DEM142 Engines II Syllabus

Course Information
Credits 5
Campus Washburn Institute of Technology
Address 5724 SW Huntoon
City/State/Zip Topeka, Kansas 66604
Office Fax 785-273-7080

Description
Course includes: Basic principles of various engine systems and reconditioning of component parts to include various fuel systems. Principles of computer-controlled diesel engines, with an emphasis on diagnosis and troubleshooting and understanding user interface with electronic engine software are covered. Prerequisite: DEM136. 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. Inspect and test power and ground circuits and connections; determine needed repairs
2. Access engine parameters; monitor or change as requested by customer
3. Remove, inspect, reinstall and adjust electronic unit injectors; determine needed repairs
4. Conduct operator survey for engine diagnosis
5. Interpret SAE code identifiers
6. Check air intake system for restrictions
7. Check exhaust back pressure
8. Check oil pressure
9. Locate an active fault code
10. Determine maintenance need for given situations
11. Interpret maintenance troubleshooting charts
12. Inspect engine coolant level and condition
13. Pressure test coolant system and radiator cap, oil sample, and change oil filter(s)
14. Inspect and test indicator system components
15. Perform a daily preventive maintenance check
16. Perform a mileage preventive maintenance check
17. Perform an engine tune-up

**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</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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<tr>
<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