Course Description: An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of, charging and starting systems, and electrical accessories. Emphasis on electrical principles, schematic diagrams, and service publications. May be taught manufacturer specific.

Text, References and Supplies: 1. “AUTOMOTIVE SERVICE INSPECTION MAINTENANCE REPAIR” by Tim Gilles 5th Edition. (Note that only one workbook is required for ALL courses: AUMT 1305, 1307, 1310, 1316, 2317)

Course Goals/Objectives: Utilizing appropriate safety procedures, the student will interpret wiring schematics and symbols; explain electrical principles; and explain the theory and principles of battery starting, charging systems, and automotive electrical accessories; demonstrate diagnosis and repair of battery starting, charging systems, automotive electrical accessories and basic electrical wiring and terminal repairs. Demonstrate proper use of electrical test equipment and Ohms law application. Define basic electrical principles, interpret wiring schematics and symbols, and explain operation of batteries, starting/charging systems, and automotive circuits.

A. BASIC ELECTRICAL SYSTEM THEROY
B. BATTERY FUNDAMENTALS
C. BATTERY SERVICES
D. STARTING SYSTEM FUNDAMENTALS
E. STARTING SYSTEM SERVICE
F. CHARGING SYSTEM FUNDAMENTALS
G. CHARGING SYSTEM SERVICE
H. LIGHTING AND WIRING FUNDAMENTALS
I. LIGHTING SYSTEMS DIAGNOSIS AND REPAIR
J. LIGHTING AND WIRING SERVICE
K. SAFETY, SECURITY, COMFORT SYSTEMS, AND ELECTRICAL ACCESSORIES

Student Contributions and Class Policies:
Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity will be reported as never attended and dropped from the course.

1. Student/Participant must furnish a set of approved safety eye glasses.
2. Student/Participant must understand class attendance is critical; therefore, three consecutive absences or five total absences may be considered justification for failure or dismissal from class.
3. Punctuality, being prepared for class, being alert, participating pro-actively and exhibiting a respectful and appropriate attitude will be required.
MIDLAND COLLEGE
SYLLABUS
AUMT 1307
AUTOMOTIVE ELECTRICAL SYSTEMS
2-4

Evaluation of Students:

- 10% = Attendance/Punctuality
- 10% = Professionalism/Participation
- 25% = Mid-term & Final exams
- 40% = Skills Objectives (Lab Assignments)
- 15% = Knowledge Objectives (Classroom Assignments)

100% Total

90 and above A
80-89 B
70-79 C
60-69 D
59 and below F

Course Schedule: This class meets for 2 lecture hours and 4 lab hours per week.

SCANS Information: SCANS skills are taught and/or reinforced in automotive courses. The student must locate, read, interpret and understand instruction information and direction materials. The participant must communicate thoughts, ideas and information through verbal and written mediums. Practical arithmetic and mathematics will apply continually throughout automotive technology training. Listening, interpreting, and responding to verbal communications and instructions as well as speaking in response to questioning will be a daily involvement. Thinking, reasoning, visualizing and problem solving are required assets to the automotive technician. The student/participant must display responsibility, self-management and honesty.

Administrative Information:

Curt Pervier, Division Dean Technical Studies
Lisa Hays, Applied Technology Secretary
(432) 685-4676
Fax: (432) 685-6472

Pete Avalos, Department Chair/Professor
ATC Office #128
(432) 681-6344
pavalos@midland.edu

Students should feel free to contact the instructor at any time. Appointments are encouraged for advising and planning the most appropriate or beneficial course work.
Students with Disabilities: Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.

Non-discrimination Statement:

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. For further information on notice of non-discrimination, visit http://wdcrobcopl01.ed.gov/CFAPPS/OCR/contactus.cfm or call 1 (800) 421-3481.

Spanish

Midland College no discrimina por motivos de raza, color, nacionalidad, sexo, discapacidad, o edad en sus programas o actividades. Las siguientes personas han sido designadas para responder a cualquier pregunta o duda sobre estas políticas no discriminatorias: Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu; Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. Para más información sobre estas políticas no discriminatorias, visite http://wdcrobcopl01.ed.gov/CFAPPS/OCR/contactus.cfm o llame al (800) 421-3481.

*Syllabus subject to change as deemed necessary by the instructor to ensure learning objectives and course goals are met.