SYLLABUS

DATE OF LAST REVIEW :  02/11/2013
CIP CODE:         47.0604
SEMESTER:         Departmental Syllabus
COURSE TITLE:     Light Truck Power Equipment
COURSE NUMBER:    AUTT0107
CREDIT HOURS:    2
INSTRUCTOR:       Departmental Syllabus
OFFICE LOCATION: Departmental Syllabus
OFFICE HOURS:    Departmental Syllabus
TELEPHONE:       Departmental Syllabus
EMAIL :           KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S):   None

REQUIRED TEXT AND MATERIALS:  
Please see bookstore for current textbook(s) and other required material.

COURSE DESCRIPTION:
This course is designed to cover Electrical, Hydraulic and Mechanical power units that are found on Snow Plows, Dump Beds and Dump Trucks. The Class will cover operation, diagnosis, and rebuilding of these power units.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:
All students must comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

I. Identify types of power units
   A. Electrical
   B. Hydraulic
   C. Mechanical

II. Electrical Diagnosis
   A. Power supplies
   B. Wires and connections
   C. Grounds
   D. Fuses

III. Hydraulic Diagnosis
   A. Pumps
   B. Valves
   C. Hoses
   D. Connection
   E. Fittings
   F. Cylinders
   G. Seals

IV. Mechanical diagnosis
   A. P.T.O’s
   B. Shafts
   C. Joints

V. Bearings

EXPECTED LEARNER OUTCOMES:
A. The learner will be able to Diagnosis Electrical problems
B. The learner will be able to Diagnosis P.T.O Problems
C. The learner will be able to Diagnosis Hydraulic problems
D. The learner will be able to explain pump differences
E. The learner will be able to diagnosis pump failures
F. The learner will be able to diagnosis fitting and hose
G. The learner will be able to diagnosis Mechanical unit failures

COURSE COMPETENCIES:

The learner will be able to Diagnosis Electrical problems
1. Diagnosis Electrical failures
2. Define Amps
3. Define Current
4. Define Resistance
   *The learner will be able to diagnosis P.T.O Problems*
5. Explain types of engagements
6. Explain methods of testing shaft wear
7. Explain P.T.O. control diagnostics
   *The learner will be able to diagnosis Hydraulic problems*
8. Define closed system
9. Define open systems
10. Define pressure system testing
    *The learner will be able to explain pump differences*
11. Identify vane pumps
12. Identify gear pumps
13. Identify G-rotor pumps
    *The learner will be able to diagnosis pump failures*
14. Diagnosis seal failure
15. Diagnosis bearing failure
16. Diagnosis U-joint failure
    *The learner will be able to diagnosis fitting and hose*
17. Describe types of joints
18. Remove, clean and inspect power units
19. Disassemble power units
    *The learner will be able to diagnosis Mechanical unit failures*
20. Determine needed repairs on power units
21. Assembly power units to factory Specifications
22. Refill with proper fluid
23. Install power units
24. Run performance check on power unit

**ASSESSMENT OF LEARNER OUTCOMES:**
Assessment methods may include, but are not limited to, the following: Homework, Assignments, Quizzes, Class Participation, Chapter Tests, and Final Exam. The grading scale and the process for calculating the course grades are to be determined by the individual instructors. This information will be included in each instructor’s syllabus.

**SPECIAL NOTES:**
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.
Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center in Room 3354 or call (913) 288-7670 V/TDD.