



Australian Government

Department of Education, Employment and Workplace Relations

FPITMM5204B Manage product design

Release: 1

FPITMM5204B Manage product design

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the outcomes required to clarify and confirm design objectives and goals, and to resource and manage the design cycle of actions to the point where the outcomes are ready for acceptance for production purposes

General workplace legislative and regulatory requirements apply to this unit; however there are no specific licensing or certification requirements at the time of publication

This unit replaces FPITMM5204A Manage product design

Application of the Unit

Application of the unit

The unit involves managing product design in a forest products factory environment

The skills and knowledge required for competent workplace performance are to be used within the scope of the person's job and authority

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

Employability Skills Information

Employability skills This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish design objectives and success factors	<p>1.1. Applicable <i>Occupational Health and Safety</i> (OHS), <i>environmental</i>, <i>legislative</i> and <i>organisational requirements</i> relevant to managing product design are identified and followed</p> <p>1.2. Information on <i>design tasks</i> is collected, analysed and maintained</p> <p>1.3 Design workload is packaged into discrete, manageable <i>design work units</i></p> <p>1.4 Criteria for each design work unit are specified and <i>key success factors</i> and indicators are established</p> <p>1.5 <i>Communication</i> with others is established and maintained in accordance with OHS requirements</p>
2. Plan the design activity	<p>2.1. Scope of each design work unit is reviewed and personnel and material resource requirements specified</p> <p>2.2. Design work units are programmed and scheduled in line with target achievement dates and resource constraints</p> <p>2.3. Design work plan, including key success or performance indicators, is processed and approved in line with enterprise procedures</p>
3. Implement the design work plan	<p>3.1. Resources including human, material, equipment and systems are allocated to particular design work units and tasks</p> <p>3.2. Designers are directed and involved in finalising work preparations and processes, and in establishing key performance indicators</p> <p>3.3. Coordination issues with <i>supporting agencies</i> and departments are resolved</p> <p>3.4. Removal of <i>inhibitors</i> to achievements are met</p> <p>3.5. Progress reviews are carried out and support provided to the designers to maintain technical design standards and achievement targets</p> <p>3.6. Design outcomes are prepared, finalised and certified as meeting the required specifications</p> <p>3.7. Design outcomes are documented and processed for the client's acceptance</p> <p>3.1.3.8. Design process and problems are <i>recorded</i></p>

ELEMENT	PERFORMANCE CRITERIA
4. Monitor and respond to design performance	<p data-bbox="619 293 1129 329"><i>and reported to appropriate personnel</i></p> <p data-bbox="576 344 1214 456">4.1. Performance targets are monitored to assess progress and to provide indicators as to target revision or other intervention response</p> <p data-bbox="576 465 1292 535">4.2. Unsatisfactory performance is detected and prompt action is taken to rectify the situation</p> <p data-bbox="576 544 1238 613">4.3. Mentoring and coaching is provided to support individuals or teams through the design process</p> <p data-bbox="576 622 1182 734">4.4. Recommendations for variations to plans are negotiated and approved by the appropriate personnel</p> <p data-bbox="576 743 1259 855">4.5. Systems, procedures and records associated with documenting performance are managed in accordance with the enterprise requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level required for this unit

Required skills

- Technical skills sufficient to use and maintain relevant tools, machinery and equipment and safely manage product design
- Communication skills and interpersonal techniques sufficient to interact appropriately with colleagues and others in the workplace
- Literacy skills sufficient to accurately record and report workplace information, and maintain documentation
- Numeracy skills sufficient to estimate, measure and calculate time required to complete a task
- Problem solving skills sufficient to identify problems and equipment faults and demonstrate appropriate response procedures

Required knowledge

- Applicable Commonwealth, State or Territory legislation, regulations, standards, codes of practice and established safe practices relevant to the full range of processes for product design management
- Environmental protection requirements, including the safe disposal of waste material, the safe use and storage of chemicals, minimising carbon emissions and the cleaning of plant, tools and equipment
- Organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

- product design management
- Environmental risks and hazards
- Using energy effectively and efficiently
- Using material effectively and efficiently
- Established communication channels and protocols
- Product design methods
- Characteristics of materials and equipment
- Construction sequences and jigs
- Construction componentry and construction standards
- Industry standard cross-sections and lengths
- Procedures for the recording, reporting and maintenance of workplace records and information
- Problem identification and resolution strategies and common fault finding techniques
- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Appropriate mathematical procedures for estimating and measuring, including calculating time to complete tasks
- Procedures for recording and reporting workplace information

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to provide evidence that they can safely manage product design

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements of this unit and include demonstration of:

- following applicable Commonwealth, State or Territory legislative and regulatory requirements and codes of practice relevant to managing product design
- following organisational policies and procedures

EVIDENCE GUIDE

- relevant to managing product design
- effective communication and safe working practices
 - managing product design in line with design criteria and performance targets
- Context of and specific resources for assessment**
- Competency is to be assessed in the workplace or realistically simulated workplace
 - Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
 - Assessment of required knowledge, other than confirmatory questions, will usually be conducted in an off-site context
 - Assessment is to follow relevant regulatory or Australian Standards requirements
 - The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to undertaking work applicable to this unit
 - specifications and work instructions
- Method of assessment**
- Assessment must satisfy the endorsed Assessment Guidelines of the FPI11 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 required knowledge
 - Assessment must be by direct observation of tasks, with questioning on required knowledge and it must also reinforce the integration of employability skills
 - Assessment methods must confirm the ability to access and correctly interpret and apply the required knowledge
 - 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
 - The assessment environment should not disadvantage the candidate
 - Assessment practices should take into account any

EVIDENCE GUIDE

relevant language or cultural issues related to Aboriginality, gender or language backgrounds other than English

- Where the participant has a disability, reasonable adjustment may be applied during assessment
- Language and literacy demands of the assessment task should not be higher than those of the work role

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements:

are to be in line with applicable Commonwealth, State or Territory legislation and regulations, and organisational safety policies and procedures, and may include:

- personal protective equipment and clothing
- safety equipment
- first aid equipment
- fire fighting equipment
- hazard and risk control
- fatigue management
- elimination of hazardous materials and substances
- safe forest practices including required actions relating to forest fire
- manual handling including shifting, lifting and carrying

Environmental requirements may include:

- legislation
- organisational policies and procedures
- workplace practices

Legislative requirements:

are to be in line with applicable Commonwealth, State or Territory legislation, regulations, certification requirements and codes of practice

RANGE STATEMENT

and may include:

- award and enterprise agreements
- industrial relations
- Australian Standards
- confidentiality and privacy
- OHS
- the environment
- equal opportunity
- anti-discrimination
- relevant industry codes of practice
- duty of care

Organisational requirements may include:

- legal
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals
- quality and continuous improvement processes and standards
- OHS, emergency and evacuation procedures
- ethical standards
- recording and reporting requirements
- equipment use and maintenance and storage requirements
- environmental management requirements (waste minimisation and disposal, recycling and re-use guidelines)

Design tasks are to include:

- the process of applying problem solving skills
- thought processes
- cultural and demographic awareness
- materials technology
- conceptual development techniques
- working with production limitations to determine and produce products or 3-D functional solutions

Design work units

break up tasks into manageable parts for design teams or individuals who may work on separate parts of a design project

Key success factors may include:

- achieving goals in the time allocated

RANGE STATEMENT

- Communication** may include:
- meeting specified design criteria
 - minimising the impact of production on the environmental
 - using energy efficiently and effectively
 - using material efficiently and effectively
 - verbal and non-verbal language
 - constructive feedback
 - active listening
 - questioning to clarify and confirm understanding
 - use of positive, confident and cooperative language
 - use of language and concepts appropriate to individual social and cultural differences
 - control of tone of voice and body language
- Supporting agencies** may include: organisations providing:
- services
 - graphic work
 - componentry
- Inhibitors** may include: barriers to design outcomes such as:
- standard timber sizes
 - equipment usage capabilities and skill capabilities
- Records and reports** may include:
- product type
 - size
 - inspection
 - grading and labelling outcomes
 - storage locations
 - quality outcomes
 - hazards
 - incidents or equipment malfunctions and
- and may be:
- manual
 - using a computer-based system or other appropriate organisational communication system
- Appropriate personnel** may include:
- supervisors
 - suppliers
 - clients

RANGE STATEMENT

Performance targets are to include:

- colleagues
- managers
- completion of design tasks inside designated timeframes
- design outcomes in line with the established criteria

Unit Sector(s)

Unit sector No sector assigned

Co-requisite units

Co-requisite units

Competency field

Competency field Timber Manufactured Products and Timber Merchandising