

2021  
2022

**YOUR FUTURE. YOUR CHOICE.**

[www.southeast.edu/DieselAgEquipment](http://www.southeast.edu/DieselAgEquipment)

CHOOSE YOU!

**STEM**



As a diesel technician, you are entering a career path that can take you anywhere! You will train to properly and efficiently repair diesel agricultural and off-highway equipment in one of the finest facilities in the region: the Crete Carrier Diesel Technology & Welding Center.

Southeast Community College uses a bumper-to-bumper approach, ensuring that graduates are knowledgeable about each major system, including engines, hydraulics, HVAC, electrical and drivetrains.

Diesel technicians rely heavily on technology and tools to inspect, diagnose and repair all aspects of off-highway equipment, including agricultural and construction equipment.

In the summer, you will be placed into an approved industry site to take a 5-credit hour Cooperative Experience course. You will receive valuable experience on customer projects and work directly with a mentor technician. You will receive a wage for the minimum 300 on-the-job work hours and many students work at their job site throughout the summer.

## SCC is the Right Choice

- Students spend approximately 75% of their time in the lab and 25% in a classroom setting.
- Students who make a commitment to master fundamental technical skills, interpersonal relationships and a solid work ethic have tremendous opportunities in the agriculture diesel service and repair industry.
- Our graduates also find employment in construction equipment service, power generation, railways, aerospace, and manufacturing.

### New! State-of-the-art facilities include:

- Contamination control measures for machinery and technicians, including a large wash bay, floor scrubber and used fluid/filter recycling
- New hydraulic and engine oil dispensed through a closed system
- Combined classroom/lab spaces for component studies
- Large-screen interactive media stations displayed in lab spaces for in-house or worldwide connectivity with training resources
- State-of-the-art welding center

The Diesel-Ag Equipment Service Tech program utilizes industry-sponsored equipment, tools and resources that are typically in modern dealerships.

You can choose to specialize in electrical/ electronic systems, precision farming, HVAC, harvesting, planting, hydraulics, power trains or engine/fuel systems. Many students choose to be masters of all agricultural equipment systems to personally handle any customer concern.

Credit hours required for graduation:

**Diesel-Ag Equipment Service Tech**  
»Associate of Applied Science ..... 70

Additional certifications available:

- »Lift Truck Operator certification (optional)
- »A/C Refrigerant Handling certification (required)



Scan this code to access the course listing

For more information contact:

Karl Eickhoff, Program Director  
402-761-8309  
KEickhoff@southeast.edu

or the Admissions Office at  
402-437-2600  
admissions@southeast.edu

**SCC receives requests for skilled diesel technicians almost daily!**

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.

A0719 - AGST (10/21)

### 2021-2022 estimated expenses to graduate with an award of 70 credit hours.

Resident	
Tuition/Fee Rate Per Credit Hour	\$114
Resident Tuition/Fees	\$7,980
Books	\$2,245
Supplies	\$407
Special Fees	\$35
Tools	\$8,500
Uniform	\$150
<b>Total:</b>	<b>\$19,317</b>
Non-Resident	
Tuition/Fee Rate Per Credit Hour	\$135
Non-Resident Tuition/Fees	\$9,450

## » Career Options

- Ag Equipment Technician
- Construction Equipment Technician

### Recent Graduates

report a yearly average starting salary of

**\$39,728**

# Diesel-Ag Equipment Service Technology Program - Required Basic Tool List

Students are required to use safety-toe boots or shoes during all lab activities and while participating in Cooperative Education/Internship.

## 1st Semester

### **PPE (PERSONAL PROTECTIVE EQUIPMENT)**

- \*1 Safety Eyewear (Z-87 Approved)
- \*1 Hearing Protection (Ear muffs of Ear canal plugs)
- \*\*\*1 Pair Safety Toe Boots or Shoes

### **SUPPLIES:**

\*Calculator (4-function), Padlock for tool box, Arc Welding Gloves, and Electrical Test Kit (#80265115) in the Campus Store.

### **WELDING SUPPLIES**

(needed the first week of first semester.)

- Burn Jacket **or** Welding Leathers
- Safety Glasses with side shields
- Gauntlet-style welding gloves
- Auto darkening welding helmet with either "Grind Mode" **or** a #5 shade for Oxy Acetylene work as well as a #10 shade for GMAW and SMAW welding
- Welpers or MIG welding pliers (must be able to cut .035" welding wire)
- Ear Plugs (3 Pair)
- Welding Beanie (optional but beneficial)
- Chipping Hammer and Wire Brush (only required for WELD 1191 Not WELD 1190)
- Leather Boots
- Denim Jeans or Overalls (No holes or tears in them)

### **TOOL CART**

- 1 Tool Cart - lockable (**max. size: 30" wide X 18" deep X 40" tall**)

### **ELECTRICAL TOOLS**

- \*1 Fluke Model 87 Digital Multimeter (NO SUBSTITUTES)
- 1 Electrical Pliers, Wire Crimper/Cutter/Stripper
- 1 Wire Type Spark Plug Gage -Standard Ignition
- 1 Wire Type Spark Plug Gage -Electronic Ignition
- \* 1 - Electrical Test Lead Kit 802 651 151
- \* 1 - Jumper Kit #80265115
- 1 Penlight

### **PLIERS**

- 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 Flat-Nose Snap Ring Pliers - narrow tip
- 1 Flat-Nose Snap Ring Pliers - wide tip

### **HAND WRENCHES**

- 1 Allen Wrench Set-English
- 1 Metric Allen Wrench Set
- 1 Ignition Wrench Set (7/32" - 3/8" range)
- 1 Combination Wrenches (3/8" to 1 1/4")

### **SOCKET WRENCHES**

- 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 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 1/2" Drive Socket et (3/8" to 1 1/4" - 12 point, including Ratchet, 3" & 6" Extensions, Flex Handle, Speed Handle and Universal Joint
- 1 1/2" Drive Deep Well Sockets, 3/8" to 7/8", 12 point
- 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 1/4" Drive Metric 6-point Socket Set (5-14mm)

### **CUTTING TOOLS**

- 1 Hacksaw w/Blades
- 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 Gasket Scraper

### **HAMMERS**

- 1 Short Handle Machine Hammer - 4 or 5 lb.
- 1 1 lb. Ball Peen Hammer
- 1 Compothane "Dead Blow" Hammer, 2 or 3 lb.

### **PRYING TOOLS**

- 1 'O' Ring Tool
- 1 Rolling Head Bar (6" to 20")

### **MEASURING**

- 1 0 to 1" Micrometer (Non-Digital)
- 1 .0015" - .030" Feeler Gauge Set
- 1 Dial Indicator w/Magnetic Base (1" Travel Indicator)
- 1 English Thread Pitch Gage
- 1 Metric Thread Pitch Gage
- 1 40-200 in. lbs. 1/4" Drive Torque Wrench
- 1 6" Steel Rule
- 1 Scribe
- \*\* 1 - Screw Sizer

### **SCREWDRIVERS**

- 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 Screwdriver, Flat Tip, Pocket, .025" tip, 4 3/4" Long (Snap-On®SDD2240 or equivalent)
- 1 Screw Extractor Set

### **PUNCHES / CHISELS**

- 1 Brass Drift Punch Set 3/8" to 1/2"
- 1 Center Punch
- 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 3/8" Cold Chisel
- 1 1/2" Cold Chisel
- 1 Bearing Race Punch (MAC BRP-4 or equivalent)
- 1 Cotter Pin/Seal Puller (Snap-On® #S59094B or equivalent)

## 2nd Semester

### **TOOL BOX**

- 1 Roll-A-Way Tool Box (Top Chest Optional) (**Maximum 55" long - 55" includes hang/add on boxes**)

### **PPE**

- Students are required to use safety-toe boots or shoes while participating in lab and during cooperative Education/Internship.

### **PLIERS**

- 1 Set of 4 Internal/External Snap Ring Pliers. Tip Diameters: .038, .047, .070, .090

### **SOCKET WRENCHES**

- 1 3/8" Drive Torque Wrench (5ft.lbs. to 75 ft.lbs.)
- 1 1/2" Torque Wrench (150 ft. lb. minimum)
- 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 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) (Snap-On®212EFTXY or equivalent)
- 1 1/2" Drive 19mm Deep Socket-12 point
- 1 Allen Head Socket Set (English) (3/8" Drive)
- 1 Allen Head Socket Set (Metric) (3/8" Drive)
- 1 1/4" & 3/8" Drive Torx Socket Set (E4 to E18) (Snap-On®210AFLEY or equivalent)
- 1 1/4" & 3/8" Drive Torx Bit Set (T8 to T55) (Snap-On®212EFTXY or equivalent)

### **HAND WRENCHES**

- 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)

### **MEASURING**

- 1 Tire Pressure Gauge (100psi capacity)

### **PUNCHES/CHISELS/PRYBARS**

- 1 16" Pinch Bar
- 1 18" Pry Bar
- 1 Roll Pin Punch Set - 12 piece set (Snap-On® PPR712K or equivalent)

### **DRILLS**

- 1 Twist Drill Index 1/16" to 1/2" by 64ths
- 1 3/8" Variable Speed/ Reversible Drill (Electric or Air)

### **HVAC**

- 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 (Snap-On® ACT413 or equivalent)

### **GENERAL PURPOSE**

- 1 Fender/Engine Cover
- 1 Utility Light w/10ft. Cord (Troublelight)
- 1 'O' Ring Pick Set (Snap-On®A5A204A or equivalent)

### **TOOL REQUIREMENTS FOR 3RD & 4TH SEMESTERS ARE THE SAME AS THOSE REQUIRED FOR 1ST & 2ND SEMESTERS. 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 (Snap-On®PHG2045CH4 or equivalent)
- 1 Bushing Driver Set (Snap-On®#A157C or equivalent)
- 1 Slide Hammer (Snap-On®#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")

\* May be purchased at the SCC Milford **Campus Store**. \*\* May be purchased at the Milford Campus **Parts Store**. \*\*\* Must be purchased **off campus**.