PART A – SkillsPoint Product Information

Master Product Information

RTO Code:	**90003**
Training Product Code:	**MSL30118**
Release no.	**1**
Training Product Name:	**Certificate III in Laboratory Skills**
Status of Training Product:	Current
Release Date:	**20/07/2018**
Category of Product:	☒ Nationally Recognised Qualification
	☐ Accredited Course
	☐ Skill Set
	☐ Statement of Attainment
	☐ Non Nationally Recognised
SkillsPoint Details	
Product Manager:	**Adam Samuelson**
Contact Details:	**adam.samuelson@tafensw.edu.au**
SkillsPoint Project Identifier:	**MRS_18_08_MSL30118**

Master Delivery Information

Specialist Stream or Industry Identified Stream contained in this TAS:
Pathology Industry Stream

Target Student Group Category:	☒ Pre-employment
	☐ Apprentices/Trainees
	☐ International Students
	☐ Existing Workers
	☐ Other (Please specify):
Mode(s) of Delivery:	☐ Face to Face Learning
	☐ Workplace Training
	☐ Online Learning
	☒ Blended
	☐ Other:

Contents

1. Training Product Overview

1.1 Training Product Requirements

Link to Training Product on TGA: https://training.gov.au/Training/Details/MSL30118	
Number of Core Units:	**6**
Number of Elective Units:	**7**
Total Number of Units:	**13**

Packaging Rules:

To be awarded the MSL30118 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

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.

1.2 Licensing and/or Regulatory Requirements

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

1.3 Qualification Description

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

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. Laboratory technicians:

-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.

1.4 Pathways

Study Pathways

The study pathways available to students who undertake this Specialist Stream or Industry Identified Stream include:

Further training pathways from this qualification include MSL40118 Certificate IV in Laboratory Techniques.

Employment Pathways

The employment pathways available to students who complete this Specialist Stream or Industry Identified Stream include:

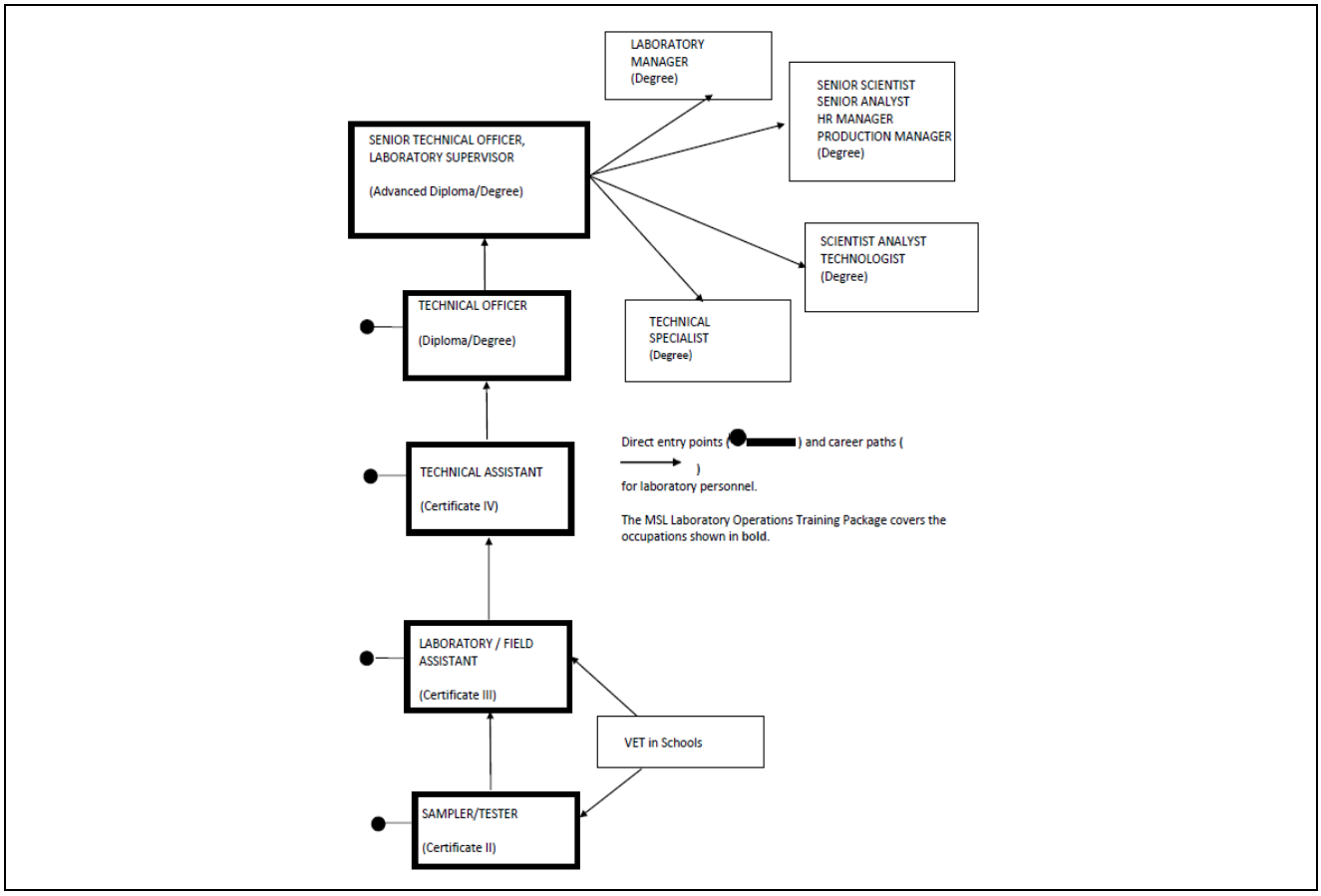

Figure 1 - Pathways For Laboratory Operations Training Package, from 'MSL Companion Volume Implementation Guide_R2_VETNet.pdf'
https://vetnet.education.gov.au/Pages/download.aspx?url=https://vetnet.education.gov.au/Public%20Documents/MSL%20Companion%20Volume%20Implementation%20Guide_R2_VETNet.pdf

1.5 Entry Requirements

The following **Training Package** entry requirements exist for this course:

There are no entry requirements for this qualification.

1.6 Exit Points

A Statement of Attainment will be issued for any unit of competency successfully completed if the full qualification is not completed.

1.7 Units of Competency

Consistent with the qualification packaging rules, the units listed below will be delivered and assessed for this training product:

Core Units

Table 1 Core Units

	Unit Code and Unit Title	Unit Type and Additional Notes
1	MSL913003 – Communicate with other people	Core
2	MSL913004 – Plan and conduct laboratory/field work	Core
3	MSL922001 – Record and present data	Core
4	MSL933006 – Contribute to the achievement of quality objectives	Core
5	MSL943004 – Participate in laboratory or field workplace safety	Core
6	MSMENV272 – Participate in environmentally sustainable work practices	Core

Elective Units

Table 2 Elective Units

	Unit Code and Unit Title	Unit Type and Additional Notes	**Packaging Rules** *(Grouping, Hours and Points, where applicable)*
7	MSL933008 – Perform calibration checks on equipment and assist with its maintenance	Elective	Group A
8	MSL953003 – Receive and prepare samples for testing	Elective	Group A
9	MSL973013 – Perform basic tests	Elective	Group A
10	MSL973014 – Prepare working solutions	Elective	Group A
11	MSL973015 – Prepare culture media	Elective	Group A
12	MSL973016 – Perform aseptic techniques	Elective	Group A
13	MSL973019 – Perform microscopic examination	Elective	Group A

1.8 Imported Units

Details of electives imported from another Training Package or accredited course.

Table 4 Imported Electives

	Unit Code and Unit Title	Release version #	Status	Release Date	SkillsPoint
1	Nil				

2. Additional Information

2.1 Environment and Location

The **simulated** work environment will be achieved by:

TAFE NSW will integrate teaching and learning strategies, in some cases bringing together a number of units that reflect real industry outcomes, to provide a framework for industry-relevant learning. In order to meet the requirements of this training product, the simulated workplace environment must reflect realistic operational workplace conditions that cover all aspects of workplace performance, including the environment, task skills, task management skills, contingency management skills and job role environment skills.

The simulated work environment at TAFE NSW will include practical application in both standard and specialised laboratories with access to appropriate laboratory instruments, equipment, personal protective equipment (PPE), containment facilities, materials, manuals, workplace documentation and procedures. The use of industry specific samples, case studies, sample requests, timeframes and progressive workflows will facilitate realistic workplace conditions. The program will be delivered and assessed through tasks that will simulate specific industry environments.

Compliance with industry safety requirements is supported through the provision of PPE, Australian Standards and codes of practice, Standard Operating Procedures (SOPs), risk assessments and the legal, ethical and work health and safety (WHS) requirements specific to the work task.

There are a series of defined activities that a team of participants and individuals may achieve in a simulated work environment which is reflective of the practical application of skills in the workplace. These include:

* Practical tasks
* Group work
* Simulated laboratory environment activities including instructor led demonstration of practical tasks using competency dedicated instruments and equipment, followed by student practice.
* Classroom activities including role plays, research and questioning and discussion.

The 'Equipment to student' ratio will vary depending on many factors including the cost of the equipment. In some cases the ratio is 1:1 for simple items such as pH meters, yet where expensive equipment is required, there may only be one item per class. In these cases, it is intended that students gain access to equipment via 'round-robin' timetabling so that each student gets access to all relevant equipment. This is no different to industry practice where laboratories have one piece of expensive equipment, which is very common.

Work placement will be achieved by:

Detail:

Nil

Eligibility for work placement:

Nil

Total Work Placement Hours: 0

2.2 Language, Literacy and Numeracy

Based on the Australian Core Skills Framework (ACSF), please indicate which performance levels students are expected to be at the commencement of the course for each of the core skills listed in the table below.

For assistance in determining the LLN level of performance please consult with your relevant Learning Support Services.

Table 4 Language, Literacy and Numeracy

Level of Performance	PL1A&B	1	2	3	4	5
Learning	☐	☐	☒	☐	☐	☐
Reading	☐	☐	☒	☐	☐	☐
Writing	☐	☐	☒	☐	☐	☐
Numeracy	☐	☐	☐	☒	☐	☐
Oral communication	☐	☐	☐	☒	☐	☐

2.3 Recognition Processes

Recognition of Prior Learning

Students are able to have their competency from prior learning and work experience recognised in this qualification through the following arrangements.

- Evidence of completing formal training
- Work experience: on the job experience and informal training
- Life experience: community group involvement, family activities, sports, hobbies, leisure activities, unpaid work, organising events, and/or travel.

Applications for RPL will be assessed on an individual basis and may be granted when a portfolio of evidence is assessed in accordance with TAFE NSW Recognition Policy and Procedures and the student is deemed competent for the unit/s of competency for which the application applies. Alternatively, the student may nominate to undertake a challenge assessment for the opportunity to demonstrate competency.

Credit Transfer

Students may also apply for credit transfer upon enrolment. The same or equivalent units of competency previously completed through an Australian RTO may be credited towards the new qualification they enrol into.

2.4 Educational and Support Services

TAFE NSW provides the following services to ensure a supported and successful learning environment for all students:

- Aboriginal and/or Torres Strait Islander Student Support and Services
- Accessibility and Disability Services
- Personal Counselling
- Vocational Counselling
- Learning Support
- International Student Support
- Scholarships
- Multicultural Support

Detailed current information on these Support Services are made available to staff and students at TAFE NSW Student Services. Additionally every student is supported by a dedicated Student Services team at each campus location.

2.5 WHS Risk Ranking

Consult the WHS risk register for this course
This Training Product has the following WHS risk ranking High risk
Refer to the TAFE NSW Enterprise Risk Management Policy for more details

2.6 Physical and Learning Resources

Specifically, the physical and learning resources listed below are required for the delivery and assessment of this Specialist Stream or Industry Identified Stream for this training product:

Table 5 Physical and Learning Resources

Type	Resource Requirements
Facilities	TAFE NSW will provide the following as suitable facilities, including: * a standard laboratory, or, * a standard transfusion/immune-haematology laboratory with relevant equipment, * a molecular biology laboratory * a standard microbiology laboratory * a standard haematology laboratory * a computer room (or other access to computers e.g. library services or in the laboratory) Facilities will include a classroom with computers with relevant software installed for online learning, internet access, desks, chairs, white/chalk board and projector capabilities.
Equipment	**MSL913003 – Communicate with other people** Access is required to the use of suitable facilities, equipment and resources, including workplace procedures and documents, communication equipment, including telephone, directories, email, and internet, modelling of industry operating conditions, including within accepted timelines **MSL913004 – Plan and conduct laboratory/field work** Access is required to the use of suitable facilities, equipment and resources, including workplace procedures as well as equipment and materials for relevant technical tasks. **MSL922001 – Record and present data** Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to data sets and records, computer and relevant software or laboratory information system and relevant workplace procedures

Type	Resource Requirements
	MSL933006 – Contribute to the achievement of quality objectives Access is required to the use of suitable facilities, equipment and resources, including workplace quality system as set out in quality manuals and workplace procedures and standard operating procedures (SOPs). **MSL943004 – Participate in laboratory or field workplace safety** Access is required to the use of suitable facilities, equipment and resources, including typical laboratory/field work equipment and materials, PPE, emergency equipment including first aid equipment, eye wash kit or shower and fire extinguisher and workplace procedures. **MSMENV272 – Participate in environmentally sustainable work practices** Access is required to the use of suitable facilities, equipment and resources, including environmental regulations, guidelines and procedures, workplace incident reporting procedures and forms. **MSL973015 – Prepare culture media** Access is required to the use of suitable facilities, equipment and resources, including a standard laboratory equipped with appropriate reagents and equipment, including pH meters; balances; stirrers, water baths and hot plates; burners, autoclave; measuring cylinders, flasks and glassware; Petri dishes; media storage bottles; self-refilling syringes; membrane filtration equipment; labelling equipment; distilled water apparatus; refrigerators; sterilisation equipment and indicators as well as workplace schedules and procedures, SDS and documented safe work practices **MSL973019 Perform microscopic examination** Access is required to the use of suitable facilities, equipment and resources, including a standard laboratory equipped with appropriate equipment, including light microscopes and samples, workplace procedures, standard methods and materials acs well as a light microscope. **MSL973016 Perform aseptic techniques** Access is required to the use of suitable facilities, equipment and resources, including a standard laboratory, test samples, appropriate equipment, including; transfer equipment, such as inoculating loops, pipettes (quantitative and qualitative), flasks, tubes and spatulas, sterilisation equipment such as Bunsen burners, bench incinerators, autoclave and/or pressure cooker, storage equipment such as incubators, water baths, refrigerators, freezers, anaerobic jars as required, laminar flow units or biohazard cabinets as required, swabs, appropriate materials, including; solid and/or liquid media, disinfecting and sterilising agents, consumables, receptacles for safe disposal of wastes and for processing

Type	Resource Requirements
	of reusable materials, bar coding material and labels as well as workplace schedules, procedures and standard methods, SDS and documented safe work practices. **MSL953003 Receive and prepare samples for testing** Access is required to the use of suitable facilities, equipment and resources, including a laboratory information management system (LIMS) system (or simulated to reflect an actual LIMS), and workplace procedures covering the receipt and preparation of samples for testing, sample containers, tubes, request forms and sample documentation, simulated samples when authentic samples are unavailable or inappropriate. **MSL973013 Perform basic tests** Access is required to the use of suitable facilities, equipment and resources, including a standard laboratory equipped with basic test equipment, common measuring instruments, materials, standard methods, workplace procedures as well as SDS and equipment manuals. **MSL973014 Prepare working solutions** Access is required to the use of suitable facilities, equipment and resources, including a standard laboratory equipped with appropriate reagents and equipment, standard methods and workplace procedures as well as containers and storage facilities. **MSL933008 - Perform calibration checks on equipment and assist with its maintenance** Access is required to the use of suitable facilities, equipment and resources, including standard laboratory equipped with appropriate equipment and reference materials; cleaning, decontamination and/or disinfection agents and equipment; and personal protective equipment (PPE), workplace procedures, equipment manuals and information/records management system.
Trainer and Assessor Qualifications and Industry Experience	**Trainer and Assessor Qualifications and Industry Experience** The following minimum requirements have been identified for trainers and assessors; * Minimum qualification of MSL30118 - Certificate IV in Laboratory Techniques or equivalent. * Evidence of maintaining relevant and current industry professional development including ongoing exposure and development to maintain currency of industry skills. * TAE40116 Certificate IV in Training and Assessment or its successor or

Type	Resource Requirements
	* TAE40110 Certificate IV in Training and Assessment plus the following units: ** TAELLN411 (or its successor) or TAELLN401A, and ** TAEASS502 (or its successor) or TAEASS502B or * A diploma or higher level qualification in adult education.
Learning Resources	Each unit to have a set of comprehensive unit notes, class activities, practical task with relevant drawings and instructions, teaching and learning resources, assessments and RPL documents which will be available on the Learning Bank. Supporting resources such as policies, procedures, management plans will be available on the Learning Bank and through a Simulated Organisation developed by TAFE Digital. Software packages such as Laboratory Information Management Systems (LIMS, simulated or real), Microsoft Word, and Microsoft Excel are all available on classroom/laboratory computers. Access to library services including books, E-Books, industry journals and magazines, on-line data base specific to trade profile. Access to trade relevant multimedia learning materials. Access to policies and procedures, WHS legislation, regulations and codes of practice, Australian Standards, manufacturer instructions, industry legislation, forms and templates such as checklists, hazard reports, quality assurance, work plans and the like..

2.7 Industry Engagement

Training and assessment practices must be relevant to the needs of industry and informed by industry engagement, this may also influence resources and staff currency. Details below are of the most current engagement activities undertaken for this training product.

Table 6 SkillsPoint Engagement

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
1	National multidisciplinary laboratory employer	Please refer to Industry Engagement Record(s): MRS_18_08_MSL30118_IER_01	Please refer to Industry Engagement Record(s): MRS_18_08_MSL30118_IER_01	11/1/18	A leading laboratory provider of commercial analytical testing services to the pathology industries. **Feedback:** The Certificate III in Laboratory Skills was listed as the ideal qualification in a recent advertisement for a Laboratory Assistant (Environmental). Experience with laboratory quality management systems and the requirements of NATA accreditation was also identified as ideal. Duties listed in the advertisement included: Preparing and grouping samples for testing Performing a wide range of basic tests

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
					Complying with Laboratories quality, safety and other systems **Action:** MSL953003 - Receive and prepare samples for testing, MSL933006 – Contribute to the achievement of quality objectives, MSL943004 - Participate in laboratory/field workplace safety and MSL913003 - Communicate with other people are core units in the Certificate III qualification. MSL973013 - Perform basic tests has been included as an elective in the Certificate III qualification.
2	Multinational multidisciplinary laboratory employer	Please refer to Industry Engagement Record(s): MRS_18_08_MSL30118_IER_01 MRS_18_08_MSL30118_IER_02	refer to Industry Engagement Record(s): MRS_18_08_MSL30118_IER_01 MRS_18_08_MSL30118_IER_02	14/11/18 21/11/18	This stakeholder is one of the world's leading inspection, verification, testing and certification companies. With more than 95,000 employees, they operate a network of more than 2,400 offices and laboratories around the world. **Feedback:**

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
					All core and elective units were identified as acceptable. The electives identified were: • MSL973013 - Perform basic tests • MSL953003 - Receive and prepare samples for testing • MSL972001 – Conduct routine site measurements • MSL933008 - Perform calibration checks on equipment and assist with its maintenance • MSL973014 - Prepare working solutions The inclusion of MSL933008 - Perform calibration checks on equipment and assist with its maintenance and MSL973014 - Prepare working solutions were flagged as critical. The balance of the electives were considered acceptable. **Action:**

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
					The electives listed above have been included in the Certificate III qualification. MSL973014 - Prepare working solutions is sufficient to meet this industry need. The level 4 unit will be included in the certificate IV. MSL953003 - Receive and prepare samples for testing and MSL933006 - Contribute to the achievement of quality objectives are core units. To ensure cross sector employment mobility to maximise options in the event of loss of employment these units have been included in the certificate III. **Feedback:** Preferred training methods included: • Theory presentations with pictures (e.g. PowerPoint) • Written theory notes with pictures (e.g. PDF) • Face to face presentation

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
					Preferred mode of delivery is workplace (on the job). **Action:** TAFE NSW is considering utilising written theory presentations/notes with pictures as learning materials where possible this should be supported by face to face presentations. TAFE NSW will adopt a blended mode of delivery to ensure that students that have limited breadth of experiences in the workplace are not disadvantaged and can gain these hands on experiences in a simulated environment. Where possible training and assessment may be conducted on the job.
3	Multidisciplinary university research laboratory employer	Please refer to Industry Engagement Record(s): MRS_18_08_MSL30118_IER_04	Please refer to Industry Engagement Record(s): MRS_18_08_MSL30118_IER_04	16/11/18	This stakeholder is a major Australian University with research capability in ecology, plant physiology, microbiology, cellular biology, microfluidics, biochemistry,

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
		MRS_18_08_MSL30118_IER_03	MRS_18_08_MSL30118_IER_03		molecular biology (genomics, proteomics, metabolomics), physics (bio-optics), chemistry and bio-informatics. The climate change cluster has over 3,800 students and over 450 academic, technical and professional staff members to support its activities. **Feedback:** The following job tasks were identified in an advertisement for an Assistant Technical Officer. • media preparation, sterilisation and transfer techniques to ensure sterility of each culture. • preparation and sterilization of microbiological media, • autoclaving, • removal of chemical and biological waste through designated waste streams,

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
					• preparing glassware and plastic ware for algal transfer with appropriate cleaning e.g. acid washing, basic instrument checking, calibration and configuration, instrument cleaning. The following skill and knowledge requirements for also identified: • Competence in PC1 and PC2 operating conditions • Good written and oral communication skills • Ability to follow standard operating procedures and preparation manuals • Ability to work independently and as part of a team • Demonstrated computer skills in commonly used programs such as Word, Excel and email, including

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
					ability to maintain and update databases • Knowledge of laboratory procedures including sterile techniques and media preparation. • Knowledge of basic laboratory instrumentation operation • Knowledge of EH&S principles and practice including chemical and electrical safety The inclusion of MSL973016 - Perform aseptic techniques and MSL973015 - Perform culture media were considered important and supported by a public school stakeholder. **Action:** MSL943004 - Participate in laboratory/field workplace safety, MSL913003 - Communicate with other people and MSL913004 - Plan and conduct

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
					laboratory/field work are core units in the Certificate III. The following units have been included as electives in the Certificate III course: • MSL973016 - Perform aseptic techniques • MSL973015 - Perform culture media • MSL973013 - Perform basic tests • MSL973014 - Prepare working solutions • MSL933008 - Perform calibration checks on equipment and assist with its maintenance

3. Transition Arrangements

When there is a change to the Training Package that impacts on this TAS, the SkillsPoint will work with Standards and Compliance teams to complete a Transition Plan and notify all staff affected as soon as possible.

TAFE NSW complies with clauses 1.26 and 1.27 of the *Standards for RTOs 2015*. When there are major changes to the Training Package, the SkillsPoint will review the changes made and create a plan to transition to the new training package requirements and cater for completion arrangements for students where possible. The progress of the transition will be implemented by the Delivery, Implementation and Performance and Skills Teams and monitored by Standards and Compliance teams.

Transition arrangements must be completed within 12 months of changes being published on training.gov.au for superseded qualifications and two years for deleted training products.

Does this qualification require the completion of a Transition Plan ☐ Yes ☒ No
If yes, a completed Transition Plan is attached.

4. Structure, Delivery and Assessment

4.1 Volume of Learning

Volume of Learning includes all activities required to be undertaken by the typical student to achieve learning outcomes. It is comprised of the Amount of Training + the Amount of Assessment + Unstructured Learning.

Amount of Training takes into consideration the existing skills, knowledge and experience of students, the mode of delivery, availability of resources and the number of units. It is the **Structured Learning** – formal learning activities, which may consist of

- Lectures or tutorials, on-line tasks and forums
- Learning activities
- Structured workplace experience
- Workshop activities
- Structured prescribed reading
- Prescribed follow-up activities

Unstructured Learning may include private study, assignment preparation, work experience and research.

A justification must be included for any differences between the **AQF Volume of Learning indicator** and the total hours in each instance of course delivery. Factors that may reduce volume of learning can include the number of units packaged in the qualification, student having pre-existing knowledge and skills, mode of delivery and clustering of units. For further information see Fact Sheet - Amount of Training.

The **AQF Volume of Learning indicator** for this product is:	Certificate III 1200-2400 hours
The **Total Amount of Training Hours** for this product is:	306
The **Total Amount of Assessment Hours** for this Product is:	45
The Total Estimated **Unstructured Learning Hours** for this product are:	300
The **Total Volume of Learning** for this product is:	**651**

4.2 Delivery Strategy

Details of the Volume of Learning for this training product are outlined below:

Table 7 Volume of Learning - Detail

	Delivery Mode	Types of Structured Learning	Structured Learning Hours	Assessment Hours	Unstructured Learning Hours	Volume of Learning
1	Blended	* Face to face learning * Online learning (Moodle) * End of chapter topic tests * In class practice tasks * Group planning tasks * Out of class structured activities	**306**	**45**		**351**
2	Self-directed	* Review of structured learning *Internet based research * Assessment preparation * Review of topic test answers from teacher * Industry research and job analysis			**300**	**300**
					TOTALS	**651**

Outline of Delivery Strategy and Justification for variance in Volume of Learning from the AQF Indicator:

Course Purpose

The MSL30118 Certificate III in Laboratory Skills intends to qualify individuals who apply integrated technical and theoretical concepts in a broad range of contexts to undertake skilled or paraprofessional work and as a pathway for further learning. This involves scientific practices and processes as well as following statutory structured workplace procedures. The Certificate III in Laboratory Skills is a non-trade (para-professional) industry endorsed course (as per IER in Table 6 above).

Delivery sequence and structure

Outline of Delivery Strategy and Justification for variance in Volume of Learning from the AQF Indicator:

This delivery strategy offers a total volume of learning of 651 hours. The AQF minimum volume of learning indicator is 1200 – 2400 hours. Below is an outline of the delivery strategy for this offering.

Target Student Group – Pre-employment

This Training and Assessment Strategy has been tailored to meet the needs of students who are 'pre-employment' and have no existing experience working in the laboratory industry, which is considered 'post-school' or paraprofessional.

It is acknowledged that students entering this qualification will generally have an interest in laboratory. Students will generally have limited skills and knowledge in general science and/or biology prior to enrolling that been acquired at high school, through some previous study or life experience, which are deemed to be transferrable to this course.

Although the target student group are new to the laboratory industry sector, it is acknowledged they typically enter the course with some basic organisation & study skills and computing skills, gained through prior study and as a result of life experience in an increasingly technology-savvy world and the need to be able to interact using these technologies as a part of day-to-day life.

Class sizes will have a nominal student to teacher ratio **on average** of 15:1 based on available resources in the classroom environment.

Volume of learning

The volume of learning is determined based on target student group described above in 'Target Student Group – Pre-employment'.

The training provided to students is based on the principles of Andragogy, and will acknowledge students existing skills, knowledge and experience and where possible will scaffold any learning outcomes based on these, as well as significant industry consultation.

This amount of training and assessment has been determined to ensure all students with an LLN level described under section 2.2 of this TAS document, can successfully complete each unit of competency delivered with minimal, or no need for additional support.

In this delivery strategy, the unit delivery flows in a logical sequence to ensure that initial concepts are learnt and applied which ensure that the appropriate underpinning knowledge and skills are learnt for later units. The unit delivery is in line with semester delivery to ensure adequate time and logical flow. Elective units have been chosen based on industry feedback to ensure the best outcomes and job readiness for graduate.

Elective units have been chosen to cover the requisite Competence Fields from the Training Package to ensure that the integrity of the industry specialisation has been adhered to. Units have also been sequenced in the intended order of the Training Package to ensure that the Training package rules have been met as stringently as possible.

Furthermore, graduate outcomes meet minimum industry requirements and expectation, achieved through real world tasks and processes from relevant government departments where appropriate/applicable.

Description of Structured learning and assessment

Blended - Structured learning & assessment: in-class

This course duration is one semester (18 weeks at 19.5 hours per week or three days a week).

Students will attend 351 hours (19.5 hrs per week x 18 weeks) of face-to-face classes over the duration of this course. Within face-to-face classes students will complete 306 hours of structured learning and 45 hours of assessment.

**For specific structured learning and assessment hours for each unit, please refer to 'Table 8 Delivery and Assessment Schedule'.

Timetabled classes will include face-to-face and online instructional sessions, demonstrations, role plays, group activities, individual tasks, practical and theory classes, projects, videos, brainstorming, and application of learning from the directed learning tasks and out of class activities.

The facilities provided by TAFE NSW provide students access to simulated work environment and the equipment required to gain a real-world experience of laboratory services that will align with their job role. The simulated environments include practical tasks in field (if required) and laboratory environments both on and off campus as well as computer labs.

Timetabled classes will also include assessments tasks that require assessor observation of supervised timed assessments, practical tasks, role plays, simulated workplace activities, project work and knowledge based assessments. All assessment occurs as specified in the assessment event instructions. Assessments will utilise on-campus resources and facilities to assess students in simulated workplace environments. Assessment methods reflect the most suitable means for assessing the required skills, providing students with the best opportunity to demonstrate their competence.

Learning resources are provided to students such as handouts, student learner workbook, unit outlines and assessment guides, which we be made available on the Learning Bank or Simulated Organisation website as required.

Out-of-class structured learning will include directed activities such as, pre-readings for timetabled classes, completing student workbook activities, practical tasks, participation in group work and forums, viewing of prescribed videos, researching specific information relating to the unit of competency and any homework of tasks set by, and monitored by the teacher.

Self-directed - Unstructured learning

This delivery strategy requires all learners to engage in 300 hours of self-paced study, research, assessment preparation, and review of class topics and practice at home or on campus. Unstructured learning is essential for learners to continue to develop a broad understanding of Laboratory concepts and application of Laboratory skills throughout the course and achieve competency.

Trainers and assessors will progressively engage students during the course through active class discussion, individual mentoring and training and assessment feedback to monitor student engagement and unstructured learning. Online resources are also available for students to engage with during unstructured learning, such as a course Moodle, accounts for Lynda.com tutorials, and studiosity.com tutorial support. This will be monitored through LMS logging time stamps.

Volume of learning variance justification

The Volume of Learning for this Training Product is 651 Hours. This is below the minimum Volume of Learning for the AQF Indicator at Certificate III level, however it may be noted that:

1) This course is non-trade (para-professional)

This means the learning requirements and training times for these students will be lower than for trade courses. The unit choice is heavily industry focused which means there is a reduced amount of learning required as there is a lower diversity of topics to learn.

2) Cohort Industry Background VoL reduction = 10%.

As the Certificate III in Laboratory Skills demonstrates skills similar to science topics learnt at school from Years 10-12, it is demonstrable that these skills are easily transferrable to this course.

3) Cohort Education background VoL reduction = 2%

The cohort will have year 10-12 level general science and/or LLN skills from life experience. This results in ‘mid-range pre-existing skills and/or knowledge which scores 2% reduction using the VoL calculator.

4) Entry LLN Levels Required = 12%

The expected entry level LLN requirements for this course in line with ACFS sums to 12% reduction in VoL due to ACSF scores of 2 as entry level requirements for **Learning**, **Reading** and **Writing**, yet scores of 3 are required for **Oral communication** and **Numeracy** skills due to the scientific nature of the course.

5) Cohort Age Group VoL reduction = 4%

The historical enrolment data shows the typical cohort age range is 18-34. This cohort range brings more current skills and knowledge than younger cohorts, yet not as many life skills as older cohorts. The Volume of Learning provided calculates the VoL reduction at 4% for this cohort.

6) Qualification Licensing/Registration requirements VoL reduction = 2%

There are no licensing requirements for this course resulting in an approximate reduction in VoL of 2%

7) Qualification UoC’s Quantity VoL reduction = 8%

The total number of total units (13), is below the median number of units across all courses, as per the VoL calculator provided.

8) Course structure of training VoL reduction = 2%

Although clustering can optimise learning outcomes, this course has not opted for clustering due to industry requests that certain topics be strengthened such as Communication and Planning skills. To ensure that industry needs and expectations are met regarding student outcomes, all units will be delivered as standalone units without clustering.

9) Course mode of delivery VoL reduction = 6%
The Volume of Learning calculator provided scores the Course mode of delivery as a 6% reduction in VoL based on a mix of Face-to-Face and Online (Blended).

This results in an overall reduction in the Volume of Learning =	**46%**
VoL reduction in hours =	**552**
Learning hours required =	**648**
Course VoL =	**651**

4.3 Assessment

Table 8 below provides a description of the sequencing of units throughout the program. It also outlines the delivery strategy, the mode (face to face, online, workplace, etc.), the hours of training and assessment required and the assessment methodology.

Assessment Method Legend

The assessment methods used for this training product are as follows:

Sk	**Skills** (role play scenario, presentation, practical, observation)
Kn	**Knowledge** (multiple choice, true or false, short answer questions)
Pro	**Project** (report, research based project, journal, essay)
CS	**Case study** (case study scenario, reflection)
TLB	**Training Log Book**
Prt	**Portfolio** (samples of work in a workplace environment)
O	**Other** (add description)

Delivery and Assessment

Table 8 Delivery and Assessment Schedule

Sequence	Unit Code and Unit Title	Cluster Group # Or Stand Alone	Unit Delivery Mode	Training and Assessment Hours	Unit Start and End dates	Assessment: Methods and Weighting *(refer to legend)*	Assessment: Due Dates
1	MSL943004 - Participate in laboratory or field workplace safety	Stand alone	Blended	T = 15 A = 3		Sk - Practical Kn – Short answer Pro - Research	
2	MSL913003 - Communicate with other people	Stand alone	Blended	T = 15 A = 3		Pro – Product Kn – Short answer	
3	MSL933006 - Contribute to the achievement of quality objectives	Stand alone	Blended	T = 15 A = 3		Kn – Short answer 1 Kn – Short answer 2	
4	MSMENV272 - Participate in environmentally sustainable work practices	Stand alone	Blended	T = 16 A = 2		Sk - Practical Kn – Short answer Pro - Research	
5	MSL973015 - Prepare culture media	Stand alone	Blended	T = 15 A = 3		Sk - Practical Kn – Short answer Pro - Research	
6	MSL973013 - Perform basic tests	Stand alone	Blended	T = 32 A = 4		Sk – Practical observation Kn – Short answer Pro - Research	
7	MSL913004 - Plan and conduct laboratory/field work	Stand alone	Blended	T = 15 A = 3		Sk - Practical Kn – Short answer Pro - Research	
8	MSL922001 - Record and present data	Stand alone	Blended	T = 32 A = 4		Kn – Short answer 1 Kn – Short answer 2 Kn – Short answer 3	

TRAINING AND ASSESSMENT STRATEGY

Sequence	Unit Code and Unit Title	Cluster Group # Or Stand Alone	Unit Delivery Mode	Training and Assessment Hours	Unit Start and End dates	Assessment: Methods and Weighting *(refer to legend)*	Assessment: Due Dates
9	MSL953003 - Receive and prepare samples for testing	Stand alone	Blended	T = 32 A = 4		Kn – Short answer Pro – Product 1 Pro – Product 2	
10	MSL973016 - Perform aseptic techniques	Stand alone	Blended	T = 32 A = 4		Kn – Short answer 1 Kn – Short answer 2 Sk – Practical observation	
11	MSL973019 - Perform microscopic examination	Stand alone	Blended	T = 32 A = 4		Kn – Short answer 1 Kn – Short answer 2 Sk – Practical observation	
12	MSL973014 - Prepare working solutions	Stand alone	Blended	T = 32 A = 4		Sk – Practical Kn – Short answer	
13	MSL933008 - Perform calibration checks on equipment and assist with its maintenance	Stand alone	Blended	T = 23 A = 4		Sk - Practical Kn – Short answer Pro - Research	

5. Master TAS Approval

Product Manager
Name: asamuelson(Adam.Samuelson@tafensw.edu.au)**Adam Samuelson**
Signature: Approval was given electronically in DATA (see request 1645): https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=1645
Date: 01/09/2019, 05:20 PM **15/8/2019**

Senior Manager, Product Development Support
Name: jfuller (Joanne.Fuller@tafensw.edu.au)
Signature: Approval was given electronically in DATA (see request 1645): https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=1645
Date: 02/09/2019, 08:54 AM

Head of SkillsPoint
Name: pfarrow5 (Paul.Farrow3@tafensw.edu.au)
Signature: Approval was given electronically in DATA (see request 1645): https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=1645
Date: 02/09/2019, 08:57 AM

TRAINING AND ASSESSMENT STRATEGY

PART B – Delivery TAS Information

6. Delivery Details

Delivery Location
Campus:
Region:
Offering Owner
Name:
ebs Identifier:
Mode/s of Delivery
☐ Face to Face Learning
☐ Workplace Training
☐ Online Learning
☐ Blended
☐ Other:
Details of Target Student Group
Duration
Total Hours:
Total Weeks:
Start and End Date:

6.1 Entry Requirements

The following **local entry requirements** exist for this course:

6.2 Additional Student Support at Delivery Location

The following additional Student Support is available:

6.3 Contextualisation

Following from the Delivery Strategy outlined in Section 4 above, the following arrangements have been made to contextualise delivery of this Training Product to meet the needs of this student group:

7. Third Party Arrangements

Are any training and assessment components for this product delivered by a third party, and if so has the required written agreement been put in place? ☐ Yes ☐ No
If yes, please provide a summary of the third party arrangement: Have the details of this arrangement been attached? ☐ Yes ☐ No
Have details of this arrangement been provided to TAFE NSW Governance, Legal and Risk? ☐ Yes ☐ No
Has ASQA been notified of this arrangement prior to any delivery commencing? ☐ Yes ☐ No

8. Staff Qualifications and Industry Experience

Insert link to detailed staff matrix.

Table 9 Staff Matrix

	Units of Competency Delivering / Assessing (multiple units can be grouped together)	**Trainer/ Assessor Name**	**Trainer, Assessor or Both**	**Training and Assessment Qualifications AND Current evidence of ongoing development in training and assessment practice** *(including correct title, name of provider and date)*	▪ **Vocational Qualifications** ▪ **Licences** ▪ **Professional development including ongoing exposure and development to maintain currency of industry skills** *(including correct title, name of provider and date)*
Delete this row after completing table	*RII30915 - Certificate III in Civil Construction (Release 1) RIIBEF201D RIICOM201D RIIOHS201D*	*Joe Bloggs*	Trainer only	▪ TAE40110 Certificate IV in Training and Assessment – ABC Training 23 November 2016. ▪ VELG Assessment Practices Workshop 5 June 2018. ▪ HTAN Training News Update Breakfast Meeting 26 March 2018. ▪ ASQA Training Provider Briefing Session June 2018	▪ BCC30107 - Certificate III in Civil Construction – XYZ Training 17 June 2008. ▪ RII30913 - Certificate III in Civil Construction – Bendigo Kangan Institute – 03 June 2013 ▪ CPCCOHS1001A - Work safely in the construction industry - XYZ Training 3 Sep 2009. ▪ Construction Australia Expo, Brisbane, 11 March 2017 ▪ Australian Building Codes Board Seminar, Canberra, 20 October 2017 ▪ Civil Engineer operating own consultancy from 2005-current.
1			Choose an item.		
2			Choose an item.		
3			Choose an item.		
4			Choose an item.		
5			Choose an item.		
6			Choose an item.		

TRAINING AND ASSESSMENT STRATEGY

	Units of Competency Delivering / Assessing (multiple units can be grouped together)	**Trainer/ Assessor Name**	**Trainer, Assessor or Both**	**Training and Assessment Qualifications AND Current evidence of ongoing development in training and assessment practice** *(including correct title, name of provider and date)*	▪ **Vocational Qualifications** ▪ **Licences** ▪ **Professional development including ongoing exposure and development to maintain currency of industry skills** *(including correct title, name of provider and date)*
7			Choose an item.		
8			Choose an item.		
9			Choose an item.		
10			Choose an item.		
11			Choose an item.		
12			Choose an item.		
13			Choose an item.		
14			Choose an item.		
15			Choose an item.		
16			Choose an item.		
17			Choose an item.		

9. Additional Industry/Community Engagement

Training and assessment practices must be relevant to the needs of industry and communities and be informed by consultation, this may also influence resources and staff currency. Details below are of further engagement activities undertaken for this training product at a Regional/Local level.

Table 10 Additional Industry/Community Engagement

	Industry/Organisation	Representative Name	Contact Details (Email/Telephone)	Date of Consultation	How did this engagement influence one or more of the following? ▪ Qualification/ Course / Skill set selection ▪ Elective selection and/or sequencing ▪ Mode of study ▪ Training Methods ▪ Assessment Methods ▪ Trainer and assessor requirements ▪ Training and assessment resources and equipment ▪ Contextualisation
1					
2					
3					
4					
5					
6					
7					
8					
9					

10. Assessment Validation

Validation is the quality review of the assessment processes and judgements. Validation involves checking that the assessment tool/s produce/s valid, reliable, sufficient, current and authentic evidence that complies with the appropriate AQF level and the dimensions of competency to enable reasonable judgments to be made as to whether the requirements of the training package or VET accredited courses are met. It includes reviewing a statistically valid sample of the assessments and making recommendations for future improvements to the assessment tool, process and/or outcomes and acting upon such recommendations.

Clause 1.9 and 1.10 of the Standards for RTOs require that the RTO implements a plan for ongoing systematic validation of assessment practices and judgements; the plan needs to ensure that each training product is validated at least once every five years, with at least 50% of products validated within the first three years of each five year cycle.

10.1 Validation of assessment judgements

Details of the scheduled validation of judgements for the training product identified in this Training and Assessment Strategy are provided below:

Table 10 Validation of assessment judgements

Date of last validation of judgements	Codes and names of units validated	Number of judgements included in the sample for each unit	Have the actions arising from the validation been completed and signed off? If No, please outline below outstanding actions and when they are due for completion	Scheduled date of next validation of judgements
Click here to enter a date.			☐ Yes ☐No	Click here to enter a date.

Location of validation record:

Details confirmed by:

Signature:

TRAINING AND ASSESSMENT STRATEGY

11. Delivery TAS Approval

The signatures below indicate that the Delivery Team meets the requirements of the Master Product outlined above. Any additional Contextualisation must be outlined in a Business Case and referred back to the SkillsPoint - details in Part A above.

Delivery Location
Campus:
Region:

Team Leader (or equivalent)
Name:
Signature:
Date:

Head of Skills Team
Name:
Signature:
Date:

Head of Delivery, Implementation and Performance
Name:
Signature:
Date: