Course Information

Division: Industrial Technology Education  
Course Number: DRF 150  
Title: Dimensioning and Tolerancing  
Credits: 1  
Developed by: Doug Griffin/Dee Lauritzen  
Lecture/Lab Ratio: 1 Lecture/1 Lab  
Transfer Status: GIT Dept Elective | CTE Departmental Elective (1) | Non Transferable

Activity Course: No  
CIP Code: 15.1300  
Assessment Mode: Pre/Post Test (40 Questions/40 Points)  
Semester Taught: Spring  
GE Category: None  
Separate Lab: No  
Awareness Course: No  
Intensive Writing Course: No

Prerequisites

None

Educational Value

Drafting Technology majors, Machine Shop majors, and individuals from the community who require knowledge in interpreting and using the ANSI Y14.5M geometric dimensioning and tolerancing standards.

Description

An intensive course covering basic and advanced dimensioning techniques. Emphasis is placed on the ANSI Y14.5M standard for geometric dimensioning and tolerancing.

Supplies

Pencil - .5mm
Competencies and Performance Standards

1. Demonstrate knowledge of basic size and location dimensions.
   
   **Learning objectives**
   
   What you will learn as you master the competency:
   
   a. Acquaint self with basic techniques in dimensioning and tolerancing.
   b. Adhere to dimension applications and limits of size.

   **Performance Standards**
   
   Competence will be demonstrated:
   
   o on course drawing assignments

   **Criteria - Performance will be satisfactory when:**
   
   o learner uses his knowledge of basic size and location dimensions on drawing assignments

2. Identify proper dimensioning and tolerancing symbology. (Includes feature control frames, datum references, and feature control symbols.)

   **Learning objectives**
   
   What you will learn as you master the competency:
   
   a. Acquaint self with proper geometric dimensioning and tolerancing symbology.
   b. Identify feature control frames, datum references and feature control symbols.

   **Performance Standards**
   
   Competence will be demonstrated:
   
   o on course drawing assignments

   **Criteria - Performance will be satisfactory when:**
   
   o learner defines dimensioning and tolerancing symbology terms

3. Demonstrate the correct use of geometric tolerancing as it applies to mechanical drawings. (FORM, ORIENTATION, POSITION, RUNOUT, and PROFILE tolerances)

   **Learning objectives**
   
   What you will learn as you master the competency:
   
   a. Acquaint self with form, orientation, position, runout, and profile tolerances.

   **Performance Standards**
   
   Competence will be demonstrated:
   
   o on course drawing assignments

   **Criteria - Performance will be satisfactory when:**
   
   o learner correctly applies knowledge of form, orientation, position, runout and profile tolerances on drawing assignments

4. Demonstrate the correct use of datums as they apply to mechanical drawings.

   **Learning objectives**
   
   What you will learn as you master the competency:
   
   a. Ascertain the correct use of datums in mechanical drawings.
**Performance Standards**

*Competence will be demonstrated:*
  - on course drawing assignments

*Criteria - Performance will be satisfactory when:*
  - learner correctly uses datums on mechanical drawings

**Types of Instruction**

Classroom Presentation

Lab

**Grading Information**

**Grading Rationale**

Quizzes and Lab Assignments=80%

Final Exam=10%

Post Test=10%

**Grading Scale**

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tr>
<td>A</td>
<td>90-100%</td>
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<tr>
<td>B</td>
<td>80-89%</td>
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<td>C</td>
<td>70-79%</td>
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<td>D</td>
<td>60-69%</td>
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<td>F</td>
<td>59% or lower</td>
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