

# **Grays Harbor College**

## **AUTOMOTIVE TECHNOLOGY**

### **AT 101 BASIC AUTOMOTIVE (NUTS AND BOLTS)**

**Denis Samson  
Instructor**

**Course Syllabus**

## **I. COURSE DESCRIPTION:**

*Prerequisite: Instructor permission*

The foundation provided in this course includes a study of safety rules and procedures, use of the shop tools, equipment, and basic fundamentals of automotive repair. This course is designed for the non-experienced student and will be a Vocational program course. The student is introduced to a wide variety of special equipment, and components related to automotive repair. Vocational program course. May be used as a general elective in the AA degree.

## **II. COURSE OBJECTIVES**

To meet the course standards and demonstrate the ability to meet the outcomes expectations of this course (Competency in the discipline (4 CD), Literacy (2 L), Critical Thinking (3 CT), Social and Personal responsibility (4 SP), and Information Used (4 IU)] student will:

Demonstrate employability by following safe work practices, being on time, maintaining proper attendance, and properly following written and oral instruction (SP)

Demonstrate safety and proper work habits (CD, SP)

Meet NATEF competency criteria in the following areas:

- 1) Identify safety rules and procedures. (L, CT, IU)
- 2) Identify measuring instruments and procedures. (L, CT, IU)
- 3) Identify automotive service tools and equipment. (L, CT, IU)
- 4) Identify the various components used in automotive repair. (CT)
- 5) Learn about various information, available today to perform the proper diagnostics on vehicles. (L, CT, IU)
- 6) Disassemble, inspect, clean and re-assemble different components found on today's vehicles. (CT, L, IU)
- 7) Perform special test, on vehicles. (CD, L, CT, IU)
- 8) Learn safety precautions using harmful tools, example: grinder.(IU, CT, SP, L)

## **III. INSTRUCTIONAL TECHNIQUE**

AUTO 101 is taught 2 hours per day, plus one 10 minute break, Tuesday – Thursday, for a period of 11 weeks. The methods of instruction will be lecture, discussion, classroom exercises, demonstrations, and lab work. There will be 1 hour per week for lecture presentations and 3 hours per week hands on in the lab/shop experience. Lab/shop work is emphasized with small group's and one to one instruction when possible.

#### **IV. DISABILITES**

If you have a documented disability that may interfere with your ability to fully participate in this class, you may be eligible for accommodations. Contact your instructor or the Disability Support Services located on campus in the Student Services, room 119. Information regarding any disability will be kept confidential.

#### **V. WORK HABITS**

Industry has expressed attendance, punctuality, and general work habits as critically important for success on the job. The standards of this course include industry expectations. If you want to do well, the following will have to occur: show up every day of class, be on time, clean, fed, wide awake and thinking about automotive, with neatly and correctly completed homework ready to turn in. During class...participate! Keep safety first. Treat equipment with respect. Be conscientious and considerate of others. Make productive use of the time available. Clean up after yourself. Feel good about yourself, your work, and your progress.

Efficient use of time is vital. The Automotive Competency Lists are designed to require effective time management for successful completion. Just like on the job, you can expect to have to plan out your tasks and periodically work on two or more competencies simultaneously to avoid unnecessary delays waiting for a special tool or for shared equipment.

The main goal is to build technical and workplace skills. The quantity and skill level requirements of the Automotive Competency Lists and homework, combined with the strict enforcement of work habits standards, grading criteria, and shop rules, is intended to maximize your likelihood of success in the industry. Focus, a “can-do” attitude and prioritization of your education is both expected and necessary in order to be successful.

#### **VI. HOME WORK**

Regular Assignment.

Processed in Microsoft Word.

Times New Roman, 12 point font, double-spaced, 1 ¼” margins and at minimum of 14 lines in length.

More than 1 mistake or ANY mistake on heading: lose 3 points off your work habits point sheet.

In case of an absence, all homework that is required will be due the day you return.

**VII. ATTENDANCE POLICY.**

Attendance is graded. There are no excused absences. You are expected to be present every day for the entire quarter. Lost points cannot be made up. If a problems arise that will cause you to miss enough class to fail the course, see admissions to request an official withdrawal.

If you will miss class for some reason, please call or tell a friend or family member to call and leave a message on the shop answering machine at least one hour before the class starts. An absence **with** prior notice will result score 0 points for the day. An absence **without** prior notice will result- 5 for the day.

**VIII. IBEST**

After completing this class students enrolling in the automotive program will be IBEST evaluated. Students who qualify will be allowed to participate in IBEST specific training 12- 1, M-F in the automotive classroom.

**IX. METHOD OF EVALUATION**

Students will earn two grades in this course, a work habits point sheet grade, and a shop/competency/participation grade. The **Lower** of the two letter grades earned is the overall grade earned.

**Work Habits Points Sheets Grade:**

Attendance, Punctuality, Time Card, and Tags,

Homework Assignments handed in on time, (see work habits point sheet),

**Point Schedule:.....Daily Total .....5 points**

<u>Homework not handed on time</u>	<b>Lose 3 points per day.</b>
<u>Homework with more than 1 mistake</u>	<b>Lose 3 points per day.</b>
<u>Homework with incorrect heading</u>	<b>Lose 3 points per day.</b>
<u>Late Homework not handed in the next day</u>	<b>Lose 3 points per day.</b>
<u>Inaccurately filling time card</u>	<b>Lose 1 point per mistake.</b>
<b>Test below 80%</b>	<b>Lose 3 points</b>
<u>Final Exam below 80%</u>	<b>Lose 1 grade (ex: A to B)</b>
<u>Unauthorized use of a cell phone or texting</u>	<b>Lose 3 points each time.</b>

**Shop / Competency / Participation Grade:**

Competency completed and graded by instructor. In order to get a competency graded, the work order needs to be completed and closed.

Correctly complete work orders and include the task with the work order when required by the competency.

**This percentage is based on work habits points, and competencies collected during the quarter. The Chapter and Final exams can not be repeated. Students not present for any exam will be given a zero.**

**Auto 101****MINIMUM REQUIREMENTS FOR GRADE OF**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Work Habits Points	94%	90%	85%	80%
Competency	90%	80%	70%	70%

*\*If you have a course grade below C more than once, you will be on probation by the administration.\**

Pluses and minus will not be used.

**X. CLEAN UP PROCEDURE**

Daily clean up starts when signaled. You may clean up early if you desire, but you will be docked points same as for leaving early.

End of quarter: Final grade computed will be lowered by one full letter if a student is arriving late leaving early on the last day of class or not showing up at all.

**XI. ATTENDANCE POLICY**

NAME: \_\_\_\_\_

**GHC Automotive Technology – WORK HABITS POINT SHEET**

Circle present week:            1   2   3   4   5   6   7   8   9   10   11   12

5 points are possible per day. Deduct 3 points for arriving late, leaving early. Deduct 3 points for not turning in completed homework at the time it is collected or if there is more than 1 mistakes or late homework not supplied the next day. Deduct 1 point for inaccurately filling out the time card. 5 points will be deducted (for you) if you are sent home, **inaccurately** record your points for the day, or take an unauthorized break. **An absence is equal to 0 points.** When failing a test 3 point must be deducted even if it mean going below 0. Leaving tag(s) in tool room after returning a tool(s) -1. Points cannot be made up.

Day	Points earned	Explanation if less than 5 points	Tags Tools -1	Test -3	Home work -3	Time card -1	Cell Phone or texting -3
T							
TH							
T							
TH							
T							
TH							

When completed start a new WHPS

Total points earned as of last 3 weeks: \_\_\_\_\_

Points earned last 3 weeks:                    + \_\_\_\_\_

Total points earned to date:                    = \_\_\_\_\_                    Total points possible \_\_\_\_\_

Adding wrong cost= **5 points**

Total points earned today divided by total points possible = \_\_\_\_\_%

Current work habits letter grade: \_\_\_\_\_

	A	B	C	D
<b>Work Habits Point Grade</b>	<b>94%</b>	<b>90%</b>	<b>85%</b>	<b>80%</b>
Competency Point Grade	90%	80%	70%	70%

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Instructor Signature

(The **lower** of the two grades earned is the highest possible grade for the quarter. Additional requirement apply – see syllabus.)

XII.

## **HOMEWORK EXAMPLE**

Name \_\_\_\_\_ Course: AT101 Date: \_\_\_\_\_

Chapter 6

Pages Covered 954 to 958

Welcome to Grays Harbor College Automotive Technology program. During this quarter, we will have lecture, and lab time. We will have chapter test, and a final exam. At the beginning of each class, I will pick up your home work. During the lecture, I will perform experiments with instructional tools and cut away equipment. In the lab you will be working on a variety of cars: Chevrolet, Ford, Volvo, Hyundai and many more. These cars are available to allow you to develop and improve your working skill by diagnosing and removing and installing components. There is a wide variety of tools available to you through the use of tags. The lab will have to be kept clean and you will have to wear coveralls and make good use of fender covers in order to keep the cars clean. You will find this course very challenging and instructive. I will be in the lab giving information to help you understand what you are doing, but we will not do the work for you. As a student , you will have to retrieve information about the task you are performing on a specific car, from our computer. After each competency I will grade your work. Only then will you be able to continue other tasks. During this quarter you be expected to be in attendance and on time. You will be expected to participate in class discussions and work in the lab. You will learn to use a time clock, write work orders and learn good work habits.

**Note: Filling the heading incorrectly will result in -3 on your points sheet.**

Requirements: margin 1 ¼, **font 12(Time New Roman)**, double space, 14 lines minimum, -3 points if there are more than 1 mistake.

Last Updated 2009

### **XIII. COURSE OUTLINE:**

1. INTRODUCTION/SAFETY
  - a. Purpose and Scope of Course
  - b. Safety Considerations and Strategies
  
2. MEASUREMENTS
  - a. Measuring Systems
  - b. Measuring Tools
  
3. AUTOMOTIVE COMPONENTS
  - a. Starter
  - b. Steering Gears (Manual, Power)
  - c. Brake
  - d. Engine Component
  - e. Component Unit Repair
  
4. TIRE
  - a. Visual wear patterns
  - b. Noise, Vibration, Harshness
  - c. Drivability

### **XIV. INSTRUCTIONAL MATERIALS, SUPPLIES, AND EQUIPMENT:**

The student will provide:

1. Textbooks
2. Notebook and composition book for journal
3. **pens**, Pencils, and colored markers as needed
4. Personal hand tools (small tool box)
5. Safety glasses
6. Disposable gloves recommended

### **XVI. TEXTBOOKS: REQUIRED**

Various textbooks are used based on current editions of manuals and published textbooks. Please see your instructor for current textbook required.

The instructor will provide:

1. Selections from Service Manuals and Electronic Service Manuals
  
2. Other handouts as required

Note: Coveralls are supplied by the students.

I have received and read the syllabus for AUTO 101. I  
Acknowledge this by my signature below.

Print Name	Signature	Date
1 _____	_____	_____
2 _____	_____	_____
3 _____	_____	_____
4 _____	_____	_____
5 _____	_____	_____
6 _____	_____	_____
7 _____	_____	_____
8 _____	_____	_____
9 _____	_____	_____
10 _____	_____	_____
11 _____	_____	_____
12 _____	_____	_____
13 _____	_____	_____
14 _____	_____	_____
15 _____	_____	_____
16 _____	_____	_____