



Course Outline

2026-2027 Catalog

DFT 16 - Print Reading for Industry and Manufacturing

Catalog Description

Transfer Status: CSU

Unit(s): 3.00

Lecture: 51.00 Contact hours/102.00 Out of class hours/153.00 Total hours/3.00 Unit(s)

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Course Description: This course introduces students to drawings, symbols and standards used in manufacturing and industrial applications. Topics include line types, views, dimensions, symbols, sketching, geometric dimensioning and tolerancing, version and revision systems and specialty drawings by manufacturing process. Manufacturing prints, drawings and specifications from both manufacturing and industrial applications will be used in the course.

Objectives

Upon successful completion of this course, the student should be able to:

1. Interpret and describe the technical information provided on industrial drawings.
2. Interpret and apply the function of the "alphabet of lines" to freehand sketching and lettering and demonstrate proper techniques.
3. Determine part dimensions and tolerances according to American National Standards Institute (ANSI) standards including geometric dimensioning and tolerancing.
4. Read and interpret appropriate measurement units and symbols to working drawings and specifications.
5. Interpret and describe dimensions and features of working drawings using supplementary views including sectional, breakout and auxiliary views.

Course Content

Topic Titles / Suggested Time Topic	
	<u>Lecture</u>
<u>Topics</u>	<u>Lec Hrs</u>
Freehand Sketching Techniques	4.00
Measurement Methods and Units of Measure	3.00
Lines and Lettering	3.00
Multiview Drawings and Projections	5.00
Dimensions and Notes	4.00
Fasteners and Springs	4.00
Welding and Fabrication Drawings	5.00
Auxiliary, Breakout and Sectional View Drawings	5.00
Geometric Dimensioning and Tolerancing	6.00
Cams, Gears and Bearings	3.00
Working Drawings	6.00
Pictorial Drawings and Technical Illustrations	3.00
Total Hours: 51.00	

Methods of Instruction

- A. Class Activities
- B. Collaborative Group Work
- C. Demonstrations
- D. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- E. Lecture
- F. Multimedia Presentations

Methods of Evaluation

- A. Exams/Tests
- B. Quizzes
- C. Homework
- D. Class participation

Examples of Assignments

Reading Assignments

1. Read the unit on Multiview Drawings. Be prepared to discuss in class.
2. Read the unit on Geometric Dimensioning and Tolerancing. Be prepared to discuss in class.

Writing Assignments

1. Complete Review Activities on Geometric Dimensioning and Tolerancing. Answer templates are located in the handout. Submit completed work to instructor.
2. Complete the review questions from the unit on Geometric Dimensioning and Tolerancing. Submit completed review questions to the instructor.

Out-of-Class Assignments

1. After reading the Chapter on Multi-view Drawings, describe in your own words the differences between first angle and third angle projection. Summarize in a 250-word paragraph and turn in during the next class.
2. Complete the Bonus Exercise for the manufactured object, including dimensions and material specification. Submit answers to instructor.

Recommended Materials of Instruction

Brown, W. C., & Brown, R. K. (20). Print Reading for Industry. *Goodheart-Willcox, 12th*. 9798891188181.

Minimum Qualifications

Drafting

Engineering (Masters Required)

Created/Revised by: Manning, Phillip

Date: 04/06/2026