

2018-2019

SOUTHEAST
COMMUNITY
COLLEGE
NEBRASKA

DIESEL-AG EQUIPMENT SERVICE TECH

Associate of
Applied Science
Degree

MILFORD CAMPUS

www.southeast.edu/DieselAgEquipment



Careers in the agricultural equipment service industries offer a variety of challenging and rewarding opportunities. Get the education and hands-on training you need for a career as an ag equipment diesel technician. Graduates can specialize in electrical/electronic systems, precision farming, HVAC, harvesting, planting, hydraulics, power trains and of course engine/fuel systems. Many people choose to be masters of all agricultural equipment systems to personally handle any customer concern. You'll receive comprehensive training in all ag equipment systems during the program. Jobs are currently available with dealerships, independent shops, farming operations and many more. This course of study utilizes industry-sponsored equipment, tools and resources that are typical of modern dealership service requirements. There are tremendous employment opportunities available now, and this trend will continue in the future.

General Education Requirements:

Contact your program advisor to select general education courses from each category which will meet your program's graduation requirements. See the General Education pages online for a complete list.

(One class from each area below.)

Oral Communications	4.5
Written Communications	4.5
Critical Thinking & Problem Solving	6.0
PHYS1150 Descriptive Physics	

(Plus two classes from the three areas below; no two classes from the same area.)

Global Awareness and Citizenship, Analytical, Quantitative and Scientific Reasoning, and/or Career and Life Skills.

See catalog for eligible classes. **9.0**

24.0 hours

Students are required to provide or purchase a basic tool set during the first quarter. A required tool list is on the back of this page. Students are required to wear program uniforms while in classroom or laboratory settings. Shirts may be purchased in the SCC Campus Store.



Diesel-Ag Equipment Service Tech Courses:

Course offerings and prerequisites will be determined by the program. A grade of "C" or higher in all AGST classes is required to progress through the program.

Course #	Course title	Credit hrs
AGST1120	Basic Electrical / Electronics	3.0
AGST1121	Electrical / Electronic Circuit Diagnostics	3.0
AGST1122	Electrical Charging Systems	2.0
AGST1123	Shop Processes & Safety	3.0
AGST1124	Power Trains I	3.0
AGST1125	Fuel Systems I	2.0
AGST1226	Theory of Engine Operation	2.0
AGST1228	Valve Trains	3.0
AGST1230	Engine Overhaul and Inspection	8.0
AGST1342	Heating, Ventilation & Air Conditioning I	3.0
AGST1344	Fuel Systems II	4.5
AGST1346	Ag Equipment Hydraulics Systems	7.5
AGST1901	Ag Equipment Cooperative Experience	10.0
AGST2554	Electrical Systems II	5.0
AGST2556	Power Trains II	6.0
AGST2558	Heating, Ventilation & Air Conditioning II	1.5
AGST2662	Planting & Seeding Equipment	5.0
AGST2663	Harvesting Systems	6.5
AGST2664	Spraying Equipment, Precision Guidance & Control Systems	3.0
WELD1191	GMAW and SMAW Industrial	3.0
		84.0 hours
Optional:		
TRUK1101	CDL-Class A Training	3.5



Graduate Earnings

Recent graduates report an average starting wage of \$16 per hour.

For more information contact:

Lester Breidenstine, Program Chair
402-761-8328, 800-933-7223 ext. 8328,
lbreiden@southeast.edu

or the College Admissions Office
Milford 402-761-8243, 800-933-7223 ext. 8243

Equal Opportunity/NonDiscrimination Policy - It is the policy of Southeast Community College to provide equal opportunity and nondiscrimination in all admission, attendance, and employment matters to all persons without regard to race, color, religion, sex, age, marital status, national origin, ethnicity, veteran status, sexual orientation, disability, or other factors prohibited by law or College policy. Inquiries concerning the application of Southeast Community College's policies on equal opportunity and nondiscrimination should be directed to the Vice President for Access/Equity/Diversity, SCC Area Office, 301 S. 68th Street Place, Lincoln, NE 68510, 402-323-3412, FAX 402-323-3420, or jsoto@southeast.edu. This publication should not be considered a contract between SCC and any prospective student. SCC's Board of Governors reserves the right to make changes in this publication during the life of the publication and without notice. A0715 - AGST (06/18)

Estimated Expenses

Nebraska Resident tuition/fee rate is \$69.50 per credit hour. Out-of-state tuition/fee rate is \$83.50 per credit hour. Graduation fee is \$25.

Housing is available at Beatrice and Milford campuses only. Tuition, books and fees are dependent upon classes taken each quarter.

Students should plan a budget that includes room, meals, clothing, laundry, medical care, recreation and entertainment, transportation, insurance, etc.

FIRST QUARTER

Tuition And Fees	\$1,355
Books	600
Tools	3,562
Supplies (min. of 3 uniform shirts)	350
Total	\$5,867

SECOND QUARTER

Tuition And Fees	\$1,599
Books	520
Tools	717
Total	\$2,836

THIRD QUARTER

Tuition And Fees	\$1,355
Books	330
Tools	1,917
Total	\$3,602

FOURTH QUARTER

Tuition And Fees	\$695
COOP Quarter	
Total	\$695

FIFTH QUARTER

Tuition And Fees	\$1,182
Books	435
Tools (may be purchased from optional list)	
Total	\$1,617

SIXTH QUARTER

Tuition And Fees	\$1,321
Books	360
Tools (may be purchased from optional list)	
Total	\$1,681

Total Estimate For Program **\$16,298**

Basic Tools for Diesel-Ag Equipment Service Technology Program

* May be purchased at the SCC Milford Campus Store. Tools needed the first week of school (meet with instructor first).

** Lab project kits may be purchased at the Milford Campus Parts Store.

SUPPLIES NEEDED FOR FIRST QUARTER

- * Safety Glasses (must meet Z87 specs)
- * Notebook Filler Paper
- * 6 - Grommet Folders/Dividers
- * 1 - Pack of Pens
- * 3 - Pencils
- * 1 - Highlighter
- * Welding Gloves
- * Ruler
- * 1 - Pack Colored Pencils
- * Large 3-Ring Notebook
- * Hearing Protection
- * Oxyacetylene Welding Headgear w/Face Shield #5 Lens, also clear face shield for general shop eye protection while grinding, buffing, etc.
- * Arc Welding Helmet w/#10 Lens and 2 clear plastic lenses
- * Chipping Hammer
- * 1 - Black Permanent Marker
- * 1 - Silver Permanent Marker
- ** Electrical Test Lead Kit
- ** Engine Lift Kit Materials
- * Uniforms (shirts) (3-5 minimum)

(SPECIAL NOTE: The 2nd day of the quarter the student is required to have in their possession the following named tools:

1 - Fluke Model 87 or 88 Multimeter (NO SUBSTITUTES)

1 - 0 to 1" Micrometer (Non-Digital, Electronic or Mechanical (Check w/ instructor before purchasing for requirements))

Do NOT PURCHASE from a vendor that must order & deliver at a later date!

TOOLS REQUIRED TO ENTER FIRST QUARTER

- 1 - Fluke Model 87 Digital Multimeter (NO SUBSTITUTES)
- 1 - Roll-A-Way Tool Box (Top Chest Optional) (Maximum 55" long — 55" includes hang/add on boxes)
- 1 - Combination Pliers
- 1 - 6" Needle Nose Pliers
- 1 - 7" Diagonal Pliers
- 1 - Water Pump or Channel Lock Pliers (12" minimum)
- 1 - 4" Vise Grip Pliers w/Cutter
- 1 - 6" Vise Grip Longnose Pliers
- 1 - 10" Vise Grip Pliers w/cutter
- 1 - Allen Wrench Set-English
- 1 - Metric Allen Wrench Set
- 1 - 'O' Ring Tool
- 1 - Penlight
- 1 - 6" Steel Rule
- 1 - Ignition Wrench Set (7/32" - 3/8" range)
- 1 - Hacksaw w/Blades
- 1 - Rolling Head Bar (6" to 20")
- 1 - 1 lb. Ball Peen Hammer
- 1 - Compothane "Dead Blow" Hammer, 2 or 3 lb.
- 1 - .0015" - .030" Feeler Gauge Set
- 1 - Gasket Scraper
- 1 - 10" Half Round File w/Handle
- 1 - 10" Single Cut Mill Bastard File w/Handle
- 1 - 8" x 5/16" Round File w/Handle
- 1 - File Card
- 1 - Screw Extractor Set
- 1 - 1 1/2" Flat Tip Screwdriver
- 1 - 2 7/8" Flat Tip Screwdriver
- 1 - 4" Flat Tip Screwdriver
- 1 - 6" Flat Tip Screwdriver
- 1 - 8" Flat Tip Screwdriver
- 1 - No. 1 Phillips Screwdriver
- 1 - No. 2 Phillips Screwdriver
- 1 - No. 3 Phillips Screwdriver
- 1 - No. 4 Phillips Screwdriver
- 1 - Brass Drift Punch Set 3/8" to 1/2"
- 1 - Center Punch
- 1 - Flat-Nose Snap Ring Pliers - narrow tip
- 1 - Flat-Nose Snap Ring Pliers - wide tip
- 1 - 1/8" Pin Punch
- 1 - 5/32" Pin Punch
- 1 - 3/16" Pin Punch
- 1 - 1/4" Pin Punch
- 1 - 1/8" Starting Punch
- 1 - 1/4" Starting Punch
- 1 - Electrical Pliers, Wire Crimper/Cutter/Stripper
- 1 - Wire Type Spark Plug Gage - Standard Ignition
- 1 - Wire Type Spark Plug Gage - Electronic Ignition
- 1 - Short Handle Sledge Hammer - 4 lb.
- 1 - Screwdriver, Flat Tip, Pocket, .025" tip, 4 3/4" Long (Snap-On SDD2240 or equivalent)
- 1 - 3/8" Cold Chisel
- 1 - 1/2" Cold Chisel
- 1 - Combination Wrenches (3/8" to 1 1/4")
- 1 - Bearing Race Punch (MAC PB39L or equivalent)
- 1 - 1/4" Drive Socket Set (1/4" to 1/2") -6 Point, including Ratchet, Short Extension & Drive Handle & Universal Joint
- 1 - 3/8" Drive Socket Set (3/8" to 7/8") -12 Point, including Ratchet, 3" & 5" Extensions, Flex Handle, Speed Handle, and Universal Joint
- 1 - 1/2" Drive Socket Set (3/8" to 1 1/4") -12 Point, including Ratchet, 3" & 6" Extensions, Flex Handle and Universal Joint
- 1 - 3/8" to 1/4" Adapter
- 1 - 1/4" to 3/8" Adapter
- 1 - 3/8" to 1/2" Adapter
- 1 - 1/2" to 3/8" Adapter
- 1 - Cotter Pin/Seal Puller (SnapOn #S59094B or equivalent)
- 1 - 1/2" Drive Deep Well Sockets, 3/8" to 7/8", 12 Point
- 1 - Dial Indicator w/Magnetic Base (1" Travel Indicator)
- 1 - English Thread Pitch Gage
- 1 - Metric Thread Pitch Gage
- 1 - Respiator (Replaceable Cartridge Type)
- 1 - 3/8" Drive Universal Socket Set, Shallow 6-point, (7/16" to 3/4")
- 1 - 3/8" Drive Socket Set, Deep, 6-point, (1/4" to 7/8")
- 1 - Scribe
- 1 - 1/4" Drive Metric 6-point Socket Set (5-14mm)
- 1 - 40-200 in. lbs. 1/4" Drive Torque Wrench
- 1 - 16" Pinch Bar
- 1 - 18" Pry Bar
- 1 - Set of 4 Internal/External Snap Ring Pliers. Tip Diameters: .038, .047, .070, .090
- 1 - 1/2" Drive 19mm Deep Socket-12 point
- 1 - Tire Pressure Gauge (100psi capacity)
- 1 - Twist Drill Index 1/16" to 1/2" by 64ths
- 1 - 3/8" Variable Speed/Reversible Drill (Electric or Air)
- 1 - Allen Head Socket Set (English) (3/8" Drive)
- 1 - Allen Head Socket Set (Metric) (3/8" Drive)

TOOLS REQUIRED FOR SECOND QUARTER IN ADDITION TO THOSE REQUIRED FOR FIRST QUARTER:

- 1 - 3/8" Drive 5/8" Flare Nut Socket - Snap-On only FRXM201
- 1 - 3/8" Drive 3/4" Flare Nut Socket - Snap-On only FRXM241
- 1 - 3/8" Drive 17mm Flare Nut Socket - Snap-On only FRXM17
- 1 - 1/2" Torque Wrench (150 ft. lb. minimum)
- 1 - 6 Point Flare Nut Wrench 1/4" - 5/16"
- 1 - 6 Point Flare Nut Wrench 3/8" - 7/16"
- 1 - 6 Point Flare Nut Wrench 1/2" - 9/16"
- 1 - 6 Point Flare Nut Wrench 5/8" - 3/4"
- 1 - Metric Combination Wrench Set (8mm to 32mm)
- 1 - 3/8" Drive Metric Socket Set (8mm to 19mm)
- 1 - 1/2" Drive Metric Socket Set (10mm to 27mm + 30mm & 32mm)
- 1 - 1/4" & 3/8" Drive Torx Drivers (T-8 to T-55) (SnapOn 212EFTXY or equivalent)
- 1 - 3/8" Drive Torque Wrench (5ft.lbs. to 75ft.lbs.)
- 1 - Fender/Engine Cover
- 1 - 2 lb. Ball Peen Hammer or 3 lb. Machine Hammer
- 1 - Roll Pin Punch Set - 12 piece set (SnapOn PPR712K or equivalent)
- 1 - 1/4" & 3/8" Drive Torx Socket Set (E4 to E18) (SnapOn 210AFLEY or equivalent)
- 1 - Dial Caliper (0 to 6")
- 1 - Utility Light w/10ft. Cord (Troublelight)
- 1 - 1/4" & 3/8" Drive Torx Bit Set (T8 to T55) (SnapOn 212EFTXY or equivalent)

TOOLS REQUIRED FOR THIRD QUARTER IN ADDITION TO THOSE REQUIRED FOR FIRST AND SECOND QUARTER:

- 1 - Air Conditioning Service Wrench (1/4" to 3/16" square drive on one end w/1/2" to 9/16" Hex Wrench on opposite end)
- 1 - Air Conditioning Thermometer (0o to 220o)
- 1 - R 134A Can Tap Valve (SnapOn ACT413 or equivalent)
- 1 - 3/8" Air Ratchet
- 1 - 3/8" Air Impact Wrench
- 1 - 3/8" Impact Socket Set (3/8" to 7/8")
- 1 - 1/2" Air Impact Wrench
- 1 - 1/2" Impact Deep Socket Set (1/2" to 1 1/2")
- 1 - 1/2" Impact Socket Set (3/8" to 1 1/4")
- 1 - Angle Head Open End Wrench Set (3/8" to 1 1/4")
- 1 - Metric Angle Head Open End Wrench Set (10mm to 19mm)
- 1 - 3/8" Drive Crowfoot Open End Wrench Set (3/8" to 2")
- 1 - 3/8" Drive Metric Deep Socket Set (6mm to 19mm)
- 1 - 1/2" Drive Metric Deep Socket Set (10mm to 20mm)
- 1 - Air Hammer Set, Medium Duty (SnapOn #PHG2045CH4 or equivalent)
- 1 - Bushing Driver Set (SnapOn #A157C or equivalent)
- 1 - Slide Hammer (SnapOn #CJ250 or equivalent)
- 1 - Air-Conditioning R-134A Gauge/Manifold/Hose set
- 1 - Creeper
- 1 - 3/8" Drive Impact Swivel Socket Set (3/8" to 9/16")

TOOL REQUIREMENTS FOR FOURTH-SIXTH QUARTERS: (Same As Those Required For First-Third Quarters)

(SPECIAL NOTE: Many employers will require the student to use Safety-Toe boots or shoes while participating in Cooperative Education.)

THE FOLLOWING TOOLS ARE OPTIONAL:

- 1 - 3/8" Air Ratchet
- 1 - 3/8" Air Impact Wrench
- 1 - 3/8" Impact Socket Set (3/8" to 7/8")
- 1 - 1/2" Air Impact Wrench
- 1 - 1/2" Impact Deep Socket Set (1/2" to 1 1/2")
- 1 - 1/2" Impact Socket Set (3/8" to 1 1/4")
- 1 - Angle Head Open End Wrench Set (3/8" to 1 1/4")
- 1 - Metric Angle Head Open End Wrench Set (10mm to 19mm)
- 1 - 3/8" Drive Crowfoot Open End Wrench Set (3/8" to 2")
- 1 - 3/8" Drive Metric Deep Socket Set (6mm to 19mm)
- 1 - 1/2" Drive Metric Deep Socket Set (10mm to 20mm)
- 1 - Air Hammer Set, Medium Duty (SnapOn #PHG2045CH4 or equivalent)
- 1 - Bushing Driver Set (SnapOn #A157C or equivalent)
- 1 - Slide Hammer (SnapOn #CJ250 or equivalent)
- 1 - Air-Conditioning R-134A Gauge/Manifold/Hose set
- 1 - Creeper
- 1 - 3/8" Drive Impact Swivel Socket Set (3/8" to 9/16")

NOTE: TOOLS MAY BE PURCHASED FROM VENDORS ON CAMPUS, IF STUDENTS DESIRE. THIS INCLUDES FIRST QUARTER.

NOTE: Students will not be allowed to use personal tool chests or Roll-A-Way tool cabinets, other than specified above, due to space limitations.

SCC is the Nebraska AGCO Advantage College with "Dealer Technician Development." SCC also is a Case New Holland Agricultural & Industrial partnership program. We still continue serving all brands of ag equipment industries in our 15-county service area.

