

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: AER 1943

COURSE TITLE: Automotive Internship I

PREREQUISITE(S): None

COREQUISITE(S): None

CREDIT HOURS: 2

CONTACT HOURS/WEEK: up to 20 hours/week

CONTACT HOUR BREAKDOWN:

Lecture/Discussion:

Laboratory:

Other _____:

FACULTY WORKLOAD POINTS: Calculated on the # of students in the internship

STANDARDIZED CLASS SIZE ALLOCATION: OPEN

CATALOG COURSE DESCRIPTION:

This course is a companion to Electrical Systems I, and Air Conditioning and Heating. In order to meet the State of Florida, N.A.T.E.F., and General Motors ASEP standards, interns must complete 100 hours on-the-job learning experience in Electrical Systems and 100 hours on-the-job learning experience in Heating and A/C related. While working under the mentorship of an experienced technician, students must document the required hours and master the student performance standards.

SUGGESTED TEXT(S): N/A

IMPLEMENTATION DATE: Spring Term, 1999

REVIEW OR MODIFICATION DATE: Fall Term 2002, (20031)
Fall Term, 2005 (20061)
Fall Term, 2007 (20081)
Fall Term, 2008 (20091)

PROGRAM TITLE: Automotive Service Management Technology

COURSE TITLE: Automotive Internship I

CIP NUMBER: 0615.080300

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

02.0 APPLY ELECTRICAL AND ELECTRONIC SKILLS IN DIAGNOSING/TROUBLESHOOTING MALFUNCTIONS OF ELECTRICAL/ELECTRONIC COMPONENTS--The student will be able to:

- 02.01 Use and apply basic electrical and electronic test equipment and meters.
- 02.02 Perform power checks with test lights.
- 02.03 Perform continuity tests.
- 02.04 Measure voltage drop, current flow and resistance in a circuit or component with a multimeter. (ASE)
- 02.05 Locate an open circuit and a short circuit.
- 02.06 Analyze cranking system malfunctions.
- 02.07 Analyze charging system malfunctions. (ASE)
- 02.08 Service and test batteries.
- 02.09 Remove and replace light bulbs. (ASE)
- 02.10 Test, remove and replace fuses and circuit breakers. (ASE)
- 02.11 Replace and test starters. (ASE)
- 02.12 Test and replace alternators.
- 02.13 Test, remove and replace regulators. (ASE)
- 02.14 Inspect and repair lighting systems. (ASE)
- 02.15 Diagnose, repair or replace turn signal and stoplight switches. (ASE)
- 02.16 Test and replace electrical system switches. (ASE)
- 02.17 Diagnose, repair or replace power window and power seat systems, including motors.
- 02.18 Diagnose and service windshield wiper/washer systems. (ASE)
- 02.19 Test and replace sending units. (ASE)
- 02.20 Diagnose engine malfunctions.
- 02.21 Inspect, remove and replace alternator belts.
- 02.22 Overhaul starters. (ASE)
- 02.23 Diagnose, repair or replace horn systems. (ASE)
- 02.24 Diagnose, repair or replace clock systems.
- 02.25 Diagnose, repair or replace warning buzzer.
- 02.26 Test and replace instrument panel units. (ASE)
- 02.27 Diagnose and service cruise control systems. (ASE)
- 02.28 Check, remove and replace radios. (ASE)
- 02.29 Test and repair automotive alarm system components. (ASE)

05.0 DEMONSTRATE PROFICIENCY IN SERVICING COOLING, AIR CONDITIONING AND HEATING SYSTEMS--The student will be able to:

- 05.01 Diagnose overheating problems.
- 05.02 Check radiator coolant level.
- 05.03 Test and add coolant. (ASE)

LIST PERFORMANCE STANDARD ADDRESSED: (continued)

NUMBER(S): TITLES(S):

- 05.04 Pressure test cooling systems. (ASE)
- 05.05 Test radiator caps. (ASE)
- 05.06 Inspect, remove and replace radiator and heater hoses. (ASE)
- 05.07 Remove, test and replace thermostats. (ASE)
- 05.08 Flush cooling systems and replace coolant.
- 05.09 Remove and replace radiators. (ASE)
- 05.10 Remove and replace water pumps.
- 05.11 Diagnose basic air conditioning system problems.
- 05.12 Inspect and pressure test basic air conditioning systems.
- 05.13 Inspect and pressure test basic air conditioning systems.
- 05.14 Discharge, evacuate and charge basic air conditioning systems. (ASE)
- 05.15 Leak test basic air conditioning systems. (ASE)
- 05.16 Service air conditioning electrical circuits.
- 05.17 Service vacuum circuits.
- 05.18 Remove and replace components in basic air conditioning systems. (ASE)
- 05.19 Remove and replace engine fan clutches and electric cooling fan and controls.
- 05.20 Remove and replace blower motors. (ASE)
- 05.21 Remove and replace heater cores, control units and cables. (ASE)
- 05.22 Diagnose and repair electronic air conditioning controls.
- 05.23 Remove and replace air conditioning compressor shaft seals.