SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Heating, Ventilation, Air Conditioning & Refrigeration Technology Program
Revision Date: August 2025

I. CATALOG DESCRIPTION

Course Number:	HVAC1452
Course Title:	Residential Install Lab
Prerequisite(s):	HVAC1132 and HVAC1336
Catalog Description:	Application of previous HVAC theory and technical courses toward installation sheet metal duct work, heating and air conditioning equipment on a residence constructed on or off the College campus, and/or other assigned projects. Also covering mechanical codes.
Credit Hours:	2
Class Hours:	15
Lab Hours:	45
Total Contact Hours:	60

II. COURSE OBJECTIVES: *Course will:*

A. Discuss setting the furnace and fabricating the sheet metal duct.
B. Describe setting the temporary heat pump or air conditioner.
C. Outline a heating and cooling start-up.
D. Review the finished HVAC system as needed.
E. Review all mechanical codes

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. Student Learning Outcomes: *Student will be able to:*
  1. Perform setting the furnace in correct location.
  2. Prepare and calculate duct sizing and layout.
  3. Construct sheet metal into duct.
  4. Complete the setting of the temporary heat pump or air conditioner.
  5. Perform a heating and cooling start up.
  6. Complete the whole HVAC as need for construction.

B. General Education Learning Outcomes (GELOs)
  1. GELO #3: Critical Thinking & Problem Solving
  Outcome 1: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE

A. Rough-in (shop house and student-built house)
B. Set furnace, fabricate and install sheet metal duct (student-built house) or another house TBD
C. Finish (student-built house) or another house TBD
D. Set temporary heat pump or air conditioner and complete finish (student-built house) or another house TBD
E. Heating and cooling start-up

V. INSTRUCTIONAL MATERIALS

A. Required Text(s): *Mechanical Code Book*
B. Other Resources: 2nd & 3rd Semester Notes
C. Supplies: Tools Required by the HVAC Program

VI. METHODS OF PRESENTATION/INSTRUCTION

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

1. On-the-job training
2. Lab demonstrations
3. Lab assistance

VII. METHODS OF EVALUATION

A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:

1. Daily job sheets
2. Quizzes

VIII. SPECIFIC COURSE REQUIREMENTS

A. Student must meet all of the following to receive a passing grade:

1. Submit own work. Students turning in homework, reports, field notes, or calculations by someone other than themselves will receive 0% and be referred to the Division Dean and Dean of Students for further disciplinary action. Consequences can include failing the course.
2. Demonstrate attitude, skills, and character commensurate with industry standards.
3. All program policies of the Heating, Ventilation, Air Conditioning, & Refrigeration Technology program will be strictly enforced.