

EASTERN ARIZONA COLLEGE
Engineering Graphics

Course Design
2012-2013

Course Information

Division Industrial Technology Education
Course Number EGR 124
Title Engineering Graphics
Credits 3
Developed by Dee Lauritzen
Lecture/Lab Ratio 1 Lecture/4 Lab

Transfer Status

ASU	NAU	UA
Non Transferable	Elective Credit	Non Transferable

Activity Course No
CIP Code 14.0101
Assessment Mode Pre/Post Test (40 Questions/40 Points)
Semester Taught Fall
GE Category None
Separate Lab No
Awareness Course No
Intensive Writing Course No

Prerequisites

DRF 154 or concurrent enrollment in DRF 154

Educational Value

Course introduces any interested individual to the universal language of graphic communication and develops within the individual the ability to rationalize and visualize solutions to graphic problems.

Description

The study of lines, planes, successive auxiliary views, intersection of planes, angles between planes, developments, parallelism, perpendicularity, and the relationships between various geometric elements. All drawings will meet the ASME Y14.5M standard.

Supplies

None

Competencies and Performance Standards

1. Demonstrate use of multi-view and auxiliary view drawings. .

Learning objectives

What you will learn as you master the competency:

- a. Acquaint self with terms relating to multi-view and auxiliary view drawings.
- b. Develop a multi-view drawing.
- c. Use fold lines and projection lines in development of multi-view drawings.
- d. Project geometry from one view to another.

Performance Standards

You will demonstrate your competence:

- o through course assignments and final exam

Your performance will be successful when:

- o learner correctly projects geometric entities between multiple views on a drawing

2. Derive the point view and true length of a line.

Learning objectives

What you will learn as you master the competency:

- a. Define point view of a line.
- b. Define true length of a line.
- c. Demonstrate the use of true length lines and point view in a multi-view drawing.

Performance Standards

You will demonstrate your competence:

- o through course assignments and final exam

Your performance will be successful when:

- o learner demonstrates proper use of point view and true length of a line in multi-view drawings

3. Derive edge view, true shape of a plane, and the dihedral angle between two planes.

Learning objectives

What you will learn as you master the competency:

- a. Define edge view of a plane.
- b. Define true shape and size of a plane.
- c. Demonstrate use of edge view and true shape of a plane.
- d. Find the true angle between two intersecting planes.

Performance Standards

You will demonstrate your competence:

- o through course assignments and final exam

Your performance will be successful when:

- o learner correctly demonstrates use of edge view and true shape and size of a plane on multi-view drawings.

4. Create flat pattern developments.

Learning objectives

What you will learn as you master the competency:

- a. Identify the intersection of two objects
- b. Create a flat pattern of intersecting objects
- c. Create a flat pattern of a cone with intersecting planes

Performance Standards

You will demonstrate your competence:

- o through course assignments and final exam

Your performance will be successful when:

- o learner demonstrates proper use of parallelism and perpendicularity on multi-view

Types of Instruction

Classroom Presentation

Lab

Grading Information

Grading Rationale

Each instructor has the flexibility to develop evaluative procedures within the following parameters:

The Post Test will represent 10% of the course grade.

Course learning activities shall represent 90% of the course grade.

Grading Scale

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