



## **Course Syllabus 2020-2021**

### **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**

Macaulay, David. *The New Way Things Work*. Houghton Mifflin: Boston. 1988. 1998. Print.

Arranged in five sections, this text provides comprehensive coverage of the workings of hundreds of machines and devices. This text also provides explanations of the scientific principles behind each machine. Conceived for readers of all ages, this text has been especially selected for those who find technology intimidating, and who wish it were less so. The beguiling treatment of the subject matter offers access to knowledge in the most captivating manner, and at the same moment makes the discovery seem like fun.

## **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

### **Safety Data Sheets**

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

### **Lifting Techniques**

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

### **Detailing**

Exterior Wash and Wax  
Interior Detailing  
Product Comparisons

### **Window tint/vinyl**

How to apply  
Types of products

### **Tools and Equipment**

Form and Function  
Proper Usage  
Handling and Storage

### **Inspection Procedures**

Vehicle Walk Around  
Occupant Controls  
Interior and Exterior Lighting  
Engine Compartment  
Wheel Ends  
Undercarriage

### **Tires**

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

**Filter and Fluid Service**

Engine Oil and Filter  
 Transmission Filter and Fluid  
 Driveline Fluids – Manual  
     Gearboxes, Differentials, and  
     Transfer Cases  
 Hydraulic Brake Fluid Bleeding and  
     Power Steering Fluid  
 Exchange  
 Coolant Exchange  
 Air Filters – engine and cabin

**Customer Service**

Understanding Customer Concerns  
 Estimating and Invoicing  
 Parts Acquisition and Quotes

**Customer Service (cont.)**

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

**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	
<b>Career Field</b>	Engineering, Manufacturing, and Technology
<b>Career Cluster</b>	Transportation, Distribution, and Logistics
<b>Career Pathway</b>	Facility and Mobile Equipment Maintenance
<b>Occupations Requiring Less than Baccalaureate Degree</b> <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>	<b>Occupations Requiring Baccalaureate Degree</b> <ul style="list-style-type: none"> <li>● CTE Instructor</li> </ul>
<b>Career Outlook</b>	information available @ <a href="http://www.iseek.org/careers">www.iseek.org/careers</a>