

SOUTHEAST COMMUNITY COLLEGE
TRANSPORTATION OCCUPATIONS
DIESEL –AG EQUIPMENT SERVICE TECH
COURSE SYLLABUS
October 2, 2019
[Syllabus Statements](#)

I. CATALOG DESCRIPTION

Course Number: AGST1240
Course Title: HVAC
Prerequisite(s): AGST1110, AGST1130, AGST1140

Catalog Description: Principles and application of theory, design, construction, components, operation, service, repair, adjustment and troubleshooting of the air conditioning and heating systems used on today's Ag equipment, use of equipment and shop safety.

Credit Hour: 3.5
Class Hours: 30
Lab Hours: 68
Total Contact Hours: 98

II. COURSE OBJECTIVES: *Course will:*

- A. Cover system identification.
- B. Cover environmental rules associated with A/C work.
- C. Cover Section 609 certification.
- D. Cover reclaiming, evacuation and charging.
- E. Cover refrigerant/sealant identifier use.
- F. Cover leak testing.
- G. Cover diagnostics.
- H. Cover safety procedures related to the Hazard Communication and Globally Harmonized Systems as well as specific program rules for tool and equipment use.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

A. STUDENT LEARNING OUTCOMES: *The student will be able to:*

1. Demonstrate the correct procedure to diagnose, reclaim, evacuate, repair, recharge and test the air conditioning and heating systems.
2. Safety procedures related to the Hazard Communication and Globally Harmonized Systems as well as specific program rules for tool and equipment use.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO #3: Critical Thinking and Problem Solving

Outcomes:

1. Collect, identify, interpret and analyze data.
2. Synthesize information to arrive at reasoned solutions to problems.

3. Evaluate ideas presented in writing, medial, speech, or artistic presentations.
4. Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.
5. Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/UNIT OF INSTRUCTION

- A. Heating system components and operation
- B. Air conditioning theory
- C. A/C system component identification and location
- D. System operation
- E. Recovery/recycling & recharging
- F. Controls
- G. Leak test
- H. Diagnostics
- I. Safety

V. INSTRUCTIONAL MATERIALS

Required Text(s): Fundamentals of Service, Air Conditioning, John Deere, FOS5710NC, ISBN# 0-86691-353-X

Other Resources: Resource materials in classroom and college libraries.
Handouts provided by the instructor.
First through third semester tool set.
Notebook, pens, pencils and colored pencils.
Appropriate clothing and eye protection per Diesel department policies.

Tools: See current required tool list

VI. METHODS OF PRESENTATION / INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Small and large group discussion
3. Video presentation
4. Transparencies
5. Demonstrations
6. Project boards
7. Flip charts
8. Handouts

9. Observations
10. Assigned lab projects
11. Field trips

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:

1. Notebook
2. Quizzes

3. Tests
4. Lab grades
5. Class conduct

Letter grades will be based on the SCC Standard Grade Scale Policy. **Note:** See course information document for specific details on how the course grades will be calculated.

VIII. SPECIFIC COURSE REQUIREMENTS

A. Student must:

1. Complete all tests, projects, assignments, and notebook.
2. Earn a final grade of 70% (2.0) or higher.

B. Attendance:

1. **Attendance is required for successful completion of this course.**
2. Each instructor will inform students by means of a Syllabus and Course Information Document of attendance requirements at the first class meeting.
3. Students are expected to complete all assignments / homework by the assigned due date/time, and attend all sessions for class and lab.
4. It is expected that students will be on time and present for all scheduled class / lab times unless PRIOR arrangements have been made with the instructor.
5. Missed class or lab sessions, regardless of cause, reduces the opportunity for learning and may affect student learning outcomes and the student's grades.
6. Students are responsible for all content missed, regardless of the reason for the absence.
7. Whenever possible students must notify the instructor if unable to attend any class / lab session.
8. Emergency absences will be considered on an individual basis to determine if learning activities can reasonably be rescheduled during the current session.

C. Participation:

1. For every hour of classroom learning students are expected to perform two hours of related studies as homework or hands-on / simulated / on-line activities outside the classroom.
2. Students are expected to be responsible for meeting scheduled class / lab / homework & assigned due dates unless prior arrangements have been made with the instructor 24 hours before the due date.
3. Students are expected to complete all exams, quizzes, lab activities and assignments / homework at the scheduled times unless PRIOR arrangements have been made with the instructor before the due date and time.
4. When reasonably possible, and only when prior arrangements have been made, students may ask the instructor to have a test or exam rescheduled prior to 24 hours before the activities scheduled date and time.
5. Unscheduled Quizzes may be given at any time and may not be repeated or taken at a later time, unless approved by the instructor.
6. Exceptions due to emergency absences will be considered on an individual basis.