



Australian Government

Department of Education, Employment and Workplace Relations

LMFDN4001A Produce drawings from design concepts

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the competency to produce manual and computer-aided drawings of objects from design concepts.

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Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

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Element	Performance Criteria
1 Prepare for the task	<p>1.1 Workplace health and safety requirements, including personal protection needs, are observed throughout the work.</p> <p>1.2 Purpose and operational characteristics of object to be drawn are identified.</p> <p>1.3 Production materials and method are identified.</p>
2 Establish design requirements and limitations	<p>2.1 Type of drawing to be completed is identified.</p> <p>2.2 Design concept requirements are established and documented identifying dimensions, angles, shapes and finished size.</p> <p>2.3 Ergonomic requirements for the objects are identified, clarified and addressed throughout the work processes.</p> <p>2.4 Drawing conventions and specifications to be noted on the drawing are identified.</p> <p>2.5 Appropriate medium for drawings is identified and selected.</p>
3 Quantify and draft initial drawing	<p>3.1 Dimensions are plotted from prototype sketch and documented specifications.</p> <p>3.2 Dimensional points are connected to match appropriate drawing view.</p> <p>3.3 Any production notes or special requirements are noted.</p> <p>3.4 Drawing conventions and specifications are noted on the documentation.</p>
4 Complete drawing	<p>4.1 Angles, shapes and dimensions are checked against specifications and concept prototype drawing.</p> <p>4.2 Adjustments are made to the drawing within scope of authority.</p> <p>4.3 Drawing is checked for compliance with workplace</p>

documentation requirements.

Required Skills and Knowledge

Not applicable.

Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competency for this unit. This is an integral part of the assessment of competency and should be read in conjunction with the Range Statement.

Critical aspects of evidence

Locate, interpret and apply relevant information.

Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment.

Identify requirements of task and organise work to achieve goals and results

Interpret specifications and measurements in two and three-dimensional form.

Satisfy ergonomic criteria during the drawing process.

Present relevant information within the production drawing using both manual and computer-aided processes and techniques.

Suggest improvements to drawing activities and where authorised, negotiate changes.

Modify activities to cater for variations in workplace cultures and environment.

Underpinning knowledge

Manual and computer-aided drawing processes and techniques.

Ergonomic principles for furniture design and manufacture.

Presentation standards.

Enterprise or equivalent operating procedures, including procedures for preparing drawings and presenting information.

Relevant regulatory requirements, recognised standards and codes, and industry practices.

Underpinning skills

Information. Research, collect, organise and understand information related to the design concept, including the relevant technical, regulatory, cultural, environmental and safety requirements.

Communication. Communicate ideas and information to enable clarification of the conceptual requirements, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems.

Planning. Plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage.

Teamwork. Work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity.

Mathematical ideas and techniques. Use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled drawings, and estimate material requirements.

Solve problems. Create and apply systematic problem solving techniques to anticipate drawing problems, avoid reworking and avoid wastage.

Use of technology. Use the workplace technology related to the drawing, including drafting tools and equipment, calculators and measuring devices and computing/computer-aided systems.

Resource implications

Design concept, specifications, dimensions and drawing equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.

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Range Statement

The Range Statement provides advice to interpret the scope and context of this unit of competency, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables may be present for this particular unit.

Unit scope

The drawings to be produced are intended for use in a furnishing industry production or manufacturing environment.

Drawings are to be produced using both manual and computer-aided processes.

Drawings are to be both two and three-dimensional.

Unit context

OH&S requirements include:

legislation

building codes

material safety management systems

hazardous substances and dangerous goods codes, and
safe operating procedures.

Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements.

Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills in the completion of drawings.

Workplace environment

The work may be conducted in any of the enterprises of the sectors that form part of the furnishing industry.

Work is generally performed with little external assistance and with minimal supervision or direction.

Drawing is to be undertaken in accordance with established industry and/or enterprise practices and procedures.

Customers may be internal or external.

Tools and equipment

Tools and equipment are to include:

drafting table

drawing aids

computing equipment and work station, and
special lighting conditions.

Materials

Materials are to include drawing and computing consumables.

Personal protective equipment

Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices.

Information and procedures

Work procedures/instructions.

Designer's concept and specifications/instructions.

Legislation/regulations/codes relevant to the work undertaken.

Furniture design principles and criteria, including ergonomic requirements.

Quality and Australian standards and procedures.

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Unit Sector(s)

Not applicable.