

AUTOMOTIVE SERVICE TECHNOLOGY (IAST)

IAST 1010 Credits: 2

Automotive Safety Total Hours: 50

Students are introduced to safe working practices within the automotive industry through the study of the Worker's Compensation Act and OHS regulations with focus on the sections relevant to the automotive repair industry. Additional topics include hazardous material safety, safe lift operation, safe vehicle operation in a shop environment, chemical safety, fire safety, personal safety measures and use of emergency equipment.

IAST 1015 Credits: 2

Communication and Business Total Hours: 50

Students practice communication in an automotive shop environment and common business practices. Students study the hierarchy of control in automotive shops and shop efficiency methods. Additional topics include record keeping and the use of technical and service publications.

IAST 1020 Credits: 4

Automotive Repair Tools Total Hours: 100

Students are introduced to tools specific to the automotive repair industry through the study and use of hand and power tools common to high throughput automotive repair facilities. Topics include selection of appropriate measuring instruments, service technician hand tools, service technician power tools, fastening devices, and shop equipment.

IAST 1023 Credits: 6

Automotive Electronics Total Hours: 150

Students learn about the design and function of automotive electronics systems and will perform troubleshooting and repair procedures. Topics include voltage, current, resistance, power, series circuits, parallel circuits, series-parallel circuits, circuit terminology, electron and conventional current flow, circuit construction and electrical relationships. Additional topics include magnetic theory, circuit protection devices, semi-conductors, microprocessors, wiring, 12-volt batteries and on-board diagnostic systems.

IAST 1025 Credits: 7

Automotive Service Total Hours: 175

Students perform light duty automotive service procedures and study standard services performed in the automotive repair industry. Topics include proper choice of automotive oils, front-end accessory drive belts, interior/exterior automotive illumination, wheel and tires, non-friction bearings, spindles, hubs and interior/exterior mouldings and ornamentation.

IAST 1030 Credits: 4

Automotive Methods Total Hours: 100

Students learn metallurgic repair methods and automotive troubleshooting which are the focus of this course. Topics include GMAW methods, Oxy-Acetylene brazing, heat fusion, and other metallurgic repair methods. Additional topics include automotive troubleshooting and problem solving.

IAST 1035 Credits: 6

Hydraulic & Mechanical Brakes Total Hours: 150

Students repair light duty automotive hydraulic and mechanical braking systems. Topics include, levers and fulcrums, Pascal's Law, and factors affecting friction. Additional topics include design, function, troubleshooting and overhaul of drum and disc brake systems, anti-skid braking systems, power braking systems, and emergency brake systems.

IAST 2010 Credits: 4

Auto Frame & Body Support Total Hours: 100

Students learn about the design and function of automotive frame and body support systems and will perform troubleshooting and repair procedures. Topics include MacPherson independent, SLA, multi-link, rigid and twin I-beam suspension systems. Additional topics include BOF perimeter, BOF ladder, hydroformed and unit body automotive frames.

IAST 2016 Credits: 7

Automotive Steering Total Hours: 175

Students learn about the design and function of light duty automotive steering gears and will perform troubleshooting and overhauling procedures. Topics include steering boxes, steering racks, hydraulic pressure assisted steering gears and racks. Additional topics include steering columns, supplemental restraint systems, and steering geometry.

IAST 2020 Credits: 5

Advanced Electric/Electronics Total Hours: 125

Students learn about advanced electronic systems and diagrams, advanced electrical test equipment, computer control systems and multiplex and network systems. Topics include advanced electronic components, advanced diagnostic procedures used for troubleshooting and testing advanced electrical signals.

IAST 2025 Credits: 3

Electronic Ignition Systems Total Hours: 75

Students learn about the design and operation of electronic ignition systems. Topics include the components, diagnose and repair of electronic distributor ignition systems and electronic ignition systems.

IAST 2030 Credits: 3

Fuel Delivery Systems Total Hours: 75

Students learn fuel types, alternate fuels and fuel delivery systems which are the main focus of this course. Topics also include carburetors and fuel injection systems.

IAST 2035 Credits: 4

Engine Management Systems Total Hours: 100

Students learn about engine management systems, new vehicle technology and hybrid vehicle systems. Topics include input sensors and output actuators, on board diagnostic systems and system data.

IAST 2040 Credits: 3

Emission Control Systems Total Hours: 75

Students learn the principles and effects of the by-products of combustion and how they affect our environment. Topics include the legislation pertaining to vehicle emission regulations, pre and post combustion emission systems, evaporative emission systems and gas analysis methods.