COURSE OUTLINE

Auto 111 Automotive Service Laboratory

Prepared By: Brandon J. Baldwin
Revised By: Kenneth Wurster
A. **TITLE:** Automotive Service Laboratory

B. **COURSE NUMBER:** Auto 111

C. **CREDIT HOURS:** 1

D. **WRITING INTENSIVE COURSE:** NO

E. **COURSE LENGTH:** 15 weeks

F. **SEMESTER(S) OFFERED:** Fall

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**
   One 2 hour lab per week for 15 weeks

H. **CATALOGUE 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.

I. **PRE-REQUISITES/CO-COURSES:**
   a. Pre-requisite(s): NONE
   b. Co-requisite(s): AUTO 101

J. **GOALS (STUDENT LEARNING OUTCOMES):**
   By the end of this course, the student will:

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Institutional SLO</th>
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<tbody>
<tr>
<td>Demonstrate safe work practices in the Auto Lab</td>
<td>SLO-2: Critical Thinking Skills</td>
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<td>SLO-3: Professional Competence</td>
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<td>Utilize maintenance information from owner’s manual and service manual</td>
<td>SLO-1: Communications Skills</td>
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<td>SLO-2: Critical Thinking Skills</td>
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<tr>
<td>Recognize, differentiate and properly remove and install common fasteners found on</td>
<td>SLO-2: Critical Thinking Skills</td>
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<tr>
<td>automobiles and light trucks</td>
<td>SLO-3: Professional Competence</td>
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<tr>
<td>Demonstrate safe operation of floor jacks and safe use of jack stands</td>
<td>SLO-2: Critical Thinking Skills</td>
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<td>SLO-3: Professional Competence</td>
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<tr>
<td>Perform dismount and remount of tires using a rim clamp style tire changer</td>
<td>SLO-2: Critical Thinking Skills</td>
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<td>SLO-3: Professional Competence</td>
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<tr>
<td>Use electronic spin balancer to balance tire wheel assembly</td>
<td>SLO-2: Critical Thinking Skills</td>
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<td>SLO-3: Professional Competence</td>
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<td>Demonstrate testing coolant for pH levels and specific gravity to determine freeze</td>
<td>SLO-2: Critical Thinking Skills</td>
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<td>point</td>
<td>SLO-3: Professional Competence</td>
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<td>Demonstrate drain and flush of radiators</td>
<td>SLO-2: Critical Thinking Skills</td>
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<td>SLO-3: Professional Competence</td>
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<tr>
<td>Demonstrate engine oil change and engine oil filter change</td>
<td>SLO-2: Critical Thinking Skills</td>
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<tr>
<td></td>
<td>SLO-3: Professional Competence</td>
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</table>
Evaluate disk brake pads and drum brake linings

| Demonstrate the ability to work independently and in small groups |
| SLO-2: Critical Thinking Skills |
| SLO-3: Professional Competence |
| SLO-4: Inter/Intrapersonal Skills |

SLO-1: Communications Skills
SLO-2: Critical Thinking Skills
SLO-3: Professional Competence
SLO-4: Inter/Intrapersonal Skills

K. **TEXTS:** None

L. **REFERENCES:** Alldata

M. **EQUIPMENT:** Each student has his/her own tools and shop equipment

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

O. **MEASUREMENT CRITERIA/METHODS:** Performance Exams, attendance, preparedness for lab, applies learned knowledge, professional attitude, and completes assigned projects/tasks.

P. **GENERAL TOPICAL OUTLINE:** Students will attain the basic skills needed to prosper in the automotive field through demonstration and repetition of common skills. Students will gain experience with basic hand tools, shop equipment and service procedures.

Q. **DETAILED TOPICAL OUTLINE:**

1) Shop safety, waste disposal and Vehicle Service Information (written)
2) Vehicle service information (written and electronic)
3) Lift, jacking and jack stand safety.
4) Fastener ID and usage
5) Basic hand tools
6) Tire dismounting and remounting
7) Tire balancing
8) Practical Exam
9) Coolant system service
10) Radiator flushing
11) Disc brake inspection
12) Drum brake lining inspection
13) Oil changes
14) Practical Exam