

**University of Arkansas - Fort Smith  
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### **General Syllabus**

#### **ASTE 24804 Engine Performance II**

Credit Hours: 4

Lecture Hours: 2

Laboratory Hours: 4

Prerequisite: ASTE 14804 Engine Performance I

Effective Catalog: 2018-2019

#### **I. Course Information**

##### **A. Catalog Description**

Study the advanced functioning, servicing and testing of atmospheric-control devices, including electronic fuel delivery systems, evaporative emissions systems, and controlled-combustion systems.

##### **B. Additional Information**

Instruction is given in the engine, fuel systems and ignition systems to help control pollutants in the exhaust. Manufacturer's specifications are maintained throughout testing procedures, and deviations are held to a minimum. Specific areas containing malfunctions are repaired and used in conjunction with various manufacturers scan tools.

#### **II. Student Learning Outcomes**

##### **A. Subject Matter**

Upon successful completion of this course, the student will be able to:

1. Analyze oscilloscope wave patterns and identify sine, square, sawtooth, and step wave patterns.
2. Identify faulty Hall Effect, cam and crank sensors.
3. Distinguish the difference between digital and analog signals.
4. Test and repair various computer networking circuits.

##### **B. University Learning Outcomes**

This course enhances student abilities in the following areas:

**Communication Skills (written and oral)**

Students must deal effectively with customers' complaints and ask effective questions to elicit more information.

**Analytical Skills**

**Critical Thinking Skills.** Students must analyze data gathered from customer complaints, inspections, tests, etc. in order to diagnose problems.

**III. Major Course Topics**

- A. Electronic Fuel Injection
- B. Electronic Ignition Systems
- C. Emission Control systems
- D. Computer Outputs and Networks
- E. On-Board Diagnostic (OBD II) and Computer Systems