Industrial Graphics Skills 2019

Study plan

Section 1: School statement

School:	Queensland Curriculum and Assessment Authority
Subject code:	6419
Combined class:	No
School contact:	SEO
Phone:	(07) 3864 0375
Email:	seo@qcaa.qld.edu.au

Section 2: Course and assessment overview

Industrial Graphics Skills is a four-unit course of study.

Units 1 and 2 of the course are designed to allow students to begin their engagement with the course content, i.e. the knowledge, understanding and skills of the subject. Course content, learning experiences and assessment increase in complexity across the four units as students develop greater independence as learners.

Units 3 and 4 consolidate student learning.

QCAA approval

QCAA officer:	**Date:**

Unit	Module number and description	Time in hours	Electives	Core concepts and ideas	Assess no.	Assessment technique, description and conditions	Dimensions
1	**Module 1: Introduction to drafting** This module introduces students to the industry practices and drafting processes of drafters, who use drawing skills and procedures to create technical drawings (specifications that assist in the manufacture of quality products in manufacturing enterprises).	55	• Building and construction drafting • Engineering drafting • Furnishing drafting	**Industry practices** • C1.1 Manufacturing enterprises • C1.2 Workplace health and safety • C1.3 Personal and interpersonal skills • C1.4 Product quality **Drafting processes** • C2.1 Drawing skills and procedures • C2.2 Specifications • C2.3 Tools and materials	1 2	**Practical demonstration** Produce a range of basic technical drawings (CAD and sketches) to industry requirements. (Visual evidence is collected through annotated photographs or teacher observations annotated on the instrument-specific standards.) Individual response. **Examination** Respond to questions relating to drawing skills and procedures: CAD, sketching, 2D and 3D. 60.0–90.0 minutes • Short response test Individual, supervised: Interpreting technical drawings. 50–150 words per item	• Knowing and understanding • Analysing and applying • Producing and evaluating • Knowing and understanding • Analysing and applying • Producing and evaluating

Unit	Module number and description	Time in hours	Electives	Core concepts and ideas	Assess no.	Assessment technique, description and conditions	Dimensions
2	**Module 2: Engineering drafting 1** This module introduces students to the industry practices associated with drafters, who work in teams using drafting skills and procedures to create technical drawings. Quality product outcomes are achieved through accurate, industry-relevant drawings. Effective teamwork in the drafting workplace requires the communication of clearly defined work roles and expectations.	55	• Engineering drafting	**Industry practices** • C1.1 Manufacturing enterprises • C1.2 Workplace health and safety • C1.3 Personal and interpersonal skills • C1.4 Product quality **Drafting processes** • C2.1 Drawing skills and procedures • C2.2 Specifications • C2.3 Tools and materials	3	**Practical demonstration** Animate the assembly of a multi-component engineering product to indicate the correct production line assembly sequence for a presentation to new workers. (Visual evidence is collected through annotated photographs or teacher observations annotated on the instrument-specific standards.)	• Knowing and understanding • Analysing and applying • Producing and evaluating
					4	**Project** In a team, create a set of technical drawings for a simple multi-component product, e.g. bench vice, skateboard. • Product component Team: Set of technical drawings. Individual: 3D printed model of an appropriately sized component of the multi-component product for assembly. • Multimodal component — presentation Individual evaluation of the team experience and of the associated industry practices and drafting processes. 2.0–4.0 minutes • Multimodal component — non-presentation Individual annotated logbook documenting the development of the drawings to indicate the use of industry practices and drafting processes. Maximum: 6 A4 pages (or equivalent)	• Knowing and understanding • Analysing and applying • Producing and evaluating

Unit	Module number and description	Time in hours	Electives	Core concepts and ideas	Assess no.	Assessment technique, description and conditions	Dimensions
3	**Module 3: Building and construction drafting** This module builds on prior learning of industry practices and drafting processes used in the creation of technical drawings for the manufacturing industry. The building and construction industry contributes significantly to the Australian economy. Drafters play a vital role by assisting in the construction of quality structures that meet industry requirements.	55	• Building and construction drafting	**Industry practices** • C1.1 Manufacturing enterprises • C1.2 Workplace health and safety • C1.3 Personal and interpersonal skills • C1.4 Product quality **Drafting processes** • C2.1 Drawing skills and procedures • C2.2 Specifications • C2.3 Tools and materials	5	**Practical demonstration** Produce a cross-sectional view, site plan, and range of basic building construction details. (Visual evidence is collected through annotated photographs or teacher observations annotated on the instrument-specific standards.)	• Knowing and understanding • Analysing and applying • Producing and evaluating
					6	**Project** Create a set of technical drawings for a covered deck extension, developed from a basic sketch and house photograph. Individual response. • Product component Technical drawings of the proposed extension. • Multimodal component — non-presentation Individual digital portfolio documenting the development of the drawings to indicate the use of industry practices and drafting processes. Maximum: 8 A4 pages (or equivalent)	• Knowing and understanding • Analysing and applying • Producing and evaluating

Unit	Module number and description	Time in hours	Electives	Core concepts and ideas	Assess no.	Assessment technique, description and conditions	Dimensions
4	**Module 4: Engineering drafting 2** This module builds on prior learning of industry practices and drafting processes used in the creation of technical drawings for the manufacturing industry. Product quality depends on drafters' understanding of industry-specific tools and materials. When materials become unavailable or production processes are modified, technical drawings are created that maintain product quality in recognition of customer expectations.	55	• Engineering drafting	**Industry practices** • C1.1 Manufacturing enterprises • C1.2 Workplace health and safety • C1.3 Personal and interpersonal skills • C1.4 Product quality **Drafting processes** • C2.1 Drawing skills and procedures • C2.2 Specifications • C2.3 Tools and materials	7	**Project** Produce a set of technical drawings of a product (e.g. motorbike jack) using a modified component, and include a physical model of the modified component. Individual response. • Product component Set of technical drawings to aid manufacture, including a 3D physical model of the modified component. • Multimodal component — non-presentation Printed folio of planning sketches documenting the development and evaluation of the drawings to indicate the use of industry practices and drafting processes. Maximum: 8 A4 pages (or equivalent)	• Knowing and understanding • Analysing and applying • Producing and evaluating
					8	**Examination** Respond to questions relating to drafting processes and industry practices covered in the course of study. 60.0–90.0 minutes • Short response test Individual responses, supervised conditions. 50–250 words per item	• Knowing and understanding • Analysing and applying • Producing and evaluating

Industrial Graphics Skills 2019

Teacher:
Student name:

Class:
Year:

Unit	Module of work	Assessment Instrument No.	Assessment Instrument	Formative or Summative	Knowing and understanding	Analysing and applying	Producing and evaluating
1	**Module one** Introduction to drafting	1	Practical demonstration	F			
		2	Examination	F			
2	**Module two** Engineering drafting 1	3	Practical demonstration	F			
		4	Project	F			
Interim Standards							
Interim Result							
3	**Module three** Building and construction drafting	5	Practical demonstration	S			
		6	Project	S			
4	**Module four** Engineering drafting 2	7	Project	S			
		8	Examination	S			
Exit Standards							
Exit Result							