DEM112 Introduction to Diesel I Syllabus

Course Information
Credits 4
Campus Washburn Institute of Technology
Address 5724 SW Huntoon
City/State/Zip Topeka, Kansas 66604
Office Fax 785-273-7080

Description
Course includes: Proper care and use of specific instruments as applied within the field of diesel technology; tools used to form threads, internal and external; thread repair, and broken fastener removal; theoretical and practical application of electrical processes in machinery including: Ohm’s Law-series, parallel, and series-parallel circuits; application of starting circuits, charging circuits and testing equipment; repair of electrical circuits and proper repair techniques. Students are expected to observe and comply with all safety rules and regulations at all times.

Textbooks

Student Learning Outcomes:
A. Communicate effectively
B. Integrate technology
C. Learn effectively
D. Demonstrate cooperative teamwork skills
E. Think critically and creatively
F. Demonstrate responsible work ethics

Competencies
1. Use tool catalogs to determine the cost of a quality hand tool set
2. Dress a grinding wheel
3. Sharpen cold chisel
4. Use a file
5. Interpret drawings used in diesel equipment reference materials
6. Interpret graphs used in diesel equipment reference materials
7. Interpret diagrams used in diesel equipment reference materials
8. Interpret tables used in diesel equipment reference materials
9. Use reference materials to answer specific questions
10. Read U.S. customary and metric rules
11. Draw lines to specified lengths
12. Measure lines using a steel rule
13. Measure line objects
14. Measure circle diameters
15. Read standard and metric micrometers
16. Use outside micrometer
17. Use dial micrometer
18. Check a torque wrench for accuracy
19. Measure U.S. customary bolts and threads
20. Measure metric bolts and threads
21. Match bolts with correct size wrenches
22. Restore external threads
23. Cut and restore internal threads
24. Describe characteristics of pipe, tubing, and hose
25. Identify fitting and threads
26. Solve problems using Ohm's Law
27. Interpret electrical values from multi-meter settings
28. Interpret wiring diagrams
29. Tin a soldering iron or gun
30. Solder-splice electrical wiring
31. Install terminals and connectors
32. Measure current, voltage, and resistance with a multi-meter
33. Test and replace light bulbs and test sockets
34. Test charge a sealed battery
35. Slow charge a battery
36. Emergency jump-start a vehicle
37. Identify features for assigned on-road vehicle
38. Identify features for assigned off-road vehicle

Guidelines for Success

Assessment Plan
Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution’s technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

Grading Criteria

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
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<tr>
<td>80 - 89%</td>
<td>B</td>
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<td>70 - 79%</td>
<td>C</td>
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<td>Below 70%</td>
<td>F</td>
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Instruction includes 30% lecture and 70% laboratory exercises.
Labs: Pass/Fail

Attendance
Classroom attendance is required. Material missed must be made up with instructor.
Disability

The Special Support Services (SSS) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST register and provide documentation with the office to be eligible for services. New requests for accommodations should be submitted two months or more prior to the date services should begin; however, contact the SSS Office as soon as a need may arise. Depending on the accommodation request, four to eight week lead time may be needed for timely and effective provision of services. SSS coordinates and assist in arranging services it deems appropriate of eligible students on a case-by-case basis.

If you are a student with a disability that may substantially limit your ability to participate in this class and believe you will need accommodations, it is your responsibility to contact:

Special Support Services Coordinator
Phone: 785-228-6356
E-Mail: ssscoordinator@washburn.edu