



CHIPOLA COLLEGE

COURSE SYLLABUS

Chipola's website: www.chipola.edu

COURSE TITLE:

Manual Drive Train and Axle Technician

COURSE NUMBER:

AER 0274V

COURSE DESCRIPTION (with prerequisites):

This course prepares the student to diagnose and repair manual transaxles, clutches, transmissions, differentials, driveline components, hydraulic systems, and four-wheel transfer cases. Components include lecture/discussion, written assignments, and hands-on experience. 150 clock hours

NAME(S) OF INSTRUCTORS:

John Gardner, Workforce Development Building "WD", Room 134, Telephone 718-2306, Fax 718-2304. College extension 2306. Office hours as posted. ASE Master Certified & A.S. degree Automotive Technology

EFFECTIVE ACADEMIC YEAR:

2023-2024

REQUIRED TEXTBOOKS AND INSTRUCTIONAL MATERIALS:

Fundamentals of Automotive Technology (bundle), 3rd Edition, (textbook, workbook, and 2-year Access Code), ISBN: 9781284271669.

Modern Automotive Technology (textbook), 10th ed., ISBN: 9781645646907.

GRADING POLICY:

The standing of a student in each course is expressed by one of the following letters and corresponding grading system:

A – 90 – 100

B – 80 – 89

C – 70 – 79

D – 60 – 69

F – 59 or less

The Chipola Catalog provides policies and procedures regarding the grading system. A student's Grade Point Average is derived from the grading system/quality point scale.

ATTENDANCE AND WITHDRAWAL POLICIES:

Chipola College expects regular attendance of all students, and all instructors record attendance daily. Students who are absent from classes for any reason other than official college activities must satisfy the instructor concerned that the absence was due to illness or other clearly unavoidable reasons. Otherwise, the student may suffer grade loss at the discretion of the instructor. Chipola policy allows each instructor to specify in

the Instructor First Day Handout whether or not an absence is excusable and what affect the absence or tardy may have on the grade.

A student is allowed to repeat a course a maximum of three (3) times. **On the third attempt a student (1) must bear the full cost of instruction (unless waived by Student Services), (2) cannot withdraw, and (3) must receive a grade.**

MAKE-UP POLICY:

Chipola allows each instructor to specify in the Instructor First Day Handout the makeup policy.

ACADEMIC HONOR CODE POLICY:

Students are expected to uphold the Academic Honor Code. Chipola College's Honor Code is based on the premise that each student has the responsibility to (1) uphold the highest standards of academic honesty in his/her own work; (2) refuse to tolerate academic dishonesty in the college community; and (3) foster a high sense of honor and social responsibility on the part of students. Further information regarding the Academic Honor Code may be found in the Chipola Catalog, Student Governance section.

STUDENTS WITH DISABILITIES POLICY:

Chipola College is committed to making all programs and facilities accessible to anyone with a disability. Chipola's goal is for students to obtain maximum benefit from their educational experience and to effectively transition into the college environment. Students with disabilities are requested to voluntarily contact the Office of Students with Disabilities to complete the intake process and determine their eligibility for reasonable accommodations.

NOTICE OF EQUAL ACCESS/EQUAL OPPORTUNITY AND NONDISCRIMINATION:

Chipola College does not discriminate against any persons, employees, students, applicants or others affiliated with the college with regard to race, color, religion, ethnicity, national origin, age, veteran's status, disability, gender, genetic information, marital status, pregnancy or any other protected class under applicable federal and state laws, in any college program, activity or employment.

Wendy Phippen, Associate Vice President of Human Resources, Equity Officer and Title IX Coordinator, 3094 Indian Circle, Marianna, FL 32446, Building A, Room 183C, 850-718-2269, pippenw@chipola.edu.

LIBRARY AND ON-LINE REFERENCE MATERIALS:

The library is a comprehensive learning resource center providing information in print, electronic, and multimedia format to support the educational objectives of the College. On-line catalogs, e-books and electronic databases can be accessed by using the *LINCCWeb* icon on the Chipola Library website at www.chipola.edu/library. If you have questions about database usage consult the "How to Use the Chipola Databases" on the Library website or call the Library at 850/718-2274 during regular hours. Library hours are posted each semester at the building entrance and on the Library website.

See your Instructor First Day Handout for individual instructor recommendations and resources.

TECHNOLOGY RESOURCES:

The college’s learning management system is **Canvas**. Classes become available on Canvas on the first day of the semester. It is the student’s responsibility to log onto the Canvas system the first day of class to establish the first day of attendance and to check announcements. All official class communication must be through Canvas. For further information, contact your instructor or the Director of eLearning. The Canvas support hotline is available online in live chat and on the phone, toll-free, at 855-308-2812 for any issues in accessing or utilizing Canvas. The **Technology Center**, located in the library, is equipped with computer workstations. Lab hours are posted each semester at the building entrance and on the Library website.

FREE TUTORING RESOURCES:

The Academic Center for Excellence (**ACE**) Lab, located in Building L, offers free tutoring from 8 a.m. to 5 p.m. and is equipped with computer workstations. ACE lab hours are posted each semester at the room entrance and on the website. Additionally, live online tutoring conferences and individual tutoring sessions are available for a variety of courses through ACE@Home. For a conference schedule or to schedule an individual appointment, visit “ACE Tutoring” in the left navigation from any course in Canvas.

ELECTRONIC DEVICE USAGE STATEMENT:

Classrooms should be free of all unnecessary distractions from the task of learning. Therefore, as a general rule, students should silence and avoid use of all electronic devices (laptops, phones, tablets, etc.) not being used for coursework. Consult first-day handouts for any specific policies related to the use of electronic devices in the classroom, as they may vary depending upon the nature of the course or the guidelines of the instructor. Faculty reserve the right to regulate the use of electronic devices and their accessories in class.

DISCIPLINE SPECIFIC COMPETENCIES / LEARNING OUTCOMES:

Automotive Technology focuses on broad, transferable skills and stresses understanding and demonstration of the following elements of the automotive industry: See chart below.

LINKING COURSE-LEVEL STUDENT LEARNING OUTCOMES WITH DISCIPLINE-SPECIFIC COMPETENCIES, ASSESSMENT METHODS, AND ARTIFACTS			
COURSE-LEVEL STUDENT LEARNING OUTCOMES FOR AER 0274V	DISCIPLINE-SPECIFIC GENERAL EDUCATION COMPETENCIES	ASSESSMENT METHODS FOR COURSE LEVEL STUDENT LEARNING OUTCOMES	LEARNING ARTIFACTS FOR AA PROGRAM ASSESSMENT

<p>The student will be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate knowledge of general driveline operating concepts, including rear-wheel, front-wheel, and four-wheel drive types. 2. Identify all inner and outer constant velocity joint types; identify propeller shaft applications; perform a propeller shaft and companion flange run out inspection. 3. Perform driveline inspection and service on constant velocity joints, front-wheel drive bearings, and rear-wheel drive bearings. 4. Remove and replace a clutch assembly on a rear-wheel/ front-wheel drive vehicle. 5. Disassemble, inspect, and reassemble a manual transmission / transaxles assembly. 6. Disassemble, inspect, and reassemble rear-wheel drive differentials; perform a gear tooth contact pattern adjustment on a rear-wheel drive differential. 7. Diagnose, test, adjust, and replace electrical / electrical components of four-wheel drive systems. • 8. Disassemble, service, and reassemble a four-wheel drive transfer case. 	<p>AUT Outcome 1: Demonstrate mastery of Automotive Service Technology knowledge and skills.</p> <p>AUT Outcome 2: Demonstrate safety skills appropriate for employees in an Automotive Service work setting.</p> <p>AUT Outcome 3: Apply critical thinking and diagnostic skills as appropriate for Automotive Service Technicians.</p> <p>AUT Outcome 4: Exhibit interpersonal and ethical skills as appropriate for Automotive Service Technicians.</p> <p>AUT Outcome 5: Exhibit leadership, organizational, and professional skills appropriate for Automotive Service Technicians.</p> <p>AUT Outcome 6: Students exhibit employability and/or entrepreneurship skills as appropriate for employees in an Automotive</p>	<p>T, Q, F, SP, SD, Proj, SK.Check</p>	
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**Assessment Codes			
T = Tests	RPT = Report/Presentation	Proj. = Projects	BO = Behavioral Observation
Pre/Post = Pre- and Post-Tests	SP = Skills Performance	Exp. = Experiments	Clin. = Clinicals
OT = Objective Tests	SD = Skills Demonstration	Cap. Proj. = Capstone Project	CS = Case Study
UT = Unit Tests	W = Writing Assignments	Cap. Course = Capstone Course	CP = Case Plan
Q = Quizzes	E = Essays	Prac. = Practicum	Port. = Portfolio
F = Final Examination	DE = Documented Essays	Intern. = Internship	Obs. = Teacher Observation
CF = Cumulative Final	RP = Research papers	H = Homework	Sk. Check = Skills Check-off Curriculum Frameworks
EX = Departmental Exam	J = Jury	PS = Problem Solving	JP = Judged Performance/Exhibition
SE = Nat'l or State Standardized Exam	R = Recital	DB = Discussion Board	

MEANS OF ACCOMPLISHING STUDENT LEARNING OUTCOMES:

The course is competency-based and self-paced using handouts, videotapes, textbooks, computer-assisted instruction and instructor demonstrations.

1. Attending classes, completing book and computer assignments along with laboratory work.
2. Completing reading and homework assignments.
3. Studying/maintaining handouts.
4. Reading current publications from the automotive industry.

Student must demonstrate an understanding theory of operating principles prior to stating lab sheets. Have the instructor or lab assistant sign and verify your lab sheets after completing each lab assignment. Turn in your lab sheets to the instructor or lab assistant for grading and recording.

You will be assigned a specific lab station work area. The equipment you will use is rugged and reliable. However, with abuse or misuse, it will malfunction and become inoperable. Be careful and have the instructor/instructional aide demonstrate the use of the equipment before using it for the first time. Read all instructions carefully and ask questions prior to use. Keep your lab bench work area clean and orderly while performing assignments. Return all equipment/lab components to the proper storage area before departing at the end of the day. Lab and shop will be clean and secured at the end of each project or day whichever comes first. If a lab assignment will take more than one day notify the instructor and secure all parts and project at the end of the day.

EXAMINATIONS:

The course examinations consist of written knowledge examinations and performance evaluations. A knowledge examination is given upon completion of each assignment on the course outline. If you take an exam and score less than 70%, you are allowed to retake the exam on the next class day. First, restudy your textbook, quizzes, lab experiments, etc. and make another attempt. If you have taken the exam three or more times to pass, your grade can never be more than 60. Performance evaluation must be mastered before proceeding to the next assignment. Student will be able to repeat performance evaluations till complete mastery is achieved. Students are encouraged to take the nationally and industry recognized Automotive Service Excellence (ASE) exam upon completion of each automotive area.

ASSIGNMENT AND/OR COURSE OUTLINE

See your Instructor First Day Handout for individual instructor assignment schedule.