JOHN DEERE/SOUTHEAST COMMUNITY COLLEGE-MILFORD CAMPUS
DEERE CONSTRUCTION & FORESTRY EQUIPMENT TECH PROGRAM

DEERE CONSTRUCTION & FORESTRY EQUIPMENT TECH COURSE DESCRIPTIONS

UNIT	TITLE	CLASS	LAB	CRS.
	First Quarter			
JDCE1130	DEERE ORIENTATION	30	45	5.5
	This course provides an introduction to the John Deere Product line, manuals, time management, engine classifications, and serial numbers. Warranty, shop tickets, and John Deere service department policy and procedures are explained as well as an introduction to John Deere Service ADVISOR and Parts Pro.			
JDCE1131	DEERE FUNDAMENTALS	45	30	4.5
	The proper use and care of power and hand tools. Encompasses micrometers, dial indicators, torque wrenches, twist drills, taps, dies, screw extractors, thread restoration, tube fittings, and fasteners. Safety, product labels, and material safety data sheets, and handling of hazardous materials will be explained. Safe forklift operation will be covered.			
WELD1185	DIESEL TRUCK, JDAT, JDCE PROGRAMS	10	20	1.5
	Theory and practice of oxyacetylene braze welding and cutting including proper operation of equipment. Principles, safety procedures, and application of gas metal Arc welding (MIG).			
JDCE1134	DEERE ELECTRICAL/ELECTRONICS I	84	36	9.0
	Basic electrical principles and applications of magnetism, electromagnetism, and the safe utilization of electrical test meters are covered. The design, construction, and safe operation and testing of lead acid batteries is part of this class. Principles of operation, testing, and repair of ignition systems, cranking systems, and charging systems are included. Safety is stressed in this course.			
BSAD1010	MICROSOFT APPLICATIONS I	45		4.5
	Use of Windows operating system to learn about My Computer and Windows Explorer to manage folders and files. Use of a popular Internet browser to explore the World Wide Web and work with electronic mail. Use of Microsoft Office software site to learn basic features and integration of the word processing application MS Word and the spreadsheet application MS Excel.			
	Second Quarter			
JDCE1340	DEERE THEORY OF ENGINE OPERATION	40	20	4.5
	Study of basic physical principles, operation, and construction of two and four stroke cycle engine. Ignition timing of four-stroke cycle engines to factory specifications. Basic diagnostic engine test procedures will be practiced on spark and compression ignition engines. This course also covers the types of internal combustion engine cooling systems, lubrication systems, air intake systems, and exhaust systems. Safety training is included.			
JDCE1341	DEERE DIESEL FUEL SYSTEMS	30	18	3.5
	Operation, theory, testing, and repair methods for spark ignition engine fuel systems along with normal and abnormal combustion theory. Fuel production, testing, storage,			

and handling are also covered. The theory of diesel fuel injection system includes the injection pump, and nozzle components, fuel flow, and fuel filtering systems. Maintenance procedures including proper removal, installation, and timing of fuel injection pumps is also covered. Safety is stressed.

JDCE1342 DEERE ENGINE REPAIR 50 112 8.5
Basic theory, construction, and operation of engine valve train and cylinder head. Valve timing and adjustments of Deere engines. Design, construction, operation, and service methods for the following engine components: crankshafts, connection rods, piston assemblies, cylinder liners, bearings, and related engine accessories. Crankshaft lubricants, lubrication systems, and oil filtration systems. Disassembly, inspection, measurements, reassembly, and adjustments performed on Deere diesel engines. Safety is included.

PHYS1150 DESCRIPTIVE PHYSICS (or higher) 45 30 6.0
Conceptual survey of physics for the non-science major. Topics covered include motion, fluids, heat, electricity, magnetism, waves, and optics, Emphasis will be placed on using concepts to analyze physical problems.

Third Quarter

JDCE1901 DEALER COOPERATIVE EDUCATION 480 12.0
On the job experience in a Deere construction equipment dealership. Application of skills and concepts learned in previous terms. Supervised by Southeast Community College – Milford Campus Deere Construction Equipment instructor. Safety rules/procedures are included in this course.

4th Quarter

JDCE1133 DEERE HEATING, VENTILATION & AIR CONDITIONING 40 50 5.5
Theory, operation, and repair of Deere heating, ventilation, and air-conditioning systems. Includes proper operation of recovery/recycling equipment and leak detection equipment. Retrofit procedures for converting a system from R-12 to R-134A refrigerant. Operation and repair of Climate Control as used on Deere Construction and Forestry Equipment is included. Safety is stressed in this course.

JDCE1343 DEERE ELECTRICAL/ELECTRONICS II 50 60 7.0
Review of electrical fundamentals including cranking motors, alternators, and ignition systems. An introduction to basic electronics is part of this course along with procedures and use of a digital multimeter in electrical circuits. Techniques of circuit diagnosis using electrical schematics. Function, operation and testing of semiconductors and transistors. Microprocessor operation, including inputs and outputs. Testing of machine circuits including lighting, accessory, instrumentation, and gauges. Lab projects include the repair procedures and testing of cranking motors and alternators. Safety is stressed in this course.