



Stage 5 Graphics Technology

Course plan: 200 hour course

Rationale

The 200 hour course will be delivered over Years 9 and 10, in five one hour lessons in each two week cycle. Total 100 hours each year for two years. Students will undertake Core Modules 1 and 2 combined over Year 9, and the four 25 hour option modules in Year 10.

Students are timetabled in a technical drawing room. Access to computer technology is via period by period booking into a Design and Technology Lab. A regular timetabled period in a computer lab would be desirable and is being investigated.

Students electing Graphics Technology for Year 9 have already completed 200 hours in the mandatory Design and Technology Stage 4 course, delivered in five one hour lessons in each two week cycle. This is broken over the two years into six cycles.

In Year 7 Design and Technology students have completed a module in *Communication*. This unit provides an introduction to graphics principles and techniques, applied geometry, orthogonal and pictorial drawing and rendering. Since core modules 1 and 2 are being delivered concurrently in the first 100 hours the content will be combined and delivered as a continuation of content rather than separated into core modules 1 and 2.

Prior to beginning the development of this program, common areas of the syllabus content were grouped to determine the extent and depth of study required in the syllabus. The remaining 100 hours will be delivered as modules of choice. These modules could be negotiated with the students, however choice of modules should reflect resources, staff availability and students interests with respect to their next stage of learning.

Year 9															
Cycle	Focus area	Topic summary	Outcomes										Notes on content		
			5.1.1	5.1.2	5.2.1	5.2.2	5.3.1	5.3.2	5.4.1	5.4.2	5.5.1	5.5.2	5.6.1	5.6.2	
1–5	Introduction to Graphics Technology <i>Getting my portfolio started</i>	<ul style="list-style-type: none">• Work practices• Drawing standards• Basic computing principles• Design principles• Applied geometry• Orthogonal drawing• Presentation drawing	<input type="checkbox"/>	<input type="checkbox"/>							<input type="checkbox"/>	<input type="checkbox"/>			Classroom and equipment orientation. OH&S issues Folio design, organisation and set up Technical language and standards. Freehand sketching. Geometric constructions and tangency. Recognise draw and develop basic geometric shapes Design development, logo design, self-promotion logo. CAD layout basics, CAD tools and libraries. Presentation of portfolio layout and contents.
6–10	Pictorial and orthogonal drawing <i>Engineering products</i>	<ul style="list-style-type: none">• Freehand and mechanical orthogonal drawing.• Pictorial and product drawing and rendering.• Basic package design.• Rendering and shading.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>					Visualise, measure and draw simple objects. Produce freehand and mechanical pictorial representations (isometric and oblique). Orthogonal drawings using instruments. Apply AS1100 standards to represent features, dimensioning etc. Create a simple orthogonal drawing using CAD.
11–15	Design and document development of a product. <i>Child's toy</i>	<ul style="list-style-type: none">• Product drawing and design• Presentation drawings• Detailed assembly and Orthogonal drawings.• Rendering	<input type="checkbox"/>			<input type="checkbox"/>				<input type="checkbox"/>					Produce concept, idea, and design freehand sketches. Produce assembly exploded and sectioned views. Produce prototype drawings CAD rendered layered.



Year 10															
Cycle	Focus area	Topic summary	Outcomes										Notes on content		
			5.1.1	5.1.2	5.2.1	5.2.2	5.3.1	5.3.2	5.4.1	5.4.2	5.5.1	5.5.2	5.6.1	5.6.2	
1–5	Graphic design and communication	<ul style="list-style-type: none">• Communication design principles• Freehand thumbnail, mechanical and CAD drawings.• Geometric constructions• Typography• Package design• Digital imaging. <p><i>Project</i> Sport product identity, icons, logos and packaging.</p>					<input type="checkbox"/>								Identify and apply graphic design principles to areas of communication. Research development and use of icons, logos, type faces. Package design, brochure design and layout. Use of colour and reproduction techniques. Presentation of artworks, hand, CAD and multimedia.
6–10	Engineering drawing	<ul style="list-style-type: none">• Detail, assembly orthogonal drawings.• Working drawings.• Design development and presentation. <p><i>Project</i> Skateboard design and specifications.</p>						<input type="checkbox"/>			<input type="checkbox"/>				AS1100 standards in mechanical and CAD orthogonal drawings. Representation and recognition of engineering features and components. Sketch plan and produce sequenced drawings of parts, components, assemblies and sections. CAD layered4 coloured detailed sections in a set of working drawings.
11–16	Australian architecture	<ul style="list-style-type: none">• History of Australian architecture.• Role and scope of the architect and designer.• Environmental issues.• Architectural graphics. <p><i>Project</i> Rural architecture in NSW</p>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>				<input type="checkbox"/>			Research and document architectural design in the area. Overview of Australian architecture, construction methods and materials, themes, styles and other influences in each period. Produce documentation and drawings using instruments and CAD of an historic local building or its features.
16–20	Cabinet and furniture drawing	<ul style="list-style-type: none">• Freehand and mechanical orthogonal drawing.• Exploded pictorial and assembly drawings.• Working drawings and documentation. <p><i>Project</i></p>	<input type="checkbox"/>					<input type="checkbox"/>							Drawing techniques using scale, representation of features, joints, and joining methods. Diagrams developed to show procedures. Measure and draw existing joints and products. Investigate industry techniques, ergonomics.

		Class project: Industrial Technology project resource book									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Produce complete documentation using instruments and CAD for construction of a project suitable for Industrial Technology Stage 5. Detailed and working drawings and rendered pictorials.
									<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	