A. **TITLE:** Automotive Service Laboratory

B. **COURSE NUMBER:** Auto 111

C. **CREDIT HOURS:** (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)

# Credit Hours: 1
# Lecture Hours: per week
# Lab Hours: (1) 2-hour lab per week

Other: per week

Course Length: 15 Weeks

D. **WRITING INTENSIVE COURSE:** Yes ☐ No ☒

E. **GER CATEGORY:** None: ☒ Yes: GER !

*If course satisfies more than one: GER !

F. **SEMESTER(S) OFFERED:** Fall ☒ Spring ☐ Fall & Spring ☐

G. **COURSE DESCRIPTION:**

Topics include automotive shop procedures involved in general maintenance of vehicles related to suspension, engine, and driveline. Additional information addresses New York State inspection. Students who have successfully completed a high school vocational program in Automotive Mechanics/Technology may be eligible for transfer credit.

H. **PRE-REQUISITES:** None ☒ Yes ☐ If yes, list below:

**CO-REQUISITES:** None ☐ Yes ☒ If yes, list below:

Auto 101 Automotive Service Lecture
I. **STUDENT LEARNING OUTCOMES:** *(see key below)*

By the end of this course, the student will be able to:

<table>
<thead>
<tr>
<th>Course Student Learning Outcome [SLO]</th>
<th>Program Student Learning Outcome [PSLO]</th>
<th>GER [If Applicable]</th>
<th>ISLO &amp; SUBSETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate safe work practices in the Auto Lab</td>
<td>ALO1, ALO4</td>
<td>N/A</td>
<td>2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO</td>
</tr>
<tr>
<td>Utilize maintenance information from owner’s manual and service manual</td>
<td>ALO1, ALO2, ALO3</td>
<td>N/A</td>
<td>1-Comm Skills 2-Crit Think 5-Ind, Prof, Disc, Know Skills</td>
</tr>
<tr>
<td>Recognize, differentiate and properly remove and install common fasteners found on automobiles and light trucks</td>
<td>ALO1</td>
<td>N/A</td>
<td>2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO</td>
</tr>
<tr>
<td>Demonstrate safe operation of floor jacks and safe use of jack stands</td>
<td>ALO1, ALO4</td>
<td>N/A</td>
<td>2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO</td>
</tr>
<tr>
<td>Perform dismount and remount of tires using a rim clamp style tire changer</td>
<td>ALO1</td>
<td>N/A</td>
<td>2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO</td>
</tr>
<tr>
<td>Use electronic spin balancer to balance tire wheel assembly</td>
<td>ALO1</td>
<td>N/A</td>
<td>2-Crit Think 5-Ind, Prof, Disc, Know Skills ISLO</td>
</tr>
<tr>
<td>Task</td>
<td>ALO1</td>
<td>Skills</td>
<td>Subsets</td>
</tr>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>Demonstrate testing coolant for pH levels and specific gravity to</td>
<td></td>
<td>2-Crit Think</td>
<td>CA</td>
</tr>
<tr>
<td>determine freeze point, then drain and flush radiator</td>
<td></td>
<td>5-Ind, Prof, Disc, Know Skills ISLO</td>
<td>IA</td>
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<td></td>
<td></td>
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<td>PS Subsets</td>
</tr>
<tr>
<td>Demonstrate engine oil change and engine oil filter change</td>
<td></td>
<td>2-Crit Think</td>
<td>CA</td>
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<td>5-Ind, Prof, Disc, Know Skills ISLO</td>
<td>IA</td>
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<td></td>
<td></td>
<td>PS Subsets</td>
</tr>
<tr>
<td>Evaluate disk brake pads and drum brake linings</td>
<td></td>
<td>2-Crit Think</td>
<td>CA</td>
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<td>5-Ind, Prof, Disc, Know Skills ISLO</td>
<td>IA</td>
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<td></td>
<td>PS Subsets</td>
</tr>
<tr>
<td>Demonstrate the ability to work independently and in small groups</td>
<td></td>
<td>1-Comm Skills</td>
<td>O</td>
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<tr>
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<td>2-Crit Think</td>
<td>CA</td>
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<td>5-Ind, Prof, Disc, Know Skills</td>
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<td>PS</td>
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<tr>
<td>KEY</td>
<td>Institutional Student Learning Outcomes [ISLO 1 – 5]</td>
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<tr>
<td>ISLO #</td>
<td>ISLO &amp; Subsets</td>
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</tr>
</tbody>
</table>
| 1 | Communication Skills  
Oral [O], Written [W] |
| 2 | Critical Thinking  
Critical Analysis [CA], Inquiry & Analysis [IA], Problem Solving [PS] |
| 3 | Foundational Skills  
Information Management [IM], Quantitative Lit./Reasoning [QTR] |
| 4 | Social Responsibility  
Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T] |
| 5 | Industry, Professional, Discipline Specific Knowledge and Skills |

*Include program objectives if applicable. Please consult with Program Coordinator!"
J. **APPLIED LEARNING COMPONENT:** Yes ☒ No ☐

If YES, select one or more of the following categories:

- Classroom/Lab
- Internship
- Clinical Placement
- Practicum
- Service Learning
- Community Service
- Civic Engagement
- Creative Works/Senior Project
- Research
- Entrepreneurship
  (program, class, project)

K. **TEXTS:**


L. **REFERENCES:**

All Data, shop manuals, ShopKeyPro

M. **EQUIPMENT:** None ☐ Needed: Student tool list

N. **GRADING METHOD:** A-F

O. **SUGGESTED MEASUREMENT CRITERIA/METHODS:**

Performance Exams, attendance, preparedness for lab, applies learned knowledge, professional attitude, and completes assigned projects/tasks. Practicum at Midtern and Final Labs.

P. **DETAILED COURSE OUTLINE:**

I. Shop Safety and Waste Disposal
II. Vehicle Service Information (written and electronic)
III. Lift, Jacking and Jack Stand Safety
IV. Fastener ID and Usage
V. Basic Hand Tool Usage
VI. Tire Dismounting and Remounting
VII. Tire Balancing
VIII. Practical Midterm Exam
IX. Coolant System Service
X. Radiator Flushing
XI. Disc. Brake Inspection
XII. Oil Changes
XIII. Practical Final Exam

Q. **LABORATORY OUTLINE:** None ☐ Yes ☐