



# Wayne County Community College District

## COURSE SYLLABUS

### HVA 115 Physical Properties of Air and Duct Design

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**CREDIT HOURS:** 5.00

**CONTACT HOURS:** 75.00

**COURSE DESCRIPTION:**

This course covers advanced commercial, industrial and architectural sheet metal duct design, layout, fabrication and installation. Custom duct work for difficult installation will be discussed, designed and fabricated in this course.

**PREREQUISITE:** *HVA 109*

**EXPECTED COMPETENCIES:**

Upon completion of the course, the student will:

- Demonstrate safety in the HVA lab and work sites, including MIOSHA
- Demonstrate the process to draw fittings and a use duct calculator to size fittings
- Demonstrate to process to lay out patterns of fittings for best use of metal and least amount of scrap
- Demonstrate the use of hand tools
- Demonstrate the process to cut out fittings
- Demonstrate the sequence of machinery use in the fabrication of ductwork
- Demonstrate the assembly process of fabricated components
- Demonstrate the sequence of installation of ductwork

**ASSESSMENT METHODS:**

Student performance may be assessed by examination, quizzes, case studies, oral conversation, group discussion, oral presentations. The instructor reserves the option to employ one or more of these assessment methods during the course.

**GRADING SCALE:**

90%-100% = A

80%-89.9%= B

70%-79.9%= C

60%-69.9%= D

<60% = E