

MODULE DES1060: DRAFTING/DESIGN FUNDAMENTALS

Level: Introductory

Theme: Drafting for Design and Technical Drawing Skills

Prerequisite: None

Module Description: Students develop basic knowledge, skills and techniques to draft appropriate drawings for visualizing and illustrating simple design problems.

Module Parameters: Access to basic sketching and drawing tools and equipment, drafting tables, equipment and materials and/or a computer with a computer-aided design (CAD) software package, a printer and/or plotter.

Note: It is recommended that students have access to instruction from an individual with formal, specialized training in a design discipline, drafting and where applicable in CAD.

Supporting Module: DES1010 Sketch, Draw & Model

Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none">produce pictorial representations and multiview drawings from sketches and/or three-dimensional objects	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none">production of one of each of the following based on teacher-specified three-dimensional references and/or sketches:<ul style="list-style-type: none">freehand pictorial drawing aided by a pictorial drawing gridpictorial drawing aided by mechanical drafting equipment or CADdimensioned multiview drawing aided by mechanical drafting equipment or CAD. <p><i>Assessment Tool</i> <i>Project Assessment: Drafting/Design Fundamentals (DES1060-1)</i></p> <p><i>Standard</i> <i>Performance rating of 1 for each criteria</i></p>	90

MODULE DES1060: DRAFTING/DESIGN FUNDAMENTALS (continued)

Concept	Specific Learner Expectations	Notes
Skills Development	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • identify common pictorial drawing types; e.g., isometric, oblique, one- and two-point perspective • identify multiview drawings, their common views (e.g., front, top, side) and discriminate between first angle projections and third angle projections • produce at least one of the following within the context of assigned projects: <ul style="list-style-type: none"> – isometric drawing – oblique drawing (either Cavalier or Cabinet) – perspective drawing (either one-point or two-point) <p>or</p> <ul style="list-style-type: none"> – at least one drawing in three-dimensions appropriate for illustrating assembled surface developments (e.g., packaging, clothing, heating/ventilation ducting) • produce at least one of the following within the context of assigned projects: <ul style="list-style-type: none"> – one multiview drawing (e.g., front view, side view, top view) – one surface development (flat pattern) (e.g., for a package, heating/ventilation duct, garment) • use general drafting conventions (e.g., title blocks) where appropriate. 	<p>In this module, students should engage in a variety of activities that will teach basic drafting skills and techniques. These could be extensions of designs developed in previously completed modules such as 2-D Design Fundamentals or 3-D Design Fundamentals. Teachers will need to determine the number of drawings of each type necessary for students to develop skills and understanding in this area.</p> <p>Students may demonstrate more than one drawing style within the same assignment. For example, a student may produce a multiview drawing (e.g., front, top, side views) of a toy he or she designed and pictorial drawing (e.g., isometric) of the toy on the same drawing sheet.</p> <p>“Drafting” may be applied in a number of contexts beyond the drafting table or terminal. One of these is flat pattern design within the fashion industry. This module exemplifies the linkage and transferability between traditional disciplines.</p> <p>Students may use traditional drafting technology, CAD or other technology specified by the teacher during this module.</p>

MODULE DES1060: DRAFTING/DESIGN FUNDAMENTALS (continued)

Concept	Specific Learner Expectations	Notes
Applied Problem Solving	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • use drafting techniques learned in this module to illustrate particular aspects of designed solutions to simple design problems; e.g., a hinge system on a box lid, a seam where two surfaces are joined, a pin to hold a wheel on an axle • where appropriate, use drafting techniques to illustrate how parts of a design go together. 	<p>Students should recognize drafting skills and techniques as tools they can use in many areas of design. Teachers may wish to brainstorm possible uses of these techniques with their students.</p> <p>Applied problem solving here relates to the student's ability to select appropriate techniques from those learned in this module to produce required illustrations.</p>
Presentation, Design Journal and Portfolio	<ul style="list-style-type: none"> • see the Specific Learner Expectations for Sketch, Draw & Model and CAD Fundamentals. 	<p>See notes for 2-D Design Fundamentals.</p>