

| | |
|--|---|
| Stage 5 Graphics Technology: Year 9 | |
| Core module: Module 4 | Module duration: 10 weeks |
| Module title: Rural architecture | Outcomes (targeted outcomes in bold) |
| <p>Module description:</p> <p>This 10 week module is placed in Year 9 in the first 100 hours of the 200 hour course. The theme for this unit is <i>rural architecture</i>.</p> <p>Throughout this unit students will be introduced to:</p> <ul style="list-style-type: none"> • using scale to produce site plans, floor plans elevations and sections • representations of architectural features • architectural rendering and shadow techniques • architectural pictorial views, axonometric, planometric and 1 and 2 point perspective. | <p>A student:</p> <p>5.1.1 communicates ideas graphically using freehand sketching and accurate drafting techniques</p> <p>5.1.2 analyses the nature of information and intended audience to select and develop appropriate presentations</p> <p>5.2.1 designs and produces a range of graphical presentations</p> <p>5.2.2 evaluates the effectiveness of different modes of graphical communications for a variety of purposes</p> <p>5.3.1 identifies, interprets, selects and applies graphics conventions, standards and procedures in graphical communications</p> <p>5.3.2 manages the development of graphical presentations to meet project briefs and specifications</p> <p>5.4.1 manipulates and produces images using computer-based drafting and presentation technologies</p> <p>5.4.2 designs, produces and evaluates multimedia presentations</p> <p>5.5.1 identifies, assesses and manages relevant OHS factors to minimise risks in the work environment</p> <p>5.5.2 demonstrates responsible and safe work practices for self and others</p> <p>5.6.1 demonstrates the application of graphics to a range of industrial, commercial and personal settings</p> <p>5.6.2 evaluates the impact of graphics on society, industry and the environment</p> |
| <p>Resources:</p> <p>Computer lab and appropriate software and printing facilities, technical drawing and drafting equipment, OHP, coloured pencils, rendering markers, paper and card. Equipment will be provided as a class set. Students will be expected to purchase their own equipment to enable project and homework completion. A complete class set will enable all students to participate without disadvantage from day 1 and will promote ownership and pride in their work environment. Students will be trained to maintain and manage their physical environment, boards, t-squares, equipment, and storage of work and work samples.</p> <p>Programming requirements:</p> <p>Consideration has been given to the time lost through external and internal assessment procedures and variations in school routines. This module has been designed to be delivered over 8 weeks with final 2 weeks allocated for completion of the final assessment task.</p> | |
| <p>Class tasks:</p> <p>Throughout this unit students will complete a number of technical drawing tasks in class.</p> | |
| <p>Assessment:</p> <p>Assessment will be based on the class tasks and the final assessment task in each module.</p> | |



| Students learn about: | Students learn to: | Integrated learning experiences, instructions and assessment | Evidence of learning | Feedback |
|---|--|---|----------------------|----------|
| Graphical principles and techniques <ul style="list-style-type: none">• career opportunities pathways in graphics | <ul style="list-style-type: none">• explore careers in graphics• analyse the roles and contributions of males and females to the graphics industry | Week 1 <ul style="list-style-type: none">• Teacher led discussion about the engagement of architects, architectural draftsmen, and their role in designing planning, consultation, approval and management of building projects. | | |
| <i>Standards</i> <ul style="list-style-type: none">• Australian and international drafting standards• Australian drafting standards• drafting scales and templates including radius, circle, nut/bolt and architectural | <ul style="list-style-type: none">• apply drafting conventions to create standard page layouts (e.g. paper size, borders, title blocks, projection symbols)• apply AS1100 drafting standards• use standard instruments in the production of drawings and presentations | <ul style="list-style-type: none">• Teacher led class discussion about AS1100 Architectural standards and knowledge required of the building codes and work in association with government regulators and local councils. | | |

| Students learn about: | Students learn to: | Integrated learning experiences, instructions and assessment | Evidence of learning | Feedback |
|---|---|--|--|--|
| Design in graphics <ul style="list-style-type: none"> freehand pictorial and orthogonal drawings design principles and processes freehand design drawings | <ul style="list-style-type: none"> visualise and sketch common objects identify and apply freehand drawing techniques to a range of simple orthogonal and pictorial drawing types apply design principles and processes in the development, production and evaluation of graphical presentations select and apply graphical communication techniques for specific purposes apply different graphical representations in elementary design situations use sketches to assist with problem-solving and communication of ideas | <ul style="list-style-type: none"> Teacher provides samples of drawings for all stages in development of a proposal, e.g. <ul style="list-style-type: none"> floor plans sectioned elevations detail drawings electrical plans plumbing diagram block plan site plan specifications shadow diagrams. Class discussion in identifying the drawings, purpose of the drawing, standards used, symbols, language and terminologies. Teacher led discussion and explanation on choice and use of scale. In groups, students complete freehand drawing using grid paper a floor plan of an area of the school, e.g. workshop, food technology room, common room. Students attempt to represent features of the room using standard symbols. | <p>Students are able to identify different types of architectural drawings.</p> <p>Students successfully apply a scale and complete the freehand floor plan.</p> | <p>Oral feedback and class discussion.</p> <p>Oral feedback and annotations on work.</p> |

| | | | | |
|---|---|---|---|---|
| Planning and construction <i>Applied geometry</i> <ul style="list-style-type: none"> • measurement and accuracy • application of scales in drawing | <ul style="list-style-type: none"> • use scales in the production of drawings | <ul style="list-style-type: none"> • Students choose a suitable scale and draw a block plan of roads and buildings around their home or building of their choice. | Students successfully complete block plan. | Oral feedback, annotations on completed work. |
| Students learn about: | Students learn to: | Integrated learning experiences, instructions and assessment | Evidence of learning | Feedback |
| <i>Orthogonal drawing</i> <ul style="list-style-type: none"> • assembled orthogonal drawings • sectioned orthogonal views • standard representation of common engineering and architectural features | <ul style="list-style-type: none"> • produce assembly drawings from exploded pictorial drawings and detail drawings • produce orthogonal drawings containing full sections • select appropriate views and drawing types for a particular context • apply orthogonal drawing techniques to architectural, engineering or cabinet drawing • relate common drawing conventions to AS1100 standards • employ manual techniques and drawing templates to draft common engineering and architectural elements | <ul style="list-style-type: none"> • Students complete a series of completion sheets developed by teacher. Sheets to include: <ul style="list-style-type: none"> – floor plans – elevations – sections – detail drawings – symbols and representations and conventions. – basic construction details and identification of components in footings, walls and roof construction. | Students successfully complete the tasks as outlined. | Observation and oral feedback during completion of class tasks and discussions. Annotations on and marking of students work. |



| | | | | |
|--|---|---|--|---|
| <i>Applied geometry</i> <ul style="list-style-type: none">• basic developments of simple solids including application to cones, prisms, cylinders and pyramids | <ul style="list-style-type: none">• produce developments of simple objects• apply development techniques to pattern design | <ul style="list-style-type: none">• Students introduced to surface developments and shapes of surfaces.• Simple development completed. | Students demonstrate understanding and competence in the development and production of sketches and completion of accurate drawings. | Annotations on and marking of students work and support and discussions in class. |
|--|---|---|--|---|

| Students learn about: | Students learn to: | Integrated learning experiences, instructions and assessment | Evidence of learning | Feedback |
|--|--|---|--|---|
| <ul style="list-style-type: none"> true lengths of lines | <ul style="list-style-type: none"> apply basic construction techniques to determine the true length of inclined lines | <ul style="list-style-type: none"> Students introduced to true lengths and true shapes of surfaces Students complete tasks prepared by teacher. Students complete a task developed by teacher in roof geometry: <ul style="list-style-type: none"> true shape of surface true lengths using auxiliary views. | Students demonstrate understanding and competence in the development and production of sketches and completion of accurate drawings. | Annotations on and marking of students work and support and discussions in class. |
| <i>Pictorial drawing</i> <ul style="list-style-type: none"> a variety of pictorial representation techniques including <ul style="list-style-type: none"> isometric and oblique planometric/axonometric 1 and 2-point perspective | <ul style="list-style-type: none"> visualise and draft common objects construct pictorial circles and geometric shapes utilise a range of pictorial representations | <ul style="list-style-type: none"> Students to complete a simple 2 point perspective of a house. Floor plan provided by teacher. | Students demonstrate competencies and understanding through completion of task as outlined. | Annotations on and marking of students work and support and discussions in class. |
| Presentation <i>Pictorial rendering</i> <ul style="list-style-type: none"> rendering pictorial drawings to assist others in the visualisation of a product or concept | <ul style="list-style-type: none"> apply manual rendering and/or modelling techniques to a range of products | <ul style="list-style-type: none"> Students introduced to architectural rendering techniques. Samples provided by teacher to class. Details and explanations given on representation of common features. | Students can recognise and identify features of rendering techniques used. | Oral feedback and clarification. |



| Students learn about: | Students learn to: | Integrated learning experiences, instructions and assessment | Evidence of learning | Feedback |
|-----------------------|--------------------|---|----------------------|----------|
| | | <p>Weeks 9 and 10</p> <p><i>Final task</i></p> <ul style="list-style-type: none">• Students research and identify a building or structure in the local area of some historical significance. The building could be:<ul style="list-style-type: none">– a rotunda in the park– gates to an historical garden– a dwelling– an edifice or facade on a shop or– a rural structure, a shed or barn.• Students will present documentation on the structure including:<ul style="list-style-type: none">– freehand pictorial drawings– site plan– block plan– floor plan and elevations– detail drawing of a feature or features.• Students should include historical data, justification for materials used in the construction and place the structure in a style or period of Australian architecture. | | |