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**

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**SkillsPoint Project Identifier: MRS\_18\_08\_MSL30118\_GENL**

Master Delivery Information

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

**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:

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1. Training Product Overview

### 1.1 Training Product Requirements

**Link to Training Product on**[TGA](http://www.training.gov.au/)**:** **<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:

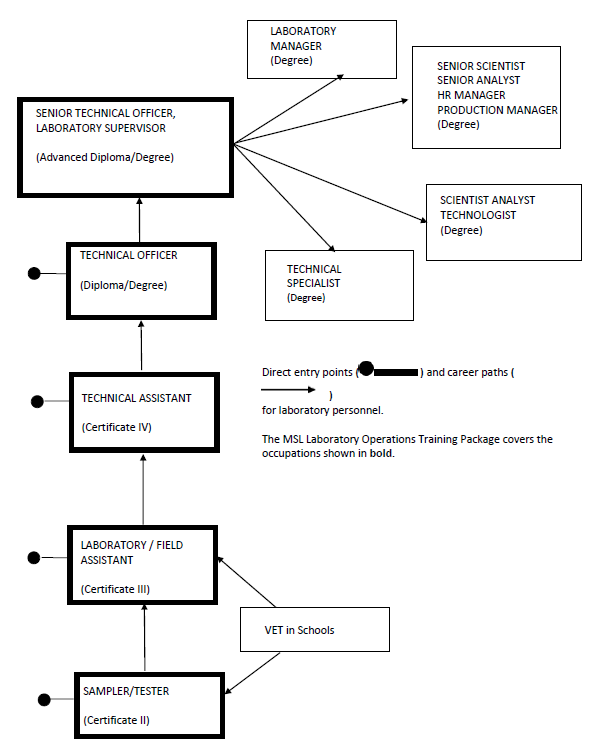


Figure 1 - Pathways For Laboratory Operations Training Package, from 'MSL Companion Volume Implementation Guide\_R2\_VETNet.pdf’ <https://vetnet.education.gov.au/Pages/download.aspx?url=https://vetnet.education.gov.au/Public%20Documents/MSL%20Companion%20Vo>

### 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

| **No.** | **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

| **No.** | **Unit Code and Unit Title** | **Unit Type and Additional Notes** | **Packaging Rules**  *(Grouping, Hours and Points, where applicable)* |
| --- | --- | --- | --- |
| **7** | MSL912001-Work within a laboratory/field workplace (induction) | Elective | Group B |
| **8** | MSL973013-Perform basic tests | Elective | Group A |
| **9** | MSL933005-Maintain the laboratory/field workplace fit for purpose | Elective | Group A |
| **10** | MSL953003-Receive and prepare samples for testing | Elective | Group A |
| **11** | MSL973014-Prepare working solutions | Elective | Group A |
| **12** | MSL972001-Conduct routine site measurements | Elective | Group B |
| **13** | MSL933008-Perform calibration checks on equipment and assist with its maintenance | Elective | Group A |

### 1.8 Imported Units

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

Table 4 Imported Electives

| **No.** | **Unit Code** a**nd 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](https://www.education.gov.au/download-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](http://www.tafensw.edu.au/support). 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](https://staff.tafensw.edu.au/documents/2017/11/enterprise-risk-management-policy.pdf/) 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  **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.  **MSL912001-Work within a laboratory/field workplace (induction)**  Access is required to instruments, equipment, materials, workplace documentation, procedures, and specifications associated with this unit, including, but not limited to relevant documentation, such as workplace standard operating procedures (SOPs), legal/regulatory requirements and codes of practice organisational charts and flow diagrams showing links between workplace functions and/or production processes employment, training and career information.  **MSL933005-Maintain the laboratory/field workplace fit for purpose**  Access is required to the use of suitable facilities, equipment and resources, including work preparation areas, stocks, materials and equipment, cleaning, decontamination and/or disinfection agents and equipment and personal protective equipment (PPE).  **MSL972001-Conduct routine site measurements**  Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to a variety of sites and relevant measuring equipment as well as safe operating procedures for equipment, site measurement procedures 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  \* TAE40110 Certificate IV in Training and Assessment plus the following units:  \*\* TAELLN411 (or its successor) or TAELLN401A, and  \*\* TAEASS502 (or its successor) or TAEASS502A 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

| No. | 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 food, agricultural, water and environmental 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  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:**  All core and elective units were identified as acceptable.  The electives identified were:   * MSL973013 - Perform basic tests * MSL953003 - Receive and prepare samples for testing * MSL924003 - Process and interpret data * 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 for a school laboratory technician by a public-school stakeholder. However, MSL933006 – Contribute to the achievement of quality objectives, MSL922001 – Record and Present Data MSL953003 - Receive and prepare samples for testing were identified as not relevant in a school setting. The balance of the electives were considered acceptable.  **Action:**  The electives listed above have been included in the Certificate III qualification excluding MSL974017 – Prepare, standardise and use solutions as it is AQF level 4 unit and the depth of chemistry in the unit is more appropriate for the certificate IV 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   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** | Education Support Laboratory employer | Please refer to Industry Engagement Record(s):  MRS\_18\_08\_MSL30118\_IER\_03  MRS\_18\_08\_MSL30118\_IER\_04 | Please refer to Industry Engagement Record(s):  MRS\_18\_08\_MSL30118\_IER\_03  MRS\_18\_08\_MSL30118\_IER\_04 | 21/11/18  16/11/18 | This stakeholder provides the perspective of a science laboratory technician in the public school system.  **Feedback:**  There were several critical skills identified as missing.   * Using Department of Education Chemical Saftey in Schools package * Using Chemwatch especially label making a critical skills. * ALL DoE employees MUST follow CSIS Detra Protocol. * Familiarity with electrical and physics equipment.   The need to include chemical handling and disposal was supported in a job advertisement for an Assistant Technical Officer working for a university research facility.  **Action:**  TAFE NSW does use the Chemwatch software as part of the training in all Laboratory courses.  TAFE NSW to review the NSW Department of Education and Communities ‘Chemical Safety in Schools (CSIS)’ resource package to determine if there are suitable, relevant training materials available. NSW DEC website http://www.dec.nsw.gov.au/ DEC Intranet, login required.  **Feedback:**  MSL973013 - Perform basic tests should include  • Testing digital and analogue meters.  • Use of data loggers  MSL973014 - Prepare working solutions should include  • 0.1M to 2M solution making of NAOH, HCL  **Action:**  • TAFE NSW will make use of Data loggers and testing of digital and analogue meters in MSL973013 - Perform basic tests by using pH meters  TAFE NSW is considering using the following example in the training of this unit.  • 0.1M to 2M solution making of NaOH, HCL"  "MSL973014 - Prepare working solutions has been included as an elective in the Certificate III and chemistry and pathology focused Certificate IV Qualifications.  TAFE NSW is using the following example in the training of this unit.  • 0.1M to 2M solution making of NaOH, HCL |
| **4** | Multidisciplinary university research laboratory employer | Please refer to Industry Engagement Record(s):  MRS\_18\_08\_MSL30118\_IER\_04  MRS\_18\_08\_MSL30118\_IER\_03 | Please refer to Industry Engagement Record(s):  MRS\_18\_08\_MSL30118\_IER\_04  MRS\_18\_08\_MSL30118\_IER\_03 | 16/11/18 | This stakeholder is a major Australian University with research capability in ecology, plant physiology, microbiology, cellular biology, microfluidics, biochemistry, 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.   * Removal of chemical and biological waste through designated waste streams. * 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:   * Good written and oral communication skills * Ability to follow Standard Operating Procedures. * Ability to work independently and as part of a team * Demonstrated computer skills in commonly used programs such as Word, Excel and email. * 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 laboratory/field work are core units in the Certificate III.  The following units have been included as electives in the Certificate III course:  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](https://www.asqa.gov.au/news-publications/publications/fact-sheets/amount-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: 307

The **Total Amount of Assessment Hours** for this Product is: 47

The Total Estimated **Unstructured Learning Hours** for this product are: 300

The **Total Volume of Learning** for this product is: **654**

### 4.2 Delivery Strategy

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

Table 7 Volume of Learning - Detail

| **No.** | **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 | **307** | **47** |  | **354** |
| **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** | | | | | **654** |

**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 654 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 19.7 hours per week or three days a week).

Students will attend 307 hours (19.7 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 307 hours of structured learning and 47 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 654 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 = 654**

### 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** | MSL912001 - Work within a laboratory/field workplace (induction) | Stand alone | Blended | T = 16  A = 3 |  | Sk - Practical  Kn – Short answer |  |
| **2** | MSL943004 - Participate in laboratory or field workplace safety | Stand alone | Blended | T = 16  A = 3 |  | Sk - Practical  Kn – Short answer  Pro - Research |  |
| **3** | MSL913003 - Communicate with other people | Stand alone | Blended | T = 16  A = 3 |  | Pro – Product  Kn – Short answer |  |
| **4** | MSL933006 - Contribute to the achievement of quality objectives | Stand alone | Blended | T = 15  A = 3 |  | Kn – Short answer 1  Kn – Short answer 2 |  |
| **5** | MSMENV272 - Participate in environmentally sustainable work practices | 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** | MSL933005 - Maintain the laboratory/field workplace fit for purpose | Stand alone | Blended | T = 32  A = 4 |  | Sk - Practical  Kn – Short answer |  |
| **8** | MSL922001 - Record and present data | Stand alone | Blended | T = 31  A = 5 |  | Kn – Short answer 1  Kn – Short answer 2  Kn – Short answer 3 |  |
| **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** | MSL973014 - Prepare working solutions | Stand alone | Blended | T = 31  A = 5 |  | Sk – Practical  Kn – Short answer |  |
| **11** | MSL913004 - Plan and conduct laboratory/field work | Stand alone | Blended | T = 15  A = 3 |  | Sk - Practical  Kn – Short answer  Pro - Research |  |
| **12** | MSL972001 - Conduct routine site measurements | 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 = 24  A = 3 |  | 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 60):

<https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=60>

Date: 01/09/2019, 05:19 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 60):

<https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=60>

Date: 02/09/2019, 11:43 AM

**Head of SkillsPoint**

Name: pfarrow5 (Paul.Farrow3@tafensw.edu.au)

Signature: Approval was given electronically in DATA (see request 60):

<https://live.nei.tafensw.edu.au/DATA2/Site/Approvals/step2.aspx?request_id=60>

Date: 02/09/2019, 12:56 PM

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

| **No** | **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. |  |  |
| **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

| **No** | **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:

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: