Industrial Technology Skills

Applied senior subject

Industrial Technology Skills focuses on the practices and processes required to manufacture products in a variety of industries.

Students understand industry practices; interpret specifications, including technical information and drawings; demonstrate and apply safe, practical production processes with hand/power tools and machinery; communicate using oral, written and graphical modes; organise, calculate and plan production processes; and evaluate the products they create using predefined specifications.

Students develop transferable skills by engaging in manufacturing tasks that relate to business and industry, and that promote adaptable, competent, self-motivated and safe individuals who can work with colleagues to solve problems and complete practical work.

Pathways

A course of study in Industrial Technology Skills can establish a basis for further education and employment in manufacturing industries. Employment opportunities may be found in the industry areas of aeroskills, automotive, building and construction, engineering, furnishing, industrial graphics and plastics.

Objectives

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

- describe industry practices in manufacturing tasks

- demonstrate fundamental production skills

- interpret drawings and technical information

- analyse manufacturing tasks to organise materials and resources

- select and apply production skills and procedures in manufacturing tasks

- use visual representations and language conventions and features to communicate for particular purposes

- plan and adapt production processes

- create products from specifications

- evaluate industry practices, production processes and products, and make recommendations.

Structure

The Industrial Technology Skills course is designed around:

- core topics, which are integrated throughout the course

- elective topics, organised in industry areas, and manufacturing tasks related to the chosen electives.

Core topics	Industry area	Elective topics
• Industry practices • Production processes	Aeroskills	• Aeroskills mechanical • Aeroskills structures
	Automotive	• Automotive mechanical • Automotive body repair • Automotive electrical

Core topics	Industry area	Elective topics
	Building and construction	• Bricklaying • Plastering and painting • Concreting • Carpentry • Tiling • Landscaping
	Engineering	• Sheet metal working • Welding and fabrication • Fitting and machining
	Furnishing	• Cabinet-making • Furniture finishing • Furniture-making • Glazing and framing • Upholstery
	Industrial graphics	• Engineering drafting • Building and construction drafting • Furnishing drafting
	Plastics	• Thermoplastics fabrication • Thermosetting fabrication

Assessment

For Industrial Technology Skills, assessment from Units 3 and 4 is used to determine the student's exit result, and this consists of four instruments, including:

• at least two projects

• at least one practical demonstration (separate to the assessable component of a project).

Project	Practical demonstration	Examination
A response to a single task, situation and/or scenario.	A task that assesses the practical application of a specific set of teacher-identified production skills and procedures.	A response that answers a number of provided questions, scenarios and/or problems.

A project consists of a product component and at least one of the following components:
• written: 500–900 words
• spoken: 2½–3½ minutes
• multimodal
  – non-presentation: 8 A4 pages max (or equivalent)
  – presentation: 3–6 minutes
• product: continuous class time.
	Students demonstrate production skills and procedures in class under teacher supervision.	• 60–90 minutes
		• 50–250 words per item