

MODULE DES2050: TECHNICAL DRAWING APPLICATIONS

Level: Intermediate

Theme: Drafting for Design and Technical Drawing Skills

Prerequisite: None

Module Description: Students develop accurate multiview drawings from previously produced sketches, and learn the common understandings, conventions and language associated with technical drawing.

Module Parameters: Basic sketching and drawing tools and equipment, drafting tables, equipment and materials and/or computer with a computer-aided design (CAD) software package, a printer and/or plotter. Specialized equipment facilities depend on the approach taken.

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 Modules: DES1060 Drafting/Design Fundamentals

Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<i>The student will:</i> <ul style="list-style-type: none">produce technical drawings for simple structures, products and/or components	<i>Assessment of student achievement should be based on:</i> <ul style="list-style-type: none">set of technical drawings for a simple structure and/or a product and/or a manufactured component. <i>Assessment Tool</i> <i>Project Assessment: Technical Drawing Applications (DES2050-1)</i> <i>Standard</i> <i>Performance rating of 1 for each criteria</i>	60
<ul style="list-style-type: none">dimension and notate drawings accurately	<ul style="list-style-type: none">accurate dimensioning and notation of all drawings in accordance with standards and conventions. <i>Assessment Tool</i> <i>Project Assessment: Technical Drawing Applications (DES2050-1)</i> <i>Standard</i> <i>Performance rating of 1 for each criteria</i>	10

MODULE DES2050: TECHNICAL DRAWING APPLICATIONS (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> • identify and include to all pertinent codes and specifications as they apply to drawings produced • select, organize and present design projects 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> • identification and application of codes and specifications as they pertain to the project and as determined by the teacher and/or other qualified individual. <p><i>Assessment Tool</i> <i>Local, regional, provincial, national and international reference manuals for codes and standards</i> <i>Project Assessment: Technical Drawing Applications (DES2050–1)</i></p> <p><i>Standard</i> <i>Performance rating of 1 for each criteria</i></p> <ul style="list-style-type: none"> • maintenance and presentation of a module-based design portfolio and a design journal. Emphasis will be placed on: <ul style="list-style-type: none"> – the quality and accuracy of the drawings produced, and the student’s discourse, emphasizing: <ul style="list-style-type: none"> • his or her understanding of technical drawing techniques • how these were applied in the drawings produced • the codes and specifications addressed in the drawings. <p><i>Assessment Tool</i> <i>Presentations/Reports: Drafting for Design and Technical Drawing Skills (Intermediate) (DESPRE–2B)</i></p> <p><i>Standard</i> <i>Performance rating of 2 for each criteria</i></p>	<p>10</p> <p>20</p>

MODULE DES2050: TECHNICAL DRAWING APPLICATIONS (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> demonstrate basic competencies. 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> observations of individual effort and interpersonal interaction during the learning process. <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
<p>Skills Development</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> describe the need for specific types of drawings (e.g., detail, assembly, sectional, auxiliary, exploded view) and where and when they are used produce at least one example of each of the following drawings based on sketches provided and accurately dimension and notate each drawing: <ul style="list-style-type: none"> multiview drawing (showing a minimum of three views) a detail and/or assembly drawing a sectional and/or auxiliary drawing exploded view and/or threaded fastener 	<p>The focus of this module is to teach students basic technical drawing skills so they may prepare working drawings for the purpose of manufacturing construction and fabrication structures, products and systems. Students may use traditional drafting equipment, CAD or other technologies specified by the teacher to complete this module.</p>

MODULE DES2050: TECHNICAL DRAWING APPLICATIONS (continued)

Concept	Specific Learner Expectations	Notes
Skills Development (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • produce a pictorial drawing (isometric or oblique or perspective) of the object represented in the multiview drawing • demonstrate standard conventions of technical drawing (e.g., title blocks, labelling/lettering, dimensioning, scale and measuring, line types such as solid, hidden, projection, break, fold, phantom) as appropriate in drawings being completed • interpret standards and codes as they apply to the drawings being done • use appropriate terminology. 	<p>This is a skill development module that supports the Drafting/Design Fundamentals, 3-D Design and Living Environments foci in Design Studies. The Drafting/Design and Technical Drawing modules also support CAD skills modules and modules from strands involved in manufacturing, construction and fabrication (e.g., Construction Technologies, Fabrication Studies, Fashion Studies, Communication Technology).</p> <p>Teachers may wish to contextualize the work done in this module in one of these areas.</p>
Presentation, Design Journal and Portfolio	<ul style="list-style-type: none"> • see Specific Learning Expectations for 2-D Design Applications and CAD Applications. 	<p>See notes for 2-D Design Applications and CAD Applications.</p>