

Course Outcome Guide (COG)

Approved April 13, 2015

Course: DTEC 216	Title: Advanced Electronics	Credits:	4	Instructor:	
Course Description:	This course covers electronic engine component identification, function and testing procedures. Diagnostics of electronic controls systems found on modern diesel engines.				
Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Institutional
<ul style="list-style-type: none"> For the student to develop a basic understanding of electronic components used in computer controlled engines and there function Develop skills for proper procedures for use of shop tools and equipment Develop skills for performing engine diagnostics Develop knowledge of electronic management systems used in modern engines 	<ul style="list-style-type: none"> Identify and describe the function of engine components Demonstrate proper procedure in the use of shop tools and equipment Demonstrate knowledge of electronic control systems used in Caterpillar, Cummins and Detroit diesel engines Perform troubleshooting diagnostics on engine management 	<ul style="list-style-type: none"> Weekly testing Shop performance Demonstration of course specific skills 	<ol style="list-style-type: none"> Demonstrate the ability to identify electronic engine components and there function Perform troubleshooting diagnostics on engine management systems and components Demonstrate knowledge of electronic control systems used in Caterpillar, Cummins 	<ol style="list-style-type: none"> Make troubleshooting decisions and complete repairs using the proper tools and equipment based on concepts and processes learned in the Transportation program. Be prepared to take NATEF Certification tests. Apply the knowledge acquired for future employment. Apply the knowledge of safety procedures and handling of hazardous material processes to their training and future employment. 	<ol style="list-style-type: none"> Students will demonstrate effective communication skills. Students will use reasoning skills to analyze and solve problems.

	systems and components				
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