

Industrial Graphics Skills

Applied senior subject

Applied

Technologies are an integral part of society as humans seek to create solutions to improve their own and others' quality of life. Technologies affect people and societies by transforming, restoring and sustaining the world in which we live. In an increasingly technological and complex world, it is important to develop the knowledge, understanding and skills used by Australian manufacturing and construction industries to produce products. The manufacturing and construction industries transform raw materials into products required by society. This adds value for both enterprises and consumers. Australia has strong manufacturing and construction industries that continue to provide employment opportunities.

Industrial Graphics Skills includes the study of industry practices and drawing production processes through students' application in, and through a variety of industry-related learning contexts. Industry practices are used by enterprises to manage drawing production processes and the associated manufacture or construction of products from raw materials. Drawing production processes include the drawing skills and procedures required to produce industry-specific technical drawings and graphical representations. Students engage in applied learning to demonstrate knowledge and skills in units that meet local needs, available resources and teacher expertise. Through both individual and collaborative learning experiences, students learn to meet client expectations of drawing standards.

Applied learning supports students' development of transferable 21st century, literacy and numeracy skills relevant to future employment opportunities in the building and construction, engineering and furnishing industrial sectors. Students learn

to interpret drawings and technical information, and select and demonstrate manual and computerised drawing skills and procedures. The majority of learning is done through drafting tasks that relate to business and industry. They work with each other to solve problems and complete practical work.

Pathways

A course of study in Industrial Graphics Skills can establish a basis for further education and employment in a range of roles and trades in the manufacturing industries. With additional training and experience, potential employment opportunities may be found in drafting roles such as architectural drafter, estimator, mechanical drafter, electrical drafter, structural drafter, civil drafter and survey drafter.

Objectives

By the conclusion of the course of study, students should:

- demonstrate practices, skills and procedures
- interpret client briefs and technical information
- select practices, skills and procedures
- sequence processes
- evaluate skills and procedures, and products
- adapt plans, skills and products.

Structure

Industrial Graphics Skills is a four-unit course of study. This syllabus contains six QCAA-developed units as options for schools to select from to develop their course of study.

Unit option	Unit title
Unit option A	Drafting for residential building
Unit option B	Computer-aided manufacturing drafting
Unit option C	Computer-aided drafting — modelling
Unit option D	Graphics for the construction industry
Unit option E	Graphics for the engineering industry
Unit option F	Graphics for the furnishing industry

Assessment

Students complete two assessment tasks for each unit. The assessment techniques used in Industrial Graphics Skills are:

Technique	Description	Response requirements
Practical demonstration	Students perform a practical demonstration of drafting and reflect on industry practices, skills and drawing procedures.	Practical demonstration of drafting Drawings: the drafting skills and procedures used in 3–5 production processes Documentation Multimodal (at least two modes delivered at the same time): up to 3 minutes, 6 A4 pages, or equivalent digital media
Project	Students draft in response to a provided client brief and technical information.	Unit-specific product Drawings: drawings drafted using the skills and procedures in 5–7 production processes Drawing process Multimodal (at least two modes delivered at the same time): up to 5 minutes, 8 A4 pages, or equivalent digital media