

Study Skills
Course Milestones for Students

Course Title: Graphic Communication

Level: Higher

Work to be covered/Topics/Activities/Assignments

Month	Unit 1 2D Graphic Communication	Unit 2 3D and Pictorial Graphic Communication		
	Course Assessment	Topics	Course Assessment	Topics
Early June	<p>Unit Assessment Task 1 - Straw and cup dispenser</p> <p>O/C 1 Produce and interpret 2D orthographic sketches¹ and drawings</p> <p>1.1 Applying appropriate drawing standards, protocols and conventions to produce orthographic sketches</p> <p>1.2 Using graphic communication equipment accurately and effectively and applying appropriate drawing standards, protocols and conventions to produce projected 2D line drawings</p> <p>O/C 2 Produce 2D computer-aided designed/draughted production drawings</p> <p>2.1 Applying computer-aided design/draughting skills, knowledge and understanding, accurately and effectively, and using appropriate drawing standards, protocols and conventions, to create related orthographic views</p>	<p>Freehand Sketching</p> <ul style="list-style-type: none"> • related third angle orthographic sketches • continuous, straight lines of good sketch quality • consistency in width between the angled and vertical components • reasonable accuracy in angles and with good proportion • generating curves of interpenetration <p>British Standards:</p> <ul style="list-style-type: none"> • views are conventionally and appropriately aligned • adhere to recognised standards and conventions • include appropriate dimensions • include title boxes and all appropriate text <p>Orthographic Drawing</p> <ul style="list-style-type: none"> ◆ 2D orthographic drawings in third angle ◆ an accuracy of $\pm 1\text{mm}$ in views ◆ Assemblies of three dissimilar and unique component parts. ◆ appropriate method of generating the curve of the interpenetration <p>Computer Aided Design</p> <p>use CAD skills to:</p> <ul style="list-style-type: none"> • create related 2D views • create and an assembly comprising a minimum of three component parts • use either 2D CAD, or a 3D model. 		
Late August				

Month	Unit 1 2D Graphic Communication		Unit 2 3D and Pictorial Graphic Communication	
	Course Assessment	Topics	Course Assessment	Topics
Early September	<p>Unit Assessment Task 2 – Children’s toothpaste</p> <p>O/C 1 Produce and interpret 2D orthographic sketches² and drawings</p> <p>1.3 Describing and justifying the use of the main types of 2D graphic communication employed in the design, manufacturing and marketing of a product</p> <p>O/C 2 Produce 2D computer-aided designed/draughted production drawings</p> <p>2.2 Applying computer-aided design/draughting skills, knowledge and understanding accurately and effectively and using appropriate drawing standards to create three examples of technical detail</p> <p>2.3 Applying computer-aided design/draughting skills accurately and effectively and using appropriate drawing standards to add textual and numerical information to orthographic computer-aided designed/draughted work</p> <p>O/C 3 Produce preliminary 2D designs and illustrations for a multi-page promotional document</p> <p>3.2 Conducting preliminary research prior to the design of a promotional publication and preparing an outline specification</p> <p>O/C 4 Create a multi-page 2D promotional publication and a project set of promotional publications</p> <p>4.3 Describing and justifying the use of promotional graphics in industry and commerce and their impact on the environment and society</p>	<p>Graphic types</p> <ul style="list-style-type: none"> preliminary production and promotional graphics orthographic work assemblies technical detail drawings scale tangencies <p>Technical detail</p> <ul style="list-style-type: none"> dimensioning stepped and revolved sections exploded views enlargements tangencies scaling cut-aways auxiliary projection helices degrees of freedom/range of motion of parts. <p>Textual and Numerical Information</p> <ul style="list-style-type: none"> annotations technical information title box information materials part names Dimensions Quantity Scale tolerances <p>Preliminary research</p> <ul style="list-style-type: none"> style boards consideration of similar products surveys market research questionnaires. <p>Impact on the Environment and Society</p> <ul style="list-style-type: none"> the sharing of ideas, values and beliefs paper and printing technologies electronic communication and digital display visual impact on the built environment. 	<p>Unit Assessment Task 2 – Children’s toothpaste</p> <p>O/C 2 Produce 3D computer-aided designed/draughted models and associated production drawings</p> <p>2.1 Applying computer-aided design/draughting skills accurately and effectively and using appropriate assembly techniques to create 3D models</p> <p>2.2 Describing and justifying 3D modelling techniques used</p> <p>2.3 Applying computer-aided design/draughting skills, knowledge and understanding accurately and effectively and using appropriate drawing standards to add textual and numerical information</p> <p>O/C 4 Plan and produce 3D models for promotional purposes</p> <p>4.1 Designing a preliminary layout to incorporate a 3D model in response to a brief</p> <p>4.2 Producing promotional publications to incorporate a 3D model</p> <p>4.3 Evaluating the effectiveness of the format to its target audience in relation to design principles and elements</p> <p>4.4 Describing the purpose of 3D modelling in commercial/industrial settings and the impact on the environment and society</p>	<p>CAD skills</p> <ul style="list-style-type: none"> create 3D models using appropriate assembly techniques Complex features <ul style="list-style-type: none"> multiple unique components lofting helices sketch/profile paths <p>Techniques</p> <ul style="list-style-type: none"> described the 3D modelling techniques use correct terminology justified the 3D modelling techniques modelling plan <p>Text and numerical information</p> <ul style="list-style-type: none"> located and positioned appropriately annotations technical information title box information materials and part names dimensions quantity scale tolerances <p>Preliminary layout</p> <ul style="list-style-type: none"> responds to a brief communicates layout elements and principles create relevant visual impact target market annotated thumbnails worked-up visuals pictorial sketches surface rendering <p>Promotional Publication</p> <ul style="list-style-type: none"> 3D CAD modelling 3D Cad illustration Packaging Rendered graphics <p>Effectiveness of format</p> <p>Effectiveness of design elements and principles</p> <p>Impact on the environment and society</p>
Mid October				

Month	Unit 1 Graphic Communication		Unit 2 3D and Pictorial Graphic Communication	
	Course Assessment	Topics	Course Assessment	Topics
Late October	<p>Unit Assessment Task 3 – Mechanical Toy</p> <p>O/C 2 Produce 2D computer-aided designed/draughted production drawings</p> <p>2.1 Applying computer-aided design/draughting skills, knowledge and understanding accurately and effectively, and using appropriate drawing standards, protocols and conventions, to create related orthographic views</p> <p>2.2 Applying computer-aided design/draughting skills, knowledge and understanding accurately and effectively and using appropriate drawing standards to create three examples of technical detail</p> <p>O/C 3 Produce preliminary 2D designs and illustrations for a multi-page promotional document</p> <p>3.1 Illustrating preliminary orthographic sketches of everyday objects</p>	<p>CAD skills</p> <ul style="list-style-type: none"> ◆ create related 2D views ◆ create and an assembly comprising a minimum of three component parts ◆ 2D CAD ◆ 3D model ◆ comply with drawing standards <p>Technical Detail</p> <ul style="list-style-type: none"> • dimensioning • stepped and revolved sections • exploded views • enlargements • tangencies • scaling • cut-aways • auxiliary projection • helices • degrees of freedom/range of motion of parts <p>Illustrated Preliminary Work</p> <ul style="list-style-type: none"> • texture • material • different components • assembly details • form 	<p>Unit Assessment Task 3 – Mechanical Toy</p> <p>O/C 1 Produce and interpret pictorial sketches and drawings</p> <p>1.1 produce pictorial line sketches with complex features that demonstrate good proportion, line quality, and representation of the item</p> <p>1.2 produce pictorial line drawings with complex features that demonstrate accuracy in proportion, line quality, type and representation of the item</p> <p>1.3 Describing and justifying the decisions made regarding the main types of 3D and pictorial graphic communication employed in the design, manufacturing and marketing of a product</p> <p>O/C 3 Produce pictorial and 3D illustrations of everyday objects</p> <p>3.1 Illustrating preliminary pictorial sketches or drawings to interpret the light source, surface texture and materials</p> <p>3.2 Creating a rendered 3D computer-aided designed model of a complex everyday object to interpret the light source, with tonal change, surface texture and materials</p> <p>3.3 Using computer-aided design software appropriately to create an environment or scene with relevant visual impact, applying surface texture and materials, to situate and effectively enhance a pictorial illustration</p>	<p>Pictorial Line Sketches/ Drawings</p> <ul style="list-style-type: none"> • perspective • isometric • oblique • planometric • complex features • a clear representation of the item <p>Complex features</p> <ul style="list-style-type: none"> • curves or circles on various planes • sections and step sections • assemblies or exploded views • degrees of movement of parts <p>Described and Justified</p> <ul style="list-style-type: none"> • use of pictorial graphic communications • design • manufacturing • marketing of a product <p>Illustrated Preliminary Work</p> <ul style="list-style-type: none"> • realistic reflection • shadow • texture • material <p>Environment or Scene</p> <ul style="list-style-type: none"> • 3D model or pictorial drawing/sketch • Realistically rendered • 3D modelling techniques • photographic image-based lighting techniques (IBL) • stock 3D models placed and orientated • backgrounds • materials • lighting
Late November				

Month	Unit 1 Graphic Communication		Unit 2 3D and Pictorial Graphic Communication	
	Course Assessment	Topics	Course Assessment	Topics
Late November	<p>Unit Assessment Task 4 – Festival Ticket</p> <p>O/C 3 Produce preliminary 2D designs and illustrations for a multi-page promotional document</p> <p>3.3 Applying knowledge and understanding of design elements and principles to produce preliminary layout designs for a multi-page promotional document</p> <p>O/C 4 Create a multi-page 2D promotional publication and a project set of promotional publications</p> <p>4.1 Using software accurately and effectively to construct a master page/template for a multi-page promotional publication</p> <p>4.2 Producing a multi-page promotional publication with complex features, which communicates effectively with its target audience and has relevant visual impact</p> <p>4.3 Describing and justifying the use of promotional graphics in industry and commerce and their impact on the environment and society</p>	<p>Preliminary Layout Designs</p> <ul style="list-style-type: none"> • multi-page document • design elements and principles • evaluated against specification • folded • cut-outs revealing other layers • reflect the target market of the product • extensively annotated thumbnails • worked-up visuals <p>Master page/Template</p> <ul style="list-style-type: none"> • borders • bleeds • fold-lines • cuts • gutters • crop marks • effective use of grid structure • Multi-page • Pre-press proof • Edge to edge document <p>Promotional Publication</p> <ul style="list-style-type: none"> • target market • design elements and principles • Complex features • cut-outs • windows • twists • flaps • irregular proportions • design principles and element • images of high quality • DTP features and techniques <p>Graphics in Industry and Commerce</p> <ul style="list-style-type: none"> • impact on the environment and society • sharing of ideas, values and beliefs, designs or information with others throughout the world • paper and printing technologies • electronic communication and digital display, visual impact 		
Late December				

December	Revision for Prelim Exam
February	Prelim Exam

	Component 1 COURSE ASSESSMENT	Candidates ability to:	Activity	Marks	Marks allocated for
January/ February/ March/ April	<p>Course Assignment TASK <i>(50% of overall grade)</i></p> <p>Deadline 31 March 2016</p> <p>To demonstrate the ability to produce a range of graphics in response to a brief, 70 marks will be awarded for the candidate's ability to produce relevant:</p> <ul style="list-style-type: none"> research and analysis preliminary graphics production drawing and CAD models promotional documents or a publication 	research and analysis	Analysing a graphic brief and carrying out research activities.	4	<ul style="list-style-type: none"> The brief is analysed in detail and provides specific information on the requirements for graphics that meet a market purpose, content and style. Research is relevant and confirms the graphic requirements comprehensively
		preliminary graphics	<ul style="list-style-type: none"> Using line, shape, form and proportion to represent an item or items. Applying drawing standards. Including relevant and sufficient technical detail, to inform development of production drawings and CAD models. Communicating design features through use of light, shade, tone and/or texture. Planning effective multi-page promotional documents or publications. 	15	<ul style="list-style-type: none"> Response is of very good quality and proportion and demonstrates a clear purpose. Adherence to protocols and convention is demonstrated in all of the work. Response contains most relevant technical details. Detail is sufficient to inform the development of production drawings, CAD models and complex features. The response demonstrates a very good understanding of techniques used to communicate design features and very good skill in applying those techniques. Planning activities are thorough and demonstrate an effective range of layout variations. Justification of design elements, principles and DTP features relates specifically to the brief and demonstrates a good understanding of the impact of layout.
		production drawing and CAD models	<ul style="list-style-type: none"> Using CAD modelling techniques. CAD modelling. CAD modelling edits and complex features. Assembling components. Producing production drawings. Providing core information to support manufacture. Adhering to protocols, standards and conventions. Providing relevant technical detail to communicate additional information about the product. Assembling an environment. 	30	<ul style="list-style-type: none"> A minimum of three different CAD modelling techniques have been used. Most components demonstrate very good skill in draughting and modelling. Models demonstrate a broad range of complex features. The assembly of components is correct in all instances. The candidate has produced an assembled orthographic, a component orthographic or a pictorial view. Core information is included and would satisfy most of the requirements for manufacture. 2D and/or 3D and/or pictorial work adheres to protocol, standards and convention across all the work. 2D and/or 3D and/or pictorial work contains three or more examples of relevant additional information to support manufacture, assembly or use. The detail is accurate with annotation and scale to the views. The environment is assembled with the main model and different supplementary models, appropriately scaled and placed in context.
		promotional documents or a publication	<ul style="list-style-type: none"> Using illustration techniques effectively in 3D environments. Producing promotional document or publication to meet the requirements of a brief. 	21	<ul style="list-style-type: none"> Illustration techniques used are fully relevant to the environment and demonstrate very good skills in application. The promotional document or publication responds to all the requirements of the brief. The promotional documents or publication incorporates DTP features that have been applied with a high level of skill and significant visual impact.

			<ul style="list-style-type: none"> Using layout techniques including design elements and principles, and DTP features. Applying illustrations to a 3D model to enhance the environment and support the requirements of the brief. 		<ul style="list-style-type: none"> The promotional documents or publication makes very good use of design principles and elements, and has provided relevant visual impact throughout. Illustrations are used creatively throughout to enhance the environment and fully support the requirements of the brief.
May	Component 2 QUESTION PAPER (50% of overall grade, 70 marks, 2 hour duration)				
	<p>The purpose of the question paper is to assess the learner’s ability to retain and integrate knowledge and understanding from across the Course.</p> <p>The question paper Component of Course assessment will require learners to draw upon and apply knowledge and understanding of a sample from the topic areas above.</p>				

Resource Type	Resources	Topic/Activity/Assignment
BOOKS	<p>Leckie and Leckie Higher Graphic Communication course notes – available in 5G7 or to can buy their own copy.</p> <p>Leckie and Leckie National 5 Graphic Communication course notes – available in 5G7 or to can buy their own copy.</p> <p>BS pp8888 – Engineering Drawing Practice – available in 5G7</p>	<p>Written for previous version of the Higher course but much of the theory is still applicable.</p> <p>Most of the content is relevant at higher level.</p> <p>Essential reading for a student hoping for an A or B pass</p>
DIGITAL RESOURCES	<p>Edmodo Group/Shared Docs</p> <p>“Get a Grip Graphics” website and YouTube channel</p>	<p>Various notes for all areas of the course. Higher Product Design Past Papers. Higher Design and Manufacture Past Papers. Course Unit Support Notes. Course Assessment Specifications. Unit Assignment Tasks. List of helpful websites.</p> <p>Excellent resource with hints, tips, images and “you tube” clips of sketching and rendering techniques</p>