

SYLLABUS

DIVISION: Business and Engineering Technology

REVISED: Fall/2013

CURRICULA IN WHICH COURSE IS TAUGHT:

Air Conditioning and Refrigeration

COURSE NUMBER AND TITLE: AIR 117 Metal Layout I

CREDIT HOURS: 3 **HOURS/WK LEC:** 1 **HOURS/WK LAB:** 6 **LEC/LAB COMB:** 7

I. CATALOG DESCRIPTION: AIR 117 Metal Layout I (3cr.)--Presents measuring and gauging of sheet metal, types of metal, handling sheet metal, cutting and bending, layout. Teaches fundamentals of drafting, basic drawing instruments, and lettering practices. Lecture 1 hour. Laboratory 6 hours. Total 7 hours per week.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES:

- Acquire an understanding of basic safety practices
- Acquire an understanding of the function and use of sheet metal tools
- Gain an understanding of drafting principles
- Gain an understanding of basic layout methods

III. REQUIRED BACKGROUND/PREREQUISITIES:

None

IV. COURSE CONTENT:

- Safety
- Tools
- Layout
- Fabrication

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

Safety <ul style="list-style-type: none">• Understanding safety rules for the classroom and handling of sheet metal• Identifying scenarios when safety rules apply• Ability to exercise safety rules in lab	Evaluation method Lab exercises Written test
Different types of sheet metal tools <ul style="list-style-type: none">• Understand the different types of sheet metal tools used• Ability to use the variety of sheet metal equipment• Identify and label the sheet metal fabrication equipment	Evaluation method Written test Lab Exercises
Metal Layout <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 In class assignments Written test
Fabrication of Sheet Metal <ul style="list-style-type: none">• Ability to construct sheet metal projects assigned• Ability to use equipment to construct project(s)• Identify which type of equipment to use to perform completion of project(s)	Evaluation method Sheet Metal Projects