



Australian Government

Department of Education, Employment and Workplace Relations

MEM19040A Create and manufacture jewellery or object design prototypes for the mass market

Release: 1

MEM19040A Create and manufacture jewellery or object design prototypes for the mass market

Modification History

Not applicable.

Unit Descriptor

This unit of competency covers the skills and knowledge required to apply creative and technical processes to develop jewellery or object designs for the mass market. It includes the development and testing of a prototype and evaluation of product viability.

Application of the Unit

This unit applies to designers who are responsible for creating and manufacturing jewellery or object design prototypes.

The unit applies to the analysis of commercial market opportunities and development of a design and production brief leading to development of one-off, limited edition, series and mass produced jewellery or objects.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

- | | | |
|---|--|---|
| 1 | Define and evaluate mass market opportunities | 1.1 Define difference between one-off, limited edition, series and products and the benefits and opportunities for jewellery and |
| | | 1.2 Identify commercial and design objectives of the client or wo |
| | | 1.3 Analyse commercial jewellery and object markets and current trends and technologies |
| | | 1.4 Conduct market research to inform development of design dir |
| 2 | Determine suitable jewellery or object manufacturing processes | 2.1 Identify in-house manufacturing capabilities available for pro determine the strengths and weaknesses of this form of jewell production |
| | | 2.2 Identify external manufacturing resources and suppliers availa designs and determine their strengths and weaknesses |
| | | 2.3 Estimate costing impacts of internal and external production s design costs |
| 3 | Develop jewellery or object design concepts | 3.1 Apply information from market and production analysis to de commercial product ideas |
| | | 3.2 Consult with appropriate personnel to analyse and refine idea brief |
| | | 3.3 Test design brief with appropriate personnel and confirm spec development |
| | | 3.4 Develop jewellery or object design concepts and solutions in brief and determine required manufacturing processes |
| 4 | Specify design production requirements | 4.1 Document design and production specifications |
| | | 4.2 Identify target audience, market position and objectives for je |
| | | 4.3 Prepare costing estimates |
| | | 4.4 Develop and present product proposal to test viability and cor specifications |
| | | 4.5 Develop work plan for design production |
| 5 | Prepare design prototype | 5.1 Plan for the production of jewellery or object design prototyp |
| | | 5.2 Prepare materials and equipment for development |
| | | 5.3 Produce jewellery or object design prototype in accordance w |

- specifications
- 5.4 Evaluate production and design results against design brief, c objectives and specifications
- 5.5 Make adjustments to concept, specifications or production p result
- 5.6 Finalise design and production specifications
- 6 Document and present design solution
 - 6.1 Prepare documentation and drawings of design solution to cle jewellery or object features and specifications
 - 6.2 Present design solution prototype to relevant personnel and se
 - 6.3 Evaluate design process and outcomes to determine success in objectives

Required Skills and Knowledge

Required knowledge includes:

- supply chain management
- outsourcing arrangements
- cost-benefit analysis methods
- research resources and techniques for investigating design information
- elements and principles of design as they relate to design of jewellery and objects
- jewellery designs (e.g. shanks, settings styles, shoulders and decorative finishes)
- working properties of jewellery materials
- methods of production for jewellery and objects
- design resources
- brainstorming and other idea generation techniques for research/idea development
- elements and principles of design, including form, harmony and line
- design considerations
- drawing media and their functions/applications, including paper, watercolours and pastels/inks/pencils
- drawing tools and their functions/applications, including stencils and rubbers
- design documentation
- form drawing development
- options available for drawing presentation
- enhancement techniques
- types of working drawings and their uses
- the interrelation between technical and design drawings
- hazard and control measures associated with preparing jewellery designs
- safe work practices

Required skills include:

- interpreting and clarifying a design brief
- identifying and collecting information necessary to create design concepts
- drawing
- conducting market research
- identifying features and benefits of design solutions
- selecting production processes
- developing and refining ideas
- applying principles and elements of design
- reading and interpreting information on specifications, design documentation, illustrations, design drawings and other applicable source documents
- identifying purpose and needs, including design considerations, item end use, proportions and desired features, and available materials
- checking and clarifying information
- documenting and maintaining design process, features and design development notes
- producing basic form drawings that accurately reflect design concept

- using drawing and/or rendering techniques appropriately
- undertaking numerical operations, geometry and calculations within the scope of the unit
- carrying out work according to occupational health and safety (OHS) practices

Evidence Guide

<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to apply a range of creative processes to develop and refine design concepts that meet commercial objectives.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can competently and consistently:</p> <ul style="list-style-type: none"> • implement OHS workplace procedures and practices • analyse jewellery and object markets to identify commercial opportunities • develop a design brief and determine key parameters • apply creative processes to develop, refine and test design concepts • apply knowledge of materials and production processes to jewellery and object design • produce design prototypes • prepare and present design concepts to appeal to the specific needs of the intended audience • evaluate success of design in meeting design brief and commercial objectives.
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • Assessment may occur on the job or in an appropriately simulated environment. Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed Assessment Guidelines of the MEM05 Metal and Engineering Training Package. • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge. • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

	<p>application.</p> <ul style="list-style-type: none">• Assessment may be applied under project-related conditions (real or simulated) and require evidence of process.• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.• Assessment may be in conjunction with assessment of other units of competency where required.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

Range Statement

Manufacturing processes	Manufacturing processes may include, but are not limited to: <ul style="list-style-type: none">• centrifugal casting• spinning• engraving• electroplating• laser cutting• die forming
Appropriate personnel	Appropriate personnel may include: <ul style="list-style-type: none">• supervisor• manager• trainer• mentor• teacher• team member
Market research	Market research may include: <ul style="list-style-type: none">• analysis of target market characteristics• sample testing• discussions with retailers and suppliers• discussions with staff and management• review of media portrayals• review of jewellery or object shows• review of current pricing strategies and price points of products
Design documents	Design documents may include: <ul style="list-style-type: none">• sketches• illustrations• concept drawings• working drawings• technical data• supporting information• specifications• production plans
Costings	Costings may include: <ul style="list-style-type: none">• labour• overheads• materials• tooling

	<ul style="list-style-type: none">• equipment• outsourcing
--	---

Unit Sector(s)

Jewellery and horological

Custom Content Section

Not applicable.