

COURSE OUTLINE

Revision: Loc Nguyen Date: September, 09

DEPARTMENT:	Drafting Technology
CURRICULUM:	Drafting
COURSE TITLE:	Drafting Technology I
COURSE NUMBER:	TDR 121
TYPE OF COURSE:	Vocational Preparatory/
COURSE LENGTH:	1 quarter
CREDIT HOURS:	7
LECTURE HOURS:	22
LAB HOURS:	110
CLASS SIZE:	24
PREREQUISITES:	None

COURSE DESCRIPTION:

Basic drafting knowledge, skills and standards required to prepare three-view drawings to current industry standards.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication - Read and translate technical data relative to geometric spatial relationships into a graphical form easily understood by others with similar technical understanding.
2. Computation - Use basic mathematical operations as required to define geometrical spatial relationships.
3. Human Relations - Use social interactive skills to enhance learning through informal tutoring activities.

STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

4. Critical Thinking and Problem Solving - Organize and evaluate technical data, as well as select and apply appropriate spatial relationship principles to determine problem solution.
5. Technology - Select and use appropriate technological tools to create technical graphics.
6. Personal Responsibility - Value and take pride in one's own skill and work, and manage time to meet required schedules.
7. Information Literacy - Access, evaluate and apply information from technical texts.

PROGRAM OUTCOMES ADDRESSED:

- 1 Ability to apply knowledge of mathematics and scientific principles to technical engineering/drafting problems.
- 2 Ability to analyze and interpret data.
- 3 Ability to think critically in evaluating information, solving problems, and making decisions.
- 5 Ability to access and evaluate information from a variety of sources, including the Internet.
- 6 Understand professional and ethical responsibility.
- 7 Ability to communicate effectively with written, oral, and visual means.
- 8 Recognize the need for and ability to engage in life-long learning.
- 9 Ability to use modern technical engineering techniques, skills, and technology, including computing tools necessary for technical engineering/drafting practice.

GENERAL COURSES OBJECTIVES:

At the end of the course the student will:

Module I - Introduction to Technical Graphics

1. Differentiate between technical and non-technical graphics.
2. Identify and describe the contents of technical graphics.
3. Demonstrate understanding of the concepts of relational geometry.
4. Demonstrate understanding of the elements of geometry.
5. Describe the function of textural information in technical graphics.
6. Describe the attributes of text in technical graphics.
7. Demonstrate appropriate freehand lettering techniques per ANSI Y14.2M-1979, 1987.
8. Demonstrate effective basic sketching techniques.

GENERAL COURSE OBJECTIVES (cont.):

Module II - Applied Geometry

1. Use correct geometric terminology.
2. Apply appropriate principles and techniques to basic and advance geometric constructions.

Module III - Drafting Skills and Standards

1. Describe line and lettering Conventions per ANSI Y14.2M-1979, 1987.
2. Demonstrate effective care an use of basic drafting tools, media and reproduction equipment.
3. Apply ANSI standards to drafting of moderately complex single-view drawings.

Module IV - Orthographic Drawing

1. Explain the principles of Orthographic projection.
2. Apply ANSI standards (Y14.2M-1979, 1987) to the preparation of moderately complex three view drawings.

Module V - Isometric Drawing

1. Explain the principles of isometric drawing.
2. Demonstrate appropriate techniques to preparation of moderately complex isometric drawings.

Module VI - Materials and processes

1. Demonstrate knowledge of basic manufacturing materials and processes.

TOPICAL OUTLINE:	APPROX. HOURS	TECH PREP CREDITS
I. Program Introduction and Course Syllabus	2.4	
II. Module I - Introduction to Technical Graphics	16.8	1
III. Module II - Applied Geometry	16.8	1
IV. Module III - Drafting Skills and Standards	16.8	1
V. Module IV - Orthographic Drawing	38.4	2
VI. Module V - Isometric Drawing	16.8	1
VII. Module VI - Materials and processes	16.8	1
VIII. Evaluation and Review	<u>7.2</u>	
Total	132.0	

REVISED BY: Loc Nguyen
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