

# AUTOMOTIVE TECHNOLOGY: ENGINE MACHINING TECHNOLOGY (A.S.)

## ASSOCIATE OF SCIENCE

The Engine Machining degree option prepares students for employment as an entry-level engine machinist. Through courses focusing on the mechanical areas of the vehicles, including basics in engines, equipment usage, engine rebuilding techniques, and machining practices, students learn how to use specialty equipment and measurement tools found in engine machinist facilities. Core topics include engine operation, measurement techniques, increasing engine power and torque, and engine modifications. Design, function, and operation of all these systems is also included in the degree. Graduates are employed as entry level engine machinists, general engine technicians, apprentice engine machinists, or are self-employed.

### Program Student Learning Outcomes

- Recognize and avoid common accidents that occur in automotive repair and machine shops.
- Demonstrate the different machining processes used in engine repair and rebuilding.
- Demonstrate how to read micrometer scales in metric and inch units.
- Demonstrate how to check flatness of cylinder head deck surfaces.
- Demonstrate how to replace integral guides with valve guide bushings.
- Explain the different procedures for three-angle seat cutting and grinding.
- Demonstrate the cylinder honing process for new or oversize cylinders.
- Compare line-boring and line-honing procedures.

## Program Requirements

Code Number	Course Title	Units
<b>Required Courses</b>		
AUTO 101	Automotive Service Tools and Equipment	4.0
AUTO 110	Automotive Engines	5.0
AUTO 210	Automotive Upper Engine Machinist	4.0
AUTO 211	Automotive Lower Engine Machinist	4.0
AUTO 212	Advanced High Performance Engines	1.0
<b>Total Units</b>		<b>18</b>

## ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS

Complete a minimum of 60 units to include the above requirements, the Associate of Arts Degree requirements, General Education requirements, and electives as needed.

## Recommended Electives

Code Number	Course Title	Units
AUTO 100	Automotive Maintenance and Operation	4.0
AUTO 105	Hydraulics and Pneumatics	2.0
AUTO 109	Automotive Diesel Systems	5.0