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## Course Syllabus 2025-2026

### **Program Title**

Automotive Career Skills

### **Instructor**

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### **Course Description**

The goal of this program is to provide you with the skills needed to gain competitive long-term employment in the automotive industry or related fields. In this program you will learn a wide variety of essential entry-level, industry relevant, automotive technician skills. You will participate in career exploration and investigation and research activities in order to fully understand all aspects of this multibillion-dollar industry. You will develop a portfolio of program related activities; develop confidence in your ability to be successful in the world-of-work and to live independently.

### **Course Goals**

Enter the exciting world of auto maintenance and detailing.

- Master the Computerized parts program
- Develop your mechanical aptitude
- Develop your manual dexterity
- Enhance your organizational skills
- Sharpen your problem solving skills
- Learn to attune to detail
- Refine your soft skills

Upon completion of this program students will be able to:

- Demonstrate knowledge of the profession and safety practices
- Demonstrate knowledge of cleaning and car care products and supplies
- Demonstrate use of hand tools and standard shop equipment
- Perform full vehicle fluid and filter service per manufacturer recommendations
- Complete cosmetic services such as exterior and interior detailing
- Demonstrate effective customer communications
- Process customer service tickets
- Develop technical literacy skills using paper hard copy and online reference

## **Textbook & Classroom Resources**

Chris Johanson. ***Auto Fundamentals 13th Edition***. Good-heart Willcox Company, INC. 2024. Print

This text provides an in depth view of the basics of the automobile systems. It covers everything from shop safety, tools, engine design to the more modern computer systems and fuel injection. It is written in such a way that it can be easily understood by those interested in vehicles.

### **Skills Needed**

To be successful in this program, you should have the following skills:

- Mechanical aptitude
- Good problem solving skills
- Detail oriented
- Manual dexterity
- Self regulation and situational awareness
- Ability to follow verbal instructions and written procedures
- Basic reading, communications, writing, math, study skills, money management, auto upkeep, and general light maintenance
- Team player attitude, sense of personal responsibility, and good communication skills

### **Course Outline**

#### **Personal Protection Equipment**

Sensory Gear Usage  
Handling and Storage  
Shop Safety  
Emergency procedures

Occupant Controls  
Interior and Exterior Lighting  
Engine Compartment  
Wheel Ends  
Undercarriage

#### **Tires**

#### **Safety Data Sheets**

Verify SDS present for all existing inventory  
Obtain SDS on all new acquisitions  
Proper Storage and Handling

Form and Function  
Pressure Check  
Plug and Patch Repair  
Reading Sidewalls  
Interpreting Tread Wear Patterns  
Mount and Dismount technique  
Rotate and Balance  
Wheel Torque

#### **Lifting Techniques**

2 Post Rotary Lift  
4 Post Bend Pak  
Floor Jacks and Jack Stands  
Midrise hoist

#### **Filter and Fluid Service**

Engine Oil and Filter  
Transmission Filter and Fluid

#### **Detailing**

Exterior Wash and Wax  
Interior Detailing  
Product Comparisons

#### **Filter and Fluid Service**

Gearboxes, Differentials, and Transfer Cases  
Hydraulic Brake Fluid Bleeding and Power Steering Fluid Exchange  
Coolant Exchange  
Air Filters – engine and cabin

#### **Tools and Equipment**

Form and Function  
Proper Usage

#### **Inspection Procedures**

Vehicle Walk Around

**Brakes**

How disc brakes work  
 How drum brakes work  
 Bending new lines and flaring

**Miscellaneous**

Spark plug replacement  
 Engine tune-ups (plug wires, cap, rotor)

**Customer Service**

Understanding Customer Concerns  
 Estimating and Invoicing  
 Parts Acquisition and Quotes  
 Print and Online Reference  
 Record Keeping

**Soft Skills**

Active Listening  
 Phone etiquette  
 Courtesy  
 Positive Attitude  
 Participation  
 Enthusiasm  
 Writing Skills  
 Organization

**Employability**

Initiative  
 Technical Literacy  
 Communication Skills  
 Self Regulation  
 Consistency

**Engines**

Small Engine theory and repair

**Evaluation of Learning**

Student performance will be evaluated using multiple assessments involving assigned program activities. Student's course grades will be based on the following:

Evaluation Criteria	Method of Evaluation	Percentages
Employability Skills	<ul style="list-style-type: none"> <li>• Attendance</li> <li>• Attitude</li> <li>• Participation</li> <li>• Professionalism</li> <li>• Commitment to Success</li> </ul>	25%
Documentation	<ul style="list-style-type: none"> <li>• Daily Bell Ringers</li> <li>• Weekly Timesheets</li> <li>• Inspections and Invoices</li> <li>• Textual Topics</li> <li>• Unit of Study Packets</li> </ul>	25%
Shop Competencies	<ul style="list-style-type: none"> <li>• Performance Tasks</li> <li>• Equipment Handling</li> <li>• Safety Practices</li> <li>• Organization Skills</li> <li>• Quality of Effort</li> </ul>	25%
Soft Skills	<ul style="list-style-type: none"> <li>• Written communications</li> <li>• Verbal Communications</li> <li>• Personal Accountability</li> <li>• Professional Composure</li> <li>• Individual Integrity</li> </ul>	25%

## Grading Scale

Grade	Percentage
A+	100% – 98%
A	97% – 92%
A-	91% – 90%
B+	89% – 88%
B	87% – 82%
B-	81% – 80%

Grade	Percentage
C+	79% – 78%
C	77% – 72%
C-	71% – 70%
D+	69% – 68%
D	67% - 62%
D -	61% - 60%
F	59% - Below

## Career Information

MN Program of Study	
Career Field	Engineering, Manufacturing, and Technology
Career Cluster	Transportation, Distribution, and Logistics
Career Pathway	Facility and Mobile Equipment Maintenance
Occupations Requiring Less than Baccalaureate Degree <ul style="list-style-type: none"><li>Auto Mechanic</li><li>Bus Mechanic</li><li>Truck Mechanic</li><li>Body Shop Worker</li><li>Detailer</li><li>Parts Counter Worker</li><li>Automotive Tint</li><li>Vinyl Wrap installer</li><li>Auto restoration/ street rod building</li></ul>	Occupations Requiring Baccalaureate Degree <ul style="list-style-type: none"><li>CTE Instructor</li></ul>
Career Outlook	information available @ <a href="http://www.iseek.org/careers">www.iseek.org/careers</a>