Institute for Apprenticeships & Technical Education

Creative and Design
Craft and Design

T Level outline content: draft version

December 2020

Contents

Introduction

Outline content

This outline content has been produced by T Level panels of employers, professional bodies and providers, and is based on the same standards as those used for apprenticeships. The outline content will form the basis of the specifications for T Level Technical Qualifications, which will be developed by awarding organisations for approval by the Institute for Apprenticeships and Technical Education. One awarding organisation will be appointed to develop and deliver each Technical Qualification following a procurement process.

Colleges and other education and training providers will decide how to structure the T Level courses they offer, based on the qualification specifications. This will enable them to deliver the study programme's mandatory components in the most effective way for students.

A T Level programme consists of a Technical Qualification, substantial industry placement, English and maths, and other occupation-specific requirements where essential for entry to skilled employment. This outline content relates solely to the Technical Qualification part of a T Level programme.

Further information about T Levels is available on the website of the Institute for Apprenticeships and Technical Education here: www.instituteforapprenticeships.org, and at www.education.gov.uk.

Creative and Design route: Craft and Design pathway

Awarding organisations will need to ensure that students have an up-to-date knowledge of the legal and regulatory obligations relating to employment in the occupations relevant to the T Level, and understand the practical implication of these on their work.

Maths, English and digital skills are set out in a separate annex. Awarding organisations should integrate these within the qualification so that they are applied in occupationally relevant contexts.

Core content

The core knowledge and understanding is assessed through an examination and core skills through a practical employer-set project.

The core knowledge and understanding focuses on the students' knowledge and understanding of contexts, concepts, theories and principles relevant to the T Level. This could include, where appropriate, assessment of knowledge and understanding relevant to the route and the pathway.

The employer-set project provides the opportunity to develop and apply a minimum range of core skills important for employability. The allocation of content to each type of assessment will need to be approved by the Institute for Apprenticeships and Technical Education.

Creative and Design: core skills and workplace practices

The outline content for the T Level "Creative and Design: Craft and Design" confirms the knowledge, skills and behaviours which form the basis of its syllabus and its assessment requirements. The outline content will be designed and developed into a high-quality technical qualification by the awarding organisation that is awarded the licence for this T Level.

The outline content presents knowledge and skills statements across the different components based upon the intended assessment method (e.g. examinations, employer-set project, occupational specialism assignments). It is important to recognise that the structure of the document does not illustrate intended course design, indicate recommended teaching and learning strategies, or imply that these components should be delivered discretely or even sequentially.

T Levels are intended to support flexible delivery models, and to increase the opportunities for centres and practitioners to work with their awarding organisation to determine how best to develop and deliver the knowledge and skills outlined, and to tailor programmes to meet the diverse needs of their students.

Creative and Design T Level students must start to develop technical and practical skills from the beginning of their programmes, while becoming familiar with the workplace practices that are essential to safe and effective craft and design activities. The content specified is to be developed and secured through experience-led learning where possible, and students should begin to develop and apply fundamental knowledge and skills – using relevant equipment – from the outset. These skills proficiencies, which will lead to defined

“levels of competence” in the relevant occupational specialisms, must be developed in ways that reflect genuine workplace demands and world-class industry practices.

Core knowledge and Understanding

Route: Creative and Design

Element	Content
1. The creative economy	• The different roles contributing to the creative economy and their interdependencies: - creative occupations within the creative industries - creative occupations outside the creative industries - non-creative/support roles within the creative industries. • The different organisations: corporate; SMEs; special purpose vehicles; freelance; partnership; limited company; not-for-profit; start-up; Community Interest Company (CIC); charities. • The supply chain of the creative economy; establishing the need, ideation of creative vision/plan and execution; the industry-recognised process of commit, commence, compete, complete. • Different business models to enable the monetisation of creative and craft products and services e.g. commission, self-generated. • Different sources of finance including grants, incentives, sponsorship, crowd funding and commercial. • Relevant government and trade organisations. • The different ways that the creative industries drive and/or respond to external factors including cultural, social, political, economic, geopolitical and environmental developments.
2. The individual in the creative industries	• Skills and attributes of the individual needed for different organisations including ideas-driven, collaborative/team worker, drive, resilience, entrepreneurial, commercial awareness, leadership and management. • The importance of networking, “you make your own opportunities”, self-marketing and presentation. • Range of careers in the sector; progression and qualifications needed. • Different modes of engagement and employment models: freelance/self-employed/employed; national and global mobility. • The importance of financial acumen. • An understanding of personal and business taxation including national insurance contributions and VAT. • An understanding of portfolio career progression. • Client relationships including customer service.
3. Cultural context and vocabulary	• Understanding the influence of different social, political, technological and economic factors on culture and creativity. • Understanding how style, taste and trends emerge and evolve. • Cultural appropriation: the risks and impact. • Contextual vocabularies – the principles of storytelling using sound, image, light, colour, shape and material.
4. Audience	• Understanding audience and consumer needs and interests including - the importance of audience/consumer research

	- the diversity of audiences/consumers - purpose and audience - audience/consumer impact - an awareness of cultural sensitivities.
5. Legislation/ regulation	• Legal and regulatory requirements relating to - employment law and collective agreements e.g. working time directives - duty of care - intellectual property - copyright - royalties and collections societies - health and safety - licensing - data protection - common types of contracts – contracts for work and contracts for service - the environment and sustainability - safeguarding - insurance and liability.
6. Professionalism and ethics	• An understanding of professional standards and conduct in the workplace including - rules of confidentiality – non-disclosure agreements - data management and protection (behaviour) - ethical standards which govern the profession - ethical dilemmas for the individual and organisation - corporate social responsibility - codes of conduct - work etiquette including worktimes, dress and behaviours - interaction with other stakeholders.
7. Equality, diversity and inclusion	• An understanding of equality, diversity and inclusion requirements. This includes understanding current relevant legislation e.g. Equality Act 2010, Human Rights Act 1998 • Equality and diversity in the workplace - protected characteristics - vulnerable audiences/consumers - unconscious bias. • Barriers and how to overcome them. • Accessibility of created content/products for audience/consumer. • The value of difference and being sensitive to the needs of others, especially when they are different from one's own. • Perceptions and common misconceptions of disability and the factual truth. Medical and social models of disability.
8. Research skills	• The breadth of sources of knowledge. • Reliability and accuracy of sources, including an understanding of - how to plan research - the appropriate research methods to use including primary, secondary, qualitative and quantitative, desk-based and field research - the reliability and validity of a range of sources including fact, opinion and bias

	- the appropriate use of information including an understanding of what constitutes plagiarism.
9. Project methodology and administration	• Project life cycle. • Awareness of different project tools to manage projects including digital tools. • The roles, responsibilities and interdependencies of different personnel in a project. • Dependencies of tasks. • Project reporting/evaluation. • Budgeting, scheduling and financial management.
10. Continued professional development	• Professional development. • Awareness of recent developments and new developments e.g. emerging technologies, technological innovation and artificial intelligence.

Employer-set project

The employer-set project ensures students have the opportunity to combine core knowledge and skills to develop a substantial piece of work in response to an employer-set brief. The employer-set project forms part of the Technical Qualification and is a separate part of the T Level programme to the Industry Placement.

To ensure consistency in project scope and demand, awarding organisations will develop assessment objectives, which require students to

- plan their approach to meeting the brief
- apply core knowledge and skills as appropriate
- select relevant techniques and resources to meet the brief
- use maths, English and digital skills as appropriate
- realise a project outcome and review how well the outcome meets the brief.

The awarding organisation will work with a relevant employer or employers, to devise a set brief that

- ensures a motivating starting point for students' projects, for example, a real-world problem to solve
- ensures students can generate evidence that covers the assessment objectives
- is manageable for providers to deliver
- is officially approved by the awarding organisation and employer.

For Craft and Design, by achieving the assessment objectives and meeting the employer-set brief, students will demonstrate the following core skills:

Undertaking research
e.g. analysing a brief, identifying sources to investigate, reviewing different cultural contexts to inform the development of an idea.

Generating ideas
e.g. generating ideas and expressing these through different methods such as creation of initial sample through prototypes, or other 2D / 3D representation.

Communicating ideas
e.g. presenting initial ideas clearly to a group, ensuring that communication is appropriate for audience and purpose, justifying medium of communication.

Developing ideas
e.g. planning key stages of development, selecting methods and resources.

Working collaboratively with others
e.g. working in a group, presenting and critiquing ideas for a project, responding to feedback, identifying roles and responsibilities throughout a project.

Reflective practice
e.g. reviewing approaches to the brief, identifying areas for further development.

Occupational Specialist Content

Specialist content is structured into different occupational specialisms, which correspond to the apprenticeship standards listed on the relevant occupational map. Occupational specialisms ensure students develop the knowledge and skills necessary to achieve a level of competence needed to enter employment in the occupational specialism and are organised around ‘performance outcomes’ that indicate what the student will be able to do as a result of learning and applying the specified knowledge and skills.

Occupational Specialism: Jewellery Maker

Performance Outcome 1: Analyse, interpret and respond to a creative proposition or a brief taking on board purpose and end user

Knowledge Specific to Performance Outcome	**Skills (should we suggest how many different options we expect them to cover?)**
Markets, contexts, and settings to consider for creative products: • retail • personal • bespoke e.g. special occasion • remodelling • fashion industry (e.g. catwalk) • entertainment sector (e.g. film, theatre) • political / social purposes Knowledge of the role of ergonomics in jewellery making such as: • how things sit and fall • how jewellery is to be worn • body shape Design principles including: • texture • direction • size • shape • form • colour Costing methodologies/models for different markets Factors to consider when costing a creative proposition or brief including: • time to produce • cost of materials including fluctuating metal prices • routes to market • need to outsource e.g. hallmarking • how other practitioners respond to	Interpret a creative proposition or a given brief (a brief) taking on board purpose, end user, market and budget Carry out research using different sources to inform the development of creative products Collate research findings using different media Explore design principles, for example, shape, colour, size Research sources for materials: availability, lead times, costs Generate ideas for concept supported by findings from selected sources

similar briefs Research methodologies to support the development of the idea including primary / secondary Aspects to research such as • cultural and historical context • other designers • character - for example when designing for entertainment sector • the market and competitors • sustainability • ethical sourcing • new and emerging techniques and materials Different sources for research • museums and exhibitions • online and physical stores • books, magazines, catalogues and other printed materials • video and photography • studio visits Tools and techniques employed in the development and presentation of concept e.g. mood boards, sketch books, CAD drawings	

Performance Outcome 2: Refine and communicate ideas for creative product development

Knowledge Specific to Performance Outcome	Skills
Ways to communicate ideas formally and informally, using different methods such as spoken, visual, written Industry standard language and symbols used to communicate design and requirements Awareness of the potential capabilities and limitations of existing and emerging technologies with regard to design, drawing and production	Review initial ideas and select ideas for further development assessing their suitability for purpose Present and communicate ideas and design requirements to colleagues for feedback or studio critique using industry standard language and different methods e.g. maquettes, CAD, hand drawings Take account of informal feedback from colleagues and respond appropriately to improve design. Formally pitch ideas to clients using different methods e.g. maquettes, CAD, hand drawings Adapt ideas in response to client /colleague feedback

Performance Outcome 3: Research and experiment with materials, tools, processes and techniques to determine suitability for product development/to realise the design

Students will be expected to experiment with more than one material/process

Knowledge Specific to Performance Outcome	**Skills**

Knowledge of different routes to creating:
• bench made jewellery (silversmithing)
• cast jewellery (carved from wax then lost wax cast)
• construction from non-traditional materials
 	
Knowledge of materials, their physical properties, limitations including malleability, cost, processes required, sustainability
• silver or precious metals
• other metals – base metals, non-ferrous, aluminium
• wood
• ceramics
• plastics (e.g. acrylics, resin)
• textiles including leather
• precious stones
• recycled/reclaimed materials
  • the production of new materials
  • repurposing of materials
  • blending of recycled materials
 	
Knowledge of where different raw materials are sourced, such as mining, fairtrade gold, conflict free diamonds, recycled plastics
 	
Knowledge of other materials that may be used/substituted
 	
Knowledge of processes and techniques such as:
Cutting
• Laser cutting
• Hand cutting
 	
Joining (including how the different properties of metals impact on the method used to join them)
 	
Understand how to support and hold work during the joining process
Cold joining
	Research and explore different tools, equipment, and production techniques in terms of appropriateness to achieve the objectives of the brief
	
	Explore the potential of different materials in terms of affordance, constraints/timeline and material characteristics, identifying alternative materials where necessary
	
	Consider costs of any selected materials and sustainability within the constraints of the brief
	
	Safely experiment with materials and techniques to test their potential and limitations for example cutting and joining different materials, finishing
	
	Apply processes and techniques, such as cutting, joining, and finishing to create test pieces
	
	Use outcomes of testing to make decisions on materials and techniques
	
	Create presentations of products for example using wax mock-ups, sketches
	
	Create and utilise a logbook to maintain accurate records of testing of materials and techniques, for example the best fixative for embellishments, time taken for each process to assist costing of the piece

• hinges • stitching • gluing • pop rivets Hot joining • welding (including the difference between TIG and MIG) • soldering (including soldering bay) • safety pickles and acids Shaping • bending and forming Carving • wax and hot pens Casting • lost wax / vacuum casting Surface • patination • plating • enamelling • oxidisation • stamping • blasting • intaglio • hammer techniques Engraving • laser engraving • hand engraving Finishing that can be applied to different materials and how they can be achieved. • surface preparation • polishing • etching • varnishing Stone setting and embellishment • fixatives • mounts and settings How surfaces should be prepared prior to polishing and finishing and the different materials that can be used to prepare items for polishing and finishing Knowledge of the different roles within the making process including the need for outsourcing. The purpose and use of different tools and equipment including: Hand tools • jewellers peg	

• pliers • saw frame • needle file • hammer • pliers • cutters • shears Power tools • dremel • pendant motor • pillar drill • hot wax pen The maintenance of tools and equipment including limits of responsibility and when to escalate Awareness of the potential of 3D printing and other emerging technologies The importance of reducing waste and the methods used to manage waste Sustainability – process and materials Ethical considerations including sourcing, end of use	

Performance Outcome 4: Use selected materials and apply appropriate processes, tools and techniques to realise ideas and refine the product.

Knowledge Specific to Performance Outcome	Skills
How to read working drawings and specifications including industry standard descriptions and symbols used to describe processes and finishes Calculations to inform size / scale / width / length Relevant health and safety legislation and environmental management and risk assessment for example Control Of Substances Hazardous to Health (COSHH), Provision and Use of Work Equipment Regulations (PUWER), Health And Safety At Work Act (HASAWA), Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and manual handling Standard workplace systems, processes and procedures used to ensure compliance with health and safety and other relevant legislation. How to measure, interpret size and scale and knowledge of the importance of accuracy, acceptable tolerances and the ability to produce within defined parameter Principles of waste management / efficiency of all materials in jewellery making Different making techniques such as casting, 3D printing, forming, CAM Different joining techniques Different finishing techniques e.g. polishing Costing • Consideration of time • Cost of materials • Route to market including market fees and postage • Outsourcing e.g. hallmark, casting Different ways of presenting products to client including	Interpret the requirements of working drawings and or specifications Create a production schedule that details activities and costings Prepare a workspace and materials ensuring that work area is clean and tidy Identify and select materials required for product(s) Calculate the quantity required and ensure that correct quantity is available Select and utilise tools and equipment to achieve the desired outcome. Handle tools and materials safely in accordance with health and safety legislation, taking action to recognise and mitigate risks Consider additional features and the associated cost implications e.g. hallmarking and the potential for outsourcing. Apply selected making, shaping, joining and finishing techniques to realise ideas. Select and utilise the correct hand and/or powered tools and equipment to achieve the desired finish Use materials efficiently being mindful to minimise waste Check work for accuracy Detect flaws/faults in materials and respond appropriately Maintain own workspace and hand and/or powered tools in accordance with professional practice and rectify any

-packaging safely -presenting -sustainability of packaging An awareness of different routes to market e.g. exhibition, direct to market	defects should they arise Store and dispose of materials safely and ecologically. Present products in an appropriate way for distribution to market

Performance Outcome 5: Review and evaluate the design process and product against the original brief and proposition

Knowledge Specific to Performance Outcome	Skills
Knowledge of how to assess the final product against the original brief and production plan How reflective practice is used within the design process to inform decision making e.g. revisions, justifications, choices How reflective practice can be used to plan progress and future development	Evaluate the extent to which the finished item meets the detail of the brief Review and assess the final outcome against the production schedule including • efficiency and wastage • quality • wearability • budget Reflect on outcome and update log book with actions for future development Engage with end user to establish if brief has been achieved and ascertain areas for future improvement.

Occupational Specialism: Ceramics Maker

Performance Outcome 1: Analyse, interpret and respond to a creative proposition or a brief taking on board purpose and end user

Knowledge Specific to Performance Outcome	Skills
Markets, contexts and settings to consider for creative products: • aesthetic purposes • personal use • bespoke • batch production • limited run • mass production Factors to consider • use and function • size, shape, ergonomics, and fitness for purpose • part of a series or a one-off Design principles including: • line • texture • direction • size • shape • form • colour • volume • texture Costing methodologies/models for different markets Factors to consider when costing a creative proposition or brief including: • time to produce • cost of materials • routes to market • need to outsource • how other practitioners respond to similar briefs Research methodologies to support the	Interpret a creative proposition or a brief taking on board purpose, end user, market and budget Carry out research using primary and secondary sources to inform the development of a creative product Explore design principles for example shape, size Collate research findings using different media Generate ideas for concept supported by findings from selected sources

development of the idea including primary / secondary Aspects to research • cultural, historical and social context • other designers, potters, ceramicists • the market and competitors • current trends • style • sustainability Research sources • museums and exhibitions • online and physical stores • books, magazines, catalogues and other printed materials • video and photography • studio visits Sustainability including • circular economy concepts • sourcing of materials • sustainable production and distribution processes Tools and techniques employed in the development and presentation of research and concept e.g. mood boards, sketch books, CAD drawings	

Performance Outcome 2: Refine and communicate ideas for creative product development

Knowledge Specific to Performance Outcome	Skills
Ways to communicate ideas formally and informally, using different methods such as spoken, visual, written Industry standard language and symbols used to communicate design and requirements Awareness of the potential capabilities and limitations of existing and emerging technologies with regard to design, drawing and production Different making techniques • moulds • tooling – creating tools for required purpose • modelling/Blocking/Casing Consideration of cost of production: • time • firing • raw materials • packaging • seconds • glazing for example special glazes or colours An awareness of different routes to market such as exhibition, retail, wholesale, direct to consumer	Develop initial ideas for further development and assess their suitability for the required function Present ideas to colleagues/clients for studio critique e.g. computer aided designs, sketches, 3D, hand prototypes Take account of informal feedback from colleagues and respond appropriately to improve design Formally pitch ideas to clients using different methods e.g. drawings Assess suitability of refined ideas taking into account cost of production

Performance Outcome 3: Select and test materials, processes, tools and techniques to determine suitability for purpose

Knowledge Specific to Performance Outcome	Skills
Suitability of design for intended purpose Calculations to inform size / scale / width / length Form and Function • size and shrinkage • proportionality Different characteristics and states of clay for industrial or studio craft-based production: • slip • wet clay • leather hard • bone dry • bisque fired • glaze firing • post firing • vitrified Types of clay, their physical properties including colour, uses, firing temperature and the results they yield. Limitations including malleability, cost, shrinkage, processes required, sustainability • white earthenware • red/iron terracotta earthenware • stoneware • porcelain • bone china • fine bone china • magnesium clay Where different raw materials are sourced from How to prepare clay for use • wedging • kneading Different making/production techniques • throwing • slab work • coiling	Research and explore different tools, equipment, and production techniques in terms of appropriateness to achieve the objectives of the brief Safely experiment with different materials and production techniques to test their potential and limitations Experiment with different decoration techniques for example for example embossing, brushwork Use outcomes of testing to make decisions on materials and techniques Create presentations of products for example using prototypes, sketches Create and utilise a log book to maintain accurate records of testing of materials and techniques, for example time taken to produce test piece

• press moulding • slip Casting • jigger and Jollying • ram Pressing • high pressure casting Ways that decoration can be applied • stamping/embossing • sprigg work • brushwork • decals • glaze • sgraffito Preparation of materials Knowledge of firings including: • kiln and firing types (the differences between electric kiln and wood/coal fired reduction firing) • the use of different temperatures, and the effect that temperature has on the firing process • stages of firing: bisque and glaze firings Glazing • the fundamental properties of a glaze including being impervious to water • biaxial and triaxial glazes • glaze 'recipes' Equipment and tools within a ceramic workspace and what they do: • wheel • wire clay cutter • sponges • shapers • brushes • loop and ribbon tools • bats • calipers • glazing tongs • pugmill • filter press • blunder • extruder • kiln How to operate a kiln including • the three main energy sources for firing	

a kiln: gas, electric, oil • how to load a kiln as efficiently as possible • how to program and run a kiln • how to program and run a kiln How to prepare clay for use • wedging • kneading Different making/production techniques • throwing/slab work/coiling/press moulding • slip Casting • jigger and Jollying • ram Pressing • high pressure casting The different glazes, pigments and underglazes that may be used Ways that decoration can be applied • stamping/embossing • sprigg work • brushwork • decals • glaze • sgraffito Maintenance of hand tools and equipment Maintenance of powered tools, plant and equipment and limits of responsibility, when to escalate. Knowledge of the different roles within the making process including the need for outsourcing. The importance of reducing waste and the methods used to manage waste	

Performance Outcome 4: Use selected materials and apply appropriate processes, tools and techniques, to realise ideas and fulfil the brief

Students will be expected to demonstrate their skills across a whole set or multiple pieces in order to demonstrate intention, consistency and proportionality

Knowledge Specific to Performance Outcome	**Skills**
Relevant health and safety legislation and environmental management and risk assessment for example Control of Substances Hazardous to Health (COSHH), Provision and Use of Work Equipment Regulations (PUWER), Health And Safety At Work Act (HASAWA), Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and manual handling Standard workplace systems, processes and procedures used to ensure compliance with health and safety and other relevant legislation. How to read working drawings and specifications including industry standard descriptions and symbols used to describe processes and finishes How to measure, interpret size and scale and knowledge of the importance of accuracy, acceptable tolerances and the ability to produce within defined parameter Control and consistency • proportionality • size and shrinkage Equipment and tools within a ceramic workspace and what they do: • wheel • wire clay cutter • sponges • shapers • brushes • loop and ribbon tools • bats • calipers • glazing tongs • pugmill • filter press • blunder • extruder	Prepare a workspace ensuring that work area is clean and tidy in accordance with professional practice Determine the resources needed and ensure that sufficient resources are available Select and utilise materials, tools and equipment to achieve the desired outcome Apply selected processes and techniques to realise ideas by making and finishing the item(s) Apply decoration techniques using appropriate tools Apply appropriate finish to objects Handle tools and materials safely in accordance with health and safety legislation Plan effective loading of the kiln considering efficiency and cost Use materials mindfully and efficiently to minimise waste Detect flaws/faults in materials and respond appropriately Store and dispose of materials safely and ecologically

• kiln How to operate a kiln including • the three main energy sources for firing a kiln: gas, electric, oil • how to load a kiln as efficiently as possible • how to program and run a kiln • how to prepare clay for use • wedging • kneading Different making/production techniques • throwing/slab work/coiling/press moulding • slip casting • jigger and jollying • ram pressing • high pressure casting The different glazes, pigments and underglazes that may be used Ways that decoration can be applied such as • stamping/embossing • sprigg work • brushwork • decals • glaze • sgraffito Storage of work at different stages • storing of work before firing for drying out • storing work between firings • storing finished work Principles of reclaim/ waste management / efficiency of all resources including clay Costing • consideration of time • cost of materials • route to market including market fees and postage • outsourcing Different ways of presenting products to client including	

• packaging safely • presenting • sustainability of packaging	

Performance Outcome 5: Review and evaluate product and activities against the original brief or proposition to refine product

Knowledge Specific to Performance Outcome	Skills
How to assess the final product against the original brief and production plan How reflective practice is used within the design process to inform decision making e.g. revisions, justifications, choices How reflective practice can be used to plan progress and future development	Evaluate the extent to which the finished item meets the detail of the brief Review and assess the final outcome against the production schedule including • efficiency and wastage • quality • budget Engage with end user to establish if brief has been achieved and ascertain areas for future improvement. Reflect on outcome and update log book with actions for future development

Occupational Specialism: Furniture Maker

Students are expected to work with a minimum of two different materials

Performance Outcome 1: Analyse, interpret and respond to a creative proposition or a brief taking on board purpose and end user

Knowledge Specific to Performance Outcome	Skills
Markets, contexts and settings to consider for creative products: • end user • market • budget • cultural & historical context • intended location • intended use Purpose of item e.g. providing a function / meeting the need of a consumer or audiences Shape and form of furniture and the balance between form and function The role ergonomics plays in furniture making Design principles including: • texture • direction • size • shape • form • colour Costing methodologies/models for different markets Factors to consider when costing a creative proposition or brief including: • time to produce • cost of materials, for example fluctuating wood prices • routes to market • need to outsource	Clarify the purpose of the brief or creative proposition. Consider parameters and expectations of a brief including end user, market, cultural context, intended use, and budget Explore design principles e.g. size, shape Generate and evaluate initial ideas for concept

• how other practitioners respond to similar briefs	

Performance Outcome 2: Create designs to realise the brief

Knowledge Specific to Performance Outcome	Skills
Different research methodologies to support the development of the idea e.g. primary / secondary, qualitative/quantitative Aspects to research • the market and competitors • cultural context • other designers • different types of materials (costs, constraints, affordances) • sustainability of materials • circular design Different sources for research • exhibitions • retailers (online and physical) • books and magazines • online and social media • studio visits • observations and gained insights An awareness of different routes to market e.g. exhibition, direct to market Tools and techniques employed in the development and presentation of concept e.g. mood boards, sketch books, CAD drawings Ways to communicate ideas including formally and informally, using different methods such as spoken, visual, written Furniture making drawings, specifications and technical language needed to present design ideas Awareness of the potential capabilities and limitations of existing and emerging technologies with regard to design, drawing and production	Review initial ideas and select ideas for further development assessing their suitability for purpose Carry out research using different sources to inform the development of a creative product Summarise findings from research using different media. Present ideas informally to colleagues selecting appropriate medium e.g. CAD drawings, sketches Refine ideas and selected medium in response to informal feedback from colleagues and own reflection Present to client to check design against expectations

Performance Outcome 3: Research and evaluate materials, processes, tools, and techniques to determine suitability to realise the design

Knowledge Specific to Performance Outcome	Skills
Suitability of design for intended purpose Calculations to inform size / scale / width / length The influence of sustainability and ethics on materials, methods, process and techniques. Knowledge of where different raw materials are sourced from Knowledge of health and safety and environmental management and legislation for example Control Of Substances Hazardous to Health (COSHH), Provision and Use of Work Equipment Regulations (PUWER), Health And Safety At Work Act (HASAWA), Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and manual handling Role of risk assessments Knowledge of materials, their physical properties, uses limitations including malleability, cost, processes required, sustainability • metal • manmade composite materials including plywood, MDF, and MFC. • veneers • laminates • glass • plastic • wood and timber • leather • recycled/reclaimed materials • bio - materials Other materials • advanced materials e.g. additive manufacturing • casting materials • resins	Explore the potential of different materials for product development/to realise the idea Research and evaluate different materials in terms of affordance, constraints/timeline Maintain accurate records of research and testing using different media, for example 2D and 3D, sketches Use industry standard terminology in all documentation Select appropriate materials for bespoke furniture designs to be produced Use essential hand and machine tools safely following current health and safety regulations Identify any problems and issues that may occur such as feasibility or cost Reassess the design against the objectives of the original brief or creative proposition. Finalise and formally pitch design to clients and select appropriate media e.g. CAD, hand drawings, material samples

The characteristics and use of different fixtures and fittings such as brackets, hinges, springs Knowledge of processes and techniques such as: • cutting (hand and by machine) • joining • gluing • welding • doweling • shaping (bending) • steaming • laminating • moulding • carving Different furniture finishing preparation methods, for example sanding The different finishes their uses and limitations for example varnish, sealers, waxes, oils, shellac polish, paint finishes, gilding, stains Application of chemical processes for finishes Essential tools for furniture making, including how to use them effectively and safely Measuring and marking tools including: • tape measure • right angle • callipers • set squares • gauge • steel ruler • straight edge • level Cutting tools • plane • saw • chisel Striking tools • hammer • punch • mallet Holding tools	

• clamps • vices Machine tools: • circular saw • drill / drivers • jigsaw • sanders (orbital, detail, belt) • Router • Table saw • mitre saw • planer thicknesser • pillar drill • router table / spindle moulder (more specialist) • portable welder Equipment such as: • personal protective equipment e.g. goggles, ear defenders, mask etc. • vice • clamps Costing including: • consideration of time • cost of materials • route to market • outsourcing Maintenance of hand tools and equipment Maintenance of powered tools, plant and equipment and limits of responsibility, when to escalate. Knowledge about sustainability with regard to process and materials Knowledge of the different roles within the making process including the need for outsourcing The importance of reducing waste and the methods used to manage waste	

Performance Outcome 4: Use the selected materials and apply appropriate processes, tools, and techniques, to realise ideas and fulfil the design

Knowledge Specific to Performance Outcome	Skills
How to read working drawings and specifications including industry standard descriptions and symbols used to describe processes and finishes How to measure, interpret size and scale and knowledge of the importance of accuracy, acceptable tolerances and the ability to produce within defined parameter Troubleshooting and finding alternative solutions to problems Principles of waste management / efficiency of all materials in furniture making Knowledge of health, safety and environmental management and the role of risk assessment for example Control Of Substances Hazardous to Health (COSHH), Provision and Use of Work Equipment Regulations (PUWER), Health And Safety At Work Act (HASAWA), Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and manual handling Standard workplace systems, processes and procedures used to ensure compliance with H&S and other relevant legislation Knowledge of current legislation related to furniture machinery and equipment for example safe use of woodworking machinery Knowledge of appropriate PPE for the materials used and the safety requirements and procedures of different workshops e.g. metal workshop Knowledge of quality standards and control methods for example British and European standards How to create complex jigs and templates to meet furniture making specifications The different joints and joining techniques used in furniture making	Create furniture making specifications including cutting lists and other relevant information Determine materials to use and correct quantities Prepare a workspace and materials ensuring that resources are available and ready and work area is clean and tidy Select and utilise tools and equipment to achieve the desired outcome Set up and operate machinery, tools and equipment to required specification Calibrate measuring equipment and use accurately Create jigs and templates to meet furniture making specifications for example lock jigs Cut, sand, drill, create joints, mould, saw and plane wood and components Apply selected processes and techniques to realise ideas by making and finishing the item Handle tools, equipment and materials safely in accordance with health and safety legislation Assess problems and potential dangers arising and record appropriately Assemble components to required specification and apply appropriate joining techniques Prepare surfaces for furniture finishes and apply appropriate finishes Use materials mindfully, and efficiently to minimise waste

Assembly methods used in furniture making Different finishing techniques, their limitations and uses e.g. polishing, sealers, stains Awareness of different roles within the furniture making process including when outsourcing may be needed Different ways of packing products for delivery to client including: • protection of product • sustainability of packaging	Detect flaws/faults in materials and respond appropriately Maintain own workspace and tools in accordance with professional practice Store and dispose of materials safely and ecologically Package product for safe delivery to client with consideration of sustainability

Performance Outcome 5: Review and evaluate the development process at each stage against the original brief or proposition to refine production methods and product

Knowledge Specific to Performance Outcome	Skills
Knowledge of how to assess the final product against the original brief and production plan How reflective practice is used within the design process to inform decision making e.g. revisions, justifications, choices How reflective practice can be used to plan progress and future development How to apply knowledge gained to future projects	Review each stage of production process including • efficiency and wastage • quality e.g. identifying quality issues with product • methods used Evaluate the extent to which the finished product meets the detail of the brief Engage with end user to establish if brief has been achieved and ascertain areas for future improvement.

Occupational Specialism: Textile and Fashion Maker

Performance Outcome 1: Analyse, interpret and respond to a creative proposition or a given brief taking on board purpose and end user

Students must learn

Knowledge Specific to Performance Outcome	Skills
Broad awareness of the textiles, leather and sewn products disciplines and the associated techniques required i.e. stitch, knit and weave The scope of the proposition/brief • commission • bespoke • small batch production • sample • mass production Design principles including: • line • texture • repetition • volume • shape • form • colour The development process from concept to customer Markets, contexts and settings to consider for creative products: • clothing and accessories • homeware/interiors • industrial for different sectors (e.g. car seats) • installation, commission, exhibition (e.g. textile art) • entertainment sector (e.g. film, theatre)	Interpret a creative proposition or a given brief (a brief) taking on board purpose, end user, market and budget Carry out research using different sources to inform the development of creative product(s) Collate research findings using different media Explore design principles such as: • texture • colour • shape • scale / proportion • pattern • repetition • contrast Research sources for materials: availability, lead times, costs Generate ideas for concept supported by findings from selected sources

The role of ergonomics in textile and fashion making such as: • how things sit and fall • form and function of proposition • shape including balance, proportion, aesthetics The suitability of style, materials and component characteristics for purpose of proposed product(s) e.g. sports clothing must enable ease of movement, durability of fabric for upholstery, or season a product is to be used in (summer or winter) Costing methodologies/models for different markets Factors to consider when costing a creative proposition or brief including: • time to produce • cost of materials including fluctuating prices of materials • routes to market • need to outsource e.g. pleating, fusing • how other practitioners respond to similar briefs Research methodologies to support the development of the proposition/brief e.g. primary, secondary Scope of research to include as appropriate • cultural context with consideration of cultural sensitivities • design movements / historical eras • other designers • trends/forecasts • self-exploration of materials and processes	

• character/personality/identity/brand of end user(s) • markets and competitors Sources for research • exhibitions • books, magazines, and other print materials • websites, social media and other online content • visual and performing arts • film and TV, video, photography, games • Site or studio visit Sustainability • Provenance of materials and components • Environmental impact • Supply chain • Circular economy An understanding of the ways that ideas can be developed for example translation and adaptation of existing idea An understanding of the difference between originality and plagiarism in design	

Performance Outcome 2: Refine and communicate ideas for product development

Knowledge Specific to Performance Outcome	Skills
Tools and techniques employed in the development and presentation of concept e.g. mood boards, sketch books, CAD drawings Ways to communicate ideas including formally and informally, using methods such as verbal, visual, written Presentation conventions e.g. for pitching ideas to colleagues/clients Industry standard language and symbols used to communicate design and requirements e.g. warp and weft / ends per inch Awareness of the potential capabilities and limitations of existing and emerging technologies with regard to design, drawing and production An awareness of different routes to market such as exhibition, retail, wholesale, direct to consumer	Review initial ideas and select ideas for further development assessing their suitability for purpose. Communicate requirements of the design to colleagues using industry standard language Present a cohesive and well edited selection of ideas to colleagues for studio critique using appropriate tools e.g. toiles, mood boards, drawing and illustration Adapt ideas in response to feedback

Performance Outcome 3: Experiment with materials, processes, tools and techniques to determine suitability for purpose

Students are expected to experiment with different materials and processes and focus on knowledge specific to their chosen discipline i.e. Textiles, Leather or Sewn Products.

Knowledge Specific to Performance Outcome	**Skills**
Suitability of design for intended purpose Knowledge of materials, their physical properties, limitations including malleability, cost, processes required, sustainability such as: • natural fibres e.g. wool, silk, cotton • synthetic materials • leather • cellulosic • bast fibres • recycled / reclaimed materials Calculations to inform size / scale / width / length The sustainability of materials and processes including ethical and environmental considerations Knowledge of where different raw materials are sourced from How to interpret design briefs, working sketches and technical specifications according to chosen discipline including: • dimensions • allowances • tolerance • detailing • hand finishing • shape and proportion • sizing including national, international, made-to-measure, bespoke sizes **Textiles** • weave draft • basic weave structure for example plain, herringbone, twill **Leather**	Explore different materials in terms of affordance, constraints and material characteristics Use safe working practices to test the potential and limitations of materials Apply processes and techniques appropriate to discipline to create samples Make informed decisions on selected materials and techniques based on experimentation Create and utilise a logbook or technical document to make accurate records of testing of materials and techniques e.g. how much dye was used Reflect on the outcomes of experimentation and adapt design accordingly Review original creative proposition against the outcomes of experimentation and make a decision about final design Create a technical specification using appropriate technical language

• grain lines **Sewn products** • pattern production • balance marks • notches • garment construction • silhouette The characteristics and behaviours of different materials such as • cost • durability • smoothness • drape • faults • threads • Handling requirements • texture e.g. nap • utility • compatibility with designs • dye suitability Fabric and fibre properties including • fibre/filament types • weight • thickness Fabric structures as appropriate to discipline including: • woven fabric • knitted fabric • pleating • quilting • finishes: chemicals such as resins, starches, waxes Dimensions and specification including • width • colour: hue, value, intensity (degree of brilliance) • density • surface contour Recycled/reclaimed materials • the production of new materials • repurposing of materials • blending of recycled materials	

Knowledge of processes and techniques as appropriate to the chosen discipline such as: • seaming, fringing, blanket stitches • interfacing • trimming • stitch/embroidery • print/surface • piping • knit • weave • dyeing • cutting (hand and by machine) • finishing e.g. washing, rubbing, felting, pressing The use of different tools and equipment appropriate to discipline such as: • industrial sewing machine • overlocker • knitting machine • loom • hank/yarn winder • silk screen • lockstitch machine • blind hemmer • scissors • snips • corner shaper • loop turner • measuring tape • mannequins Knowledge of the different roles within the making process including the need for outsourcing Costing: • consideration of time • cost of materials • routes to market The importance of reducing waste and the methods used to manage waste	

Performance Outcome 4: Use selected materials and apply appropriate processes, tools and techniques, to realise ideas and fulfil the brief

Students are expected to work with different materials and processes and focus on knowledge specific to their chosen discipline i.e. Textiles, Leather or Sewn Products.

Knowledge Specific to Performance Outcome	Skills
Industry recognised quality standards, for example, British Standards (BSI) International Standards (ISO) Health, safety, welfare and environmental policies and procedures including Health & Safety at Work Act; safe working practices, workplace risks employer and employee legal obligations, employees' rights and responsibilities, ethical trading standards, equality and diversity Standard workplace systems, processes and procedures used to ensure compliance with H&S and other relevant legislation How to read working drawings and specifications including industry standard descriptions and symbols used to describe processes and finishes How to measure, interpret size and scale and knowledge of the importance of accuracy, acceptable tolerances and the ability to produce within defined parameter Principles of waste management / efficiency of all materials in textiles and fashion making Common faults, and rectification for example unsuitable joining techniques, poorly cut components, incorrect construction Tolerances and accuracy (the ability to produce within parameters) including: • measurement points • length and breadth measurements Knowledge of processes and techniques as appropriate to the chosen discipline such as:	Create a production schedule that details activities and costings Prepare a workspace and assemble components ensuring that sufficient resources are available and ready and work area is clean and tidy Interpret the technical specification, patterns and/or instructions Measure against critical measurement points, shape, design and specification, producing a cutting list where appropriate Select, prepare and operate machines and their attachments, for example sewing machine, knitting machine or loom, including machine adjustment for different materials Select and utilise tools and equipment safely in accordance with health and safety legislation Apply selected processes and techniques to realise ideas by making and finishing the item(s) within expected tolerances Prepare components in accordance with measurement and specification of item e.g. cutting, shaping, Join/assemble components of item(s) using appropriate techniques according to discipline e.g. stitching, knitting, weaving Position and attach trimmings as appropriate to the discipline, for example braid, bias lace, buttons, eyelets Finish item(s) selecting techniques according to discipline

Sewn products and leather • seaming, fringing, blanket stitches • hand stitches • seam types • interfacing • trimming • stitch/embroidery • print/surface • piping • knit • dyeing • cutting (hand and by machine) • finishing e.g. washing, rubbing, felting, pressing Textiles • drafting basic weave structure for example plain, twill • warp winding • counting and tying ends • understanding the process of shedding, picking and beating Calculating materials for example length and width of warp according to yarn choice Assembly process for chosen discipline for example sewing methods, assembly sequence Shaping techniques The use of different tools and equipment appropriate to chosen discipline such as: • types of sewing machine, needle systems • sewing work aids and attachments • overlocker • knitting machine • hank/yarn winder • silk screen • lockstitch machine • blind hemmer • scissors • snips • corner shaper • loop turner • measuring tape • mannequins	Use materials mindfully, and efficiently to minimise waste Inspect components and quality of finished items identify and deal with any issues found, for example material/design compatibility, surface flaws, shading, shrinkage Consider additional factors e.g. the potential for outsourcing or collaborating with a mill Maintain own workspace and tools in accordance with professional practice Store and dispose of materials safely and ecologically. Present products in an appropriate way for distribution to market including labelling where appropriate

Awareness of loom devices and their functions e.g. heddle, shuttle, reed Setting up and threading a loom Maintenance of hand tools and equipment Routine machine maintenance, for example cleaning, lubrication, setting, consumable replacement Maintenance of powered tools, plant and equipment and limits of responsibility, when to escalate Costing • consideration of time • cost of materials • route to market • outsourcing Labelling and related legislation for example fibre content, care requirements Ways of presenting different products to client including packaging • protection of product • sustainability of packaging	

Performance Outcome 5: Review and evaluate the activities and development against the original brief or proposition to refine product(s).

Knowledge Specific to Performance Outcome	Skills
Knowledge of how to assess the final product against the original brief and production plan How reflective practice is used within the design process to inform decision making e.g. revisions, justifications, choices How reflective practice can be used to plan progress and future development	Evaluate the extent to which the finished item meets the detail of the brief including design interpretation Review and assess the final outcome against the production schedule including • efficiency and wastage • quality • cost effectiveness Engage with end user to establish if brief has been achieved and ascertain areas for future improvement. Reflect on outcome and update log book with actions for future development