SYLLABUS

COURSE # AND TITLE __COMP124 **Nat Gas Engine Trblshoot** __ # **OF CREDITS** _3__

CATALOG DESCRIPTION: Develop knowledge and skills to effectively troubleshoot common problems associated with natural gas engines. Students will gain the knowledge needed to diagnose and repair problems associated with natural gas engines.
Semester Offered: Fall Spring and Summer
Prerequisites: COMP 111, 112, 121, 122, 123

Common Student Learning Outcomes *Upon successful completion of San Juan College programs and degrees, the student will....*	
Learn	*Students will actively and independently acquire, apply and adapt skills and knowledge to develop expertise and a broader understanding of the world as lifelong learners.*
Think	*Students will think analytically and creatively to explore ideas, make connections, draw conclusions, and solve problems.*
Communicate	*Students will exchange ideas and information with clarity and originality in multiple contexts.*
Integrate	*Students will demonstrate proficiency in the use of technologies in the broadest sense related to their field of study.*
Act	*Students will act purposefully, reflectively, and respectfully in diverse and complex environments.*

GENERAL LEARNING OBJECTIVES

1. Diagnose, repair or replace defective sensors and sending units
2. Diagnose cranks (won't start conditions) with regard to tattletale safety shut down
3. Diagnose, repair or replace defective wiring to IAW appropriate guidelines

SPECIFIC LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to …

1. Develop skills needed to troubleshoot and diagnose ignition problems
2. Distinguish power train problems by using vibration spectrums on power cylinders and main frame
3. Interpret ultra-sonic patterns to diagnose leaking piston rings and valves
4. Understand the events of a natural gas engine at each degree of crankshaft rotation
5. Develop skills for trending temperature and pressures for diagnosing problems
6. Gain knowledge in the use of "root cause" and "failure analysis"
7. Develop skills in the basic use of an engine analyzer

Syllabus developed by __Randy R Randall and Linda J Martinez___ Date: ____February 15, 2006____

Syllabus reviewed by _____ Date: _____

A current syllabus must be on file in the dean's office for every course being taught during a given semester.