



Division:	Industrial Technology	Area:	Automotive Engineering Technology
Course Number:	AUTO 114	Course Name:	Automotive Instrumentation and Testing
Prerequisite:	AUTO 101, 103, and 104		
Corequisite:	None		
Hours Required:	Class: 30	Lab: 60	Credits: 4

Course Description/Purpose

This course is designed to further develop students' understanding and ability to set up and conduct laboratory investigations applicable to automotive research and development. Emphasis will be placed on defining the scope of a project, evaluation of investigation procedures, setting up and conducting tests, gathering and analyzing data and the production of final reports. Hardware and procedures will include computerized data collection, application of thermocouples, pressure transducers, strain gauges and similar devices applied to components undergoing tests on chassis and engine dynamometers, flow benches and related equipment.

Major Units

- Statistics
- Reporting Data
- Measuring Temperature
- Measuring Pressure
- Noise and Vibration
- Conducting Lab Tests

Educational/Course Outcomes

Student learning will be assessed by a variety of methods, including, but not limited to, quizzes and tests, journals, essays, papers, projects, laboratory/clinical exercises and examinations, presentations, simulations, portfolios, homework assignments, and instructor observations.

Cognitive Each student will be expected to *Identify/Recognize* . . .

- variables that affect test results
- correction factors

Performance Each student will be expected to *Demonstrate/Practice* . . .

- write technical reports
- calibrate instruments
- research published data
- conduct lab tests

Attitudinal Each student will be expected to *Believe, Feel, Think* . . .

- shop safety
- the importance of technical writing

AUTO 114-1/98:DK:cs
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