

SYLLABUS

DIVISION: Business and Engineering Technology **REVISED:** Spring/2014
CURRICULA IN WHICH COURSE IS TAUGHT: Air Conditioning & Refrigeration
COURSE NUMBER AND TITLE: Air 118- Metal Layout II
CREDIT HOURS: 3 HOURS/WK LEC: 1HOURS/WK LAB: 4 LEC/LAB COMB: 5

I. CATALOG DESCRIPTION: Presents practice in the laying out of various sheet metal pieces on paper and transposing to metal.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES:

- Gain an understanding of transferring a layout from paper to metal
- Acquire the knowledge to operate the plasma cutter
- Ability to layout and rough in a house and draw a duct system

III. REQUIRED BACKGROUND/PREREQUISITIES:

- Air 117 or Approved

IV. COURSE CONTENT:

- Layout and fabrication
- Plasma Cutter
- Measurement allowance

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE

1. Communication

- 1.1 understand and interpret complex materials;
- 1.3 use standard English;
- 1.5 use listening skills; and

2. Critical Thinking

- 2.6 use problem solving skills.

6. Quantitative Reasoning

- 6.1 use logical and mathematical reasoning within the context of various disciplines;
- 6.2 interpret and use mathematical formulas;

VI. LEARNER OUTCOMES**VII. EVALUATION**

Layout and Fabrication <ul style="list-style-type: none">• Understand different types of layout drawings• Ability to transfer drawings from paper to metal• Identify angles and allowances for different types of seams and locks	Evaluation method Lab exercises Projects
Plasma Cutter <ul style="list-style-type: none">• Understand the operation of the computer program that operates the plasma cutter• Ability to input drawing into AutoCAD• Ability to make program run and construct a finished product	Evaluation method Lab exercises In class assignments Projects
Measurement Allowance <ul style="list-style-type: none">• Understand allowances for construction materials• Identifying the best duct layout for a conditioned area• Ability to design, layout, and construct ductwork needed for a job	Evaluation method Lab exercises In class assignments Job Site