

Electronics Drafting

Course Design

2005-2006

Course Information

Organization	Eastern Arizona College
Division	Industrial Technology Education
Course Number	DRF 240
Title	Electronics Drafting
Credits	3
Developed by	Dee Lauritzen, Tom Tomasky
Lecture/Lab Ratio	1 Lecture/4Lab
Transfer Status	DEC (ICG) to ASU, E to NAU, NT to UofA
Activity Course	No
CIP Code	15.1300
Assessment Mode	Pre/Post Test (20 Questions/20 Points)
Semester Taught	Upon Request
GE Category	None
Separate Lab	No
Awareness Course	No
Intensive Writing Course	No

Prerequisites

None

Educational Value

This course introduces the universal language of graphic communication and lends itself to everyday application. This course is primarily designed for the student who plans to enter the world of work upon the completion of the Drafting Technology Program.

Description

This course covers the basic elements of electronic drafting. Students create block diagrams, electronic schematics, printed circuit board drawing packages, and electro-mechanical drawings of racks, panels, and chassis. Use of current industrial standards is emphasized.

Supplies

None

Competencies and Performance Standards

- 1. Produce electronic drawings containing proper line work, symbols, lettering and technique acceptable to industrial requirements.**

Learning objectives

What you will learn as you master the competency:

- Determine the relationship between components and symbols used in drafting applications.
- Adhere to principles of correct drafting technique.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner will produce accurate and precise drawings using concepts learned.

- 2. Create a block diagram.**

Learning objectives

What you will learn as you master the competency:

- Construct block diagrams, flow diagrams, and single line diagrams according to instructor's directions.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner creates a block diagram to industry specifications.

- 3. Create a schematic diagram.**

Learning objectives

What you will learn as you master the competency:

- Acquaint self with drafting schematics.
- Identify rules for drafting schematics.
- Interpret reference designations.
- Differentiate between series and parallel circuits.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner creates a schematic diagram to industry specifications.

4. Create a logic diagram.

Learning objectives

What you will learn as you master the competency:

- a. Acquaint self with logic diagrams and truth tables.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner creates a logic diagram to industry specifications.

5. Create a highway diagram.

Learning objectives

What you will learn as you master the competency:

- a. Complete highway diagram using correct application of concepts learned.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner creates a highway diagram to industry specifications.

6. Create a point-to-point wiring diagram.

Learning objectives

What you will learn as you master the competency:

- a. Build wiring diagram acceptable to industrial standards.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner creates a point-to-point wiring diagram to industry specifications.

7. Create a printed circuit board design drawing package.

Learning objectives

What you will learn as you master the competency:

- a. Acquaint self with P. C. B. layout, board profile, component assembly, drill plan, artwork, circuit side, component side, legend/silk screen, solder mask and pad master.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner creates a printed circuit board design drawing package to industry specifications.

8. Create mechanical drawings for an electronic components (rack, panel, chassis).

Learning objectives

What you will learn as you master the competency:

- a. Combine knowledge of electronic drafting to assemble mechanical drawings.

Performance Standards

Competence will be demonstrated:

- o on course drawing assignments.

Criteria - Performance will be satisfactory when:

- o learner creates appropriate drawings to industry specifications.

Types of Instruction

Classroom Presentation

Lab

Grading Information

Grading Scale

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	59% or lower