

# **MSL Laboratory Operations**

## **TRAINING PACKAGE**

**Version 1.00**

## **WA NOMINAL HOURS GUIDE**

## Introduction

This Guide has been generated to enable the stakeholders in this Industry in Western Australia to participate in the managed implementation of the National MSL Laboratory Operations Training Package.

This Guide is designed to aid Registered Training Organisations (RTOs) to convert from existing Training Package qualifications to new Training Package qualifications within the scope of their training delivery.

The Guide should be read in conjunction with the endorsed components of the Training Package.

Version 1.00 of the MSL Laboratory Operations was released by Training.Gov.Au (TGA) on the 01/03/2016.

## Transition Arrangements

Registered Training Organisations (RTOs) are required to deliver Training Package qualifications in accordance with the Standards for RTOs. For further information visit the Training Accreditation Council website [www.tac.wa.gov.au](http://www.tac.wa.gov.au).

## Nominal Hours

Nominal hours are the hours of training notionally required to achieve the outcomes of units of competency.

Nominal hours are identified for nationally endorsed qualifications. Nominal hours may vary for a qualification depending on the selection of units of competency.

In Western Australia, nominal hours are used as a mechanism for funding allocation.

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## Qualifications and Nominal Hours

The following table provides a summary of the qualifications and nominal hours in the industry.

National Code	National Title	Nominal Hours
MSL20116	Certificate II in Sampling and Measurement	280
MSL30116	Certificate III in Laboratory Skills	580
MSL40116	Certificate IV in Laboratory Techniques	850
MSL50116	Diploma of Laboratory Technology	985
MSL60116	Advanced Diploma of Laboratory Operations	550

## Units of Competency and Nominal Hours

The following table provides a summary of the units of competency and nominal hours in the industry.

National Code	National Title	Nominal Hours
MSL904001	Perform standard calibrations	60
MSL905001	Perform non-standard calibrations	60
MSL905002	Create or modify calibration procedures	80
MSL905003	Create or modify automated calibration procedures	80
MSL912001	Work within a laboratory or field workplace (induction)	40
MSL913001	Communicate with other people	20
MSL913002	Plan and conduct laboratory/field work	40
MSL914001	Prepare practical science classes and demonstrations	80
MSL915001	Provide information to customers	60
MSL915002	Schedule laboratory work for a small team	60
MSL916001	Develop and maintain laboratory documentation	40
MSL916002	Manage and develop teams	40
MSL916003	Supervise laboratory operations in work or functional area	40
MSL916004	Maintain registration and statutory or legal compliance in work or functional area	40
MSL916005	Manage complex projects	60
MSL922001	Record and present data	60
MSL924001	Process and interpret data	60
MSL924002	Use laboratory application software	60
MSL925001	Analyse data and report results	120
MSL925002	Analyse measurements and estimate uncertainties	50
MSL933001	Maintain the laboratory/field workplace fit for purpose	20
MSL933002	Contribute to the achievement of quality objectives	60
MSL933003	Apply critical control point requirements	40

MSL933004	Perform calibration checks on equipment and assist with its maintenance	35
MSL934001	Contribute to the ongoing development of HACCP plans	40
MSL934002	Apply quality system and continuous improvement processes	60
MSL934003	Maintain and control stocks	40
MSL935001	Monitor the quality of test results and data	120
MSL935002	Assist in the maintenance of reference materials	60
MSL935003	Authorise the issue of test results	50
MSL935004	Maintain instruments and equipment	120
MSL936001	Maintain quality system and continuous improvement processes within work or functional area	40
MSL936002	Conduct an internal audit of the quality system	40
MSL943001	Work safely with instruments that emit ionising radiation	60
MSL943002	Participate in laboratory or field workplace safety	40
MSL944001	Maintain laboratory or field workplace safety	20
MSL946001	Implement and monitor WHS and environmental management systems	40
MSL952001	Collect routine site samples	20
MSL952002	Handle and transport samples or equipment	40
MSL953001	Receive and prepare samples for testing	40
MSL953002	Operate a robotic sample preparation system	50
MSL954001	Obtain representative samples in accordance with sampling plan	40
MSL954002	Prepare mineral samples for analysis	40
MSL955001	Supervise a robotic sample preparation system	45
MSL963001	Operate basic handblowing equipment	60
MSL963002	Repair glass apparatus using simple glassblowing equipment	60
MSL965001	Design and manufacture glass apparatus and glass systems	120
MSL965002	Perform glass coating, grinding and finishing operations	120
MSL965003	Construct, modify and maintain high vacuum systems	120
MSL972001	Conduct routine site measurements	40
MSL973001	Perform basic tests	80

MSL973002	Prepare working solutions	80
MSL973003	Prepare culture media	20
MSL973004	Perform aseptic techniques	40
MSL973005	Assist with fieldwork	40
MSL973006	Prepare trial batches for evaluation	40
MSL973007	Perform microscopic examination	40
MSL973008	Perform histological procedures	40
MSL973009	Conduct field-based acceptance tests for construction materials	50
MSL973010	Conduct laboratory-based acceptance tests for construction materials	45
MSL973011	Perform fire pouring techniques	45
MSL973012	Perform site investigation activities	80
MSL974001	Prepare, standardise and use solutions	60
MSL974002	Conduct geotechnical site investigations	50
MSL974003	Perform chemical tests and procedures	60
MSL974004	Perform food tests	60
MSL974005	Perform physical tests	60
MSL974006	Perform biological procedures	120
MSL974007	Undertake environmental field-based monitoring	60
MSL974008	Capture and manage scientific images	40
MSL974009	Undertake field-based, remote-sensing monitoring	60
MSL974010	Perform mechanical tests	80
MSL974011	Prepare tissue and cell cultures	40
MSL974012	Perform tests to determine the properties of construction materials	80
MSL974013	Monitor performance of structures	80
MSL974014	Classify soils	80
MSL974015	Operate an automated mineral analysis system	100
MSL975001	Perform microbiological tests	120
MSL975002	Perform haematological tests	120

MSL975003	Perform histological tests	120
MSL975004	Perform chemical pathology tests	120
MSL975005	Conduct sensory analysis	60
MSL975006	Perform immunohaematological tests	120
MSL975007	Supervise sampling, inspections and testing at construction sites	70
MSL975008	Apply electrophoretic techniques	120
MSL975009	Apply routine chromatographic techniques	120
MSL975010	Perform fire assay techniques	120
MSL975011	Design and supervise complex environmental field surveys	120
MSL975012	Provide input to production trials	120
MSL975013	Perform tissue and cell culture techniques	120
MSL975014	Perform molecular biology tests and procedures	120
MSL975015	Prepare animal and plant material for display	120
MSL975016	Perform complex tests to measure engineering properties of materials	120
MSL975017	Perform laboratory-based ecological techniques	120
MSL975018	Perform complex tests to measure chemical properties of materials	120
MSL975019	Apply complex instrumental techniques	120
MSL975020	Apply routine spectrometric techniques	120
MSL975021	Apply routine electrometric techniques	120
MSL975022	Perform food analyses	120
MSL975023	Supervise geotechnical site investigations	70
MSL975024	Locate, record and collect forensic samples	80
MSL975025	Perform complex laboratory testing of forensic samples	100
MSL975026	Perform physical examination of forensic samples	90
MSL975027	Classify building sites	60
MSL976002	Prepare plans and quality assurance procedures for environmental field activities	60
MSL976003	Evaluate and select appropriate test methods and/or procedures	60
MSL977001	Contribute to the development of products and applications	40

MSL977002	Troubleshoot equipment and/or production processes	40
MSL977003	Contribute to validation of test methods	40
MSL977004	Develop or adapt analyses and procedures	40



## Mapping Qualifications

The following table provides an overview of the qualifications from Version 1.00 which replace qualifications from the existing version of the MSL09 Laboratory Operations Training Package.

MSL09 Current Qualification				MSL Replacement Qualification		
National Code	National Title	Nominal Hours	E / NE	National Code	National Title	Nominal Hours
MSL20109	Certificate II in Sampling and Measurement	360	E	MSL20116	Certificate II in Sampling and Measurement	280
MSL30109	Certificate III in Laboratory Skills	640	E	MSL30116	Certificate III in Laboratory Skills	580
MSL40109	Certificate IV in Laboratory Techniques	880	E	MSL40116	Certificate IV in Laboratory Techniques	850
MSL50109	Diploma of Laboratory Technology	1560	E	MSL50116	Diploma of Laboratory Technology	985
MSL60109	Advanced Diploma of Laboratory Operations	560	E	MSL60116	Advanced Diploma of Laboratory Operations	550

## Mapping Units of Competency

The following table provides an overview of the units of competency from Version 1.00 which replace units of competency from the existing version of the MSL Laboratory Operations.

MSL09 Current Unit				MSL Replacement Unit		
National Code	National Title	Nominal Hours	E / NE	National Code	National Title	Nominal Hours
MSL904001A	Perform standard calibrations	60	E	MSL904001	Perform standard calibrations	60
MSL905001A	Perform non-standard calibrations	60	E	MSL905001	Perform non-standard calibrations	60
MSL905002A	Create or modify calibration procedures	80	E	MSL905002	Create or modify calibration procedures	80
MSL905003A	Create or modify automated calibration procedures	80	E	MSL905003	Create or modify automated calibration procedures	80
MSL912001A	Work within a laboratory/field workplace (induction)	40	E	MSL912001	Work within a laboratory or field workplace (induction)	40
MSL913001A	Communicate with other people	20	E	MSL913001	Communicate with other people	20
MSL913002A	Plan and conduct laboratory/field work	40	E	MSL913002	Plan and conduct laboratory/field work	40
MSL914001A	Prepare practical science classes and demonstrations	80	E	MSL914001	Prepare practical science classes and demonstrations	80
MSL915001A	Provide information to customers	60	E	MSL915001	Provide information to customers	60
MSL915002A	Schedule laboratory work for a small team	60	E	MSL915002	Schedule laboratory work for a small team	60
MSL916001A	Develop and maintain laboratory documentation	40	E	MSL916001	Develop and maintain laboratory documentation	40
MSL916002A	Manage and develop teams	40	E	MSL916002	Manage and develop teams	40
MSL916003A	Supervise laboratory operations in work/functional area	40	E	MSL916003	Supervise laboratory operations in work or functional area	40
MSL916004A	Maintain registration and statutory or legal compliance in work/functional area	40	E	MSL916004	Maintain registration and statutory or legal compliance in work or functional area	40
MSL916005A	Manage complex projects	60	E	MSL916005	Manage complex projects	60
MSL922001A	Record and present data	60	E	MSL922001	Record and present data	60
MSL924001A	Process and interpret data	60	E	MSL924001	Process and interpret data	60
MSL924002A	Use laboratory application software	60	E	MSL924002	Use laboratory application software	60
MSL925001A	Analyse data and report results	120	E	MSL925001	Analyse data and report results	120
MSL925002A	Analyse measurements and estimate uncertainties	50	E	MSL925002	Analyse measurements and estimate uncertainties	50

MSL933001A	Maintain the laboratory/field workplace fit for purpose	20	E	MSL933001	Maintain the laboratory/field workplace fit for purpose	20
MSL933002A	Contribute to the achievement of quality objectives	60	E	MSL933002	Contribute to the achievement of quality objectives	60
MSL933003A	Apply critical control point requirements	40	E	MSL933003	Apply critical control point requirements	40
MSL933004A	Perform calibration checks on equipment and assist with its maintenance	35	E	MSL933004	Perform calibration checks on equipment and assist with its maintenance	35
MSL934001A	Contribute to the ongoing development of HACCP plans	40	E	MSL934001	Contribute to the ongoing development of HACCP plans	40
MSL934002A	Apply quality system and continuous improvement processes	60	E	MSL934002	Apply quality system and continuous improvement processes	60
MSL934003A	Maintain and control stocks	40	E	MSL934003	Maintain and control stocks	40
MSL935001A	Monitor the quality of test results and data	120	E	MSL935001	Monitor the quality of test results and data	120
MSL935002A	Assist in the maintenance of reference materials	60	E	MSL935002	Assist in the maintenance of reference materials	60
MSL935003A	Authorise the issue of test results	50	E	MSL935003	Authorise the issue of test results	50
MSL935004A	Maintain instruments and equipment	120	E	MSL935004	Maintain instruments and equipment	120
MSL936001A	Maintain quality system and continuous improvement processes within work/functional area	40	E	MSL936001	Maintain quality system and continuous improvement processes within work or functional area	40
MSL936002A	Conduct an internal audit of the quality system	40	E	MSL936002	Conduct an internal audit of the quality system	40
MSL943001A	Work safely with instruments that emit ionising radiation	60	E	MSL943001	Work safely with instruments that emit ionising radiation	60
MSL943002A	Participate in laboratory/field workplace safety	40	E	MSL943002	Participate in laboratory or field workplace safety	40
MSL944001A	Maintain laboratory/field workplace safety	20	E	MSL944001	Maintain laboratory or field workplace safety	20
MSL946001A	Implement and monitor OHS and environmental management systems	40	E	MSL946001	Implement and monitor WHS and environmental management systems	40
MSL952001A	Collect routine site samples	20	E	MSL952001	Collect routine site samples	20
MSL952002A	Handle and transport samples or equipment	40	E	MSL952002	Handle and transport samples or equipment	40
MSL953001A	Receive and prepare samples for testing	40	E	MSL953001	Receive and prepare samples for testing	40
MSL953002A	Operate a robotic sample preparation system	50	E	MSL953002	Operate a robotic sample preparation system	50
MSL954001A	Obtain representative samples in accordance with sampling plan	40	E	MSL954001	Obtain representative samples in accordance with sampling plan	40
MSL954002A	Prepare mineral samples for analysis	40	E	MSL954002	Prepare mineral samples for analysis	40

MSL955001A	Supervise a robotic sample preparation system	45	E	MSL955001	Supervise a robotic sample preparation system	45
MSL963001A	Operate basic handblowing equipment	60	E	MSL963001	Operate basic handblowing equipment	60
MSL963002A	Repair glass apparatus using simple glassblowing equipment	60	E	MSL963002	Repair glass apparatus using simple glassblowing equipment	60
MSL965001A	Design and manufacture glass apparatus and glass systems	120	E	MSL965001	Design and manufacture glass apparatus and glass systems	120
MSL965002A	Perform glass coating, grinding and finishing operations	120	E	MSL965002	Perform glass coating, grinding and finishing operations	120
MSL965003A	Construct, modify and maintain high vacuum systems	120	E	MSL965003	Construct, modify and maintain high vacuum systems	120
MSL972001A	Conduct routine site measurements	40	E	MSL972001	Conduct routine site measurements	40
MSL973001A	Perform basic tests	80	E	MSL973001	Perform basic tests	80
MSL973002A	Prepare working solutions	80	E	MSL973002	Prepare working solutions	80
MSL973003A	Prepare culture media	20	E	MSL973003	Prepare culture media	20
MSL973004A	Perform aseptic techniques	40	E	MSL973004	Perform aseptic techniques	40
MSL973005A	Assist with fieldwork	40	E	MSL973005	Assist with fieldwork	40
MSL973006A	Prepare trial batches for evaluation	40	E	MSL973006	Prepare trial batches for evaluation	40
MSL973007A	Perform microscopic examination	40	E	MSL973007	Perform microscopic examination	40
MSL973008A	Perform histological procedures	40	E	MSL973008	Perform histological procedures	40
MSL973009A	Conduct field-based acceptance tests for construction materials	50	E	MSL973009	Conduct field-based acceptance tests for construction materials	50
MSL973010A	Conduct laboratory-based acceptance tests for construction materials	45	E	MSL973010	Conduct laboratory-based acceptance tests for construction materials	45
MSL973011A	Perform fire pouring techniques	45	E	MSL973011	Perform fire pouring techniques	45
MSL973012A	Assist with geotechnical site investigations	80	E	MSL973012	Perform site investigation activities	80
MSL974001A	Prepare, standardise and use solutions	60	E	MSL974001	Prepare, standardise and use solutions	60
MSL974002A	Conduct geotechnical site investigations	50	E	MSL974002	Conduct geotechnical site investigations	50
MSL974003A	Perform chemical tests and procedures	60	E	MSL974003	Perform chemical tests and procedures	60
MSL974004A	Perform food tests	60	E	MSL974004	Perform food tests	60
MSL974005A	Perform physical tests	60	E	MSL974005	Perform physical tests	60
MSL974006A	Perform biological procedures	120	E	MSL974006	Perform biological procedures	120

MSL974007A	Undertake environmental field-based monitoring	60	E	MSL974007	Undertake environmental field-based monitoring	60
MSL974008A	Capture and manage scientific images	40	E	MSL974008	Capture and manage scientific images	40
MSL974009A	Undertake field-based, remote-sensing monitoring	60	E	MSL974009	Undertake field-based, remote-sensing monitoring	60
MSL974010A	Perform mechanical tests	80	E	MSL974010	Perform mechanical tests	80
MSL974011A	Prepare tissue and cell cultures	40	E	MSL974011	Prepare tissue and cell cultures	40
MSL974012A	Perform tests to determine the properties of construction materials	80	E	MSL974012	Perform tests to determine the properties of construction materials	80
MSL974013A	Monitor performance of structures	80	E	MSL974013	Monitor performance of structures	80
			-	MSL974014	Classify soils	80
			-	MSL974015	Operate an automated mineral analysis system	100
MSL975001A	Perform microbiological tests	120	E	MSL975001	Perform microbiological tests	120
MSL975002A	Perform haematological tests	120	E	MSL975002	Perform haematological tests	120
MSL975003A	Perform histological tests	120	E	MSL975003	Perform histological tests	120
MSL975004A	Perform chemical pathology tests	120	E	MSL975004	Perform chemical pathology tests	120
MSL975005A	Conduct sensory analysis	60	E	MSL975005	Conduct sensory analysis	60
MSL975006A	Perform immunohaematological tests	120	E	MSL975006	Perform immunohaematological tests	120
MSL975007A	Supervise sampling, inspections and testing at construction sites	70	E	MSL975007	Supervise sampling, inspections and testing at construction sites	70
MSL975008A	Apply electrophoretic techniques	120	E	MSL975008	Apply electrophoretic techniques	120
MSL975009A	Apply routine chromatographic techniques	120	E	MSL975009	Apply routine chromatographic techniques	120
MSL975010A	Perform fire assay techniques	120	E	MSL975010	Perform fire assay techniques	120
MSL975011A	Design and supervise complex environmental field surveys	120	E	MSL975011	Design and supervise complex environmental field surveys	120
MSL975012A	Provide input to production trials	120	E	MSL975012	Provide input to production trials	120
MSL975013A	Perform tissue and cell culture techniques	120	E	MSL975013	Perform tissue and cell culture techniques	120
MSL975014A	Perform molecular biology tests and procedures	120	E	MSL975014	Perform molecular biology tests and procedures	120
MSL975015A	Prepare animal and plant material for display	120	E	MSL975015	Prepare animal and plant material for display	120
MSL975016A	Perform complex tests to measure engineering properties of materials	120	E	MSL975016	Perform complex tests to measure engineering properties of materials	120
MSL975017A	Perform laboratory-based ecological techniques	120	E	MSL975017	Perform laboratory-based ecological techniques	120

MSL975018A	Perform complex tests to measure chemical properties of materials	120	E	MSL975018	Perform complex tests to measure chemical properties of materials	120
MSL975019A	Apply complex instrumental techniques	120	E	MSL975019	Apply complex instrumental techniques	120
MSL975020A	Apply routine spectrometric techniques	120	E	MSL975020	Apply routine spectrometric techniques	120
MSL975021A	Apply routine electrometric techniques	120	E	MSL975021	Apply routine electrometric techniques	120
MSL975022A	Perform food analyses	120	E	MSL975022	Perform food analyses	120
MSL975023A	Supervise geotechnical site investigations	70	E	MSL975023	Supervise geotechnical site investigations	70
MSL975024A	Locate record and collect forensic samples	80	E	MSL975024	Locate, record and collect forensic samples	80
MSL975025A	Perform complex laboratory testing of forensic samples	100	E	MSL975025	Perform complex laboratory testing of forensic samples	100
MSL975026A	Perform physical examination of forensic samples	90	E	MSL975026	Perform physical examination of forensic samples	90
MSL976001A	Classify building sites	60	E	MSL975027	Classify building sites	60
MSL976002A	Prepare plans and quality assurance procedures for environmental field activities	60	E	MSL976002	Prepare plans and quality assurance procedures for environmental field activities	60
MSL976003A	Evaluate and select appropriate test methods and/or procedures	60	E	MSL976003	Evaluate and select appropriate test methods and/or procedures	60
MSL977001A	Contribute to the development of products and applications	40	E	MSL977001	Contribute to the development of products and applications	40
MSL977002A	Troubleshoot equipment and/or production processes	40	E	MSL977002	Troubleshoot equipment and/or production processes	40
MSL977003A	Contribute to validation of test methods	40	E	MSL977003	Contribute to validation of test methods	40
MSL977004A	Develop or adapt analyses and procedures	40	E	MSL977004	Develop or adapt analyses and procedures	40

## Traineeships

The following table provides a summary of the qualifications in the MSL: Laboratory Operations and the accredited traineeship courses they will replace.

National Code	National Title	Traineeship	Nominal Hours	E / NE	National Code	National Title	Nominal Hours
MSL20109	Certificate II in Sampling and Measurement	TR06070: SAMPLING AND MEASUREMENT (LEVEL 2)	360	E	MSL20116	Certificate II in Sampling and Measurement	280
MSL30109	Certificate III in Laboratory Skills	TR08150: LABORATORY SKILLS (LEVEL 3)	640	E	MSL30116	Certificate III in Laboratory Skills	580
MSL40109	Certificate IV in Laboratory Techniques	TR08160: LABORATORY TECHNIQUES (LEVEL 4)	880	E	MSL40116	Certificate IV in Laboratory Techniques	850
MSL50109	Diploma in Laboratory Technology	TR08170: LABORATORY TECHNOLOGY (LEVEL 5)	1560	E	MSL50116	Diploma in Laboratory Technology	985
MSL60109	Advanced Diploma in Laboratory Operations	TR07010: SENIOR LABORATORY TECHNICIAN (LEVEL 6)	560	E	MSL60116	Advanced Diploma in Laboratory Operations	550