Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: https://catalog.uvu.edu/

Semester: Spring
Year: 2025
Course Prefix: AUT
Course and Section #: 1010-001
Course Title: Maintenance and Light Repair
Credits: between 1 and 3

Course Description

Studies the basics of automotive systems, and the basic maintenance of automotive care. Studies domestic and imported passenger cars and light trucks, including an overview of hybrid and electric vehicle technologies.

Course Attributes

This course has the following attributes:

☐ General Education Requirements
☐ Global/Intercultural Graduation Requirements
☐ Writing Enriched Graduation Requirements
☒ Discipline Core Requirements in Program
☐ Elective Core Requirements in Program
☐ Open Elective

Other: *Click here to enter text.*

Instructor Information

Instructor Name: Jim Oldham

Student Learning Outcomes

- 1 Use basic automotive theory and maintenance.
- 2 List basic vehicle components and determine the need for replacement.
- 3 Use basic maintenance parts such as fluids, light bulbs, filters, and brakes.
- 4 Analyze basic issues related to engine noises, leaks, and maintenance warning lights.
- 5 Identify tires and wheels and determine the need for service or replacement.
- 6 Vehicle inspections and emissions testing criteria.
- 7 Discuss hybrid and electric vehicle systems..

Course Materials and Texts

Required Text: Automotive Maintenance and Light Repair, 1st edition, Published by Pearson (July 15, 2013) © 2014. The authors are; James D. Halderman and Darrell Deeter. ISBN-13: 9780133405187
The following is the link to the online rentable version:

https://www.pearson.com/en-us/subject-catalog/p/automotive-maintenance-and-light-repair/P200000001178/9780133444308

Tools:
As in industry, each student will be expected to provide their own basic set of hand tools to complete the lab assignments. Specialty tools can be checked out from the tool room after paying the fee.

Course Requirements

This is a combined lecture and lab-based class. Most of the hands-on class work on basic maintenance tasks will be done in the lab, so students MUST be enrolled in Theory **and** the Lab. I highly recommend this lab to anyone interested in the hands-on application of theory learned in this class.

Assignments:
Assignments will be turned in on time to receive full credit. All assignments will be submitted on Canvas as a document or picture. All lab assignments completed on live vehicles must be accompanied by a completed Task Sheet. These Lab Task Sheets will be submitted on Canvas through the Lab section 101L (not through the Theory 1010 section).
Late Work / Make-up Work:
Make-up work will be allowed only for extenuating circumstances as per the instructor's discretion. Assignments missed because of unexcused absences cannot be made up. Homework assignments are due on the date listed in Canvas. 3% will be deducted from the assignment score for each day late to a minimum 40% score. Assignments close after approx two weeks. **No Assignments will be reopened or extended**. During the last two weeks of the course, late work will only be allowed to make up 10% of your grade. If you are failing the course, you will only be allowed to make up one letter grade. Pace yourself by scheduling time each week to do homework and submit your completed assignments. If you follow this pattern, you will not have any issues doing well in the class. If you procrastinate and are not consistent in completing your takes each week, you will do poorly in this class.
Exams:
Exams will be given periodically to measure your progress. The final exam will be given the last class period of the block.
Reflections Paper:
You will be required to write short weekly thoughts during the semester as you reflect on what you have learned so far during the course. These will be due each week and all be completed before the end of the course. Please write a minimum three-sentence paragraph each week and write your thoughts and feelings about what you have learned in the course lecture that week. You should also include what you hope to learn during the remainder of the course. Please be truthful. Thank you. These are each worth 20 points. Please submit them to (or write them on) Canvas.

A = 95% B = 84% C = 74% D = 64%
A- = 90% B- = 80% C- = 70% D- = 60%
B+ = 87% C+= 77% D+= 67% F = 59% or below

AUT 1010 Grades will be based upon the following weighted values and criteria:
(This section is pending and may be adjusted during the course)
Attendance 20%

Tests 25%
Presentations 15%
Class Assignments 15%
Quizzes 20%
SRI 5%
All assignments will be given a point value. Each student earns their own points whether you work individually or in pairs. Shop assignments will be expected to be completed to industry guidelines and safety standards. Points are earned by attitude, willingness to work, and quality of work. (Not unlike what you will encounter on the job.) Points are lost by not participating, i.e. just watching, long breaks, no tools, inappropriate dress, lack of lab attendance, etc. If you have not already done so, you will want to develop good work habits that you can take with you into the marketplace (Any workplace, not just an Auto shop.).
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Required or Recommended Reading Assignments
Chapters from book

General Description of the Subject Matter of Each Lecture or Discussion

Assignment Schedule:

AUT 1010 Spring 2024 (Tentative)

Week	Date	Assignment Due	Chapters
1	Week #1	Jan. 8	Intro, Shop Safety, Vehicle Lifting	6,11
2	Jan. 10	Fasteners, Hand Tools, Power Tools	8,9,10
Week #2	Jan. 15	Holiday	
3	Jan. 17	Measuring Systems, Service Info, Vehicle ID	12,13,14
4	Week #3	Jan. 22	Gas and Diesel Engines	15,16
5	Jan. 24	Underhood Inspection, LOF Service	17,18
6	Week #4	Jan. 29	Cooling Systems	19
7	Jan. 31	Electrical Fundamentals/Circuits	23,24
8	Week #5	Feb. 5	Electrical Circuits, Testers	25,26
9	Feb. 7	Electrical Wire Repair, Schematics	27,28
10	Week #6	Feb. 12	Electrical/ Charging Systems	29,30,31

10	Feb. 14		Electrical/ Charging Systems Cont	29,30,31
Week #7	Feb. 19		Holiday	
11	Feb 21.		HVAC	37,38
12	Week #8	Feb. 26	Scan Tool	44
13	Feb. 28		Ignition	39
14	Week #9	Mar. 4	Fuel	40,41
15	Mar. 6		Tires and Wheels, TPMS, Tire Service	45,46,47
Week #10	Mar. 11		Holiday	
Mar. 13			Holiday	
16	Week #11	Mar. 18	Front and Rear Suspension	48,49,50
17	Mar. 20		Power Steering and Wheel Alignment	51,52
18	Week #12	Mar. 25	Braking, Components, Fluid, Lines, Bleeding	53, 54,55,56
19	Mar. 27		Braking, Drum, Disk, Parking	58,59,60
20	Week #13	Apr. 1	Clutches, Manual Trans, Drive Shafts	63,64,65
21	Apr. 3		Drive Axles, Differentials	66,67
22	Week #14	Apr. 8	Automatic Transmissions	68,69
23	Apr. 10		Wheel Bearings	57
24	Week #15	Apr. 15	Emission Devices	42
25	Apr. 17		Engine Diagnosis	20
26	Week #16	Apr. 22	Used Vehicle Inspection	70
Apr.24			Final Prep	
Finals	Apr. 29		Finals	

Required Course Syllabus Statements

Generative AI

The use of Artificial Intelligence (AI) programs is becoming a fact of life. As this technology becomes more prevalent and more advanced, it is conceivable that no business will be able to operate efficiently and effectively without it.
Students must balance the benefits of utilizing AI assistance in the research and preparation of project materials within the framework of issues of Academic Ethics and Honesty. Students are responsible for their use of AI in an ethical manner. Using AI without proper parameters constitutes plagiarism.
Generative AI is a subset of artificial intelligence models capable of generating new content, be it text, images, music, or other forms of data. By learning patterns from existing large amounts of data, these models can produce novel outputs that were not part of their training set, mimicking the style and structure of the learned data. ChatGPT is what is called a Large Language Model (LLM) type of AI.

Using Remote Testing Software

☒ This course does not use remote testing software.

☐ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU Accessibility Services at accessibilityservices@uvu.edu or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Integrity

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by

not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: *Student Code of Conduct*.

Equity and Title IX

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a specially dedicated space for meditation, prayer, reflection, or other forms of religious expression.