

Florida Department of Education
Curriculum Framework

Program Title: Advanced Automotive Service Technology 1
Program Type: Career Preparatory
Career Cluster: Transportation, Distribution and Logistics

Career Certificate Program – Career Preparatory	
Program Number	T600100
CIP Number	0647060413
Grade Level	30, 31
Standard Length	800 hours
Teacher Certification	Refer to the Program Structure section
CTSO	SkillsUSA
SOC Codes (all applicable)	49-3023 – Automotive Service Technicians and Mechanics
CTE Program Resources	http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml
Basic Skills Level	Mathematics: 10 Language: 10 Reading: 10

Purpose

This program offers a sequence of courses that provides coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in the Transportation, Distribution and Logistics career cluster; provides technical skill proficiency, and includes competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of the Transportation, Distribution and Logistics career cluster.

The content includes but is not limited to broad, transferable skills and stresses understanding and demonstration of the following elements of the Automotive industry; planning, management, finance, technical and product skills, underlying principles of technology, labor issues, community issues and health, safety, and environmental issues.

Additional Information relevant to this Career and Technical Education (CTE) program is provided at the end of this document.

Program Structure

This program is a planned sequence of instruction consisting of two occupational completion points.

NOTE: It is recommended that students complete **OCP-A (Automotive Maintenance Technician)** and/or demonstrate mastery of the outcomes in **OCP-A (Automotive Maintenance Technician)** prior to enrolling in additional Advanced Automotive Service Technology courses. **The sequence of OCP's, after completing and/or demonstrating mastery of OCP-A (Automotive Maintenance Technician), is at the discretion of the instructor.**

For institutions using this framework, the National Automotive Technicians Education Foundation (NATEF) highly recommends the Master Automotive Service Technology (MAST) program Certification/Accreditation. Florida Statute (F.S.) 1004.925 – Automotive service technology education programs; certification. – requires all automotive service technology education programs shall be industry certified in accordance with rules adopted by the State Board of Education.

Benchmarks identified with a designation of P-1, P-2, or P-3 are ASE tasks.

When offered at the postsecondary adult career and technical level, this program is comprised of courses which have been assigned course numbers in the SCNS (Statewide Course Numbering System) in accordance with Section 1007.24 (1), F.S. Career and Technical credit shall be awarded to the student on a transcript in accordance with Section 1001.44 (3) (b), F.S.

To teach the course(s) listed below, instructors must hold at least one of the teacher certifications indicated for that course.

The following table illustrates the postsecondary program structure:

OCP	Course Number	Course Title	Teacher Certification	Length	SOC Code
A	AER0011	Automotive Maintenance Technician	AUTO IND @7 %7 %G	400 hours	49-3023
B	AER0319	Advanced Automotive Electrical/Electronic System Technician	AUTO MECH @7 7G	400 hours	49-3023

National Standards

Industry or National Standards corresponding to the standards and/or benchmarks for the Advanced Automotive Service Technology program can be found using the following link:

<http://www.aseeducation.org/program-accreditation>

Common Career Technical Core – Career Ready Practices

Career Ready Practices describe the career-ready skills that educators should seek to develop in their students. These practices are not exclusive to a Career Pathway, program of study, discipline or level of education. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study.

1. Act as a responsible and contributing citizen and employee.
2. Apply appropriate academic and technical skills.
3. Attend to personal health and financial well-being.
4. Communicate clearly, effectively and with reason.
5. Consider the environmental, social and economic impacts of decisions.
6. Demonstrate creativity and innovation.
7. Employ valid and reliable research strategies.
8. Utilize critical thinking to make sense of problems and persevere in solving them.
9. Model integrity, ethical leadership and effective management.
10. Plan education and career path aligned to personal goals.
11. Use technology to enhance productivity.
12. Work productively in teams while using cultural/global competence.

Standards

After successfully completing this program, the student will be able to perform the following:

- 01.0 Proficiently explain and apply required shop and personal safety tasks relating to the automotive industry.
- 02.0 Demonstrate proficiency in preparing vehicle for routine pre/post maintenance and customer services.
- 03.0 Explain and apply proficiently the diagnosis, service and repair of electrical/electronic system components, battery, starting, charging, lighting, gauges, warning devices, driver information, horn, wiper/washer and accessory systems.

2020 - 2021

Florida Department of Education Student Performance Standards

Program Title: Advanced Automotive Service Technology 1
Career Certificate Program Number: T600100

Course Number: AER0011
Occupational Completion Point: A
Automotive Maintenance Technician – 400 Hours – SOC Code 49-3023

Course Description:

The Automotive Maintenance Technician course prepares students for entry into the Automotive Service industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study shop and personal safety skills, tools and equipment, pre/post maintenance, and customer service.

Abbreviations:

ASE = Supplemental Tasks

For every task in Automotive Maintenance Technician course, the following safety requirement MUST be strictly enforced:

Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

CTE Standards and Benchmarks		Priority Number
01.0	Proficiently explain and apply required shop and personal safety tasks relating to the automotive industry.--The student will be able to:	
01.01	Identify general shop safety rules and procedures.	ASE
01.02	Utilize safe procedures for handling of tools and equipment.	ASE
01.03	Identify and use proper placement of floor jacks and jack stands.	ASE
01.04	Identify and use proper procedures for safe lift operation.	ASE
01.05	Utilize proper ventilation procedures for working within the lab/shop area.	ASE
01.06	Identify marked safety areas.	ASE
01.07	Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment.	ASE
01.08	Identify the location and use of eye wash stations.	ASE
01.09	Identify the location of the posted evacuation routes.	ASE
01.10	Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities.	ASE
01.11	Identify and wear appropriate clothing for lab/shop activities.	ASE
01.12	Secure hair and jewelry for lab/shop activities.	ASE
01.13	Demonstrate awareness of the safety aspects of supplemental restraint systems (SRS), electronic brake control systems, and hybrid vehicle high voltage circuits.	ASE
01.14	Demonstrate awareness of the safety aspects of high voltage circuits (such as high intensity discharge (HID) lamps, ignition systems, injection systems, etc.).	ASE
01.15	Locate and demonstrate knowledge of safety data sheets (SDS).	ASE
01.16	Identify tools and their usage in automotive applications.	ASE
01.17	Identify standard and metric designation.	ASE
01.18	Demonstrate safe handling and use of appropriate tools.	ASE
01.19	Demonstrate proper cleaning, storage, and maintenance of tools and equipment.	ASE
01.20	Demonstrate proper use of precision measuring tools (i.e. micrometer, dial-indicator, dial-caliper).	ASE
01.21	Identify information needed and the service requested on a repair order.	ASE
01.22	Identify purpose and demonstrate proper use of fender covers, mats.	ASE
01.23	Demonstrate use of the three C's (concern, cause, and correction).	ASE
01.24	Review vehicle service history.	ASE
01.25	Complete work order to include customer information, vehicle identifying information, customer concern,	ASE

CTE Standards and Benchmarks	Priority Number
related service history, cause, and correction.	
01.26 Ensure vehicle is prepared to return to customer per school/company policy (floor mats, steering wheel cover, etc.).	ASE
01.27 Identify appropriate emergency first aid procedures.	
01.28 Identify proper procedures for safe pit usage.	
01.29 Use proper handling procedures for automotive fluids.	
01.30 Identify and describe typical automotive lubricants and lubricant properties.	
01.31 Research, identify, and interpret the Federal Law as recorded in (29 CFR-1910.1200).	
01.32 Identify and describe typical automotive seals and gaskets.	
01.33 Explain the effects of chemical/substance abuse.	
01.34 Identify principles of stress management.	
01.35 Identify and define career opportunities in the automotive service industry.	
01.36 Demonstrate knowledge of appropriate automotive industry certifications.	
01.37 Disable supplemental restraint systems (SRS) in accordance with manufacturers' procedures.	
02.0 Demonstrate proficiency in preparing vehicle for routine pre/post maintenance and customer services.--The student will be able to:	
02.01 Identify automobiles according to engine location, cylinders, type of drive system, purpose, etc.	
02.02 Locate and use Vehicle identification Number (VIN) vehicle information placards, decals, tags, as required.	
02.03 Conduct an appropriate pre-service evaluation and report or note any concerns not already on the repair order.	
02.04 Demonstrate retrieving stored diagnostic trouble codes.	
02.05 Reset product specific service indicator.	
02.06 Identify acceptable customer relations.	
02.07 Identify and demonstrate proper customer relations skills.	
02.08 Identify and define payroll deductions (taxes, insurance, and social security) employee benefits and pay systems.	
02.09 Identify principles of time management.	
02.10 Demonstrate proficiency in manufacturer electronic service information system, including flat rate manuals, technical service bulletins and replacement part identification; where applicable.	
02.11 Use proper chemicals for cleaning and lubrication.	

CTE Standards and Benchmarks	Priority Number
02.12 Determine the presence of a Tire Pressure Monitoring System (TPMS).	
02.13 Identify service considerations when equipped with a Tire Pressure Monitoring System (TPMS).	
02.14 Determine the presence of wheel locks.	
02.15 Determine the presence of an air suspension system.	
02.16 Check operation and status of instrument panel warning lights and gauges.	
02.17 Inspect under hood area for leaks, damage, and unusual conditions.	
02.18 Inspect undercar area for leaks, damage, and unusual conditions.	
02.19 Inspect engine assembly for fuel, oil, coolant, and other leaks.	
02.20 Determine fluid type requirements and identify fluid.	
02.21 Check engine oil level and condition; service as required.	
02.22 Check engine coolant level and condition; service as required.	
02.23 Inspect cooling system pipes and hoses for wear, damage, and proper routing.	
02.24 Check power steering fluid level and condition; service as required.	
02.25 Lubricate driveline, suspension and steering systems as applicable.	
02.26 Inspect and replace power steering hoses and fittings.	
02.27 Inspect struts, springs, and related components; service as required.	
02.28 Inspect stabilizer bar, bushings, brackets, and links; service as required.	
02.29 Inspect springs, torsion bars, and related components; service as required.	
02.30 Inspect shock absorbers and related components.	
02.31 Check windshield washer fluid level and condition; service as required.	
02.32 Check automatic transmission fluid level and condition; service as required.	
02.33 Check differential/transfer case fluid level; note unusual conditions; service as required.	
02.34 Check manual transmission fluid level; note unusual conditions; service as required.	
02.35 Service transmission; perform visual inspection; replace fluids and filters.	
02.36 Check hydraulic clutch fluid and condition; service as required.	
02.37 Check rear axle drive assembly seals and vents; check lube level.	
02.38 Inspect constant velocity (CV) axle shaft boots; service as required.	

CTE Standards and Benchmarks	Priority Number
02.39 Remove, inspect, and service front and rear wheel bearings on non-drive axles.	
02.40 Check wheel bearings for play and other signs of wear.	
02.41 Inspect, replace and adjust drive belts; inspect tensioners and pulleys.	
02.42 Inspect and replace air filter.	
02.43 Inspect and replace cabin air filter.	
02.44 Inspect tires, diagnose tire wear patterns, inspect spare and mounting system; check and adjust tire pressure; where applicable.	
02.45 Rotate tires according to manufacturer's recommendations.	
02.46 Balance wheel and tire assembly (static, dynamic and road force balance); where applicable.	
02.47 Dismount, inspect, repair, and remount tire on wheel.	
02.48 Repair tire according to industry standards.	
02.49 Identify nitrogen-filled tires.	
02.50 Reinstall wheel; torque wheel fasteners to specification.	
02.51 Perform a visual inspection of a brake drum system.	
02.52 Perform a visual inspection of a disc brake system.	
02.53 Check parking brake operation; check parking brake components for unusual conditions.	
02.54 Check master cylinder for internal and external leaks and proper operation.	
02.55 Fill master cylinder with recommended fluid and seat pads.	
02.56 Check brake fluid level and condition; service as required.	
02.57 Inspect brake lines, flexible hoses, and fittings for leaks, dents, kinks, rust, cracks, bulging or wear.	
02.58 Identify and use the proper procedures required for cutting tubing and double and ISO flaring.	
02.59 Inspect flexible brake hoses for leaks, kinks, cracks, bulging or wear; tighten loose fittings and supports.	
02.60 Inspect fuel tank, fuel cap and seal; inspect and replace fuel lines, fittings, and hoses; as applicable.	
02.61 Inspect and replace fuel filters as applicable.	
02.62 Inspect exhaust manifold, exhaust pipes, mufflers, resonators, tail pipes, and heat shields; repair or replace as needed.	
02.63 Inspect, test head lamps, tail lamps and stop lamps. Aim headlights.	
02.64 Inspect and replace exterior and courtesy lamps.	
02.65 Check wiper blades, inserts, and arms; replace wiper blades or inserts.	

CTE Standards and Benchmarks	Priority Number
02.66 Lubricate door latches and hinges.	
02.67 Perform slow/fast battery charge.	
02.68 Inspect, clean, fill, and replace battery.	
02.69 Inspect and clean battery cables, connectors, clamps, and hold-downs; repair or replace as needed.	
02.70 Perform battery, starting, and charging system tests using appropriate tester.	
02.71 Perform battery test; determine needed service.	
02.72 Start a vehicle using jumper cables or a battery auxiliary power supply (jump box).	
02.73 Demonstrate knowledge of abnormal key-off battery drain.	
02.74 Perform starter current draw and circuit voltage drop test; determine necessary action.	
02.75 Remove and replace/reinstall starter.	
02.76 Remove, inspect, and replace/reinstall alternator.	
02.77 Observe dash warning lamps during bulb check.	
02.78 Practice recommended precautions when handling static sensitive devices.	
02.79 Check 12 volt non-computer electrical circuits with a test light; determine necessary action.	
02.80 Check voltage and voltage drop in electrical circuits using a digital multi-meter (DMM).	
02.81 Obtain and interpret digital multi-meter (DMM) readings.	
02.82 Check current flow in electrical/electronic circuits and components using an ammeter.	
02.83 Check electrical circuits using fused jumper wires.	
02.84 Inspect and test fusible links, circuit breakers, and fuses; confirm proper circuit operation; replace as needed.	
02.85 Maintain or restore electronic memory functions if required.	
02.86 Inspect and test positive crankcase ventilation (PCV) filter/breather cap, valve, tubes, orifices, and hoses; service or replace as needed.	
02.87 Remove and replace valve cover gaskets.	
02.88 Return cores for rebuilt and exchange items.	
02.89 Inspect driver and passenger restraint system.	
02.90 Demonstrate knowledge of manufacturer policies and procedures.	
02.91 Perform product specific service procedures.	
02.92 Identify and maintain product specific engine systems.	

CTE Standards and Benchmarks	Priority Number
02.93 Identify and maintain product specific automatic transmission systems.	
02.94 Identify and maintain product specific manual transmission systems.	
02.95 Identify and maintain product specific electrical and electronic systems.	
02.96 Identify and maintain product specific heating and A/C systems.	
02.97 Identify and maintain product specific steering and suspension systems.	
02.98 Identify and maintain product specific brake systems.	
02.99 Identify and maintain product specific audio systems.	
02.100 Identify and maintain product specific safety systems.	
02.101 Identify and maintain product specific accessories.	
02.102 Identify product specific engine performance and emission related components	
02.103 Use manufacturer specific scan tool to retrieve P, B, C and U type diagnostic trouble codes.	

Florida Department of Education
Student Performance Standards

Course Number: AER0319

Occupational Completion Point: B

Advanced Automotive Electrical/Electronic System Technician – 400 Hours – SOC Code 49-3023

Course Description:

The Advanced Automotive Electrical/Electronic System Technician course prepares students for entry into the Automotive Service industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study electrical/electronic system components, battery, starting, charging, lighting, gauges, warning devices, driver information, horn, wiper/washer and accessory systems diagnostics, service, and repair.

Abbreviations:

EE = Electrical/Electronic Systems

For every task in Advanced Automotive Electrical/Electronic System Technician course, the following safety requirement MUST be strictly enforced:

Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

EE Task List:	
P-1 =	29
P-2 =	16
P-3 =	1
Total	46

CTE Standards and Benchmarks		Priority Number
03.0	Explain and apply proficiently the diagnosis, service and repair of electrical/electronic system components, battery, starting, charging, lighting, gauges, warning devices, driver information, horn, wiper/washer and accessory systems.--The student will be able to:	
General: Electrical System Diagnosis		
03.01	Research vehicle service information including vehicle service history, service precautions, and technical service bulletins.	P-1
03.02	Demonstrate knowledge of electrical/electronic series, parallel, and series-parallel circuits using principles of electricity (Ohm's Law).	P-1
03.03	Demonstrate proper use of a digital multi-meter (DMM) when measuring source voltage, voltage drop (including grounds), current flow and resistance.	P-1
03.04	Demonstrate knowledge of the causes and effects from shorts, grounds, opens, and resistance problems in electrical/electronic circuits.	P-1
03.05	Demonstrate proper use of a test light on an electrical circuit.	P-1
03.06	Use fused jumper wires to check operation of electrical circuits.	P-1
03.07	Use wiring diagrams during the diagnosis (troubleshooting) of electrical/electronic circuit problems.	P-1

CTE Standards and Benchmarks	Priority Number
03.08 Diagnose the cause(s) of excessive key-off battery drain (parasitic draw); determine needed action.	P-1
03.09 Inspect and test fusible links, circuit breakers, and fuses; determine needed action.	P-1
03.10 Inspect, test, repair, and/or replace components, connectors, terminals, harnesses, and wiring in electrical/electronic systems (including solder repairs); determine needed action.	P-1
03.11 Check electrical/electronic circuit waveforms; interpret readings and determine needed repairs.	P-2
03.12 Repair data bus wiring harness.	P-1
Battery Diagnosis and Service	
03.13 Perform battery state-of-charge test; determine needed action.	P-1
03.14 Confirm proper battery capacity for vehicle application; perform battery capacity and load test; determine needed action.	P-1
03.15 Maintain or restore electronic memory functions.	P-1
03.16 Inspect and clean battery; fill battery cells; check battery cables, connectors, clamps, and hold-downs.	P-1
03.17 Perform slow/fast battery charge according to manufacturer's recommendations.	P-1
03.18 Jump-start vehicle using jumper cables and a booster battery or an auxiliary power supply.	P-1
03.19 Identify safety precautions for high voltage systems on electric, hybrid, hybrid-electric, and diesel vehicles.	P-2
03.20 Identify electrical/electronic modules, security systems, radios, and other accessories that require re-initialization or code entry after reconnecting vehicle battery.	P-1
03.21 Identify hybrid vehicle auxiliary (12v) battery service, repair, and test procedures.	P-2
Starting System Diagnosis and Repair	
03.22 Perform starter current draw tests; determine needed action.	P-1
03.23 Perform starter circuit voltage drop tests; determine needed action.	P-1
03.24 Inspect and test starter relays and solenoids; determine needed action.	P-2
03.25 Remove and install starter in a vehicle.	P-1
03.26 Inspect and test switches, connectors, and wires of starter control circuits; determine needed action.	P-2
03.27 Differentiate between electrical and engine mechanical problems that cause a slow-crank or a no-crank condition.	P-2
03.28 Demonstrate knowledge of an automatic idle-stop/start-stop system.	P-2
Charging System Diagnosis and Repair	
03.29 Perform charging system output test; determine needed action.	P-1
03.30 Diagnose (troubleshoot) charging system for causes of undercharge, no-charge, or overcharge conditions.	P-1

CTE Standards and Benchmarks	Priority Number
03.31 Inspect, adjust, and/or replace generator (alternator) drive belts; check pulleys and tensioners for wear; check pulley and belt alignment.	P-1
03.32 Remove, inspect, and/or replace generator (alternator).	P-1
03.33 Perform charging circuit voltage drop tests; determine needed action.	P-1
Lighting Systems Diagnosis and Repair	
03.34 Diagnose (troubleshoot) the causes of brighter-than-normal, intermittent, dim, or no light operation; determine needed action.	P-1
03.35 Inspect interior and exterior lamps and sockets including headlights and auxiliary lights (fog lights/driving lights); replace as needed.	P-1
03.36 Aim headlights.	P-2
03.37 Identify system voltage and safety precautions associated with high-intensity discharge headlights.	P-2
Instrument Cluster and Driver Information Systems Diagnosis and Repair	
03.38 Inspect and test gauges and gauge sending units for causes of abnormal readings; determine needed action.	P-2
03.39 Diagnose (troubleshoot) the causes of incorrect operation of warning devices and other driver information systems; determine needed action.	P-2
03.40 Reset maintenance indicators as required.	P-2
Body Electrical Systems Diagnosis and Repair	
03.41 Diagnose operation of comfort and convenience accessories and related circuits (such as: power window, power seats, pedal height, power locks, truck locks, remote start, moon roof, sun roof, sun shade, remote keyless entry, voice activation, steering wheel controls, back-up camera, park assist, cruise control, and auto dimming headlamps); determine needed repairs.	P-2
03.42 Diagnose operation of security/anti-theft systems and related circuits (such as: theft deterrent, door locks, remote keyless entry, remote start, and starter/fuel disable); determine needed repairs.	P-2
03.43 Diagnose operation of entertainment and related circuits (such as: radio, DVD, remote CD changer, navigation, amplifiers, speakers, antennas, and voice-activated accessories); determine needed repairs.	P-3
03.44 Diagnose operation of safety systems and related circuits (such as: horn, airbags, seat belt pretensioners, occupancy classification, wipers, washers, speed control/collision avoidance, heads-up display, park assist, and back-up camera); determine needed repairs.	P-1
03.45 Diagnose body electronic systems circuits using a scan tool; check for module communication errors (data communication bus systems); determine needed action.	P-2
03.46 Describe the process for software transfer, software updates, or reprogramming of electronic modules.	P-2
Manufacturer Specific Electrical and Electronic Related Tasks	
03.47 Service and repair product specific electrical/electronic systems.	

CTE Standards and Benchmarks	Priority Number
03.48 Perform product specific diagnostic procedures.	
03.49 Locate and interpret vehicle major electrical/electronic components and identification numbers.	
03.50 Identify location of hybrid vehicle high voltage circuits disconnect (service plug) location and safety procedures.	
03.51 Manufacturer specific battery test; determine necessary action.	
03.52 Inspect and test sensors, connectors, and wires of electronic (digital) instrument circuits; determine necessary action.	
03.53 Diagnose incorrect heated glass, mirror, or seat operation; determine necessary action.	
03.54 Perform product specific electrical/electronic relearning procedures	
03.55 Diagnose operation of entertainment and related circuits (such as: radio, DVD, remote CD changer, navigation, amplifiers, speakers, antennas, and voice activated accessories); determine needed repairs.	
03.56 Diagnose operation of heated and cooled accessories and related circuits (such as: heated/cooled seats, heated steering wheel, heated mirror, heated glass, and heated/cooled cup holders); determine needed repairs.	
03.57 Diagnose operation of safety systems and related circuits (such as: airbags, seat belt pretensioners, occupancy classification, wipers, washers, speed control/collision avoidance, heads-up display, park assist, and back up camera); determine needed repairs.	
03.58 Diagnose operation of comfort and convenience accessories and related circuits (such as: power windows, power seats, pedal height, power locks, truck locks, remote start, moon roof, sun roof, sun shade, remote keyless entry, voice activation, steering wheel controls, back-up camera, park assist, and auto dimming headlamps); determine needed repairs.	

Additional Information

Laboratory Activities

Laboratory investigations that include scientific inquiry, research, measurement, problem solving, emerging technologies, tools and equipment, as well as, experimental, quality, and safety procedures are an integral part of this career and technical program/course. Laboratory investigations benefit all students by developing an understanding of the complexity and ambiguity of empirical work, as well as the skills required to manage, operate, calibrate and troubleshoot equipment/tools used to make observations. Students understand measurement error; and have the skills to aggregate, interpret, and present the resulting data. Equipment and supplies should be provided to enhance hands-on experiences for students.

Special Notes

Benchmarks identified with a designation of P-1, P-2, or P-3 are ASE tasks.

It is highly recommended that the program be NATEF Master Certified and be approved by the appropriate industry manufacturer to provide manufacturer certification. Instructors must meet the specific manufacturer certification and be A1-A8 ASE Master certified, Advanced Engine Performance (L1) ASE Certification is also recommended. Program must meet the equipment and specialty tool requirement as specified by the manufacturer sponsor. Program must offer EPA section 609 recognized refrigerant-recycling certification training.

MyCareerShines is an interactive resource to assist students in identifying their ideal career and to enhance preparation for employment. Teachers are encouraged to integrate this resource into the program curriculum to meet the employability goals for each student. Access MyCareerShines by visiting: www.mycareershines.org.

Career and Technical Student Organization (CTSO)

SkillsUSA is the intercurricular career and technical student organization(s) providing leadership training and reinforcing specific career and technical skills. Career and Technical Student Organizations provide activities for students as an integral part of the instruction offered.

Cooperative Training – OJT

On-the-job training is appropriate but not required for this program. Whenever offered, the rules, guidelines, and requirements specified in the OJT framework apply.

Basic Skills

In a Career Certificate Program offered for 450 hours or more, in accordance with Rule 6A-10.040, F.A.C., the minimum basic skills grade levels required for postsecondary adult career and technical students to complete this program are: Mathematics 10.0, Language 10.0, and Reading 10.0. These grade level numbers correspond to a grade equivalent score obtained on a state designated basic skills examination.

Adult students with disabilities, as defined in Section 1004.02(7), Florida Statutes, may be exempted from meeting the Basic Skills requirements (Rule 6A-10.040). Students served in exceptional student education (except gifted) as defined in s. 1003.01(3)(a), F.S., may also be exempted from

meeting the Basic Skills requirement. Each school district and Florida College must adopt a policy addressing procedures for exempting eligible students with disabilities from the Basic Skills requirement as permitted in Section 1004.91(3), F.S.

Students who possess a college degree at the Associate of Applied Science level or higher; who have completed or are exempt from the college entry-level examination; or who have passed a state, national, or industry licensure exam are exempt from meeting the Basic Skills requirement (Rule 6A-10.040, F.A.C.) Exemptions from state, national or industry licensure are limited to the certifications listed on the Basic Skills and Licensure Exemption List which may be accessed from the CTE Program Resources page.

Accommodations

Federal and state legislation requires the provision of accommodations for students with disabilities to meet individual needs and ensure equal access. Postsecondary students with disabilities must self-identify, present documentation, request accommodations if needed, and develop a plan with their counselor and/or instructors. Accommodations received in postsecondary education may differ from those received in secondary education. Accommodations change the way the student is instructed. Students with disabilities may need accommodations in such areas as instructional methods and materials, assignments and assessments, time demands and schedules, learning environment, assistive technology and special communication systems. Documentation of the accommodations requested and provided should be maintained in a confidential file.

Note: postsecondary curriculum and regulated secondary programs cannot be modified.

Additional Resources

For additional information regarding articulation agreements, Bright Futures Scholarships, Fine Arts/Practical Arts Credit and Equivalent Mathematics and Equally Rigorous Science Courses please refer to:

<http://www.fldoe.org/academics/career-adult-edu/career-tech-edu/program-resources.stml>