

Northwest Arkansas Community College
Business and Computer Information Systems Division

Discipline Code

DRFT

Course Number

2343

Course Title

Design and Production Technology

Catalog Description

This course is a study of the modern techniques of design, production, and operations including material and process selection. The correct application of these concepts to engineering drawings is emphasized. The importance of concurrent engineering and computer-integrated manufacturing in design is examined. Students will tour local manufacturing plants that use these techniques.

Prerequisites

DRFT 2534 Parametric Modeling I

Credit Hours

3 credit hours

Contact hours

45 contact hours

Load hours

3 load hours

Semesters Offered

Fall

ACTS Equivalent

None

Grade Mode

A-F

Learning Outcomes

Students will:

- Describe the relationship of product design, product function, materials used, and manufacturing processes
- Identify the major categories of engineering materials and their applications
- Correctly apply dimensioning and tolerancing, symbols, finish requirements, and manufacturing processes to engineering drawings
- Define the concepts of concurrent engineering, manufacturing planning, production, and total quality management
- Define how graphic models drive computer integrated manufacturing

General Education Outcomes Supported

None

Standard Practices

Topics list

- History of machine tools
- Use Geometric Dimensioning and Tolerancing principles
- Types of machines
- Gcode basics
- See shop environments in action
- Basics of 3D printers, lasers, and routing tables

Learning activities

Assessments

Grading guidelines

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%
- F = 0-59%