

DDGT 110 - Technical Drawing Fundamentals Course Outline

Approval Date: 04/08/2010

Effective Date: 01/16/2018

SECTION A

Unique ID Number CCC000270162

Discipline(s) Drafting

Division Career Education and Workforce Development

Subject Area Digital Design Graphics Technology

Subject Code DDGT

Course Number 110

Course Title Technical Drawing Fundamentals

TOP Code/SAM Code 0953.00 - Drafting and Design Technology/Technician,
General* / D - Possible Occupational

**Rationale for adding this course
to the curriculum** Updates needed.

Units 3

Cross List N/A

Typical Course Weeks 18

Total Instructional Hours

Contact Hours

Lecture 36.00

Lab 54.00

Activity 0.00

Work Experience 0.00

Outside of Class Hours 72.00

SECTION B

General Education Information:

SECTION C

Course Description

Repeatability May be repeated 0 times

Catalog An entry level course for students with little or no technical drawing experience. Topics covered include national and international drafting standards, drawing scales, two-dimensional geometric construction, orthographic projection, auxiliary views, sectioning, dimensioning, creation and modification of basic templates, and computer-aided drafting (CAD) using the

- A. Design Visualization
 - a. Drawing Types
 - b. Image Planes
 - c. Design Process
 - d. Advantages of Prototyping
 - e. Advantages of 3D Renderings and Conceptualization
 - f. Types of Views: Oblique, Isometric, and Perspective
 - g. Types of Sketches: Technical, Artistic, Working Drawings
- B. CAD Workstation Components
 - a. Computer Hardware: CPU, Motherboards, Memory, Hard Drives, Video Cards, Power Supplies, ROM
 - b. Computer Software: Operating Systems, GUI
 - c. Input and Output Devices: Monitors, Keyboards, Mice, 3D Mice, Tablets, Digitizers, Printers, Scanners
 - d. Storage Devices: Flash Drives, Servers, NAS, Raid Types
- C. Technical Drawing Tools
 - a. Typical Hand Drafting Tools: T

- b. Size and Location
 - c. Types of Dimensioning: Datums, Chain, Baseline, Coordinate
 - d. Screw threads and fastener representation
 - e. Dual Dimensioning vs. Double Dimensioning
 - f. Dimensioning Guidelines
- I. Section Views
- a. Definitions and Applications,
 - b. Cutting Planes vs. Viewing Planes
 - c. Dimension Placement, Alignment, Offset Distances
 - d. How to Dimension Standard Hole Types
 - e. Standard Protocol: Linetypes, Lineweight, Labels, Hatching, Omitting Lines,
How to Deal With Standard Hardware, How to Section Thin and Thick Parts
 - f.

Observation and Demonstration: Instructor provides computer demonstrations of best practices utilizing the class software for given assignments.

Projects: Class assignments.

Other: Class lectures and demonstrations are recorded and posted online as a student resource.

5. Methods of Evaluation:

Publisher: McGraw-Hill

Date of Publication: 2009

Edition: 4th

Software #1:

Title: AutoCAD

Publisher: Autodesk

Edition: Latest

B. Other required materials/supplies.

A 3" binder or two 1.5" binders.

USB flash drive.

Headphones.