Australian Government

MSL30109 Certificate III in Laboratory Skills

Release 3

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

MSL30109 Certificate III in Laboratory Skills

Modification History

Release 3 - ISC upgrade

- Minor formatting changes
- Prerequisites now marked with an asterisk
- Imported unit updated to current version - equivalent

Release 2 - ISC upgrade

- Prerequisite listed for HLTPAT419A removed – unit has no prerequisite
- HLTPAT units updated to current versions - equivalent
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Description

This qualification covers the skills and knowledge required to perform a limited range of laboratory operations across all industry sectors.

Job roles/employment outcomes
The Certificate III in Laboratory Skills offers entry level technical training in laboratory skills across a range of industries. Employment outcomes targeted by this qualification include laboratory technicians, instrument operators and similar personnel.
Laboratory technicians perform straightforward laboratory work. They follow set procedures and recipes, and apply well developed technical skills and basic scientific knowledge. They generally work inside a laboratory but may also perform technical tasks in the field or within production plants. They may also perform a range of laboratory maintenance and office tasks.

The majority of their work involves a predictable flow of parallel or similar tasks within one scientific discipline. They:

- perform straightforward technical tasks to prepare and test samples using relevant procedures, Australian standards and readily available advice. These tasks generally require close attention to detail and to the accuracy and precision of measurements. They may require the use of manual or semi-automated techniques
- operate test equipment and instruments and make limited adjustments to their controls
- process and record data and recognise trends and out of control conditions
- solve predictable problems using clear information or known solutions. Where alternatives exist, they are limited and apparent
- work under close and regular supervision, although they may have autonomy for specific tasks and responsibility for their own outputs
- take decisions within defined limits of responsibility
- work as part of a team.

Examples of the work of laboratory technician are given below.

- A laboratory technician working at a dairy factory may gather samples from the milk tankers, vats and the processing line, and perform routine chemical and bacteriological tests on the samples.
- A laboratory technician in a pathology laboratory may receive and prepares tissue samples.
- A school laboratory technician may set up for classes, prepare chemicals and instruments for students to undertake practical work.

Application

This qualification is typically used to prepare new employees or develop the skills of existing workers performing a laboratory technician or instrument operator role across all industry sectors.

MSL30109 Certificate III in Laboratory Skills is designed to maximise the portability of this qualification, which is the entry level required for laboratory personnel across all industry sectors.

Training programs for this qualification are suitable to be undertaken as part of a formal training contract with an employer under an Australian Traineeship or Apprenticeship arrangement.

Additional qualification advice

Because specialisation is a requirement in some industry sectors for the Certificate III in Laboratory Skills, Registered Training Organisations (RTOs) may choose to issue a generic:

- Certificate III in Laboratory Skills

or, where elective units of competency are packaged to suit a particular industry sector or specialisation, RTOs might issue a:

- Certificate III in Laboratory Skills

  (specialising in xxxxxxx)

Industry sector/specialisations could include, but are not limited to:

- construction materials testing
- environmental monitoring
- food testing
- pathology testing
- mineral assay
- scientific glassblowing
- wine testing.

It should be noted that a qualification with a specialisation does not change the title of the qualification, although RTOs may choose to record the specialisation. The AQTF requirements must be complied with and the qualification or Statement of Attainment should clearly specify the units of competency achieved and where appropriate, the specialisation.

Pathways Information

Pathways into the qualification

This qualification may be accessed by direct entry. Credit for this qualification may include units contained within relevant skill sets.

Pathways from the qualification
Further training pathways from this qualification include MSL40109 Certificate IV in Laboratory Techniques or MSA40108 Certificate IV in Manufacturing Technology (Laboratory Operations Stream).

Licensing/Regulatory Information

There are no specific licences that relate to this qualification. However depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	**Industry/enterprise requirements for this qualification include**:
Communication	• Receive and pass on written and oral messages, provide relevant information in response to requests and demonstrate effective interpersonal skills including conflict resolution techniques • Record and store data, perform basic calculations of scientific quantities and present information in tables and graphs • Report using verbal responses, data entry into laboratory information management system (LIMS) or enterprise databases and brief written reports using enterprise proformas • Communicate with team members, supervisors and customers
Teamwork	• Work effectively with team members who may have diverse work styles, cultures and perspectives when reporting problems, hazards and incidents and results or contributing to productivity improvements • Promote cooperation and good relations in the team
Problem solving	• Deal with inquiries in accordance with enterprise customer service requirements • Rectify errors in data using enterprise procedures • Resolve simple customer requirements, such as mismatched request forms and specimens
Initiative and enterprise	• Access and provide relevant information that meets own authorisation and confidentiality requirements • Recognise potential incidents and take appropriate corrective action • Identify and report opportunities for improvements in procedures, processes and equipment • Identify hazards associated with samples, preparation methods, reagents and equipment and implement enterprise control measures
Planning and organising	• Plan and organise daily work activities to ensure the timely completion of tasks • Modify work plans to suit changing conditions and priorities • Assemble and organise specified laboratory equipment and materials
Self-management	• Follow enterprise procedures which reflect equal opportunity, anti-discrimination and non-harassment legislative requirements • Maintain enterprise standards of personal hygiene • Conduct work based on ethical values and principles

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	• Review own strengths, weaknesses and work practices for opportunities to continuously improve performance • Maintain confidentiality of all client/enterprise data and information • Use appropriate protective equipment to ensure personal safety when sampling, processing, transferring or disposing of samples
Learning	• Clarify instructions with supervisors to ensure a complete understanding of the task • Update knowledge and skills and take advantage of skill development opportunities
Technology	• Use communication, emergency, data recording and laboratory equipment. Laboratory equipment includes items such as microscopes, weigh balances, LIMS and centrifuges • Use computers and software to collect and report information

Packaging Rules

To be awarded a Certificate III in Laboratory Skills, competency must be achieved in a total of **thirteen** (**13**) units of competency, consisting of:

- **six** (**6**) core units
- **seven** (**7**) elective units from Groups A and B, chosen as specified below.

Units listed under **core** are considered essential for all laboratory assistants. The units of competency listed as **electives** may only apply to some personnel according to the size and scope of the particular enterprise and laboratory.

Note: Units marked with an asterisk have one or more prerequisite requirements and must be included in the total number of units chosen. Please refer to individual units for details.

Core units of competency

Select **all six** (**6**) units of competency from this list.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSL913001A	Communicate with other people	

Unit code	Unit title	Prerequisites
MSL913002A	Plan and conduct laboratory/field work	
MSL922001A	Record and present data	
MSL933002A	Contribute to the achievement of quality objectives	
MSL943002A	Participate in laboratory/field workplace safety	

Elective units of competency
Select **seven** (**7**) elective units from Groups A and B, as specified below:

- a minimum of **four** (**4**) units must be chosen from Group A.
- the remainder may be chosen from Groups A and B, to bring the total number of electives to **seven** (**7**).

Note that **two** (**2**) of the electives units may be chosen from this Training Package, other endorsed Training Packages and accredited courses, where those units are available at Certificate III.

Group A

Unit code	Unit title	Prerequisites
MSL933001A	Maintain the laboratory/field workplace fit for purpose	
MSL933003A	Apply critical control point requirements	
MSL933004A	Perform calibration checks on equipment and assist with its maintenance	
MSL943001A	Work safely with instruments that emit ionising radiation	
MSL953001A	Receive and prepare samples for testing	
MSL953002A	Operate a robotic sample preparation system	
MSL963001A	Operate basic handblowing equipment	
MSL963002A	Repair glass apparatus using simple glassblowing equipment	*

Unit code	Unit title	Prerequisites
MSL973001A	Perform basic tests	
MSL973002A	Prepare working solutions	
MSL973003A	Prepare culture media	
MSL973004A	Perform aseptic techniques	
MSL973005A	Assist with fieldwork	
MSL973006A	Prepare trial batches for evaluation	
MSL973007A	Perform microscopic examination	
MSL973008A	Perform histological procedures	
MSL973009A	Conduct field-based acceptance tests for construction materials	
MSL973010A	Conduct laboratory-based acceptance tests for construction materials	
MSL973011A	Perform fire pouring techniques	
MSL973012A	Assist with geotechnical site investigations	
HLTPAT317C	Operate effectively within a pathology testing environment	
TAEDEL301A	Provide work skill instruction	

Group B

Unit code	Unit title	Prerequisites
MSL912001A	Work within a laboratory/field workplace (induction)	
MSL952001A	Collect routine site samples	
MSL952002A	Handle and transport samples or equipment	
MSL972001A	Conduct routine site measurements	

Unit code	Unit title	Prerequisites
MSL904001A	Perform standard calibrations	
MSL914001A	Prepare practical science classes and demonstrations	
MSL924001A	Process and interpret data	
MSL924002A	Use laboratory application software	
MSL934001A	Contribute to the ongoing development of HACCP plans	
MSL934002A	Apply quality system and continuous improvement processes	
MSL934003A	Maintain and control stocks	
MSL944001A	Maintain laboratory/field workplace safety	
MSL954001A	Obtain representative samples in accordance with sampling plan	
MSL954002A	Prepare mineral samples for analysis	
MSL974001A	Prepare, standardise and use solutions	
MSL974002A	Conduct geotechnical site investigations	*
MSL974003A	Perform chemical tests and procedures	
MSL974004A	Perform food tests	
MSL974005A	Perform physical tests	
MSL974006A	Perform biological procedures	*
MSL974007A	Undertake environmental field-based monitoring	
MSL974008A	Capture and manage scientific images	
MSL974009A	Undertake field-based, remote-sensing monitoring	
MSL974010A	Perform mechanical tests	
MSL974011A	Prepare tissue and cell cultures	*
MSL974012A	Perform tests to determine the properties of	*

Unit code	Unit title	Prerequisites
	construction materials	
MSL974013A	Monitor performance of structures	*
MSAENV472B	Implement and monitor environmentally sustainable work practices	
HLTPAT419C	Perform pathology tests	