



## Master Course Syllabus

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

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**Semester:** Fall

**Course Prefix:** AUT

**Course Title:** Engine Repair

**Year:** 2025

**Course and Section #:** 1130-001

**Credits:** 2

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### ***Course Description***

Explores the acquisition of practical skills needed for accurate internal combustion engine diagnosis and repair. Studies all phases of engine rebuilding and basic machine work. Teaches precision measurement techniques used in industry. Presents procedures for disassembly and reassembly of engine units, service, and technical data. Includes basic gasket technologies and fastener use.

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### ***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.*

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### ***Instructor Information***

**Instructor Name:** Chet Milburn

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### ***Student Learning Outcomes***

1. Explain the purpose and function of an internal combustion engine and engine components.
  2. Describe how to diagnose, disassemble, and inspect an engine to determine the condition of components and the cause of failure.
  3. Demonstrate the proper use of special service tools and hand tools when performing any vehicle repair.
  4. Apply a proper diagnostic approach when analyzing a vehicle system fault.
  5. Demonstrate a proper repair verification procedure when a vehicle has been repaired.
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### ***Course Materials and Texts***

**Automotive Engines 9th Edition James D. Halderman**

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### ***Course Requirements***

## Course Assignments, Assessments, and Grading Policy

### Grade Breakdown

Mid-term = 20%  
Final = 20%  
Presentation/Paper = 25%  
Class Assignments = 25%  
Quizzes = 10%

### Grading Scale

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

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### Safety Test

You are required to go online and complete the SP2 safety tests for working in the lab. This must be done before any work can be done in the lab.

Go to: [www.sp2.org](http://www.sp2.org), Select Login, Account ID: 46672888 Password: uvuautodepartment (Personal) PIN: (your uvu id #) This should let you in to do the tests.

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### Assignments

All assignments will be given in canvas. Assignments will be turned in on time to receive full credit. Late assignments will receive less than the total possible points. 10% of the possible points will be deducted for every class period the assignment is late. If you do the assigned reading, attend and participate in class, you will have no difficulty completing all assignments.

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### General Description of the Subject Matter of Each Lecture or Discussion

Week 1: Basic measuring techniques, glues and sealants, fasteners  
Week 2: What is an Engine? Engine basics and the four-stroke Otto cycle  
Week 3: Engine components review, composition and design  
Week 4: Cylinder Head, why is it so important? Airflow and power  
Week 5: Crankshaft, connecting rods and pistons, design and movement  
Week 6: The mysteries of the camshaft and the camshaft cycles  
Week 7: Oil, how it is made and why it is so important. Other fluids  
Week 8: Review and Exam

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### *Required Course Syllabus Statements*

#### Generative AI

AI programs are not a replacement for your human creativity, originality, and critical thinking. Writing, thinking, and researching are crafts that you must develop over time to develop your own individual voice.

The use of generative AI tools (e.g. ChatGPT, Google Bard, etc.) is permitted in this course for the following activities: Brainstorming and refining your ideas; Fine tuning your research questions; Finding information on your topic; Drafting an outline to organize your thoughts; and Checking grammar and style.

The use of generative AI tools is not permitted in this course for the following activities: Impersonating you in classroom contexts, such as by using the tool to compose discussion board prompts/responses assigned to you or content that you put into a Teams/Canvas chat; Writing a draft of a writing assignment; Writing entire sentences, paragraphs, or papers to complete class assignments.

You are responsible for the information you submit based on an AI query (for instance, that it does not violate intellectual property laws, or contain misinformation or unethical content). Your use of AI tools must be properly documented and cited in order to stay within university policies on academic honesty. Any student work submitted using AI tools should **clearly indicate what work is the student's work and what part is generated by the AI**. In such cases, no more than 10% of the student work should be generated by AI. If any part of this is confusing or uncertain, please reach out to me for a conversation before submitting your work.

\*Copied and modified from (Hilary Hungerford | Office of Teaching and Learning | Utah Valley University)

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### 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.

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## *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](mailto: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](mailto:DHHservices@uvu.edu)

DHH is located on the Orem Campus in BA 112.

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### 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](#).

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### **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](mailto:TitleIX@uvu.edu) – 800 W University Pkwy, Orem, 84058, Suite BA 203.

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### **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](mailto: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.