

**TECHNICAL CERTIFICATE**  
**Automotive Service Technology**

**GENERAL EDUCATION: (6 credit hours)**

ENG 1203 Technical Communications  
MATH 1103 Technical Mathematics

**CORE COURSES (39 Credit Hours)**

AST 1105 Automotive Engine Repair  
AST 1106 Automotive Electrical/Electronic  
Systems  
AST 1203 Automotive Brake Systems  
AST 1205 Automotive Suspension and Steering  
AST 1206 Automotive Engine Performance  
AST 1604 Automotive Heating and Air  
Conditioning  
AST 2105 Automatic Transmission/  
Transaxles  
AST 2205 Automotive Manual Drive Train  
& Axles

**Minimum Required Credit Hours (45)**

Register online at [www.asun.edu](http://www.asun.edu)

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Technical Center Marked Tree

*“A Great Place to start!”*

**Technical  
Certificate  
in  
Automotive  
Service  
Technology**



*“Our Business Is You”*

# Technical Certificate in Automotive Service Technology

## Automotive Service Technology

The automotive service technology program at ASU-Newport Technical Center at Marked Tree provides state-of-the-art training to prepare students as an automotive service technician. Students have the opportunity to learn all aspects of automotive mechanical repair including advanced electronic and computer system diagnoses.

## Career Outlook

According to Occupational Outlook Quarterly, the number of jobs for automotive service technicians and mechanics is projected to grow faster than average for all occupations over the next decade. Job openings will be significantly larger because many skilled technicians are expected to retire and will need to be replaced.

Median hourly wage-and-salary earnings of automotive service technicians and mechanics, were \$16.24 in May 2006. The middle 50 percent earned between \$11.96 and \$21.56 per hour.

Our instructors are all A. S. E. Master certified and experienced service technicians.

ASU-Newport Technical Center students can earn a technical certificate or Associate of Applied Science in Automotive Service Technology.

## Admission

Students are required to the COMPASS or ACT test which are designed to assess the current skills of a student and recommend appropriate course placement.

The cost to attend ASU-Newport Technical Center is one of the lowest in the area.

## Financial Aid

Students needing financial assistance should contact the financial aid office at 870-358-2117.

## COURSE DESCRIPTIONS

### AST 1105 Automotive Engine Repair

A study of internal combustion engines which includes diagnosing and testing valve trains, lubrication systems, cooling systems, and engine assembly. Instruction in the use of related measuring instruments and analytical test equipment for servicing to manufacturers specifications is included. Safety will be emphasized.

### AST 1106 Automotive Electrical/Electronic Systems

A study of direct current fundamentals as needed in the theory and troubleshooting of all electrical and electronic circuits and systems incorporated by automotive manufacturers. Diagnostic and testing procedures, equipment, and hand tools will be utilized in the maintaining and service/repair of the automobile electrical/electronic components. Safety is emphasized.

### AST 1203 Automotive Brake Systems

A study of hydraulic principles and fluid controls which operate the brake system. Emphasis will be on system diagnosis and repair of the brake system. Safety is emphasized.

### AST 1205 Automotive Suspension and Steering

A study of automotive steering geometry and



undercarriage system, including alignment. Emphasis is on diagnosis and repair of steering components (manual and power), undercarriage systems, as well as realignment and wheel balancing. Safety is emphasized.

### AST 1206 Automotive Engine Performance

A study of fuel systems, ignition systems, engine testing, emission and emission controls. Fuel Systems will include system principles and testing techniques on both carburetors and fuel injection. Ignition systems will include systems testing and diagnosis with up-to-date equipment for engine performance. Emission control will include the study of air pollution, engine performance and its relation, fuel recovery systems, catalytic converters, PVC systems, Air Pump systems and basic electronic controls. Safety is emphasized.

### AST 1604 Automotive Heating and Air Conditioning

The theory, construction, operation and repair procedures of the automotive climate control systems. It includes the refrigeration cycle, automatic temperature control systems, heating, ventilation, and CFC recovery and recycling. Special emphasis is placed on safety and general shop procedures.

### AST 2105 Automatic Transmission/Transaxles

The automatic transmission unit is divided into the fundamental study of fluid units, torque converters, principles of automatic controls, and planetary gear systems, with service to various components. System testing and safety are emphasized.

### AST 2205 Automotive Manual Drive Train & Axles

A study of clutches, conventional automotive transmissions, and overdrive. The student will demonstrate his/her ability to service other components in addition to the transmission; this includes the drive line and final drive assemblies for automotive use. Safety is emphasized.