is still emerging. Currently on both the California and National level, the data is still collect within the larger umbrella of Auto Service Technicians.

   Using data collected from California's labor market website below, Automotive Service Technicians and Mechanics (SOC Code: 49-3023) shows there were an estimated 64,000 automotive technicians in the entire state of California in the year 2013 with 25,587 in the LA/OC region. Projections to 2016 show a growth of 895 in that same LA/OC Region. The year 2022 projections statewide show an estimate of 73,800 jobs. The increase over 10 years is expected to be about 9,600 technicians, or about 15%. (http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/occExplorerQSDetails.asp?searchCriteria=diesel&careerID=&menuChoice=&geogArea=0601000000&soccode=493023&search=Explore+Occupation). This is also the same statistical data supplied by our local Center of Excellence using the EMSI industry data from the California Labor Market Information Department.

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As noted on Indeed.com, the average advertised salary for EV technician jobs is 7% higher in California compared to job postings nationwide. http://www.indeed.com/salary/q-Electric-Vehicle-l-California.html
http://www.bls.gov/green/electric_vehicles/#maintenance

In addition, as of March 4, 2015, there are currently 96 open positions for automotive technicians within 25 miles of Huntington Beach zip code 92647 according to US.Jobs website, part of the National Labor Exchange. A 50 mile search shows 150 automotive technician positions, again using 92647 zip code.
http://us.jobs/results.asp?jobcategory=49302300&rd1=25&zc1=92647

Although not vetted for its data collection processes, the link below shows the impending need for EV and Hybrid trained technicians will inherently be on the rise shown by the increased volume of EV/Hybrid vehicles have been purchased in recent years.
http://study.com/articles/Hybrid_Car_Technician_Job_Outlook_and_Requirements_for_a_Career_in_Hybrid_Car_Technology.html

5. List similar programs at other colleges in the Los Angeles and Orange County Region which may be adversely impacted. (Push Enter after each entry to begin a new line)

College	Program	Who you Contacted	Outcome of Contact
Cerritos College	Automotive Mechanical Repair Tech	Nick Real	No Response
Cypress College	Automotive Technology	Steve Donley	No Response
Citrus College	Automotive Service	Jim Lancaster	Input & GWC Response
East Los Angeles College	Automotive Technology	Paul De La Cerda	No Response
El Camino College	Automotive Technology	Virginia Rapp	No Response
Fullerton College	Automotive Technology	Scott McKenzie	No Conflict
LA Pierce College	Automotive Technology	Jose Luis Fernandez	No Response
LA Trade Tech College	Automotive Technology	Nicole Albo-Lopez	No Response
Pasadena City College	Automotive Technology	Salomon Davila	No Response
Rio Hondo College	Automotive Technology	Bruce Noble	No Conflict
Saddleback College	Automotive Technician	Tony Teng	No Conflict
Santa Ana College	Automotive Technology	Bart Hoffman	No Conflict

6. Include any other information you would like to share.
This certificate will be an additional option to students beyond the current certificates and the AA degree. While it will be available to all, it will not be part of our current AA degree. It will enhance and compliment students who desire additional training in this area. (It is an AA in our system and will not be changing to AS.)
This certificate will not address CNG or Hydrogen Fuel Cell vehicles at this time.
For curriculum questions please contact Bryan Kramer at bkramer@gwc.cccd.edu or 714-892-7711 x 52751
New course Auto G173 was approved by GWC curriculum committee on March 3, 2015