



**COURSE OUTLINE
GEMDTW 2022
UNIT 1 AND UNIT 2**



This course will run the two units, 1 and 2, concurrently. The student Semester 1 grade will therefore be an estimate. Blue = Unit 1 Content / Red = Unit 2 Content

Term	Week	Topic and key teaching points	Syllabus content	Assessment
1	1-2	Design Skills and Techniques Safety Production Management	Design Design Fundamentals and Skills <ul style="list-style-type: none"> • investigate <ul style="list-style-type: none"> ▪ needs, values and beliefs of the client or other end user ▪ sources of design inspiration ▪ existing ideas and products ▪ design fundamentals <ul style="list-style-type: none"> ○ aesthetics ○ function ○ safety ○ cost • devise <ul style="list-style-type: none"> ▪ using communication and documentation techniques <ul style="list-style-type: none"> ○ sketching ○ annotation ▪ elements of design <ul style="list-style-type: none"> ○ line ○ shape ○ form ○ texture ○ colour ○ tone ▪ rapid concept development techniques ▪ reviewing design ideas against design brief ▪ annotated graphics and sketches with appropriate measurements or dimensions applicable to context ▪ production planning <ul style="list-style-type: none"> ○ full materials list ○ full materials costing ○ production plan, including time line 	OSH Induction Booklet (not assessed) Task1: Cutting Board Folio



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	<ul style="list-style-type: none">• evaluate<ul style="list-style-type: none">▪ design ideas when investigating and devising▪ finished product against the initial design and student generated criteriaUse of TechnologySkills and Techniques• ICT, portfolio development and communication skills<ul style="list-style-type: none">▪ photography – ongoing record of progress and processes used and final product▪ documenting presentations and evaluations• context appropriate drawings and relevant technical information to produce the final product to demonstrate<ul style="list-style-type: none">▪ sketching rapid concept developments▪ 3D presentation drawings▪ rendering techniques▪ 2D working drawings or using templates▪ inspiration/concept or storyboard development and presentation▪ design and making specification sheets• workroom/studio terminology appropriate to context• select appropriate materials and calculate the quantities of materials required to complete the project• with supervision, operate machinery and tools appropriate to contextSafety• correct use of personal protective equipment (PPE) where applicable• occupational safety and health (OSH) practices appropriate to tasks being undertaken in workshopsProduction Management• production plan<ul style="list-style-type: none">▪ maintain a production plan▪ maintain time management while using tools, equipment and machinery to complete production<ul style="list-style-type: none">○ follow instructions from plans○ maintain safety requirements▪ record changes to materials lists or costing▪ record regular journal/diary entries▪ ongoing evaluation techniques: diary, journal or portfolio notes and use of photography to record ongoing progress/decision changes made to the project	
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1	3-5	<p>Safety Skills and Techniques Design Fundamentals and Skills</p>	<p>Safety</p> <ul style="list-style-type: none"> ▪ correct use of personal protective equipment (PPE) where applicable ▪ conduct risk assessment for using specific tools/machinery ▪ demonstrate occupational safety and health practices appropriate to tasks being undertaken in workshops ▪ apply risk management strategies in the workshop/studio ▪ recognise need and purpose of MSD (materials safety data) with regard to storage and handling of hazardous substances and hazardous operations appropriate to situation <p>Skills and Techniques</p> <ul style="list-style-type: none"> ▪ identification of the main reasons for blades becoming blunt or breaking <p>Skills and Techniques</p> <ul style="list-style-type: none"> ▪ read and correctly interpret and/or modify plans/patterns/templates ▪ use appropriate workroom terminology ▪ select and safely apply technical skills using a range of tools and machinery that could include, but not limited to: radial arm saw or drop saw or compound mitre saw / sanding machines / portable or fixed routers / various grinders / carving tools / wood lathe / biscuit cutter / portable saws / drill press ▪ apply multiple coats of a finish by brush, cloth and/or spray gun followed by correct clean up procedures ▪ demonstrate workshop clean up procedures ▪ operate machinery and tools appropriate to context ▪ select and use appropriate finishes ▪ apply multiple coats of a finish by spray gun, including appropriate clean-up of equipment <p>Design Fundamentals and Skills</p> <ul style="list-style-type: none"> • evaluate <ul style="list-style-type: none"> ▪ design ideas when investigating and devising finished product against the initial design and student generated criteria 	<p>Task7: Semester 1 Response Booklet: OSH Worksheet Task3: Cutting Board Task1: Cutting Board Folio</p>
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1	6-9	<p>Nature and Properties of Materials</p> <p>Materials in Context</p> <p>Skills and Techniques</p>	<p>Nature and Properties of Materials</p> <ul style="list-style-type: none"> ▪ origins of common softwoods and hardwoods ▪ classification of hardwoods, softwoods and manufactured boards using the characteristics of hardness, colour and workability ▪ difference between rough sawn and DAR timbers ▪ identification of common timber sizes, lengths, widths and thicknesses, sheet sizes ▪ identification of the structure and basic parts of a tree- cambium layer / sapwood / heartwood / growth rings / medullary rays / pith / bark <p>Materials in Context</p> <ul style="list-style-type: none"> ▪ broad areas of use for hard and soft woods <p>Skills and Techniques</p> <p>use hand tools and/or machines to fabricate at least one of the following joints- widening joint / finger joint / cross-halving joint / dovetail joint / housing joint / mortise and tenon / bridle joint / biscuit joint</p>	<p>Task4: Table</p> <p>Task7: Semester 1 Response Booklet: Tree Structure Worksheet</p>
2	1-2	<p>Materials in Context</p> <p>Materials in Context</p>	<p>Materials in Context</p> <ul style="list-style-type: none"> • identification of environmental considerations <ul style="list-style-type: none"> ▪ 3 Rs – reduce, re-use, recycle ▪ ways to reduce waste ▪ ways to re-use and recycle <p>Materials in Context</p> <ul style="list-style-type: none"> • condition of materials recovered through different methods of recycling <p>impact of materials production processes on the workshop and the local environment, waste management, dust, fumes, noise</p>	<p>Task4: Table</p> <p>Task7: Semester 1 Response Booklet: Environmental Impact Worksheet</p>
2	3-4	<p>Nature and Properties of Materials</p>	<p>Skills and Techniques</p> <ul style="list-style-type: none"> ▪ identify and differentiate between PVA, two pack epoxy, contact cement adhesives ▪ select and use appropriate adhesives <p>Nature and properties of materials</p> <p>identification of common associated materials used with wood- adhesives</p>	<p>Task4: Table</p> <p>Task7:</p> <p>Task7: Semester 1 Response Booklet: Adhesives Worksheet</p>
2	5-6	<p>Skills and Techniques</p> <p>Nature and properties of materials</p>	<p>Nature and Properties of Materials</p> <ul style="list-style-type: none"> • origins of manufactured boards • production process for manufactured boards • uses of plywood and different fibreboards • identification of characteristics of plywood and fibreboards • the association between hardness, workability and structure 	<p>Task4: Table</p> <p>Task8: Semester 2 Response Booklet: Manufactured Boards Worksheet</p>

2	7-10	<p>Nature and Properties of Materials Skills and Techniques Nature and Properties of Materials Design Fundamentals and Skills Use of Technology Skills and Techniques Production Management</p>	<p>Nature and Properties of Materials</p> <ul style="list-style-type: none"> • identification of common timber finishes • select and use appropriate finishes <p>Skills and Techniques</p> <ul style="list-style-type: none"> • differentiate between water-based, turpentine (oil) based, solvent-based and two pack epoxy finishes, including stains and waxes <p>Nature and Properties of Materials</p> <ul style="list-style-type: none"> • identification of common associated materials used with wood- fillers and finishes <p>Design Fundamentals and Skills</p> <ul style="list-style-type: none"> • investigate <ul style="list-style-type: none"> ▪ needs, values and beliefs of the designer/developer ▪ design fundamentals <ul style="list-style-type: none"> ○ aesthetics – appearance, form ○ function – purpose, use ○ safety – safe design concepts ○ cost – comparison with commercial products ▪ similar and alternate existing ideas and products using a variety of sources: <ul style="list-style-type: none"> ○ sources of design inspiration – aesthetic and functional features ○ performance criteria related to aesthetics and function • devise <ul style="list-style-type: none"> ▪ communication and documentation techniques <ul style="list-style-type: none"> ○ sketching ○ annotating ▪ ICT or manual presentation skills to create solutions incorporating: <ul style="list-style-type: none"> ○ elements of design – line, shape, form, texture, colour, tone ○ rapid concept development techniques ▪ review of design ideas against design brief and performance criteria ▪ design solution, using annotated hand drawings or computer generated drawings with measurements or dimensions applicable to context ▪ production planning: <ul style="list-style-type: none"> ○ full materials list ○ full materials costing ○ production plan, including time line • evaluate <ul style="list-style-type: none"> ▪ production plan, journal or diary with supporting images 	<p>Task4: Table Task8: Semester 2 Response Booklet: Finishing Materials Worksheet Task2: Cabinet Folio</p>
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			<ul style="list-style-type: none"> ▪ finished product against the design brief, initial design and student-generated performance criteria <p>Use of Technology</p> <p>Skills and Techniques</p> <ul style="list-style-type: none"> • ICT, portfolio development and communication skills <ul style="list-style-type: none"> ▪ photography – ongoing record of progress and processes used and final product ▪ documenting presentations and evaluations • develop context appropriate drawings and relevant technical information to produce the final product: <ul style="list-style-type: none"> ▪ sketching rapid concept developments ▪ 2D working drawings or using templates ▪ inspiration/concept or storyboard development and presentation • use workroom/studio terminology appropriate to context • select appropriate materials and calculate the correct amount required to order and purchase materials to complete the project <p>Production Management</p> <ul style="list-style-type: none"> • production plan <ul style="list-style-type: none"> ▪ maintain a production plan ▪ maintain time management while using tools, equipment and machinery to complete production <ul style="list-style-type: none"> ○ adhere to sequential instructions ○ apply safety and risk management ▪ record changes to materials lists or costing ▪ record regular journal/diary entries <p>use ongoing evaluation techniques: diary, journal or portfolio notes and use of photography to record ongoing progress/decision changes made to the project</p>	
3	1-3	<p>Design Fundamentals and Skills</p> <p>Use of Technology</p> <p>Skills and Techniques</p> <p>Production Management</p>	<p>Design Fundamentals and Skills</p> <ul style="list-style-type: none"> • investigate <ul style="list-style-type: none"> ▪ needs, values and beliefs of the designer/developer ▪ design fundamentals <ul style="list-style-type: none"> ○ aesthetics – appearance, form ○ function – purpose, use ○ safety – safe design concepts ○ cost – comparison with commercial products ▪ similar and alternate existing ideas and products using a variety of sources: 	<p>Task2: Cabinet Folio</p> <p>Task5: Cabinet</p>



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		<ul style="list-style-type: none">○ sources of design inspiration – aesthetic and functional features○ performance criteria related to aesthetics and function● devise<ul style="list-style-type: none">■ communication and documentation techniques<ul style="list-style-type: none">○ sketching○ annotating■ ICT or manual presentation skills to create solutions incorporating:<ul style="list-style-type: none">○ elements of design – line, shape, form, texture, colour, tone○ rapid concept development techniques■ review of design ideas against design brief and performance criteria■ design solution, using annotated hand drawings or computer generated drawings with measurements or dimensions applicable to context■ production planning:<ul style="list-style-type: none">○ full materials list○ full materials costing○ production plan, including time line● evaluate<ul style="list-style-type: none">■ production plan, journal or diary with supporting images■ finished product against the design brief, initial design and student-generated performance criteria <p>Use of Technology</p> <p>Skills and Techniques</p> <ul style="list-style-type: none">● ICT, portfolio development and communication skills<ul style="list-style-type: none">■ photography – ongoing record of progress and processes used and final product■ documenting presentations and evaluations● develop context appropriate drawings and relevant technical information to produce the final product:<ul style="list-style-type: none">■ sketching rapid concept developments■ 2D working drawings or using templates■ inspiration/concept or storyboard development and presentation● use workroom/studio terminology appropriate to context● select appropriate materials and calculate the correct amount required to order and purchase materials to complete the project <p>Production Management</p> <ul style="list-style-type: none">● production plan	
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			<ul style="list-style-type: none"> ▪ maintain a production plan ▪ maintain time management while using tools, equipment and machinery to complete production <ul style="list-style-type: none"> ○ adhere to sequential instructions ○ apply safety and risk management ▪ record changes to materials lists or costing ▪ record regular journal/diary entries <p>use ongoing evaluation techniques: diary, journal or portfolio notes and use of photography to record ongoing progress/decision changes made to the project</p>	
3	4-5	Nature and Properties of Materials	<p>Nature and Properties of Materials</p> <ul style="list-style-type: none"> ▪ identification of common associated materials used with wood- abrasives 	<p>Task8: Semester 2 Response Booklet: Abrasives Worksheet Task5: Cabinet</p>
3	6-10	<p>Nature and Properties of Materials Use of Technology Skills and Techniques</p>	<p>Nature and Properties of Materials</p> <ul style="list-style-type: none"> • identification of common associated materials used with wood- permanent and non-permanent fixings <p>Use of Technology Skills and Techniques</p> <ul style="list-style-type: none"> • correctly interpret and/or modify plans/patterns/templates • use appropriate conventions and workshop terminology • select appropriate materials and calculate the correct amount required for completion of project • calculate orders and costing for solid timbers and/or sheet materials • apply appropriate and accurate marking out techniques <p>demonstrate correct and safe procedures for setting up and/or operating selected power tools and machinery that could include: radial arm saw or drop saw or compound mitre saw / sanding machines / portable or fixed routers and table / various grinders / carving tools / wood lathe / biscuit cutter / bandsaw / pneumatic tools / portable saws / drill press / mortise machine</p>	<p>Task8: Semester 2 Response Booklet: Fasteners Worksheet Task5: Cabinet</p>



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4	1-5	Use of Technology Skills and Techniques Design Fundamentals and Skills	Use of Technology Skills and Techniques <ul style="list-style-type: none">• correctly interpret and/or modify plans/patterns/templates• use appropriate conventions and workshop terminology• select appropriate materials and calculate the correct amount required for completion of project• calculate orders and costing for solid timbers and/or sheet materials• apply appropriate and accurate marking out techniques<ul style="list-style-type: none">▪ demonstrate correct and safe procedures for setting up and/or operating selected power tools and machinery that could include: radial arm saw or drop saw or compound mitre saw / sanding machines / portable or fixed routers and table / various grinders / carving tools / wood lathe / biscuit cutter / bandsaw / pneumatic tools / portable saws / drill press / mortise machine Design Fundamentals and Skills <ul style="list-style-type: none">• evaluate<ul style="list-style-type: none">▪ production plan, journal or diary with supporting images finished product against the design brief, initial design and student-generated performance criteria	Task6: Docking Station
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