Solano Community College
Alternative and Renewable Fuel Vehicle Technology Program

Beginning in 2012 – ARFVTP Training Program
Hybrid Electric Vehicles (HEVs) are one of the fastest growing segments of the Automotive industry. With nearly 275,000 sold in 2010, the number of choices is steadily rising as manufacturers announce additional new models.

By year 2012, forecasts estimate that as many as 30% of cars sold in the United States could be hybrids.

Hybrids: Toyota, Toyota Prius, Honda, Nissan, Lexus, Ford Fusion, Lincoln MKZ, Escape, Hyundai, BMW, Mazda, Mercedes, General Motors...

Plug-in vehicles: The electric-only Nissan Leaf has emerged the victor once again, beating the Chevrolet Volt for the sixth consecutive month in sales...

Green Build Energy Group
Mercedes-Benz will unveil two new hybrid versions of its midrange E-Class — one diesel, one gasoline — at the upcoming Detroit auto show in January 2012.
The market is expanding as manufacturers are offering plug-in hybrids, electric vehicles, flexible-fuel vehicles, hydrogen fuel cell vehicles, and natural gas vehicles of all types including cars, trucks, SUV’s, and busses.

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Electric Vehicle Maintenance Shop
2012 ARFVTP Training Program
The program, due to a grant from the California Energy Commission, (books and tuition) is being offered at no cost to:
• People that are currently employed (or being trained) within the automotive service technicians and mechanics industry.
• Or those individuals with automotive maintenance background, and are currently unemployed and or underemployed.
Curriculum – Class Room & Hands On

• Introduction to HEV Technology
• High-Voltage Electrical Safety
• High-Voltage Vehicle Safety Systems
• Hybrid Engines
• AC Induction Electrical Machines
• Permanent Magnet Electric Machines
• Power Inverter Systems
• Electric Propulsion Sensing Systems
• DC-DC Converter Systems
• Transaxels, Gears, and Cooling Systems

• Energy Management Hardware Systems
• Battery Construction and Technologies
• Nickel Metal Hydride Technology
• Battery Pack and Energy Management System
• Braking Systems
• Climate Control Systems
• Hybrid Jump Starting and Jump Start Assist Systems
• GM Flex Power PHT
• Belted Alternator Starter (BAS) System

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Eligibility Requirements for Enrollment

• 18 years or older
• Right to work in the United States
• Males must have completed Selective Service Registration
• A valid and unexpired Driver’s license or ID card
• Social Security Number or Certificate of Birth
• Have a verifiable background of education or experience in Automotive Service and Maintenance
The new BMW i3 and i8 concepts made their North American debut at the 2011 LA Auto Show. The pure electric and premium hybrid were the main attraction at the BMW stand.
Tesla Roadster / Zero to Sixty 3.7 seconds / 245 miles per charge