



A U S T R A L I A N M E A T P R O C E S S O R C O R P O R A T I O N

Guide to competencies & training options for maintenance engineers in meat processing plants

Project code:	2014/1028
Prepared by:	People & Performance International
Date Published:	November 2015
Published by:	Australian Meat Processor Corporation

The Australian Meat Processor Corporation acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this publication.

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1.0 Introduction

It is essential that meat processing plants are able to attract, retain and provide continuing development for maintenance engineering staff to be able to meet the maintenance needs of their plants now and into the future.

Maintenance engineering personnel in the meat processing industry are traditionally trade qualified. Plants generally employ electricians and mechanical fitters, and may also employ other trades. A 'typical' maintenance engineering team in a large plant generally employs:

- Mechanical fitters
- Electricians
- Plumbers and boilermakers
- Trade or diploma qualified supervisors and planners
- Degree qualified plant engineers.

Generally, maintenance engineering departments undertake a broad range of activities across many trade disciplines not only encompassing those outlined above but also in areas such as building and construction, refrigeration, project management, environment, information and communications technology. Because of the broad range of activities across trades, personnel undertaking some of these activities may not have formal training in these areas. They may, for example, learn the skills from other maintenance staff. While this system has worked for the industry in the past, it is important that a more systematic approach is adopted to ensure the person is competent in all areas, including the following tasks:

- Follow work instructions
- Work independently
- Follow work health and safety requirements
- Meet quality assurance requirements
- Meet hygiene and sanitation requirements
- Identify and report faults
- Identify and manage risks
- Respond appropriately to emergency situations
- Follow environmental policies and procedures.

The best way to achieve this is for personnel to undertake unit of competency training.

This guide provides a range of options for the selection of units of competency and qualifications suitable for maintenance engineering staff from entry level to senior management. There are several pathway options. These pathways include:

- Trades and post trade pathways in any of the trade areas
- Certificate II through to Advanced Diploma in the Australian Meat Industry Training Package (MTM11)
- Training options and pathways from any other training package that meet plant and staff member needs e.g. Certificate IV in Environmental Monitoring and Technology.

Please note that the training pathway for maintenance engineering staff through the Australian Meat industry Training Package does not currently meet all maintenance engineering skills

development requirements. It is proposed to address this through the revision of the Meat Industry Training Package.

You are not locked into choosing from the units listed in this guide. Your training manager or registered training organisation may identify relevant units for the skills you need for your plant. Units may be selected and completed as individual units. The unit may provide credits towards a qualification and the unit must meet the requirements for that particular qualification in order to gain credits towards the qualification.

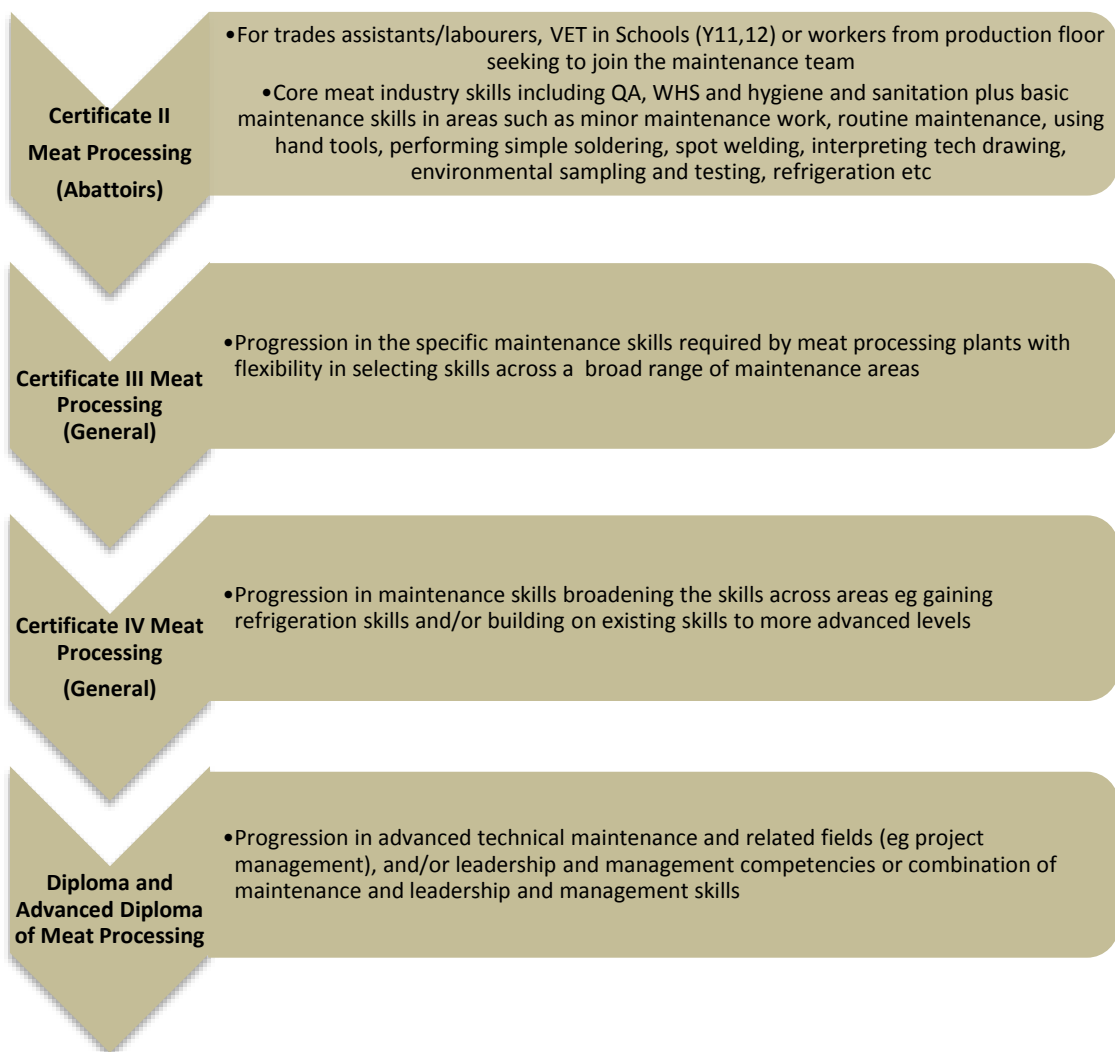
This guide sets out training pathways options for maintenance engineering staff from entry level to senior management. This guide is divided into the following three sections:

- Section 1: Training options that are currently available for maintenance engineering staff in the Australian Meat Industry Training Package (MTM11)
- Section 2: Possible training development options for trades qualified maintenance engineering staff
- Section 3: Proposed future training pathways options for maintenance engineering staff in the Australian Meat Industry Training Package.

2.0 Section 1: Training options that are currently available for maintenance engineering staff in the Australian Meat Industry Training Package (MTM11)

2.1 Overview of training pathway for maintenance engineering personnel in the Meat Industry Training Package

The following training pathway and training options are currently available for maintenance engineering staff or personnel seeking to join the industry, through the Australian Meat Industry Training Package (MTM11).



3.0 Overview of requirements to gain a qualification with a maintenance major at each level of the Meat Industry Training Package

3.1 Maintenance Certificate II in Meat Processing (Abattoirs)

3.1.1 Who is this qualification for?

This is an entry level qualification for school students, personnel working in meat processing plants or preparing to work in maintenance engineering in meat processing plants. This qualification may be gained by:

- Labourers or trades assistants already working in maintenance
- Workers from production areas seeking to join the maintenance team
- School students undertaking a vocational education and training (VET) program as part of their requirements for years 11 and 12.

3.1.2 What do you need to do to gain the qualification?

To gain the qualification you must meet the packaging rules for the Certificate II in Meat Processing (Abattoirs). The packaging rules are:

- Complete all six core units of competency
- Complete a minimum of three elective units of competency, to a minimum value of twenty points.

Units with a value of up to fifteen points can be selected from a Certificate III in Meat Processing qualification.

A maximum of four units can be selected from other Certificate II level qualifications in this Training Package, or from another Training Package or accredited course. Units selected must be relevant to the identified job role and must not duplicate units already contained within the qualification. Units selected will be worth 2 points.

3.1.3 What units can I do to gain the qualification?

Two different options follow for gaining a Certificate II in Meat Processing (Abattoirs) with majors in maintenance engineering or related fields. These options provide you with a range of units of competency that you can select from to meet the needs of your plant. You need to select the number of units from each area to comply with the requirements for the qualification as set out above.

You should note that you are not confined to selecting from the units that are listed. You may select alternative units to those included in the following options. The following units have been selected because they are examples of competencies required in that respective area by maintenance personnel in meat processing plants. You may select any units so long as you comply with the requirements for the qualification.

3.2 Certificate II in Meat Processing (Abattoirs) with maintenance engineering major

Core competencies			
You must complete all six of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies & procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
Elective units			
All of the following units are elective units. You must select a minimum of three elective units of competency, to a minimum value of twenty points.			
Elective units currently available in this qualification at Certificate II			
MTMP2042C	Operate new technology or process (2)	MTMPS201C	Clean work area during operations (4)
MTMP206C	Use selected hand tools (2)	MTMPSR202B	Apply environmentally sustainable work practices (2)
MTMPS206C	Operate forklift in a specific workplace (6)	HLTFA301C	Apply first aid (2)
Elective units from Certificate III in Meat Processing that are currently available in this qualification			
You may select elective units with a value of up to fifteen points from the Certificate III in Meat Processing to make up the total value of twenty points for elective units required for this qualification.			
BSBFLM312C	Contribute to team effectiveness (3)	MTMP3118A	Conduct start up procedures and pre-operational checks on slaughter floor NLIS equipment (2)
MSL904001A	Perform standard calibrations (2)	MTMP3085C	Monitor boiler operations (4)
MSL922001A	Read and present data (2)		
Elective units from other training packages			
In order to gain the total of twenty points required for elective units in the qualification you may select a maximum of four units from the following or other maintenance electives from other training packages. Each unit will be given a value of two points.			
Elective units in computing and measurement			
BSBITU101A	Operate a personal computer	MEM12024A	Perform computations

BSBITU202A	Create and use spread sheets	MEM16008A	Interact with computing technology
UEENEED101A	Use computer applications relevant to a workplace	MEM12023A	Perform engineering measurements
Elective units in drawing, drafting and design			
VU20910	Produce basic engineering sketches and drawings	RIICCM203A	Read and interpret plans and specifications
MEM09002B	Interpret technical drawing	MSAPMSUP210A	Process and record information
Elective units in maintenance and diagnostics			
MSAPMSUP240A	Undertake minor maintenance	MEM07001B	Perform operational maintenance of machines/equipment
MEM07029B	Perform routine sharpening/maintenance of production tools and cutters	AUMATK3003	Monitor & maintain equipment, tools & machinery
MSAPMSUP100A	Apply workplace procedures	MSAPMSUP101A	Clean workplace or equipment
MSAPMSUP303A	Identify equipment faults	MEM18011C	Shut down and isolate machines/equipment
UEENECC002B	Source and purchase material/parts for installation or service jobs		
Elective units in machine and process operation			
MEM16007A	Work with others in manufacturing, engineering or related environment	MSASS00005	License to operate a standard boiler
MEM07024B	Operate and monitor machine/process	MEM18002B	Use power tools/hand held operations
MEM03001B	Perform manual production assembly	MEM18001C	Use hand tools
MEM18003C	Use tools for precision work	MEM07028B	Operate computer controlled machines/processes
MEM07016C	Set and edit computer controlled machines/processes		
Elective units in fabrication			
MEM05026C	Apply welding principles	AURVTW2005	Carry out spot welding procedures
VU20528	Perform basic oxy-acetylene welding and cutting	VU20911	Handle engineering materials
MEM05001B	Perform manual soldering/desoldering -	CPCCA3013A	Install lining, panelling and moulding

	electrical/electronic components		
PCCC02013A	Carry out concreting to simple forms	CPCPCM2048A	Cut and join sheet metal
Elective units in materials handling			
PMBHAN103C	Shift materials safely by hand	TLILIC2001A	License to operate a forklift truck
MEM11010B	Operate mobile load shifting equipment	RIIMPO318B	Conduct civil construction skid steer loader operations
TLILIC2014B	License to Drive Light Rigid Vehicle	TLILIC2016B	License to Drive Heavy Rigid Vehicle
TLILIC2015B	License to Drive Medium Rigid Vehicle	TLILIC3018B	License to drive a multi combination vehicle
TLILIC3017B	License to Drive Heavy Combination Vehicle		
Elective units in work health and safety			
HLTCPR211A	Perform CPR	MSAPMPER205C	Enter confined space
RIIOHS204A	Work safely at heights	TLID307E	Handle dangerous goods/hazardous substances
		AHCCHM101A	Follow basic chemical safety rules
Elective units in other areas conducted by maintenance			
FPICOT2238A	Cut materials with hand held chain saw	PSPPM402B	Manage simple projects
FPICOT2237A	Maintain chainsaws		

3.3 Certificate II in Meat Processing (Abattoirs) with environment major

Core competencies			
You must complete all six of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry

Elective units

All of the following units are elective units. You must select a minimum of three elective units of competency, to a minimum value of twenty points.

Elective units currently available in this qualification

The following elective units are currently available in this qualification. You may select units to a minimum value of 20 points from these units or you may select the units you need from here and make up the points to 20 by also selecting units from Certificate III in Meat Processing such as those units that follow or elective units from other training packages.

MTMPSR202B	Apply environmentally sustainable work practices (2)	MTMPS201C	Clean work area during operations (4)
NWP262A	Monitor and report wastewater treatment processes (2)	MTMP2042C	Operate new technology or process (2)
NWP263A	Operate and maintain wastewater treatment plant and equipment (8)	HLTFA301C	Apply first aid (2)
NWP208A	Perform basic wastewater tests (2)	MTMP206C	Use selected hand tools (2)
MTMPS206C	Operate forklift in a specific workplace (6)	MSL973001A	Perform basic tests
MSL954001A	Obtain representative samples in accordance with sampling plan		

Elective units from Certificate III in Meat Processing that are currently available in this qualification

You may select elective units with a value of up to fifteen points from the Certificate III in Meat Processing to make up the total value of twenty points for elective units required for this qualification.

BSBFLM312C	Contribute to team effectiveness (3)	MSL922001A	Read and present data (2)
MSL904001A	Perform standard calibrations (2)		

Elective units from other training packages

You may select a maximum of four units from the following environment electives from other training packages. Each unit will be given a value of two points. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).

NWP220B	Collect and control drainage run-off	NWP234B	Locate, identify and protect utility services
NWP213B	Monitor and operate irrigation, stock and domestic delivery systems	NWP241B	Inspect and maintain basic dams and water storages
NWP221A	Operate basic flow control and regulating devices in water or wastewater treatment network systems	NWP245B	Maintain tanks and water storage assets

NWP231B	Maintain and repair drainage assets	FDFSUG222A	Operate a waste water treatment system
AHCCHM101A	Follow basic chemical safety rules		

3.4 Certificate III in Meat Processing (General) with maintenance engineering major

3.4.1 Who is this qualification for?

This is a qualification for personnel working as trades assistants in maintenance engineering areas in meat processing plants. This qualification enables trades assistants to continue their career in maintenance engineering by developing professionally by broadening their skills to cover additional maintenance areas and/or learning more advanced skills in areas where they already have skills.

3.4.2 What do you need to do to gain the qualification?

To gain the qualification you must meet the packaging rules for the Certificate III in Meat Processing (General). The packaging rules are:

- Complete all six core units of competency (which are the same core units as those at Certificate II so they have already been completed if you have the Certificate II in Meat Processing (Abattoirs))
- Complete a minimum of two elective units of competency to a minimum value of thirty points.

Up to three units may be substituted with units selected from another Certificate III or IV qualification in this Training Package, or another Training Package or accredited course. The selected units must be relevant to the nominated meat processing job and must not duplicate units already contained in the qualification. Units selected will be worth 2 points.

3.4.3 What units can I do to gain the qualification?

You need to select the number of units from each area to comply with the requirements for the qualification as set out above. You should note that you are not confined to selecting from the units that are listed. You may select alternative units to those included in the following options. The following units have been selected because they are examples of competencies required in that respective area by maintenance personnel in meat processing plants. You may select any units so long as you comply with the requirements for the qualification.

3.5 Certificate III in Meat Processing (General) with maintenance engineering major

Core competencies			
You must complete all six of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
Elective units			
All of the following units are elective units. You must select a minimum of two elective units of competency, to a minimum value of thirty points. Up to three units may be substituted with units selected from another Certificate III of IV qualification in this Training Package, or another Training Package or accredited course. The selected units must be relevant to the nominated meat processing job and must no duplicate units already contained in the qualification. Units selected will be worth 2 points.			
Elective units in maintenance available in this qualification			
BSBFLM312C	Contribute to team effectiveness (3)	MSL922001A	Read and present data (2)
MSL904001A	Perform standard calibrations (2)	MSL952002A	Handle and transport samples or equipment (3)
MSL954001A	Obtain representative samples in accordance with sampling plan (3)	MSL973001A	Perform basic tests (3)
TAEDEL301A	Provide work skill instruction (3)		
Elective units in maintenance and leadership that are currently available from Certificate IV in Meat Processing			
You may select a maximum of three units from Certificate IV in Meat Processing to help make up the total of elective units to the value of thirty points.			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
NWP263A	Operate and maintain wastewater treatment plant and equipment	SIRXINV005A	Control inventory
MTMP407B	Supervise new recruits	BSBINM401A	Implement workplace information system

MTMPSR401C	Coordinate contracts	BSBINN301A	Promote innovation in a team environment
MTMPSR404C	Foster a learning culture in a meat enterprise	BSBLED401A	Develop teams and individuals
MTMPSR405C	Build productive and effective workplace relationships	BSBMGT402A	Implement operational plan
MTMPSR411A	Lead communication in the workplace	BSBMGT403A	Implement continuous improvement
TAEASS401B	Plan assessment activities and processes	BSBWOR402A	Promote team effectiveness
TAEASS402B	Assess competence		
Elective units from other training packages You may select up to three units from Certificates III or IV from other training packages (at a values of 2 points each) to help make up the total of elective units to the value of thirty points.			
UEENEEJ178A	Apply safety awareness and legal requirements for ammonia refrigerant	MEM10006B	Install machine/plant
UEENEEJ196A	Operate ammonia refrigeration plant	MSS404081A	Undertake proactive maintenance analysis
MEM18090B	Maintain and repair industrial refrigeration systems and components	MEM18095A	Maintain and repair cooling towers/evaporative condensers and associated equipment
MEM18096A	Maintain, repair/replace and adjust refrigerant flow controls and associated equipment	MEM18016B	Analyse plant and equipment condition monitoring results
UEENEEJ111A	Diagnose and rectify faults in air conditioning and refrigeration systems and components	MSS404082A	Assist in implementing a proactive maintenance strategy
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	PMAOPS402A	Respond to abnormal process situations
UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	PMAOPS411B	Manage plant shutdown and restart
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	PMASUP441C	Decommission plant

UEENEEJ109A	Verify functionality & compliance of refrigeration & air conditioning installations	PMBTECH301B	Use material and process knowledge to solve problems
UEENEEJ113A	Commission air conditioning and refrigeration systems	UEENEEC003B	Provide quotations for installation or service jobs
UEENEEE105A	Fix and secure electro-technology equipment	UEENEEC005B	Estimate electrotechnology projects
UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	UEENEEC002B	Source and purchase material/parts for installation or service jobs
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	UEENEEJ170A	Diagnose and rectify faults in air conditioning and refrigeration control systems
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	CPCCCM1015A	Carry out measurements and calculations
UEENEEJ110A	Select refrigerant piping, accessories and associated controls	RIICCM203A	Read and interpret plans and specifications
AHCMOM302A	Perform machinery maintenance	UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications
MEM18004B	Maintain and overhaul mechanical equipment	MEM10006B	Install machine/plant
PMBTECH406A	Diagnose production equipment problems	MSS404081A	Undertake proactive maintenance analysis
MSAPMSUP303A	Identify equipment faults	MSS404082A	Assist in implementing a proactive maintenance strategy

3.6 Certificate IV in Meat Processing (General)

3.6.1 Who is this qualification for?

Qualifications at Certificate IV support career progression for maintenance engineering personnel who generally already have a Certificate III qualification in a trade area or in the Meat Industry Training Package. Career progression may include:

- Gaining skills in different areas such as environment, leadership, refrigeration or robotics
- Broadening skills across areas
- Gaining more advanced skills in your area

- Gaining leadership and management skills to support career progression to supervisory and management roles.

3.6.2 What qualifications are available for maintenance personnel at Certificate IV?

Maintenance engineering personnel may undertake Certificate IV qualifications in their own trade areas such as electricians undertaking a Certificate IV in Industrial Electronics and Control or Instrumentation or mechanical fitters undertaking a Certificate IV in Engineering. Alternatively you may seek qualifications in a new area such as environment and enrol in the Certificate IV in Environmental Monitoring and Technology.

Another option is for maintenance engineering personnel to undertake a Certificate IV in Meat Processing (General) with a maintenance engineering major and/or with units from leadership and management and progress to supervisory and management positions. In this case you could undertake a Certificate IV in Meat Processing (Leadership).

3.6.3 What do you need to do to gain a Certificate IV qualification?

The requirements to gain the Certificate IV in Meat Processing in leadership or general are as follows:

- Complete eighteen units of competency in total. This includes completing all ten core units of competency (six of which may have already been completed at Certificate II) and completing eight elective units of competency.
- A maximum of three units can be selected from other Certificate IV or Diploma qualifications in this Training Package, or from another Training Package or accredited course. Units selected must be relevant to meat processing job roles and must not duplicate units already contained within the qualification.

3.6.4 What units can I do to gain the Certificate IV in Meat Processing qualifications?

Suggested options for units for Certificate IV in Meat Processing in technical maintenance engineering areas and/or leadership follow. You should note that you are not confined to selecting from the units that are listed. You may select alternative units to those included in the following options. The following units have been selected because they are examples of competencies required in that respective area by maintenance personnel in meat processing plants. You may select any units so long as you comply with the requirements for the qualification as set out above.

3.7 Certificate IV Meat Processing with maintenance engineering major

Core competencies			
You must complete all ten of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace

MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units e.g. only a maximum of 3 units can be selected from a Diploma or other training package.			
Elective units currently available in the Certificate IV in Meat Processing			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
Elective units from the Diploma in Meat Processing that are currently available in this qualification You may select a maximum of three units from the Diploma in Meat Processing.			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
Elective units from other training packages You may select a maximum of three from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).			
Elective units in maintenance and diagnostics			
MSS404081A	Undertake proactive maintenance analysis	PMBTECH406A	Diagnose production equipment problems
MSS404082A	Assist in implementing a proactive maintenance strategy	MSAPMSUP303A	Identify equipment faults
AHCMOM302A	Perform machinery maintenance	PMAOPS402A	Respond to abnormal process situations

MEM18004B	Maintain and overhaul mechanical equipment	UEENEEC003B	Provide quotations for installation or service jobs
PMBTECH301B	Use material and process knowledge to solve problems	MEM18010C	Perform equipment condition monitoring and recording
MEM18006C	Repair and fit engineering components	MEM18016B	Analyse plant and equipment condition monitoring results
MEM18028B	Maintain (engine) lubrication systems	MEM18017C	Modify mechanical systems and equipment
UEENEEG181A	Provide advice on effective and energy efficient lighting products	MSAENV272B	Participate in environmentally sustainable work practices
BSBINN501A	Establish systems that support innovation	MSS403002A	Ensure process improvements are sustained
AHCCHM304A	Transport, handle and store chemicals		
Elective units in installation and commissioning			
MEM10006B	Install machine/plant	MEM18011C	Shut down and isolate machines/equipment
PMAOPS411B	Manage plant shutdown and restart	PMASUP441C	Decommission plant
Elective units in PLCs			
MEM07015B	Set computer controlled machines/ processes	MEM30027A	Prepare basic programs for programmable logic controllers
MEM07016C	Set and edit computer controlled machines/ processes	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
MEM10004B	Enter and change programmable controller operational parameters	UEENEEI151A	Develop, enter and verify word and analogue control programs for programmable controllers
MEM10005B	Commission programmable controller programs		
Elective units in hydraulics and pneumatics			
MEM30011A	Set up basic pneumatic circuits	MEM30010A	Set up basic hydraulic circuits
MEM18018C	Maintain pneumatic system components	MEM18020B	Maintain hydraulic system components
MEM18019B	Maintain pneumatic systems	MEM18021B	Maintain hydraulic systems
MEM18022B	Maintain fluid power controls	MEM18053B	Modify fluid power control systems
MEM18023B	Modify fluid power system operation		

Elective units in welding			
MEM05043B	Perform welds to code standards using gas metal arc welding process	AURVTW2004	Carry out gas tungsten arc welding procedures
MEM05044B	Perform welds to code standards using gas tungsten arc welding process	UEPOPS433B	Operate and monitor a heat recovery steam generator unit

3.8 Certificate IV Meat Processing (General) with environment major

Core competencies			
<p>You must complete all ten of the following core competencies. (Six of the units will have been completed at Certificate II in Meat Processing)</p>			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units			
<p>All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units e.g. only a maximum of 3 units can be selected from a Diploma or other training package.</p>			
Elective units currently available in the Certificate IV in Meat Processing			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
NWP263A	Operate and maintain wastewater treatment plant and equipment		
Elective units from the Diploma in Meat Processing that are currently available in this qualification			
<p>You may select a maximum of three units from the Diploma in Meat Processing.</p>			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems

MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
<p>Elective units from other training packages You may select a maximum of three units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).</p>			
MSAENV272B	Participate in environmentally sustainable work practices	MSAENV472B	Implement and monitor environmentally sustainable work practices
MSS024002A	Implement environmental management plans and procedures	MSS024003A	Apply an understanding of environmental principles to a site
MSS024004A	Process and present environmental data	MSL952001A	Collect routine site samples
MSL974007A	Undertake environmental field-based monitoring	CPCPDR4012B	Design and size stormwater drainage systems
MSS024006A	Perform sampling and testing of water	CPCPDR4013B	Design and size domestic treatment plant disposal systems
MSS024009A	Assist with assessing and monitoring stormwater systems	MSL954001A	Obtain representative samples in accordance with sampling plan
MSL904001A	Perform standard calibrations	MSS025001A	Assist with assessing site environmental indicators
MSS015010A	Conduct a sustainability water use audit	MSS025002A	Assess the environmental risk or impact of a project activity or process
MSS015011A	Conduct a sustainability energy audit	MSS025006A	Collect and evaluate groundwater data
MSS015012A	Conduct an emissions audit	PUAWER009B	Participate as a member of a workplace emergency initial response team
MSS025008A	Monitor and evaluate noise	SFIEMS401B	Conduct an internal audit of an environmental management plan

MSS025009A	Perform sampling and testing of air	LGAPLEM602A	Assist in developing an environmental management system for an organisation
MSS025010A	Assist with odour source assessment	MSSO27001A	Co-ordinate environmental management activities
MSS025011A	Assist with odour field assessment	LGAPLEM606B	Develop ecologically sustainable land management systems
MSS025008A	Monitor and evaluate noise	BSBINN501A	Establish systems that support innovation
LGAPLEM504A	Develop strategies and approaches to minimise environmental pollution	LGALAND405A	Implement strategies and approaches to minimize environmental pollution
CPPPMT3002A	Assess pest management options	CPPPMT3005A	Modify environment to manage pests
CPPPMT3007A	Implement pest management plans	CPPPMT3018B	Maintain equipment and chemical storage areas
CPPPMT3043A	Prepare and present pest management proposals	CPPPMT3019A	Organise and monitor pest management operations
CPPPMT3029A	Plan and schedule pest management operations	AHCCHM304A	Transport, handle and store chemicals

3.9 Certificate IV Meat Processing (Leadership)

Core competencies

You must complete all ten of the following core competencies. (Six of the units will have been completed at Certificate II in Meat Processing).

MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance

Elective units

All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units e.g. only a maximum of 3 units can be selected from a Diploma of other training package.

Elective units currently available in the Certificate IV in Meat Processing

MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
MTMP407B	Supervise new recruits	BSBINM401A	Implement workplace information system
MTMPSR401C	Coordinate contracts	BSBINN301A	Promote innovation in a team environment
MTMPSR404C	Foster a learning culture in a meat enterprise	BSBLED401A	Develop teams and individuals
MTMPSR405C	Build productive and effective workplace relationships	BSBMGT402A	Implement operational plan
MTMPSR411A	Lead communication in the workplace	BSBMGT403A	Implement continuous improvement
TAEASS401B	Plan assessment activities and processes	BSBWOR402A	Promote team effectiveness
TAEASS402B	Assess competence	SIRXINV005A	Control inventory

Elective units from the Diploma in Meat Processing that are currently available in this qualification

You may select a maximum of three units from the Diploma in Meat Processing.

MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities

Elective units from other training packages

You may select a maximum of three units from other training packages.

BSBINN501A	Establish systems that support innovation	MSS403002A	Ensure process improvements are sustained
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3.10 Diploma of Meat Processing

3.10.1 Who is this qualification for?

Qualifications at Diploma level support career progression for maintenance engineering personnel who generally already have a Certificate III and/or IV qualification. Career progression may include:

- Gaining more advanced skills in technical areas in maintenance engineering or related fields
- Gaining leadership and management skills to support career progression to supervisory and management roles.

3.10.2 What qualifications are available for maintenance personnel at Diploma level?

Maintenance engineers may currently gain a qualification in the Diploma of Meat Processing selecting a combination of advanced technical maintenance units of competency and/or leadership and management units.

Alternatively maintenance engineers may gain a qualification wholly in leadership units of competency.

3.10.3 What do you need to do to gain a Diploma of Meat Processing qualification?

The requirements for the Diploma of Meat Processing qualification are completion of ten units of competency in total comprised of all four core units of competency and six elective units of competency.

Two of the elective units can be selected from a relevant Diploma or Advanced Diploma from this Training Package or any other Training Package or accredited course. Selected units must be relevant to the meat industry and must not duplicate units already contained within the qualification.

3.10.4 What units can I do to gain the Diploma of Meat Processing qualification?

Suggested options for units for the Diploma of Meat Processing for each of the two streams of technical maintenance engineering or leadership follow. You should note that there are additional units to those included in the following options. The following units have been selected because they are examples of competencies required by maintenance personnel in meat processing plants. Additionally you may mix technical and leadership units in your selection of units for the qualification, in compliance with the requirements for the qualification as set out above.

3.11 Diploma of Meat Processing with maintenance engineering major

Core competencies			
<p>You must complete all four core competencies. It should be noted that all four core units have pre-requisite units.</p>			
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR403A	Participate in OH&S risk control process
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units			
<p>All of the following units are elective units. You must select six elective units in total. The six elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units e.g. only a maximum of 2 units can be selected from a Diploma in another training package.</p>			
Elective units currently available in the Diploma of Meat Processing			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
BSBFIM501A	Manage budgets and financial plans	MTMPS5609C	Manage, maintain and continuously improve OH&S plans and systems
Elective units from other training packages			
<p>You may select a maximum of two units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).</p>			
CPCBC5010B	Manage construction work	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
UEENEEC006B	Prepare tender submissions for electrotechnology projects	CPCPCM5010A	Design complex sanitary plumbing and drainage systems

UEENEEC007B	Manage contract variations	CPCPPS5015B	Inspect plumbing and drainage systems
UEENEEE110A	Develop and implement energy sector maintenance programs	PSPPM501B	Design complex projects
CPPBDN5017A	Produce 2-D drawings for building design projects using CAD software	PSPPM503B	Close complex projects
UEENEEJ181A	Design ammonia refrigerated systems	BSBINN501A	Establish systems that support innovation
UEENEEJ165A	Evaluate thermodynamic and fluid parameters of refrigeration systems	BSBINN502A	Build and sustain an innovative work environment
UEENEEJ192A	Analyse the psychometric performance of HVAC/R systems	UEENEEJ133A	Design industrial refrigeration systems and select components
UEENEEE190A	Prepare engineering drawings using manual drafting and CAD for electrotechnology/utilities applications	UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures

3.12 Diploma of Meat Processing with leadership major

Core competencies			
<p>You must complete all four core competencies. It should be noted that all four core units have pre-requisite units.</p>			
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR403A	Participate in OH&S risk control process
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units			
<p>All of the following units are elective units. You must select six elective units in total. The six elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units e.g. only a maximum of 2 units can be selected from a Diploma in another training package.</p>			
Elective units currently available in the Diploma of Meat Processing			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance
MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5609C	Manage, maintain and continuously improve OH&S plans and systems	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
BSBFIM501A	Manage budgets and financial plans		
Elective units from other training packages			
<p>You may select a maximum of two units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).</p>			
BSBLED501A	Develop a workplace learning environment	BSBWOR502B	Ensure team effectiveness
BSBMGT406A	Plan and monitor continuous improvement	BSBDIV501A	Manage diversity in the workplace
BSBMGT502B	Manage people performance	BSBHRM405A	Support the recruitment, selection and induction of staff

BSBHRM512A	Develop and manage performance-management processes	BSBHRM513A	Manage workforce planning
BSBMGT515A	Manage operational plan	PSPPM501B	Design complex projects
BSBMGT516C	Facilitate continuous improvement	PSPPM503B	Close complex projects
BSBR501B	Manage risk	BSBINN501A	Establish systems that support innovation
BSBINN502A	Build and sustain an innovative work environment		

3.13 Advanced Diploma of Meat Processing

3.13.1 Who is this qualification for?

Qualifications at Advanced Diploma level support career progression for maintenance engineering personnel who generally already have a Diploma or Bachelors qualification. Career progression at this level generally focuses on gaining leadership and management skills to support career progression to senior management roles.

3.13.2 What do you need to do to gain an Advanced Diploma of Meat Processing?

The requirements for the Advanced Diploma of Meat Processing qualification are completion of a total of ten units of competency with a minimum of five units selected from Group A and a minimum of three units selected from Group B.

Two of the elective units can be selected from a relevant Advanced Diploma from this Training Package or any other Training Package or accredited course. Selected units must be relevant to meat industry and must not duplicate units already contained within the qualification.

You should note that there are additional units to those included in the following options. The following units have been selected because they are examples of competencies required by maintenance personnel in meat processing plants. Additionally you may mix technical and leadership units in your selection of units for the qualification to comply with the requirements for the qualification as set out above.

3.14 Advanced Diploma of Meat Processing

Group A units			
A minimum of five units must be selected from Group A units			
Group A units currently available in the Advanced Diploma of Meat Processing			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	BSBMGT605B	Provide leadership across the organisation
MTMPS5607C	Manage and improve meat industry plant operations	BSBMGT617A	Develop and implement a business plan
MTMPSR5604C	Manage new product/process development	SIRXMGT005A	Set strategic plans

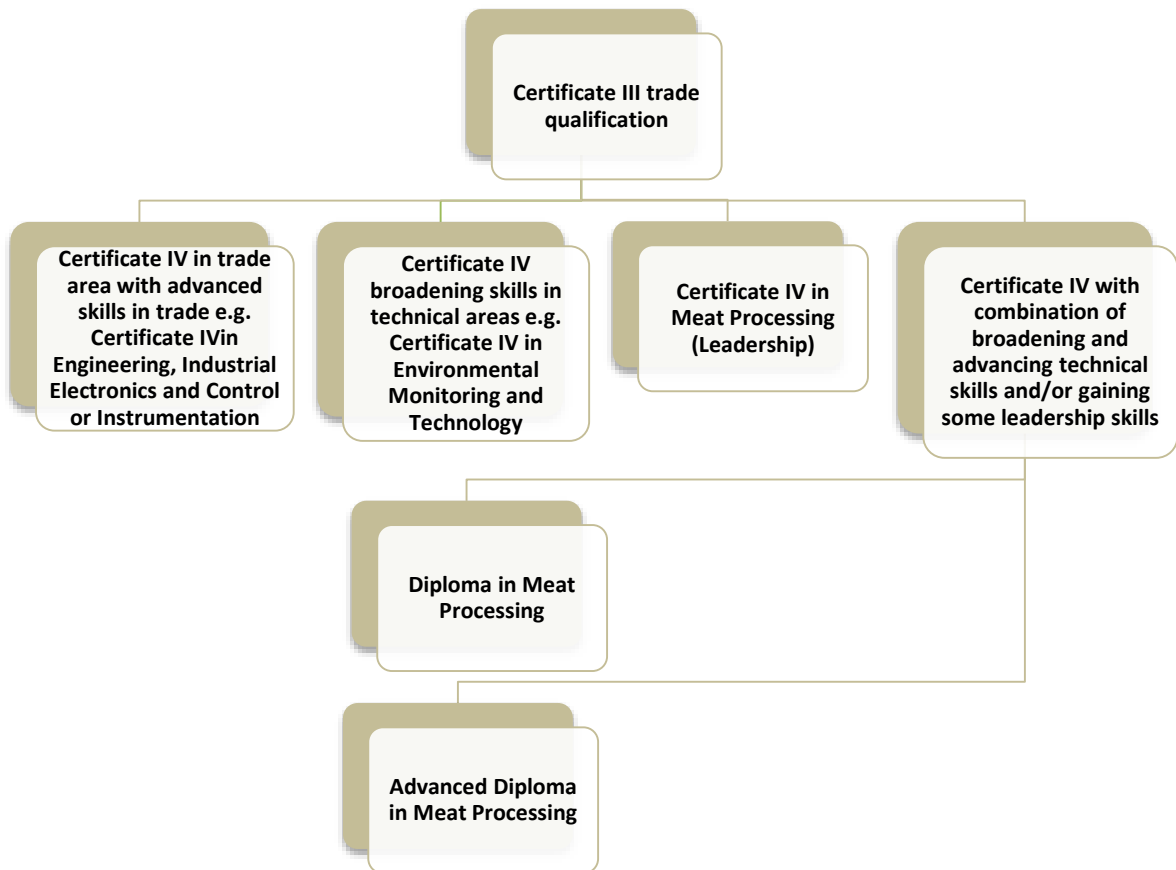
MTMPS5608C	Manage environmental impacts of meat processing operations	MSL916005A	Manage complex projects
BSBFIM501A	Manage budgets and financial plans	MTMPS5609C	Manage, maintain and continuously improve OH&S plans and systems
		SIRXMGT006A	Initiate and implement change
Group B units currently available in the Advanced Diploma of Meat Processing A minimum of three units must be selected from Group B units			
MTMPSR601A	Benchmark to manage/improve enterprise performance	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
MTMPSR602A	Monitor and manage organisational legal responsibilities	BSBDIV501A	Manage diversity in the workplace
MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems	BSBFIM601A	Manage finances
Elective units from other training packages You may select a maximum of two units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).			
UEENEEE190A	Prepare engineering drawings using manual drafting and CAD for electrotechnology/utilities applications	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
UEENEEC006B	Prepare tender submissions for electrotechnology projects	CPCPCM5010A	Design complex sanitary plumbing and drainage systems
UEENEEC007B	Manage contract variations	CPCPPS5015B	Inspect plumbing and drainage systems
UEENEEE110A	Develop and implement energy sector maintenance programs	PSPPM501B	Design complex projects
CPPBDN5017A	Produce 2D drawings for building design projects using CAD software	PSPPM503B	Close complex projects
CPCBC5010B	Manage construction work	BSBINN501A	Establish systems that support innovation
BSBLED501A	Develop a workplace learning environment	BSBINN502A	Build and sustain an innovative work environment
BSBMGT406A	Plan and monitor continuous improvement	BSBWOR502B	Ensure team effectiveness

BSBMGT502B	Manage people performance	BSBHRM513A	Manage workforce planning
BSBHRM512A	Develop and manage performance-management processes	BSBHRM405A	Support the recruitment, selection and induction of staff
BSBMGT515A	Manage operational plan	BSBMGT516C	Facilitate continuous improvement
BSBR501B	Manage risk		

4.0 Section 2: Training options for trades qualified maintenance engineering staff

4.1 Overview of training pathway for trades qualified maintenance engineering personnel

The following training pathway and training options are currently available for maintenance engineering staff or personnel seeking to gain trades qualifications or already holding trades qualifications and continuing their professional development in the meat processing industry.



4.2 Certificate III Trades qualification

4.2.1 Who are trades qualifications for?

The meat processing industry employs a range of tradespersons. These trades include:

- Mechanical fitters
- Electricians
- Plumbers
- Boilermakers.

The main trades in the industry are mechanical fitters and electricians.

The industry may recruit personnel to undertake a trade such as mechanical fitter or electrician. These personnel may commence the trade whilst completing years 11 and 12 in school and then continue their apprenticeship whilst fully employed at a meat processing plant or they may complete the whole apprenticeship as an employee of a plant.

The industry also employs fully qualified and experienced trade personnel.

4.3 Progression to Certificate IV for trades qualified personnel

4.3.1 Who is this qualification for?

Qualifications at Certificate IV support career progression for maintenance engineering personnel who generally already have a Certificate III qualification in a trade area or in the Meat Industry Training Package. Career progression may include:

- Gaining skills in different areas such as environment, leadership, refrigeration or robotics
- Broadening skills across areas
- Gaining more advanced skills in your area
- Gaining leadership and management skills to support career progression to supervisory and management roles.

4.3.2 What qualifications are available for maintenance personnel at Certificate IV?

Maintenance engineering personnel may undertake Certificate IV qualifications in their own trade areas such as electricians undertaking a Certificate IV in Industrial Electronics and Control or Instrumentation or mechanical fitters undertaking a Certificate IV in Engineering. They may seek qualifications in a new area such as environment and enrol in the Certificate IV in Environmental Monitoring and Technology.

Alternatively maintenance engineering personnel may undertake Certificate IV in Meat Processing (General) or progress to a Certificate IV in any area related to their work, e.g. in project management.

Another option for maintenance engineering personnel is to gain competencies in leadership and management and progress to supervisory and management positions. In this case they could undertake a Certificate IV in Meat processing (Leadership).

4.3.3 What do you need to do to gain a Certificate IV qualification?

The requirements for Certificate IV qualifications are generally specific for the qualifications in each training package. This means that if you are seeking Certificate IV qualifications in engineering or electrical trades or manufacturing you need to meet the specific requirements for

that qualification. The training manager or registered training organisation in your plant can help you with this.

The requirements for progression to Certificate IV in Meat Processing in leadership or general are set out earlier in this guide.

4.4 Progression to Diploma and Advanced Diploma for trades qualified personnel

Trades qualified personnel may progress their training and development by undertaking a Certificate IV in Meat Processing or any Certificate IV relevant to their work as outlined above. They may then continue their development to Diploma and Advanced Diploma levels. One option for achieving this is by progression to the Diploma and Advanced Diploma in Meat Processing.

Qualifications at Diploma and Advanced Diploma levels support career progression for maintenance engineering personnel to:

- Gain more advanced skills in technical areas in maintenance engineering or related fields
- Gain leadership and management skills to support career progression to supervisory and management roles.

Options for maintenance staff at Diploma and Advanced Diploma in Meat Processing are included earlier in this guide.

5.0 Section 3: Proposed future training pathways options for maintenance engineering staff in the Australian Meat Industry Training Package

5.1 Overview of proposed future training pathway for maintenance engineering personnel

The following training pathway and training options is a proposed future training pathway for maintenance engineering staff in the meat processing industry. This pathway is an alternative and additional pathway to the trades pathway for skilling and upskilling maintenance engineering personnel. This proposed pathway is a certificate pathway. It is not a trades pathway. Plants will have trade qualified personnel in addition to certificate qualified maintenance personnel. They may also have maintenance personnel with certificate qualifications in the Meat Industry Training Package.

This proposed new pathway is needed to ensure formal training and a training pathway is available to train and provide qualifications and professional development for maintenance staff in every area that they work in maintenance departments in meat processing plants. Essentially meat processing plants have a broad range of maintenance tasks across all trades but they may not have enough tasks in some disciplines such as carpentry or plumbing or building to employ a fulltime or even part time employee in some areas. In addition they may not be able to attract the tradespersons they need to work in the plant. The new proposed training pathway is designed to provide total flexibility to enable personnel to undertake formal training and skills development that provides credits towards qualifications across all areas in maintenance departments to meet the maintenance needs of plants. These personnel may work as trades assistants and undertake semi-skilled tasks to support the tradespersons and free the tradespersons to undertake the more highly skilled trades specific tasks such as electrical work.

The pathway also provides options for training for career development for trades assistants through to supervisory and leadership roles as well as development options in technical maintenance areas such as project management and ammonia refrigeration.

It is also critical for maintenance engineering staff to have core meat industry specific skills in the same way as every other production employee in meat processing plants and also have the elective units customised to meet the needs of meat processing plants.

Additionally the pathway enables the industry to meet and respond to changing needs in the industry, e.g. to include skills development in ammonia refrigeration or mechatronics.

The structure of the proposed training pathway at each qualification level would be composed of:

- Core units in meat processing including QA, WHS, hygiene and sanitation
- Core maintenance engineering units
- Elective units that can be picked up from any training package to meet the maintenance engineering needs of meat processing plants.

The new proposed pathway provides entry level training and continuing professional development options in maintenance engineering in meat processing plants, in addition to the trades pathway. The pathway provides total flexibility for the selection of areas for skills

development to meet plant maintenance and individuals skills development needs to meet current and future industry needs.



5.2 Certificate II in Meat Processing (Abattoirs)

5.2.1 Who is this qualification for?

This is an entry level qualification for personnel working in meat processing plants or preparing to work in maintenance engineering in meat processing plants. This qualification may be gained by:

- Labourers or trades assistants already working in maintenance
- Workers from production areas seeking to join the maintenance team
- School students undertaking a vocational education and training program as part of their requirements for years 11 and 12.

5.2.2 What would you need to do to gain the qualification?

It is proposed that this qualification would be made up of:

- Core units in meat processing including QA, WHS, hygiene and sanitation
- Core maintenance engineering units
- Elective units at Certificate II level that can be picked up from any training package to meet the maintenance engineering needs of meat processing plants.

5.3 Sample of proposed structure for Certificate II in Meat Processing (Abattoirs) with maintenance engineering major

Core competencies			
Complete all six of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies & procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
	Recognise and report faults in tools and equipment		Follow risk management procedures
Elective units			
Select a minimum of ten elective units of competency. Examples of units follow.			
MTMP2042C	Operate new technology or process	MTMPS201C	Clean work area during operations
MTMP206C	Use selected hand tools	MTMPSR202B	Apply environmentally sustainable work practices
MTMPS206C	Operate forklift in a specific workplace	HLTFA301C	Apply first aid
Elective units in computing and measurement			
BSBITU101A	Operate a personal computer	MEM12024A	Perform computations
BSBITU202A	Create and use spread sheets	MEM16008A	Interact with computing technology

UEENEED101A	Use computer applications relevant to a workplace	MEM12023A	Perform engineering measurements
Elective units in drawing, drafting and design			
VU20910	Produce basic engineering sketches and drawings	RIICCM203A	Read and interpret plans and specifications
MEM09002B	Interpret technical drawing	MSAPMSUP210A	Process and record information
Elective units in maintenance and diagnostics			
MSAPMSUP240A	Undertake minor maintenance	MEM07001B	Perform operational maintenance of machines/equipment
MEM07029B	Perform routine sharpening/maintenance of production tools and cutters	AUMATK3003	Monitor & maintain equipment, tools & machinery
MSAPMSUP100A	Apply workplace procedures	MSAPMSUP101A	Clean workplace or equipment
MSAPMSUP303A	Identify equipment faults	MEM18011C	Shut down and isolate machines/equipment
UEENEED002B	Source and purchase material/parts for installation or service jobs		
Elective units in machine and process operation			
MEM16007A	Work with others in manufacturing, engineering or related environment	MSASS00005	License to operate a standard boiler
MEM07024B	Operate and monitor machine/process	MEM18002B	Use power tools/hand held operations
MEM03001B	Perform manual production assembly	MEM18001C	Use hand tools
MEM18003C	Use tools for precision work	MEM07028B	Operate computer controlled machines/processes
MEM07016C	Set and edit computer controlled machines/processes		
Elective units in fabrication			
MEM05026C	Apply welding principles	AURVTW2005	Carry out spot welding procedures
VU20528	Perform basic oxy-acetylene welding and cutting	VU20911	Handle engineering materials
MEM05001B	Perform manual soldering/desoldering - electrical/electronic components	CPCCCA3013A	Install lining, panelling and moulding

PCCC02013A	Carry out concreting to simple forms	CPCPCM2048A	Cut and join sheet metal
Elective units in materials handling			
PMBHAN103C	Shift materials safely by hand	TLILIC2001A	License to operate a forklift truck
MEM11010B	Operate mobile load shifting equipment	RIIMPO318B	Conduct civil construction skid steer loader operations
TLILIC2014B	License to Drive Light Rigid Vehicle	TLILIC2016B	License to Drive Heavy Rigid Vehicle
TLILIC2015B	License to Drive Medium Rigid Vehicle	TLILIC3018B	License to drive a multi combination vehicle
TLILIC3017B	License to Drive Heavy Combination Vehicle		
Elective units in work health and safety			
HLTCPR211A	Perform CPR	MSAPMPER205C	Enter confined space
RIIOHS204A	Work safely at heights	TLID307E	Handle dangerous goods/hazardous substances
		AHCCHM101A	Follow basic chemical safety rules
Elective units in other areas conducted by maintenance			
FPICOT2238A	Cut materials with hand held chain saw	PSPPM402B	Manage simple projects
FPICOT2237A	Maintain chainsaws		

5.4 Certificate III in Meat Processing (Maintenance Engineering)

5.4.1 Who is this qualification for?

Recognition and rewards for work well done and continuing development are top motivators for staff. It is important to have a formal reward program in place that includes financial and non-financial benefits and is fair, timely and specific. The recognition and reward program needs to include:

- A workplace culture that values and respects employees, supports, mentors and develops them
- Regular, set salary increases linked with set criteria and learning and development (set in awards)
- A workplace culture of continuing learning and professional development
- Career development and career progression
- Annual salary aligned with increases in cost of living and market rates
- Incentives and bonuses
- Employee benefits
- Flexible rosters and working hours
- Initiatives that encourage work-life balance

- Salary increments linked with skills development and career progression, and performance management that incorporates a training plan and regular review to ensure training plan and skills development is achieved and career development and salary progression is attained
- Training pathway reflecting career path from entry level through to trade and post trade skills defining options for progression to more complex technical skills and/or gaining skills across trades and/or progression to leadership and management
- Building a positive industry culture.

5.4.2 What would you need to do to gain the qualification?

It is proposed that this qualification would be made up of:

- Core units in meat processing including QA, WHS, hygiene and sanitation
- Core maintenance engineering units
- Elective units at Certificate III level that can be picked up from any training package to meet the maintenance engineering needs of meat processing plants.

5.5 Sample of proposed structure for Certificate III in Meat Processing (Maintenance Engineering)

Complete all core competencies			
Core meat industry and maintenance engineering competencies at Certificate III level.			
Elective units			
Complete 10 elective units that may be selected from any training package at Certificate III. Examples of units that may be selected follow.			
BSBFLM312C	Contribute to team effectiveness (3)	MSL922001A	Read and present data (2)
MSL904001A	Perform standard calibrations (2)	MSL952002A	Handle and transport samples or equipment (3)
MSL954001A	Obtain representative samples in accordance with sampling plan (3)	MSL973001A	Perform basic tests (3)
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
NWP263A	Operate and maintain wastewater treatment plant and equipment	SIRXINV005A	Control inventory
MTMP407B	Supervise new recruits	BSBINM401A	Implement workplace information system

MTMPSR401C	Coordinate contracts	BSBINN301A	Promote innovation in a team environment
MTMPSR404C	Foster a learning culture in a meat enterprise	BSBLED401A	Develop teams and individuals
MTMPSR405C	Build productive and effective workplace relationships	BSBMGT402A	Implement operational plan
MTMPSR411A	Lead communication in the workplace	BSBMGT403A	Implement continuous improvement
TAEASS401B	Plan assessment activities and processes	BSBWOR402A	Promote team effectiveness
TAEASS402B	Assess competence		
UEENEEJ178A	Apply safety awareness and legal requirements for ammonia refrigerant	MEM10006B	Install machine/plant
UEENEEJ196A	Operate ammonia refrigeration plant	MSS404081A	Undertake proactive maintenance analysis
MEM18090B	Maintain and repair industrial refrigeration systems and components	MEM18095A	Maintain and repair cooling towers/evaporative condensers and associated equipment
MEM18096A	Maintain, repair/replace and adjust refrigerant flow controls and associated equipment	MEM18016B	Analyse plant and equipment condition monitoring results
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	PMAOPS402A	Respond to abnormal process situations
UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	PMAOPS411B	Manage plant shutdown and restart
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	PMASUP441C	Decommission plant
UEENEEJ110A	Select refrigerant piping, accessories and associated controls	PMBTECH301B	Use material and process knowledge to solve problems
PMBTECH406A	Diagnose production equipment problems	UEENEEC003B	Provide quotations for installation or service jobs

UEENEEC002B	Source and purchase material/parts for installation or service jobs	CPCCCM1015A	Carry out measurements and calculations
MSS404082A	Assist in implementing a proactive maintenance strategy	RIICCM203A	Read and interpret plans and specifications
AHCMOM302A	Perform machinery maintenance	UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications
MEM18004B	Maintain and overhaul mechanical equipment	MEM10006B	Install machine/plant
MSAPMSUP303 A	Identify equipment faults		

5.6 Certificate IV in Meat Processing (Maintenance Engineering)

5.6.1 What would you need to do to gain the qualification?

It is proposed that this qualification would be made up of:

- Core units in meat processing including QA, WHS, hygiene and sanitation
- Core maintenance engineering units
- Elective units at Certificate IV level that can be picked up from any training package to meet the maintenance engineering needs of meat processing plants.

5.7 Certificate IV Meat Processing (Maintenance Engineering)

Core competencies Complete all core competencies.			
Core meat industry and maintenance engineering competencies at Certificate III level.			
Elective units Complete 10 elective units that may be selected from any training package at Certificate IV. Examples of units that may be selected follow.			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance

MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
MSS404081A	Undertake proactive maintenance analysis	PMBTECH406A	Diagnose production equipment problems
MSS404082A	Assist in implementing a proactive maintenance strategy	MSAPMSUP303A	Identify equipment faults
AHCMOM302A	Perform machinery maintenance	PMAOPS402A	Respond to abnormal process situations
MEM18004B	Maintain and overhaul mechanical equipment	UEENEEC003B	Provide quotations for installation or service jobs
PMBTECH301B	Use material and process knowledge to solve problems	MEM18010C	Perform equipment condition monitoring and recording
MEM18006C	Repair and fit engineering components	MEM18016B	Analyse plant and equipment condition monitoring results
MEM18028B	Maintain (engine) lubrication systems	MEM18017C	Modify mechanical systems and equipment
UEENEEG181A	Provide advice on effective and energy efficient lighting products	MSAENV272B	Participate in environmentally sustainable work practices
BSBINN501A	Establish systems that support innovation	MSS403002A	Ensure process improvements are sustained
AHCCHM304A	Transport, handle and store chemicals		
Elective units in installation and commissioning			
MEM10006B	Install machine/plant	MEM18011C	Shut down and isolate machines/equipment
PMAOPS411B	Manage plant shutdown and restart	PMASUP441C	Decommission plant
Elective units in electrotechnology			
UEENEEH147A	Assess electronic apparatus compliance	MEM18054B	Fault find, test and calibrate instrumentation systems and equipment
MEM18062B	Install, maintain and calibrate instrumentation sensors, transmitters and final control elements	MEM18061B	Maintain/calibrate complex control systems

MEM18066B	Diagnose and repair microprocessor-based equipment	MEM18069B	Maintain, repair instrumentation process control analysers
UEENEEC005B	Estimate electrotechnology projects		
Elective units in PLCs			
MEM07015B	Set computer controlled machines/ processes	MEM30027A	Prepare basic programs for programmable logic controllers
MEM07016C	Set and edit computer controlled machines/ processes	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
MEM10004B	Enter and change programmable controller operational parameters	UEENEEI151A	Develop, enter and verify word and analogue control programs for programmable controllers
MEM10005B	Commission programmable controller programs		
New electives required in automation			
	Diagnose faults, maintain and service an industrial robot safely in a production environment		Program an industrial robot in a production environment
Elective units in hydraulics and pneumatics			
MEM30011A	Set up basic pneumatic circuits	MEM30010A	Set up basic hydraulic circuits
MEM18018C	Maintain pneumatic system components	MEM18020B	Maintain hydraulic system components
MEM18019B	Maintain pneumatic systems	MEM18021B	Maintain hydraulic systems
MEM18022B	Maintain fluid power controls	MEM18053B	Modify fluid power control systems
MEM18023B	Modify fluid power system operation		
Elective units in welding			
MEM05043B	Perform welds to code standards using gas metal arc welding process	AURVTW2004	Carry out gas tungsten arc welding procedures
MEM05044B	Perform welds to code standards using gas tungsten arc welding process	UEPOPS433B	Operate and monitor a heat recovery steam generator unit

5.8 Certificate IV Meat Processing (Maintenance Engineering) with refrigeration major

It should be noted that many of the units from other Training Packages in this proposed stream would need to be customised to meet the meat processing industry requirements as some units require skills in air conditioning in addition to ammonia refrigeration. The meat processing industry's focus is on ammonia refrigeration only.

Core competencies			
You must complete all ten of the following core competencies.			
MTMCOR201A	Maintain personal equipment	MTMCOR204A	Follow safe work policies and procedures
MTMCOR202A	Apply hygiene and sanitation practices	MTMCOR403A	Participate in OH&S risk control process
MTMCOR404A	Facilitate hygiene and sanitation performance	MTMCOR205A	Communicate in the workplace
MTMCOR203A	Apply Quality Assurance practices	MTMCOR206A	Overview the meat industry
MTMCOR402C	Facilitate Quality Assurance process	MTMCOR401C	Manage own work performance
Elective units			
All of the following units are elective units. You must select eight elective units in total. The eight elective units may be selected from any of the following elective units provided they meet the requirements of that specific category of elective units e.g. only a maximum of 3 units can be selected from a Diploma or other training package.			
Elective units currently available in the Certificate IV in Meat Processing			
MTMPSR415A	Develop and implement work instructions and SOPs	BSBRKG404A	Monitor and maintain records in an online environment
Elective units from the Diploma in Meat Processing that are currently available in this qualification			
You may select a maximum of three units from the Diploma in Meat Processing.			
MTMPS5604C	Manage maintenance systems	MSL916005A	Manage complex projects
MTMPSR5604C	Manage utilities and energy	MTMPSR604A	Manage effective operation of meat enterprise cold chain and refrigeration systems
MTMPS5607C	Manage and improve meat industry plant operations	MTMPSR601A	Benchmark to manage/improve enterprise performance

MTMPSR5604C	Manage new product/process development	MTMPSR602A	Monitor and manage organisational legal responsibilities
MTMPS5608C	Manage environmental impacts of meat processing operations	MTMPSR607A	Analyse and develop enterprise systems for new opportunities
Elective units from other training packages You may select a maximum of three units from other training packages. (It is proposed to include these units in this qualification in the future enabling you to select any of them in your qualification).			
UEENEEJ178A	Apply safety awareness and legal requirements for ammonia refrigerant	MEM10006B	Install machine/plant
UEENEEJ196A	Operate ammonia refrigeration plant	MSS404081A	Undertake proactive maintenance analysis
MEM18090B	Maintain and repair industrial refrigeration systems and components	MEM18095A	Maintain and repair cooling towers/evaporative condensers and associated equipment
MEM18096A	Maintain, repair/replace and adjust refrigerant flow controls and associated equipment	MEM18016B	Analyse plant and equipment condition monitoring results
UEENEEJ111A	Diagnose and rectify faults in air conditioning and refrigeration systems and components	MSS404082A	Assist in implementing a proactive maintenance strategy
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	PMAOPS402A	Respond to abnormal process situations
UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	PMAOPS411B	Manage plant shutdown and restart
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	PMASUP441C	Decommission plant
UEENEEJ109A	Verify functionality & compliance of refrigeration & air conditioning installations	PMBTECH301B	Use material and process knowledge to solve problems
UEENEEJ113A	Commission air conditioning and refrigeration systems	UEENEEC003B	Provide quotations for installation or service jobs
UEENEEJ105A	Fix and secure electro-technology equipment	UEENEEC005B	Estimate electrotechnology projects

UEENEEJ106A	Install refrigerant pipe work, flow controls and accessories	UEENEEC002B	Source and purchase material/parts for installation or service jobs
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	UEENEEJ170A	Diagnose and rectify faults in air conditioning and refrigeration control systems
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test refrigerants	CPCCCM1015A	Carry out measurements and calculations
UEENEEJ110A	Select refrigerant piping, accessories and associated controls	RIICCM203A	Read and interpret plans and specifications
AHCMOM302A	Perform machinery maintenance	UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications
MEM18004B	Maintain and overhaul mechanical equipment	MEM10006B	Install machine/plant
PMBTECH406A	Diagnose production equipment problems	MSS404081A	Undertake proactive maintenance analysis
MSAPMSUP303A	Identify equipment faults	MSS404082A	Assist in implementing a proactive maintenance strategy
MEM18011C	Shut down and isolate machines/equipment	PMAOPS402A	Respond to abnormal process situations
BSBINN501A	Establish systems that support innovation	PSPPM402B	Manage simple projects
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	MEM18092B	Maintain and repair commercial and/or industrial refrigeration and/or air conditioning controls
UEENEEC002B	Source and purchase material/parts for installation or service jobs	UEENEED101A	Use computer applications relevant to a workplace
UEENEEE009B	Comply with scheduled and preventative maintenance program processes	UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers
UEENEEJ120A	Resolve problems in industrial refrigeration systems	UEENEEJ179A	Repair and service ammonia refrigeration systems
UEENEEJ168A	Maintain microbial control of refrigeration and air conditioning systems	UEENEEJ180A	Install and commission ammonia refrigeration systems, components and associated equipment



MEM13007B	Maintain water treatment systems for cooling towers	MEM18013B	Perform gland packing
		UEENEEC001B	Maintain documentation