

Print Reading

Course Outcome Summary

Wisconsin Indianhead Technical College

Information

Course Number	32-420-310
Credits	2
Instructional Area	Industrial Maintenance
Instructional Level	Two-Year Technical Diploma
Division	Industrial
Developers	Steve Miller
Development Date	01/13/2004
Revision Date	06/01/2004
Revision History	Revised description

Types of Instruction

	Type of Instruction	Contact Hours	Outside Hours	Credits
	Classroom Presentation	16	0	0.5
	On Campus Lab and/or Shop Experience	48	0	1.5
	Totals	64		2

Description

This course will cover the basic principles of print reading. The emphasis will be on interpreting lines and symbols in single- and multiple-view working drawings. Topics include print reading procedures, sketching, drawing changes, and the reading of prints in maintenance areas of machining, fabrication, piping systems, and welding.

Course Level Learning Outcomes

Competencies

1. Interpret drawing types, drawing structure, and organizational nomenclature

Performance Standards

Competence will be demonstrated:

- o by participating in the class

Criteria - Performance will be satisfactory when:

- o you enter into class discussions
- o you offer questions or comments during class
- o you attend class regularly
- o you arrive for class on time
- o you listen attentively during class

Learning Objectives

What you will learn as you master the competency:

- a. Distinguish between prints using 1st and 3rd angles projection
- b. Differentiate between pictorial drawings and orthographic projection drawing
- c. Identify the information commonly found in the title block
- d. Identify other organizational information commonly found on a print
- e. Compare length, width, and height on drawing with width, depth, and height
- f. Identify the characteristic drawing features that relate to flat, curved, or circular part surfaces
- g. Identify the characteristic drawing features that relate to normal, inclined, and oblique part surfaces
- h. Identify the characteristic drawing features that relate to hidden part surfaces

2. Present part information through the use of views

Performance Standards

Competence will be demonstrated:

- o by participating in the class

Criteria - Performance will be satisfactory when:

- o you enter into class discussions
- o you offer questions or comments during class
- o you attend class regularly
- o you arrive for class on time

- o you listen attentively during class

Learning objectives

What you will learn as you master the competency:

- a. Identify the types of view used
- b. Explain the purpose for using the different types of view
- c. Explain the criteria used to determine the number of view to use
- d. Determine how many views are necessary to communicate part information
- e. Explain the rules for each of the view types
- f. Identify the types of views on partprints

3. Interpret print notes and symbols

Performance Standards

Competence will be demonstrated:

- o by participating in the class

Criteria - Performance will be satisfactory when:

- o you enter into class discussions
- o you offer questions or comments during class
- o you attend class regularly
- o you arrive for class on time
- o you listen attentively during class

Learning objectives

What you will learn as you master the competency:

- a. Describe the function of the common print symbols
- b. Explain the meaning of 10 of the most commonly used feature descriptions given in symbolic and short form
- c. Translate between long version of description to short version and to symbolic version

4. Interpret diameters, holes, bolt circles, chamfers, recesses

Performance Standards

Competence will be demonstrated:

- o by participating in the class

Criteria - Performance will be satisfactory when:

- o you enter into class discussions
- o you offer questions or comments during class

- o you attend class regularly
- o you arrive for class on time
- o you listen attentively during class

Learning objectives

What you will learn as you master the competency:

- a. Describe how the part features look geometrically from multiple directions of view (use proper line type)
- b. Give several examples of how the part feature could be used
- c. Interpret the meaning of the different components of the part feature description
- d. Give several different examples of how the part feature can be dimensioned
- e. List alternate forms of the part feature (example holes: counter bored, counter sunk)
- f. Explain the purpose for these alternate forms
- g. Give examples of how to dimension these part features
- h. List information that is necessary to produce the part feature
- i. Determine if enough information about the part feature is present to machine the part

5. Interpret common welding symbols used in prints

Performance Standards

You will demonstrate your competence:

- o by participating in the class

Your performance will be successful when:

- o you enter into class discussions
- o you offer questions or comments during class
- o you attend class regularly
- o you arrive for class on time
- o you listen attentively during class

Learning objectives

What you will learn as you master the competency:

- a. Identify ANSI symbols for arc and gas welds
- b. Identify symbols for resistance weld types
- c. Identify supplementary weld symbols
- d. Acquaint self with ANSI standards for symbols, representation on drawings and dimensioning

6. Interpret common piping system symbols

Performance Standards

You will demonstrate your competence:

- o by participating in the class

Your performance will be successful when:

- o you enter into class discussions
- o you offer questions or comments during class
- o you attend class regularly
- o you arrive for class on time
- o you listen attentively during class

Learning objectives

What you will learn as you master the competency:

- a. Acquaint self with the two types of piping drawings used .
- b. Identify crossings and connections on piping drawings
- c. Identify flange symbols
- d. Identify valve symbols