



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **FDFOP3003A Operate interrelated processes in a production system**

**Revision Number: 1**

## **FDFOP3003A Operate interrelated processes in a production system**

### **Modification History**

Not applicable.

### **Unit Descriptor**

<b>Unit descriptor</b>	This unit of competency covers the skills and knowledge required to set up, operate and adjust interrelated processes in a production system.
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## Application of the Unit

<b>Application of the unit</b>	<p>This unit applies to senior operators who are applying skills and knowledge of the operational requirements of the production system for the industry in which it is applied.</p> <p>While the unit does not have specific prerequisites, it is not an entry level unit covering skills and knowledge required for operation of individual items of equipment and individual processes. The unit instead provides the skills and knowledge required for the coordination of multiple processes in a production system at an operational level. Where sector-specific senior operator technical skills are required, a relevant sector specific specialist elective unit should be selected.</p> <p>A system typically involves a series of interrelated processes that must be coordinated and concurrently operated to produce the required outcome. Individual processes may be directly operated, automated and/or operated by others. System operation requires higher level planning and problem solving skills applied to the series of processes than is required when operating an individual unit of equipment or multiple pieces of the same equipment.</p> <p>This unit does not supply skills related to the implementation of lean and competitive manufacturing related skills to improve system performance. Where these skills are required the relevant Manufacturing Skills Australia (MSA) competitive manufacturing elective units should be selected.</p>
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## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

<b>Prerequisite units</b>	

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## 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.
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Prepare the production system for operation</p>	<p>1.1. Equipment, materials and services are confirmed and available to meet production requirements</p> <p>1.2. Cleaning requirements and equipment status are identified and confirmed</p> <p>1.3. Machine settings are selected or adjusted as required to meet safety and production requirements</p> <p>1.4. Processing/operating parameters are entered as required to meet production requirements</p> <p>1.5. Materials, ingredients and/or product are loaded or positioned as required to meet production requirements</p> <p>1.6. Pre-start checks are carried out as required by workplace requirements</p> <p>1.7. Equipment performance is checked and adjusted as required</p> <p>1.8. Equipment is ready and safe to operate</p>
<p>2. Operate and monitor the production system</p>	<p>2.1. The system is started up and operated according to company procedures</p> <p>2.2. System equipment components are monitored to identify variation in operating conditions</p> <p>2.3. Variation in equipment operation is identified and maintenance requirements are reported according to workplace reporting requirements</p> <p>2.4. The production system is monitored to confirm that specifications are met</p> <p>2.5. Out-of-specification product/process outcomes are identified, rectified and/or reported to maintain the process within specification</p> <p>2.6. The work area is maintained according to housekeeping standards</p> <p>2.7. Work is conducted in accordance with workplace environmental guidelines</p>
<p>3. Hand over production system operation</p>	<p>3.1. Workplace records are maintained according to workplace recording requirements</p> <p>3.2. Handover is carried out according to workplace procedures</p> <p>3.3. Process operators are aware of system and related equipment status at completion of handover</p>
<p>4. Shut down the</p>	<p>4.1. The appropriate shutdown procedure is identified</p>

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
production system	4.2.The system is shut down according to workplace procedures 4.3.Maintenance requirements are identified and reported
5. Contribute to continuous improvement of the production system	5.1.System performance is reviewed against output plan/targets 5.2.Opportunities for system improvement are identified and investigated 5.3.Proposals for improvement are developed and implemented within company planning arrangements, authority levels and according to company procedures

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

##### *Ability to:*

- access production schedule and related information to identify system output and operating requirements, such as planning daily production schedules and/or modifying plans to respond to operating conditions and customer requirements
- liaise with relevant work areas to confirm and/or secure necessary materials, services, equipment and labour to meet production requirements
- confirm supply of necessary equipment and related attachments, materials and services
- select, fit and use personal protective clothing and/or equipment
- set and/or adjust equipment to meet process output requirements, including inspecting equipment condition to identify any signs of wear, confirming selection of appropriate settings and/or related parameters, ensuring that isolation or lock outs are cancelled as required, confirming that equipment is clean and correctly configured for processing requirements, positioning sensors and controls correctly, ensuring any scheduled maintenance has been carried out, and confirming that all safety guards are in place and operational (checks may be done by the system operator or involve observing/supporting others setting and adjusting equipment and conducting pre-start checks)
- load and/or position materials, ingredients and/or product as required
- operate and monitor the production system, such as use of a process control system and/or observing/supporting others to follow correct operating procedures
- monitor materials flow and work-in-progress through the system
- confirm that the system operates within specified parameters and inspection/control points are monitored
- determine responses to out-of-specification results or non-conformance within level of responsibility
- monitor operating efficiencies of the system, including recognition of signs and symptoms of faulty equipment and early warning signs of other potential problems
- investigate, resolve and/or report problems and faults
- plan scheduled events to minimise disruption to production
- conduct/coordinate product or batch changeovers
- conduct/coordinate shift handovers
- review and maintain procedures to support system improvements
- maintain work area to meet housekeeping standards
- use oral communication skills/language competence to fulfil the job role as specified by the organisation, including questioning, active listening, asking for clarification and seeking advice from supervisor

**REQUIRED SKILLS AND KNOWLEDGE**

- work cooperatively within a culturally diverse workforce

**Required knowledge*****Knowledge of:***

- purpose and basic principles of the production system, including the system process flow, the interrelationships of each process to identify the impact of variation on related processes, and optimisation options
- basic operating principles of equipment and related accessories used by the system, including equipment adjustment points, status and purpose of guards, and range and location/alignment requirements of sensors and related feedback instruments
- operating capacities of equipment used in the system, such as different types of equipment and/or components as required by processing/packaging operations
- related systems and responsibilities for interaction, such as related production systems, services supply, packaging/warehousing, maintenance, laboratory/quality assurance and planning and scheduling
- product characteristics and common types of variation in materials and/or ingredients used, including the effect of variation on each stage of the system and scope to adjust or correct
- typical production related problems, including equipment faults, common causes and warning signs, incorrect or poor supply of materials, incorrect settings and poor operator control
- relevant procedures, specifications and operating parameters for the system and the individual processes
- isolation, lock out and tag out procedures and responsibilities
- hazards, risks, controls and methods for monitoring processes within the system, including occupational health and safety (OHS), food safety, quality and environmental hazards and risks
- workplace system and approach to equipment maintenance
- process improvement procedures and related consultative arrangements
- troubleshooting procedures and problem solving techniques
- communication responsibilities to inform related work areas/support functions and other shifts of operational status and production issues
- procedures and responsibility for reporting production and performance information



## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>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.</p>	
<p><b>Overview of assessment</b></p>	<p>Assessment must be carried out in a manner that recognises the cultural and literacy requirements of the assessee and is appropriate to the work performed. Competence in this unit must be achieved in accordance with food safety standards and regulations.</p>
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>Evidence of ability to:</p> <ul style="list-style-type: none"> <li>• conduct pre-start checks on production system components</li> <li>• confirm machine setup is ready to achieve production requirements</li> <li>• correctly use required personal protective equipment</li> <li>• start, operate, monitor and adjust process equipment throughout the system to achieve required quality outcomes</li> <li>• identify system problems and take corrective action</li> <li>• conduct operational handovers</li> <li>• shut down system</li> <li>• identify and investigate opportunities for operational improvements within areas of responsibility</li> <li>• complete workplace records as required</li> <li>• apply safe work practices and identify OHS hazards and controls</li> <li>• safely shut down equipment</li> <li>• apply food safety procedures.</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<p>Assessment must occur in a real or simulated workplace where the assessee has access to:</p> <ul style="list-style-type: none"> <li>• personal protective clothing and equipment</li> <li>• production schedule and related advice on system requirements</li> <li>• information on equipment capacity and operating parameters</li> <li>• production system equipment and related accessories and services</li> <li>• materials/consumables required by the process</li> <li>• communication and recording systems and</li> </ul>

<b>EVIDENCE GUIDE</b>	
	procedures.
<b>Method of assessment</b>	<p>This unit should be assessed together with core units and other units of competency relevant to the function or work role. Examples could be:</p> <ul style="list-style-type: none"> <li>• FDFOP2030A Operate a process control interface</li> <li>• FDFPPL3003A Support and mentor individuals and groups.</li> </ul>
<b>Guidance information for assessment</b>	<p>To ensure consistency in one's performance, competency should be demonstrated on more than one occasion over a period of time in order to cover a variety of circumstances, cases and responsibilities, and where possible, over a number of assessment activities.</p>

## Range Statement

<b>RANGE STATEMENT</b>	
<p>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.</p>	
<b>Policies and procedures</b>	<p>Work is carried out according to company procedures, regulatory and licensing requirements, legislative requirements, and industrial awards and agreements</p>
<b>Legislative requirements</b>	<p>Legislative requirements are typically reflected in procedures and specifications. Legislation relevant to this industry includes:</p> <ul style="list-style-type: none"> <li>• the Food Standards Code, including labelling, weights and measures legislation</li> <li>• legislation covering food safety, environmental management, OHS, anti-discrimination and equal opportunity</li> </ul> <p>When applied to the pharmaceutical industry, relevant Good Manufacturing Practice (GMP) codes apply in place of the Food Standards Code and reference to food safety is replaced by GMP</p>
<b>Workplace information</b>	<p>Workplace information may include:</p> <ul style="list-style-type: none"> <li>• standard operating procedures (SOPs)</li> <li>• specifications</li> <li>• production schedules and instructions</li> <li>• performance records and reports</li> </ul>
<b>Systems</b>	<p>A system typically involves:</p> <ul style="list-style-type: none"> <li>• a series of interrelated processes that must be coordinated and concurrently operated to produce the required outcome</li> </ul>
<b>System operation</b>	<p>System operation may involve:</p> <ul style="list-style-type: none"> <li>• coordination of operators of system components</li> </ul>
<b>Handovers</b>	<p>Handovers may be done:</p> <ul style="list-style-type: none"> <li>• in person or via recording/communication</li> </ul>

<b>RANGE STATEMENT</b>	
	systems according to workplace arrangements
<b>Operation and monitoring of equipment and system processes</b>	Operation and monitoring of equipment and system processes typically requires: <ul style="list-style-type: none"> <li>the use of control panels and systems</li> </ul>
<b>Shutdown procedures</b>	Shutdown procedures may include: <ul style="list-style-type: none"> <li>cleaning (in some cases cleaning may be carried out by a dedicated cleaning crew)</li> </ul>
<b>Confirming cleaning requirements and status</b>	Confirming cleaning requirements and status may involve: <ul style="list-style-type: none"> <li>accessing cleaning records</li> </ul>

### Unit Sector(s)

<b>Unit sector</b>	Operational
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### Competency field

<b>Competency field</b>	
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### Co-requisite units

<b>Co-requisite units</b>	