AUTOMOTIVE INTRODUCTION
Course Syllabus

Course Number: INT101  Instructor: Ron Rader
OCAS Code:  Phone Number: 580-327-0344
Course Length: 45 hours  Email: rrader@nwtech.edu
Career Cluster: Transportation  Campus: Alva, OK
Career Pathway: Automotive Service  Program: Automotive Service Technology
Career Major: Automotive Service Technician, Automotive Chassis Technician, Automotive Maintenance Light Repair Technician, Air Conditioning Technician, Automotive Drivability Technician
Pre-requisite: None

Course Description: This course covers occupational health and safety, tools and equipment identification, usage and operation. The students will learn about the history, current state and future of the automotive service industry. This course will cover dealership and independent operations. Students will learn vehicle identification and how to look up service information using several different sources. Students will learn vehicle maintenance, which will include fluid level checks and adjustments, peripheral electrical system checks and tire inspection and air pressure adjustment. In this course the students will learn basic measuring instruments used in vehicle service and diagnosis, as well as communication skills used throughout the automotive service industry.

Instructional Philosophy: To provide a training program that is of merit both educationally and ethically while effectively providing the individual learner the opportunities, knowledge and skills necessary to succeed in the workplace as well as life.

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

Competencies:
Automotive History and Career Exploration
Occupational Health & Safety
Using an MSDS
Hazardous Waste procedures
Using fire extinguishers
Emergency procedures
Basic first aid & CPR
Personal safety
Defect warning procedures
Cleaning tools & equipment
Workplace security procedures
Tools & Equipment
Using hand tools
Using a floor jack
Using a two-post hoist
Using a four-post hoist
Using an engine hoist
Using a torque wrench & an angle gauge
Setting up an oxyacetylene torch
Using an oxyacetylene torch
Using a lubrication gun
Using an air drill
Using an air impact wrench
Using an air chisel
Using an air blow gun
Using an electric drill
Using an angle grinder
Using a bench grinder
Using a lead light
Using a gear puller
Using a screw extractor
Using a micrometer
Using a dial indicator
Using a feeler gauge
Using a tire pressure gauge
Measuring a fastener
Repairing an internal thread
Removing a stud
Repairing an external thread
Using a vacuum gauge
Vehicle Maintenance
Identifying powertrain configurations
Identifying chassis configurations
Identifying axle configurations
Identifying powertrain configurations
Locating vehicle information
Identifying axle configurations
Measuring vehicle wheelbase
Decoding a VIN
Using an owner’s manual
Using a shop manual
Using a repair manual
Using a computerized service system
Using a parts manual
Using a labor guide
Complete Work Order to contain pertinent information
Checking engine oil
Checking & adjusting power steering fluid
Checking & adjusting transmission fluid
Checking & adjusting brake fluid
Checking & adjusting differential/transaxle fluid
Checking & adjusting coolant levels
Checking windshield washer fluid
Checking peripheral electrical systems
Checking & replacing wiper blades
Checking & adjusting tire pressures
Checking seat belts

**Major Course Projects:**

Students will perform tasks relating to the Automotive Service Industry as per standards identified by the National Automotive Technicians Education Foundation (NATEF). Students will complete repair orders each day and will document completion of
competencies on competency profiles tracking individual progress and accomplishment. 
Projects will include performing tasks on mock ups, shop vehicles, and live work as 
student skills progress. These projects will reinforce classroom theory instruction and 
will require the student to consult industry service information during the course of task 
performance.

**Project Outline:**
Projects will include performing tasks on mock ups, shop vehicles, and live work as 
student skills progress. These projects will reinforce classroom theory instruction and 
will require the student to consult industry service information during the course of task 
performance.

**Instructional Delivery Plan:**
The instruction for this course will be comprised of multiple methods designed to 
promote and accommodate different learning styles including classroom lecture, 
classroom demonstrations, shop demonstrations, hands on learning activities, classroom 
discussion, interactive media, textbook, computer based learning activities, research 
projects, guest speakers, student presentations, and interactive learning with CPS 
(Classroom Performance System). Students will be required to practice the skills 
associated with the instructional content and will be required to work independently and 
also in teams. Assignments will require students to use academic skills in math, science, 
and language arts.

**Assessment Plan:**
Students will be assessed according to three basic kinds of learning. Knowledge: Does 
the student possess the required knowledge to perform a specific competency? Skills: 
Does the student possess the necessary coordination to perform the task/competency? 
Attitude: Will the student perform the task/competency on the job after learning to do 
it? Students will also be assessed according to the basic work skills of attendance and 
promptness. Soft skills will be assessed in the Academic Career Center.

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<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>50%</td>
<td>Daily work - Performance of technical skills on job, work habits, safety, clean-up, participation</td>
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<tr>
<td>50%</td>
<td>Written assignment - Repair orders, textbook assignments, etc.</td>
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**Grading Scale:**
- A 90-100 Exceeds expectations
- B 80-89 Meets industry standards and expectations
- C 70-79 Passing grade, but does not meet some standards
- D 60-69 Passing, but only meets the minimum standards
- F Below 60 Failing, does not meet minimum standards

**Alliance Credit Offered:**
OSU Okmulgee

**Industry Alignments:**
ASE Certification, ODCTE Certification,

**End of Instruction Industry Assessment:**
ASE Certification, ODCTE Certification,

**Resources:**
Automotive Excellence Vol. 1 and Vol. 2
Introduction to Automotive Service: Fundamental Concepts
CDX Global Interactive Training
Snap On Shop Key
Modern Automotive Technology
Alldata

**Attachments:**
See Automotive Service Technology Task List Competency Handbook