



Stage 6 Syllabus

Primary Industries Curriculum Framework

Course Structures and Requirements and HSC Content

for implementation from 2012

Primary Industries (120 indicative hours)
Primary Industries (240 indicative hours)
Primary Industries Specialisation Study
(60 or 120 or 180 or 240 indicative hours)

2011

© 2011 Copyright Board of Studies NSW for and on behalf of the Crown in right of the State of New South Wales.

This document contains Material prepared by the Board of Studies NSW for and on behalf of the State of New South Wales. The Material is protected by Crown copyright.

All rights reserved. No part of the Material may be reproduced in Australia or in any other country by any process, electronic or otherwise, in any material form or transmitted to any other person or stored electronically in any form without the prior written permission of the Board of Studies NSW, except as permitted by the *Copyright Act 1968*. School students in NSW and teachers in schools in NSW may copy reasonable portions of the Material for the purposes of bona fide research or study.

When you access the Material you agree:

- to use the Material for information purposes only
- to reproduce a single copy for personal bona fide study use only and not to reproduce any major extract or the entire Material without the prior permission of the Board of Studies NSW
- to acknowledge that the Material is provided by the Board of Studies NSW
- not to make any charge for providing the Material or any part of the Material to another person or in any way make commercial use of the Material without the prior written consent of the Board of Studies NSW and payment of the appropriate copyright fee
- to include this copyright notice in any copy made
- not to modify the Material or any part of the Material without the express prior written permission of the Board of Studies NSW.

The Material may contain third-party copyright materials such as photos, diagrams, quotations, cartoons and artworks. These materials are protected by Australian and international copyright laws and may not be reproduced or transmitted in any format without the copyright owner's specific permission. Unauthorised reproduction, transmission or commercial use of such copyright materials may result in prosecution.

The Board of Studies has made all reasonable attempts to locate owners of third-party copyright material and invites anyone from whom permission has not been sought to contact the Copyright Officer, ph (02) 9367 8289, fax (02) 9279 1482.

Acknowledgements

Units of competency from the Agriculture, Horticulture and Conservation and Land Management Training Package (AHC10) in this syllabus are © Commonwealth of Australia. Reproduced with permission.

The following copyright warning applies to the material from the Training Package:

All rights reserved. This work has been produced initially with the assistance of funding provided by the Commonwealth Government through DEEWR. This work is copyright, but permission is given to trainers and teachers to make copies by photocopying or other duplicating processes for use with their own training organisations or in a workplace where the training is being conducted. This permission does not extend to the making of copies for use outside the immediate training environment for which they are made, nor the making of copies for hire or resale to third parties. The views expressed in this version of the work do not necessarily represent the views of DEEWR. DEEWR does not give warranty nor accept any liability.

Published by
Board of Studies NSW
GPO Box 5300
Sydney NSW 2001
Australia

Tel: (02) 9367 8111
Fax: (02) 9367 8484
Internet: www.boardofstudies.nsw.edu.au

September 2011

2011730

Contents

1	Introduction to the Primary Industries Curriculum Framework	5
1.1	Aim.....	5
1.2	Industry context – primary industries.....	5
1.3	AQF VET qualifications available in the Primary Industries Curriculum Framework	6
1.4	AQF VET qualification and HSC VET course completion requirements	6
1.4.1	AQF VET qualification requirements	6
1.4.2	HSC VET course requirements	7
1.5	HSC VET course delivery	7
1.6	Outcomes and Content	8
1.7	Assessment Requirements and Advice	8
1.8	Documentation associated with industry curriculum frameworks.....	8
2	Course Structures and Requirements	10
2.1	Primary Industries HSC VET courses.....	10
2.1.1	Preliminary and HSC unit credit	10
	Table 1 HSC credit units for Primary Industries HSC courses	10
2.1.2	Units of competency.....	11
2.1.3	HSC Content	11
2.1.4	Work placement requirements	12
	Table 2 Minimum work placement hours for Primary Industries HSC courses	12
2.1.5	HSC examination	12
2.2	Primary Industries (120 indicative hours).....	13
2.3	Primary Industries (240 indicative hours).....	15
2.4	Primary Industries Specialisation Study (60 or 120 or 180 or 240 indicative hours).....	17
2.5	Primary Industries units of competency.....	19
	Table 3 Mandatory units of competency for the Certificate II qualification pathways for the 240-hour course.....	19
	Table 4 Mandatory units of competency for the Certificate III qualification pathways for the 240-hour course.....	19
	Table 5 HSC elective pool – units of competency	20
3	HSC Content	27
	Table 6 Focus areas and associated units of competency	28
3.1	Chemicals – mandatory focus area.....	29
3.1.1	Outcomes.....	29
3.1.2	Associated units of competency	29
3.1.3	Employability skills.....	30
3.1.4	Scope of learning for the HSC	31
3.2	Safety – mandatory focus area	34
3.2.1	Outcomes.....	34
3.2.2	Associated units of competency	34
3.2.3	Employability skills.....	35
3.2.4	Scope of learning for the HSC	36

3.3	Sustainability – mandatory focus area	39
3.3.1	Outcomes.....	39
3.3.2	Associated units of competency	39
3.3.3	Employability skills.....	40
3.3.4	Scope of learning for the HSC	41
3.4	Weather – mandatory focus area.....	45
3.4.1	Outcomes.....	45
3.4.2	Associated units of competency	45
3.4.3	Employability skills.....	46
3.4.4	Scope of learning for the HSC	47
3.5	Working in the industry – mandatory focus area	49
3.5.1	Outcomes.....	49
3.5.2	Associated unit of competency	49
3.5.3	Employability skills.....	50
3.5.4	Scope of learning for the HSC	51
3.6	Livestock health and welfare – stream focus area.....	56
3.6.1	Outcomes.....	56
3.6.2	Associated units of competency	56
3.6.3	Employability skills.....	57
3.6.4	Scope of learning for the HSC	58
3.7	Plant pests, diseases and disorders – stream focus area	62
3.7.1	Outcomes.....	62
3.7.2	Associated units of competency	62
3.7.3	Employability skills.....	63
3.7.4	Scope of learning for the HSC	64
4	HSC examination	66
4.1	Examinable outcomes and content.....	66
4.1.1	Relationship of the Primary Industries (240 indicative hours) course structure to the HSC examination	67
5	Other important information.....	68
5.1	Recognition of Prior Learning (RPL) and credit transfer within VET courses	68
5.2	School-based apprentices and trainees	68
5.3	Students with Special Education Needs	69
5.4	Access by students in Years 9 and 10 (Stage 5).....	69
6	Glossary.....	70

1 Introduction to the Primary Industries Curriculum Framework

Industry curriculum frameworks provide students with the opportunity to gain industry-recognised national vocational qualifications under the Australian Qualifications Framework (AQF) as part of their NSW Higher School Certificate (HSC).

HSC courses within Industry Curriculum Frameworks count as Board Developed unit credit for the HSC and can contribute towards an Australian Tertiary Admission Rank (ATAR).

1.1 Aim

The Primary Industries Curriculum Framework is designed to enable students to develop a range of technical, vocational and interpersonal competencies valued both within and beyond the workplace. They will also acquire underpinning knowledge and skills related to work and further education within primary industries.

It also provides for the development of employability skills such as communication and teamwork which are transferable to other industry areas as well as being key features of each qualification available through the Framework.

Through the study of this subject, students will gain experiences that can be applied to a range of contexts, including work, study and leisure, and that will assist them to make informed career choices.

1.2 Industry context – primary industries

Australia remains a world leader in rural and related industries. These industries are key drivers of our state's economy, and primary industries provide many social, environmental, cultural and economic benefits to the people of NSW. Sustainability of the country's natural resources is the subject of regular debate in the Australian community.

Natural resources and primary products are crucial to our lives. The various sectors of primary industries supply us with many products and services essential to life including food, fibre, timber and energy, as well as the basic materials used in other industries.

The demand for products and services from primary industries in an environment featuring economic growth, climate change and diminishing resources will test the technologies, work practices and people in the industry. The extent of change demands the adoption of new skills and increased knowledge across the entire workforce.

The primary industries sector is a significant employer in Australia, particularly in regional and rural areas. The agriculture, horticulture and conservation and land management industry sectors offer a wide and diverse range of career opportunities and pathways, both within and across organisations and industry sectors.¹

¹ www.agrifoodskills.net.au and www.landlearnsw.org.au

1.3 AQF VET qualifications available in the Primary Industries Curriculum Framework

The Primary Industries Curriculum Framework is based on qualifications and units of competency contained in the nationally endorsed [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#).

The AQF VET qualifications available in the Primary Industries Curriculum Framework are:

AHC20110	Certificate II in Agriculture
AHC20310	Certificate II in Production Horticulture
AHC20410	Certificate II in Horticulture
AHC20610	Certificate II in Parks and Gardens
AHC20710	Certificate II in Production Nursery
AHC20810	Certificate II in Retail Nursery
AHC20910	Certificate II in Sports Turf Management
AHC21010	Certificate II in Conservation and Land Management
AHC21210	Certificate II in Rural Operations
AHC21310	Certificate II in Shearing
AHC21410	Certificate II in Wool Handling
AHC21510	Certificate II in Floriculture
AHC21610	Certificate II in Landscaping
AHC30110	Certificate III in Agriculture
AHC30310	Certificate III in Horse Breeding
AHC30710	Certificate III in Horticulture
AHC31010	Certificate III in Parks and Gardens (Statement of Attainment only)
AHC32810	Certificate III in Rural Operations.

1.4 AQF VET qualification and HSC VET course completion requirements

The requirements for the completion of an AQF VET qualification are different to the requirements for HSC VET course completion. Registered Training Organisations (RTOs) need to ensure that delivery of courses meets HSC course requirements and complies with Training Package rules.

1.4.1 AQF VET qualification requirements

To receive AQF VET qualifications, students must meet the assessment requirements of the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#). A qualified assessor must conduct the assessment.

AQF VET qualifications are determined by the qualification rules for each Training Package, referred to as *qualification packaging rules*. The qualification packaging rules describe the number and range of **core** and **elective** units of competency required for eligibility for an AQF VET qualification.

Qualification packaging rules for each AQF VET qualification available through the Primary Industries Curriculum Framework are contained in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au. Tables detailing the status of units of competency in the Framework in relation to these qualifications are provided in the qualification associated documents and support material for this Framework (www.boardofstudies.nsw.edu.au/syllabus_hsc/primary-industries.html).

Students may be eligible for the AQF VET qualification as a result of meeting the requirements of the packaging rules for that qualification prior to completing all HSC VET course requirements.

1.4.2 HSC VET course requirements

HSC VET courses in the Primary Industries Curriculum Framework are made up of:

- units of competency
 - HSC **mandatory** units of competency
 - HSC **elective** units of competency
- HSC outcomes and content
- mandatory HSC work placement requirements.

For a student to be considered to have satisfactorily completed a course within the Primary Industries Curriculum Framework they must meet the:

- HSC VET course requirements described in each HSC course structure in the Framework (refer to Sections 2.2–2.5 of this Syllabus)
- requirements for satisfactory course completion (refer to the Board's [Assessment, Certification and Examination \(ACE\) Manual](#)) – there must be sufficient evidence that the student has:
 - followed the course developed by the Board
 - applied themselves with diligence and sustained effort to the set tasks and experiences provided in the course
 - achieved some or all of the course outcomes
 - undertaken the mandatory work placement.

HSC elective units of competency should be selected to meet qualification packaging rules for the intended qualification pathway. Selection of units of competency should also be guided by the job outcome sought and local industry requirements.

1.5 HSC VET course delivery

HSC VET courses can only be delivered by a Registered Training Organisation (RTO) with the relevant qualification and units of competency on their scope of registration. These can include:

- schools and colleges as a part of school system RTOs
- TAFE NSW institutes
- other RTOs on behalf of schools and colleges.

Information about the delivery of VET courses for the HSC by RTOs other than schools and colleges as part of school system RTOs or TAFE NSW colleges are contained in the Board of Studies [Assessment, Certification and Examination \(ACE\) Manual](#).

Non-government schools also need to refer to the *Registered and Accredited Individual Non-government Schools (NSW) Manual* or *Registration Systems and Member Non-government Schools (NSW) Manual* which are available on the Board's website (www.boardofstudies.nsw.edu.au/manuals/#regaccreditsystemsmanuals).

RTOs offering training programs for the delivery and assessment of HSC Primary Industries courses must meet the requirements of the:

- VET Quality Framework [formerly referred to as the Australian Quality Training Framework (AQTF)]
- *Agriculture, Horticulture and Conservation and Land Management Training Package (AHC10)*
- HSC course (including addressing the scope of learning for the HSC outlined in HSC Content focus areas in Section 3 of this Syllabus).

The units of competency that can be delivered and assessed are determined by the scope of the registration of each RTO. **Teachers and trainers should check their accreditation and their RTO's scope of registration before determining which units of competency are to be included in their teaching and assessment programs. School or college principals should seek documentary evidence of the scope of any external RTO delivering an HSC VET course.** Scope of registration can be checked at www.training.gov.au.

1.6 Outcomes and content

The HSC outcomes and content for this industry curriculum framework are defined in:

- the units of competency (refer to Section 2.5 of this Syllabus)
- HSC Content focus areas (refer to Section 3 of this Syllabus).

1.7 Assessment requirements and advice

The HSC VET courses within the Primary Industries Curriculum Framework are competency-based. The Board of Studies and the VET Quality Framework (formerly referred to as the AQTF) require that a competency-based approach to assessment is used. Advice on appropriate assessment practice in relation to the Primary Industries Curriculum Framework is contained in the [Assessment and Reporting in Primary Industries Stage 6](#) document.

An integrated or holistic approach to course delivery and assessment should be adopted.

1.8 Documentation associated with industry curriculum frameworks

Schools and colleges offering HSC Primary Industries Curriculum Framework courses must follow the Primary Industries Curriculum Framework Stage 6 Syllabus and take into account the information provided in the associated documentation.

Industry curriculum framework documentation includes:

- the syllabus
- associated documents
- support materials.

The range of documentation for the Primary Industries Curriculum Framework is shown on the following page. This documentation is available on the Board's website at www.boardofstudies.nsw.edu.au/syllabus_hsc/primary-industries.html

Syllabus

Primary Industries Stage 6 Syllabus

- course structures and requirements
- work placement requirements
- HSC Content (focus areas)
- examinable outcomes and content

Associated documents

**Primary Industries –
Certificate II qualifications**

**Primary Industries –
Certificate III qualifications**

**Pathways from Certificate II into
Certificate III in Primary Industries**

**Work placement in
Primary Industries**

- industry-specific information
- principles of work placement

**Employability skills in
Primary Industries**

**Assessment and Reporting in
Primary Industries**

- assessment in Stage 6
- reporting achievement in the HSC
- competency-based assessment
- Training Package requirements
- HSC examination
- estimated examination mark
- HSC examination specifications

**HSC examination
achievement standards**

- performance band descriptions
- standards package

Support materials

Syllabus modification history

HSC Content mind maps

**HSC VET course information sheets
for HSC subject selection**

**Summary description of units of
competency in the Framework**

Course planning templates

Students with special education needs

- fact sheet
- support document

HSC examination materials

- sample HSC examination questions
- past HSC examination papers
- notes from the marking centre

2 Course structures and requirements

2.1 Primary Industries HSC VET courses

This Framework specifies the range of industry-developed units of competency from the Agriculture, Horticulture and Conservation and Land Management Training Package (AHC10) for inclusion in the HSC. It describes how these units of competency are arranged in HSC VET courses to gain unit credit for the HSC.

The Primary Industries Curriculum Framework contains the following courses:

- Primary Industries (120 indicative hours) – see Section 2.2 of this Syllabus
- Primary Industries (240 indicative hours) – see Section 2.3 of this Syllabus
- Primary Industries Specialisation Study (60 or 120 or 180 or 240 indicative hours) – see Section 2.4 of this Syllabus.

Students can undertake either the Primary Industries (120 indicative hours) course or the Primary Industries (240 indicative hours) course. In addition students undertaking the Primary Industries (240 indicative hours) course can access the Primary Industries Specialisation Study (60 or 120 or 180 or 240 indicative hours) course.

2.1.1 Preliminary and HSC unit credit

To facilitate flexibility of VET in the HSC, courses within the Primary Industries Curriculum Framework may be delivered as Preliminary units, as HSC units or as a combination of Preliminary and HSC units.

Table 1 HSC credit units for Primary Industries HSC courses

HSC VET course	HSC credit units
Primary Industries (120 indicative hours)	2U
Primary Industries (240 indicative hours)	4U
Primary Industries Specialisation Study (60 indicative hours)	1U
Primary Industries Specialisation Study (120 indicative hours)	2U
Primary Industries Specialisation Study (180 indicative hours)	3U
Primary Industries Specialisation Study (240 indicative hours)	4U

The maximum number of Preliminary and/or HSC credit units available from this Framework is 8 units. That is, courses can total up to 480 HSC indicative hours.

The HSC credit units will be allocated to students' Preliminary and/or HSC patterns of study as required.

The pattern of study (BOS course number) entered on *Schools Online (Administration)* should reflect the delivery of the HSC VET course over successive years. For example, delivery of the 240 HSC indicative hour course over two years should be entered as 2U x 2 years. Students will be credentialled for the HSC credit units entered each calendar year provided they have satisfactorily completed the course requirements for that calendar year as determined by the school, college or RTO.

2.1.2 Units of competency

Courses for the Primary Industries Curriculum Framework are based on units of competency from the [*Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)*](#). The units of competency available in the Framework are listed in Tables 3–5 of this Syllabus.

Each HSC VET course indicates whether a unit of competency is mandatory, stream or elective for that course (refer to Sections 2.2–2.5 of this Syllabus).

Allocation of HSC indicative hours of credit

Units of competency drawn from Training Packages are not defined in terms of duration. The amount of time required by individual students to achieve competency will vary according to their aptitude and experience. Where a training program is designed for delivery by an RTO, the RTO will specify the length of the training program according to the delivery strategies and/or curriculum resources chosen.

However, for the purposes of the HSC, VET courses must be described in terms of their indicative hours. For this reason, indicative hours for unit credit towards the HSC have been assigned to each unit of competency within the Framework. It is emphasised that the assignment of indicative hours does not imply that all students will fulfil all requirements of a unit of competency within these hours. RTOs may determine that additional or fewer hours are required for the achievement of particular competencies. However, this does not alter the HSC indicative hours allocated, only the delivery hours.

Students may need to spend additional time practising skills in a work environment and in completing projects and assignments, in order to fulfil Training Package assessment requirements.

Tables 3–5 in Section 2.5 of this Syllabus list the HSC indicative hours assigned to each unit of competency included in the Primary Industries Curriculum Framework for the purpose of unit credit towards the HSC.

2.1.3 HSC Content

The HSC Content for this industry curriculum framework is organised into focus areas. Each focus area prescribes the scope of learning for the HSC. This is drawn from the associated units of competency (refer to Section 3 of this Syllabus).

2.1.4 Work placement requirements

Work placement is a mandatory HSC requirement within this Framework and appropriate hours have been assigned to each HSC VET course.

Students must complete the following work placement for Primary Industries Curriculum Framework courses.

Table 2 Minimum work placement hours for Primary Industries HSC courses

Primary Industries Framework course	Minimum work placement requirement
Primary Industries (120 indicative hours)	35 hours
Primary Industries (240 indicative hours)	70 hours
Primary Industries Specialisation Study (60 indicative hours)	no additional hours required
Primary Industries Specialisation Study (120 or 180 or 240 indicative hours)	35 hours

Students undertaking these courses as part of a school-based apprenticeship or traineeship will meet the mandatory work placement hour requirements through the on-the-job training component of the apprenticeship or traineeship.

Work placement is to be undertaken in an appropriate primary industries work environment.

Non-completion of work placement is grounds for withholding the HSC course. Schools and colleges are advised to follow the procedure for issuing ‘N’ determinations as outlined in the Board of Studies [Assessment, Certification and Examination \(ACE\) Manual](#).

Refer to the [Work Placement in Primary Industries](#) document for further information.

2.1.5 HSC examination

The Primary Industries Curriculum Framework includes an optional Primary Industries HSC examination. Students who have completed the Primary Industries (240 indicative hours) course are eligible to sit for the HSC examination.

Students who choose to sit for the Primary Industries HSC examination can have the results of the examination count towards their Australian Tertiary Admission Rank (ATAR) (refer to Section 4 of this Syllabus).

Students who want to sit for the Primary Industries HSC examination must be entered for the examination in addition to their Primary Industries course on *Schools Online (Administration)*.

2.2 Primary Industries (120 indicative hours)

Purpose

The purpose of this HSC VET course is to provide students with an opportunity to develop basic knowledge and skills to be competent in routine tasks in various primary industries settings.

AQF VET qualifications

Depending on the selection and achievement of units of competency, the possible qualification outcomes for the Primary Industries (120 indicative hours) course are:

Statement of Attainment towards:

- Certificate II in Agriculture (AHC20110)
- Certificate II in Production Horticulture (AHC20310)
- Certificate II in Horticulture (AHC20410)
- Certificate II in Parks and Gardens (AHC20610)
- Certificate II in Production Nursery (AHC20710)
- Certificate II in Retail Nursery (AHC20810)
- Certificate II in Sports Turf Management (AHC20910)
- Certificate II in Conservation and Land Management (AHC21010)
- Certificate II in Rural Operations (AHC21210)
- Certificate II in Shearing (AHC21310)
- Certificate II in Floriculture (AHC21510)
- Certificate II in Landscaping (AHC21610).

Certificate II in Wool Handling (AHC21410)

Statement of Attainment towards:

- Certificate III in Agriculture (AHC30110)
- Certificate III in Horse Breeding (AHC30310)
- Certificate III in Horticulture (AHC30710)
- Certificate III in Parks and Gardens (AHC31010)
- Certificate III in Rural Operations (AHC32810).

Course structure

This course comprises:

- one HSC mandatory unit of competency (see the diagram on next page)
- a range of HSC elective units of competency (from the units in Tables 3–5, Section 2.5 of this Syllabus).

Course requirements – Primary Industries (120 indicative hours)

Students must attempt:		
<p>ONE mandatory unit of competency</p> <p>AHCOHS201A Participate in OHS processes</p> <p>OR</p> <p>AHCOHS301A Contribute to OHS processes</p>	<p>Students must complete a minimum of 35 hours of mandatory work placement (Section 2.1.4)</p>	
AND		
<p>a selection of units of competency from the mandatory, stream and/or elective pool to a minimum of 120 HSC indicative hours</p> <p>(Tables 3–5, Section 2.5)</p>		

2.3 Primary Industries (240 indicative hours)

Purpose

The purpose of this HSC VET course is to provide students with the opportunity to gain knowledge and skills to enable the individual to be competent in a range of activities and functions in a defined context within a primary industries setting.

AQF VET qualifications

The Primary Industries (240 indicative hours) course provides a pathway to the following qualifications:

- Certificate II in Agriculture (AHC20110)
- Certificate II in Production Horticulture (AHC20310)
- Certificate II in Horticulture (AHC20410)
- Certificate II in Parks and Gardens (AHC20610)
- Certificate II in Production Nursery (AHC20710)
- Certificate II in Retail Nursery (AHC20810)
- Certificate II in Sports Turf Management (AHC20910)
- Certificate II in Conservation and Land Management (AHC21010)
- Certificate II in Rural Operations (AHC21210)
- Certificate II in Floriculture (AHC21510)
- Certificate II in Landscaping (AHC21610)
- Certificate III in Agriculture (AHC30110)
- Certificate III in Horse Breeding (AHC30310)
- Certificate III in Horticulture (AHC30710)
- Certificate III in Parks and Gardens (AHC31010) (Statement of Attainment only)
- Certificate III in Rural Operations (AHC32810).

Depending on the selection of units of competency, as well as RPL and/or credit transfer granted, students may need to undertake a Specialisation Study as well as the 240 indicative hour course to achieve a qualification.

Course structure

This course comprises:

- five mandatory units of competency
- two stream units of competency
 - Livestock health and welfare
 - Plant pests, diseases and disorders
- a range of elective units of competency
- HSC Content – mandatory and stream focus area
(See Tables 3–5, Section 2.5 of this Syllabus.)

Primary Industries HSC examination

An external written Higher School Certificate examination will be conducted for the 240 indicative hour course. (refer to Sections 2.1.5 and 4 of this Syllabus).

The HSC Content (focus areas) for the HSC examination is detailed in Section 3 of this Syllabus.

Course requirements – Primary Industries (240 indicative hours)

Students **must** attempt ONE of the following:

<p style="text-align: center;">Pathway to Certificate II qualifications</p> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center;">FIVE mandatory units of competency (Table 3, Section 2.5) <i>and the following focus areas</i></p> <ul style="list-style-type: none"> • Chemicals • Safety • Sustainability • Weather • Working in the industry (Section 3) </div> <p style="text-align: center;">+</p> <table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; padding: 5px; width: 50%; text-align: center;"> <p>AHCLSK202A (Table 3, Section 2.5) <i>and the</i> Livestock health and welfare focus area (Section 3)</p> </td> <td style="text-align: center; vertical-align: middle; font-weight: bold; padding: 0 10px;">OR</td> <td style="border: 1px solid black; padding: 5px; width: 50%; text-align: center;"> <p>AHCPMG202A (Table 3, Section 2.5) <i>and the</i> Plant pests, diseases and disorders focus area (Section 3)</p> </td> </tr> </table> <p style="text-align: center;">+</p> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px; text-align: center;"> <p>units of competency from the elective pool, or the stream unit not previously undertaken, to bring course total to a minimum of 240 HSC indicative hours (Tables 3 and 5, Section 2.5)</p> </div> <p style="text-align: center;">+</p> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px; text-align: center;"> <p>a minimum of 70 hours of mandatory work placement (Section 2.1.4)</p> </div>	<p>AHCLSK202A (Table 3, Section 2.5) <i>and the</i> Livestock health and welfare focus area (Section 3)</p>	OR	<p>AHCPMG202A (Table 3, Section 2.5) <i>and the</i> Plant pests, diseases and disorders focus area (Section 3)</p>	<p style="text-align: center;">Pathway to Certificate III qualifications</p> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> <p style="text-align: center;">FIVE mandatory units of competency (Table 4, Section 2.5) <i>and the following focus areas</i></p> <ul style="list-style-type: none"> • Chemicals • Safety • Sustainability • Weather • Working in the industry (Section 3) </div> <p style="text-align: center;">+</p> <table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; padding: 5px; width: 50%; text-align: center;"> <p>AHCLSK309A (Table 4, Section 2.5) <i>and the</i> Livestock health and welfare focus area (Section 3)</p> </td> <td style="text-align: center; vertical-align: middle; font-weight: bold; padding: 0 10px;">OR</td> <td style="border: 1px solid black; padding: 5px; width: 50%; text-align: center;"> <p>AHCPMG302A (Table 4, Section 2.5) <i>and the</i> Plant pests, diseases and disorders focus area (Section 3)</p> </td> </tr> </table> <p style="text-align: center;">+</p> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px; text-align: center;"> <p>units of competency from the elective pool, or the stream unit not previously undertaken, to bring course total to a minimum of 240 HSC indicative hours (Tables 4–5, Section 2.5)</p> </div> <p style="text-align: center;">+</p> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px; text-align: center;"> <p>a minimum of 70 hours of mandatory work placement (Section 2.1.4)</p> </div>	<p>AHCLSK309A (Table 4, Section 2.5) <i>and the</i> Livestock health and welfare focus area (Section 3)</p>	OR	<p>AHCPMG302A (Table 4, Section 2.5) <i>and the</i> Plant pests, diseases and disorders focus area (Section 3)</p>
<p>AHCLSK202A (Table 3, Section 2.5) <i>and the</i> Livestock health and welfare focus area (Section 3)</p>	OR	<p>AHCPMG202A (Table 3, Section 2.5) <i>and the</i> Plant pests, diseases and disorders focus area (Section 3)</p>					
<p>AHCLSK309A (Table 4, Section 2.5) <i>and the</i> Livestock health and welfare focus area (Section 3)</p>	OR	<p>AHCPMG302A (Table 4, Section 2.5) <i>and the</i> Plant pests, diseases and disorders focus area (Section 3)</p>					

2.4 Primary Industries Specialisation Study (60 or 120 or 180 or 240 indicative hours)

Purpose

The purpose of the Primary Industries Specialisation Study is to provide students with the opportunity to gain further credit towards an industry qualification.

AQF VET qualifications

The Primary Industries Specialisation Study (60 or 120 or 180 or 240 indicative hours) course provides a pathway to the following qualifications:

- Certificate II in Agriculture (AHC20110)
- Certificate II in Production Horticulture (AHC20310)
- Certificate II in Horticulture (AHC20410)
- Certificate II in Parks and Gardens (AHC20610)
- Certificate II in Production Nursery (AHC20710)
- Certificate II in Retail Nursery (AHC20810)
- Certificate II in Sports Turf Management (AHC20910)
- Certificate II in Conservation and Land Management (AHC21010)
- Certificate II in Rural Operations (AHC21210)
- Certificate II in Wool Handling (AHC21410)
- Certificate II in Shearing (AHC21310)
- Certificate II in Floriculture (AHC21510)
- Certificate II in Landscaping (AHC21610)
- Certificate III in Agriculture (AHC30110)
- Certificate III in Horse Breeding (AHC30310)
- Certificate III in Horticulture (AHC30710)
- Certificate III in Parks and Gardens (AHC31010) (Statement of Attainment only)
- Certificate III in Rural Operations (AHC32810).

The selection of units of competency, as well as RPL and/or credit transfer granted, will determine the Specialisation Study course students need to undertake with the 240 indicative hour course to achieve a qualification.

Course eligibility

The Primary Industries Specialisation Study is only available to students who are currently entered in, or have completed, the Primary Industries (240 indicative hours) course.

For students who have undertaken a Certificate II qualification as a part of the Primary Industries (240 indicative hours) course, and are undertaking a Certificate III qualification pathway in the Primary Industries Specialisation Study, there are different course requirements. RTOs must refer to the associated document [*Pathways from Certificate II to Certificate III in Primary Industries*](#) for further information.

Course structure

The Primary Industries Specialisation Study consists of units of competency that are drawn from the elective pool, or the stream units of competency not previously undertaken (see Tables 3–5, Section 2.5 of this Syllabus).

Course requirements – Primary Industries Specialisation Study (60 or 120 or 180 or 240 indicative hours)

Students must attempt:	
<p>units of competency not previously undertaken to a minimum of</p> <p>60 HSC indicative hours OR 120 HSC indicative hours OR 180 HSC indicative hours OR 240 HSC indicative hours</p> <p>(Tables 3–5, Section 2.5)</p>	<p>Mandatory work placement requirement</p> <p>no additional work placement for the 60 HSC indicative hours Specialisation Study</p> <p>35 additional hours for the 120, 180 or 240 HSC indicative hours Specialisation Study</p> <p>(Section 2.1.4)</p>

2.5 Primary Industries units of competency

Details of units of competency listed in Tables 3–5 are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

Table 3 Mandatory units of competency for the Certificate II qualification pathways for the 240-hour course

Attempt the following units of competency:

Unit code	Unit title	HSC indicative hours of credit
AHCCHM201A	Apply chemicals under supervision	20
AHCOHS201A	Participate in OHS processes	20
AHCWRK201A	Observe and report on weather	15
AHCWRK204A	Work effectively in the industry	20
AHCWRK209A	Participate in environmentally sustainable work practices	20
and one of the following stream units		
AHCLSK202A	Care for health and welfare of livestock	25
or		
AHCPMG202A	Treat plant pests, diseases and disorders	20
Mandatory HSC indicative hours		115 or 120

OR

Table 4 Mandatory units of competency for the Certificate III qualification pathways for the 240-hour course

Attempt the following units of competency:

Unit code	Unit title	HSC indicative hours of credit
AHCCHM303A	Prepare and apply chemicals	20
AHCOHS301A	Contribute to OHS processes	25
AHCWRK204A	Work effectively in the industry	20
AHCWRK302A	Monitor weather conditions	20
AHCWRK313A	Implement and monitor environmentally sustainable work practices	25
and one of the following stream units		
AHCLSK309A	Implement animal health control programs	30
or		
AHCPMG302A	Control plant pests, diseases and disorders	25
Mandatory HSC indicative hours		135 or 140

Table 5 HSC elective pool – units of competency

Unit code	Unit title	HSC indicative hours of credit
Agribusiness		
AHCAGB301A	Keep records for a primary production business	30
Biosecurity		
AHCBIO201A	Inspect and clean machinery for plant, animal and soil material	10
AHCBIO202A	Follow site quarantine procedures	15
Broadacre cropping		
AHCBAC201A	Assist agricultural crop establishment	15
AHCBAC202A	Assist agricultural crop maintenance	15
AHCBAC203A	Assist agricultural crop harvesting	15
AHCBAC301A	Conserve forage	20
AHCBAC302A	Establish pastures and crops for livestock production	25
AHCBAC305A	Undertake preparation of land for agricultural crop production	20
AHCBAC306A	Establish agricultural crops	25
AHCBAC307A	Maintain agricultural crops	20
AHCBAC308A	Undertake agricultural crop harvesting activities	20
Business		
AHCBUS301A	Use hand held e-business tools	15
Chemicals		
AHCCHM304A	Transport, handle and store chemicals	15
Dairy		
AHCDRY201A	Milk livestock	20
Drainage		
AHCDRG201A	Maintain drainage systems	15
AHCDRG301A	Install drainage systems	30
Fauna		
AHCFAU201A	Recognise fauna	15
First aid		
HLTFA201A	Provide basic emergency life support	15
HLTFA301B	Apply first aid	20

Table 5 cont/d

Unit code	Unit title	HSC indicative hours of credit
Horse breeding		
AHCHBR201A	Monitor horse health and welfare	20
AHCHBR202A	Handle young horses	25
AHCHBR203A	Provide daily care for horses	30
AHCHBR204A	Assist with mating procedures and parturition of horses	25
AHCHBR302A	Carry out basic hoof care procedures	15
AHCHBR304A	Educate, ride and care for horses and equipment	30
AHCHBR306A	Prevent and treat equine injury and disease	25
AHCHBR307A	Assess suitability of horses for stock work	20
Indigenous land management		
AHCILM201A	Maintain cultural places	15
AHCILM202A	Observe and report plants and/or animals	15
AHCILM203A	Record information about country	25
AHCILM304A	Follow cultural protocols	30
Infrastructure		
AHCINF201A	Carry out basic electric fencing operations	15
AHCINF202A	Install, maintain and repair fencing	15
AHCINF203A	Maintain properties and structures	20
AHCINF302A	Plan and construct an electric fence	25
AHCINF303A	Plan and construct conventional fencing	20
Irrigation		
AHCIRG201A	Assist with the operation of gravity fed irrigation	20
AHCIRG202A	Assist with the operation of pressurised irrigation	20
AHCIRG204A	Lay irrigation and/or drainage pipes	15
AHCIRG206A	Maintain pressurised irrigation systems	15
AHCIRG302A	Install irrigation systems	30
AHCIRG305A	Operate pressurised irrigation systems	15
Landscape		
AHCLSC201A	Assist with landscape construction work	15
AHCLSC202A	Construct low-profile timber or modular retaining walls	20

Table 5 cont/d

Unit code	Unit title	HSC indicative hours of credit
Landscape cont/d		
AHCLSC203A	Install aggregate paths	20
AHCLSC204A	Lay paving	25
AHCLSC205A	Install tree protection devices	10
AHCLSC301A	Set out site for construction works	35
AHCLSC304A	Erect timber structures and features	35
AHCLSC306A	Implement a paving project	35
AHCLSC307A	Implement a retaining wall project	35
Livestock		
AHCLSK201A	Assist with feeding in a production system	15
AHCLSK203A	Carry out birthing duties	15
AHCLSK204A	Carry out regular livestock observation	10
AHCLSK205A	Handle livestock using basic techniques	15
AHCLSK206A	Identify and mark livestock	15
AHCLSK207A	Load and unload livestock	10
AHCLSK208A	Monitor livestock to parturition	15
AHCLSK209A	Monitor water supplies	10
AHCLSK210A	Muster and move livestock	10
AHCLSK211A	Provide feed for livestock	15
AHCLSK212A	Ride horses to carry out stock work	25
AHCLSK301A	Administer medication to livestock	15
AHCLSK303A	Carry out feedlot operations	15
AHCLSK305A	Maintain livestock water supplies	15
AHCLSK308A	Identify and draft livestock	20
AHCLSK310A	Implement feeding plans for intensive production	20
AHCLSK311A	Implement feeding plans for livestock	20
AHCLSK312A	Coordinate artificial insemination and fertility management of livestock	25
AHCLSK313A	Monitor livestock production growing environments	20
AHCLSK314A	Prepare animals for parturition	20

Table 5 cont/d

Unit code	Unit title	HSC indicative hours of credit
Livestock cont/d		
AHCLSK316A	Prepare livestock for competition	15
AHCLSK317A	Plan to exhibit livestock	20
AHCLSK318A	Rear newborn and young livestock	25
AHCLSK323A	Maintain and monitor feed stocks	15
AHCLSK324A	Care for and train working dogs	20
AHCLSK329A	Implement procedures for calving	20
AHCLSK331A	Comply with industry animal welfare requirements	20
Machinery operation and maintenance		
AHCMOM201A	Operate two wheel motorbikes	15
AHCMOM202A	Operate tractors	20
AHCMOM203A	Operate basic machinery and equipment	15
AHCMOM204A	Undertake operational maintenance of machinery	25
AHCMOM212A	Operate quad bikes	15
AHCMOM302A	Perform machinery maintenance	25
AHCMOM304A	Operate machinery and equipment	20
AHCMOM305A	Operate specialised machinery and equipment	20
AHCMOM306A	Ground spread fertiliser and soil ameliorant	20
AHCMOM308A	Operate broadacre and row crop harvest machinery and equipment	15
AHCMOM309A	Operate broadacre sowing machinery and equipment	15
AHCMOM311A	Operate precision control technology	15
AHCMOM312A	Operate row crop planting and seeding machinery and equipment	15
Merchandising and sales		
SIRXCCS001A	Apply point-of-sale handling procedures	20
SIRXICT001A	Operate retail technology	20
SIRXSLS001A	Sell products and services	15
Natural area restoration		
AHCNAR201A	Carry out natural area restoration works	25
AHCNAR202A	Maintain wildlife habitat refuges	20

Table 5 cont/d

Unit code	Unit title	HSC indicative hours of credit
Natural area restoration cont/d		
PPIFGM2201A	Collect seed	20
Nursery		
AHCNSY201A	Pot up plants	10
AHCNSY202A	Tend nursery plants	15
AHCNSY203A	Undertake propagation activities	20
AHCNSY204A	Maintain indoor plants	15
AHCNSY301A	Maintain nursery plants	25
AHCNSY302A	Receive and dispatch nursery products	15
AHCNSY303A	Install and maintain plant displays	25
Parks and gardens		
AHCPGD201A	Plant trees and shrubs	15
AHCPGD202A	Prepare and maintain plant displays	15
AHCPGD203A	Prune shrubs and small trees	15
AHCPGD204A	Transplant small trees	15
AHCPGD206A	Conduct visual inspection of park facilities	15
Pest management		
AHCPMG201A	Treat weeds	10
AHCPMG301A	Control weeds	25
Plants		
AHCPCM201A	Recognise plants	20
AHCPCM202A	Collect, prepare and preserve plant specimens	15
AHCPCM301A	Implement a plant nutrition program	25
Production horticulture		
AHCPTH201A	Plant horticultural crops	20
AHCPTH203A	Support horticultural crop harvesting	20
AHCPTH205A	Carry out postharvest operations	20
Shearing		
AHCSHG201A	Crutch sheep	20
AHCSHG202A	Assist in preparing for shearing and crutching	15

Table 5 cont/d

Unit code	Unit title	HSC indicative hours of credit
Shearing cont/d		
AHCSHG203A	Shear sheep to novice level*	40
AHCSHG204A	Shear sheep to improver level*	40
AHCSHG205A	Grind combs and cutters for machine shearing	10
AHCSHG206A	Prepare handpiece and downtube for machine shearing	10
Soils and media		
AHCSOL201A	Determine basic properties of soil and/or growing media	15
AHCSOL301A	Prepare growing media	20
AHCSOL401A	Sample soils and interpret results	20
Soil and water conservation		
AHCSAW201A	Conduct erosion and sediment control activities	15
Turf		
AHCTRF201A	Assist with turf construction	20
AHCTRF202A	Prepare turf surfaces for play	25
AHCTRF203A	Renovate grassed areas	20
AHCTRF204A	Support turf establishment	30
AHCTRF301A	Construct turf playing surfaces	45
AHCTRF302A	Establish turf	30
AHCTRF303A	Implement a grassed area maintenance program	25
AHCTRF304A	Monitor turf health	25
AHCTRF305A	Renovate sports turf	25
Wool		
AHCWOL201A	Pen sheep	15
AHCWOL202A	Perform board duties	20
AHCWOL203A	Carry out wool pressing	15
Work		
AHCWRK202A	Observe environmental work practices	15
AHCWRK205A	Participate in workplace communications	10
AHCWRK206A	Observe enterprise quality assurance procedures	15

* Substantial workplace experience would be needed to meet the required skill level for this unit of competency.

Table 5 cont/d

Unit code	Unit title	HSC indicative hours of credit
Work cont/d		
AHCWRK207A	Collect and record production data	10
AHCWRK208A	Provide information on products and services	15
AHCWRK303A	Respond to emergencies	20
AHCWRK305A	Coordinate work site activities	20
AHCWRK306A	Comply with industry quality assurance requirements	20
TLID107C	Shift materials safely using manual handling methods	10
Other		
CPPDSM4068A	Prepare livestock for sale at saleyards	20

3 HSC Content

The HSC Content for this industry curriculum framework is organised into focus areas. Each focus area prescribes the scope of learning for the HSC. This is drawn from the associated units of competency.

Students undertaking the 240 indicative hour course from the Primary Industries Curriculum Framework must address **all of the mandatory focus areas** plus **one stream focus area**.

The Primary Industries Curriculum Framework **mandatory** focus areas are:

- Chemicals
- Safety
- Sustainability
- Weather
- Working in the industry.

The Primary Industries Curriculum Framework **stream** focus areas are:

- Livestock health and welfare
- Plant pests, diseases and disorders.

The HSC examination in Primary Industries is based on the HSC Content and employability skills for the Certificate II qualifications in this Framework (refer to Sections 2.1.5 and 4 of this Syllabus).

Details of the employability skills for the AQF VET qualification pathways in this Framework are contained in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au. They are also available in the *Employability Skills in Primary Industries* document (www.boardofstudies.nsw.edu.au/syllabus_hsc/primary-industries.html).

The following table outlines the associated units of competency for each focus area.

Table 6 Focus areas and associated units of competency

		Associated units of competency
Focus area	Unit code	Unit title
Mandatory		
Chemicals	AHCCHM201A or AHCCHM303A	Apply chemicals under supervision Prepare and apply chemicals
Safety	AHCOHS201A or AHCOHS301A	Participate in OHS processes Contribute to OHS processes
Sustainability	AHCWRK209A or AHCWRK313A	Participate in environmentally sustainable work practices Implement and monitor environmentally sustainable work practices
Weather	AHCWRK201A or AHCWRK302A	Observe and report on weather Monitor weather conditions
Working in the industry	AHCWRK204A	Work effectively in the industry
Stream		
Livestock health and welfare	AHCLSK202A or AHCLSK309A	Care for health and welfare of livestock Implement animal health control programs
Plant pests, diseases and disorders	AHCPMG202A or AHCPMG302A	Treat plant pests, diseases and disorders Control plant pests, diseases and disorders

3.1 Chemicals – mandatory focus area

3.1.1 Outcomes

The student:

- explains the processes for safe chemical use and application
- demonstrates an understanding of OHS principles and practices when working with chemicals
- explains safe work practices within a compliance framework
- understands the principles of integrated pest/resistance management
- applies knowledge of working with chemicals to develop effective plans for the application of chemicals.

3.1.2 Associated units of competency

The scope of learning for the HSC must be read and delivered in conjunction with the following associated units of competency:

either

- [AHCCHM201A Apply chemicals under supervision](#)

or

- [AHCCHM303A Prepare and apply chemicals.](#)

Details of these units of competency are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

The unit descriptor, elements and critical aspects for assessment for each of these units of competency are provided below.

AHCCHM201A Apply chemicals under supervision

Descriptor This unit covers the process of applying chemicals under supervision using handheld or small powered equipment, and defines the standard required to: apply chemicals using handheld or small powered equipment; check, prepare, use and maintain application equipment and personal protective equipment; measure, mix, transport, handle store and dispose of chemicals and comply with Occupational Health and Safety (OHS), chemical label and Material Safety Data Sheets (MSDSs) requirements.

- Elements*
1. Check application and personal protective equipment
 2. Prepare application equipment
 3. Apply chemicals
 4. Finalise work
 5. Transport and handle chemical.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- apply chemicals using handheld or small powered equipment

- check, prepare, use and maintain application equipment and personal protective equipment
- measure, mix, transport, handle store and dispose of chemicals
- comply with OHS, chemical label and MSDSs requirements.

AHCCHM303A Prepare and apply chemicals

Descriptor This unit covers the process of preparing and applying chemicals and defines the standard required to: assess the need for chemical use: comply with safety, chemical label and MSDS requirements; prepare an application/spray plan; prepare and apply chemicals; calibrate application equipment and maintain chemical records.

- Elements*
1. Determine the need for chemical use
 2. Prepare application/spray plan
 3. Prepare chemical mixes
 4. Calibrate application equipment
 5. Apply chemicals
 6. Clean up equipment and complete records.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- assess the need for chemical use
- comply with safety, chemical label and MSDSs requirements
- prepare an application/spray plan
- prepare and apply chemicals
- calibrate application equipment
- maintain chemical records.

3.1.3 Employability skills

The following employability skills have been considered in the development of the scope of learning for the HSC:

- problem-solving
- planning and organising.

3.1.4 Scope of learning for the HSC

The scope of learning for the HSC should be addressed in the context of at least two relevant types of chemicals used in primary industries.

types
<ul style="list-style-type: none"> • types of chemical formulations used in primary industries: <ul style="list-style-type: none"> – dry – liquid • a range of types of chemicals commonly used in a primary industries workplace/ enterprise and their mode of action
equipment
<ul style="list-style-type: none"> • a range of chemical application equipment: <ul style="list-style-type: none"> – name and general features – purpose and limitations – considerations for selection: <ul style="list-style-type: none"> ▪ task/job requirements ▪ environmental factors – working knowledge: <ul style="list-style-type: none"> ▪ pre-operational safety checks ▪ prepare for use ▪ safe work practices for operation ▪ measures to minimise environmental impact ▪ correct chemical output – fault identification: <ul style="list-style-type: none"> ▪ signs of poor performance and inefficiency ▪ common faults: <ul style="list-style-type: none"> ○ malfunctions ○ worn, broken or missing components ▪ solutions to a range of common faults – maintenance: <ul style="list-style-type: none"> ▪ operation and performance monitoring ▪ cleaning and decontamination ▪ scheduled servicing – operational records – storage
OHS
<ul style="list-style-type: none"> • risk management in relation to the use of chemicals • personal protective equipment (PPE) used when handling chemicals: <ul style="list-style-type: none"> – selection: <ul style="list-style-type: none"> ▪ correct for task ▪ maintenance of PPE ▪ importance of correct fitting

OHS cont/d

- use
- application
- cleaning and maintenance
- storage
- minimising risk of poisoning to workers using chemicals:
 - path of entry:
 - inhalation
 - absorption
 - ingestion
 - injection
 - limiting exposure
 - first aid
- an awareness of the potential hazardous effects associated with the use of chemicals:
 - for humans
 - for animals
 - for the environment

chemical compliance

- the handling and use of chemicals in a primary industries environment:
 - the purpose and intent of related legislative requirements
 - in accordance with workplace/enterprise policy and procedures and manufacturer's instructions
 - with consideration of safe work practices and the environment
- licensing requirements for chemical use

working with chemicals

- use and interpret chemical labels and Material Safety Data Sheets (MSDS):
 - the information provided
 - the meaning of symbols
- methods and techniques for measuring and calculating chemical use:
 - importance of accuracy
 - units of measurement
 - measuring equipment used when handling chemicals
 - the calculations performed:
 - addition
 - subtraction
 - division
 - multiplication
 - percentages
 - ratios
 - volume
 - an understanding of:
 - calibration

working with chemicals cont/d

- decimal points
- estimations
- 'rounding off'
- mixing chemicals
- procedures for loading chemicals into application equipment
- safe and effective chemical application in a primary industries workplace:
 - assessing and recording meteorological conditions and forecasts
 - following an application/spray plan
 - re-entry and withholding periods
- workplace/enterprise procedures in the event of a chemical spill
- clean up procedures related to working with chemicals:
 - requirements for disposal:
 - excess chemical
 - waste
 - containers
 - triple rinse
- purpose and importance of recording and reporting chemical use:
 - inventory
 - pre-treatment notification
 - application details
- storage of chemicals
- transport requirements when handling chemicals

integrated pest/resistance management

- an understanding of integrated pest/resistance management
- outline strategies for integrated pest/resistance management
- alternatives to chemicals for pest/resistance management

3.2 Safety – mandatory focus area

3.2.1 Outcomes

The student:

- explains safe work practices and procedures for primary industries
- demonstrates an understanding of OHS compliance in primary industries
- applies risk management in a primary industries workplace
- describes workplace policy and procedures that ensure the safety of clients, colleagues and the primary industries worker.

3.2.2 Associated units of competency

The scope of learning for the HSC must be read and delivered in conjunction with the following associated units of competency:

either

- [AHC0HS201A Participate in OHS procedures](#)

or

- [AHC0HS301A Contribute to OHS processes.](#)

Details of these units of competency are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

The unit descriptor, elements and critical aspects for assessment for each of these units of competency are provided below.

AHCOHS201A Participate in OHS procedures

Descriptor This unit covers the process of following enterprise Occupational Health and Safety (OHS) policies and procedures and defines the standard required to: recognise and report hazards in the workplace; follow workplace safety procedures and directions; adjust, use, clean and store personal protective equipment (PPE) according to safe work procedures and manufacturer directions; carry out basic safety checks on equipment before use; identify and handle hazardous substances according to workplace procedures; complete manual handling tasks using recommended techniques; and follow emergency procedures and warning signs.

- Elements*
1. Follow workplace procedures for hazard identification and risk control
 2. Observe safe practices during work operations
 3. Participate in arrangements for maintaining health and safety of all people in the workplace.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- recognise and report hazards in the workplace
- follow workplace safety procedures and directions
- adjust, use, clean and store PPE according to safe work procedures and manufacturer directions
- carry out basic safety checks on equipment before use
- identify and handle hazardous substances according to workplace procedures
- complete manual handling tasks using recommended technique
- follow emergency procedures and warning signs.

AHCOHS301A Contribute to OHS procedures

Descriptor This unit covers the process of carrying out enterprise Occupational Health and Safety (OHS) policies and procedures and defines the standard required to: work in accordance with workplace procedures in hazard identification and risk control; carry out safe practices during work operations; participate in arrangements for maintaining the health and safety of all people in the workplace.

- Elements*
1. Adapt OHS policies and procedures
 2. Assist in workplace hazard identification and risk control
 3. Observe safe practices during work operations
 4. Participate in arrangements for maintaining health and safety of all people in the workplace.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- work in accordance with workplace procedures in hazard identification and risk control
- carry out safe practices during work operations
- participate in arrangements for maintaining the health and safety of all people in the workplace.

3.2.3 Employability skills

The following employability skills have been considered in the development of the scope of learning for the HSC:

- communication
- problem-solving
- planning and organising
- learning.

3.2.4 Scope of learning for the HSC

occupational health and safety
<ul style="list-style-type: none"> • the meaning of health and safety • implications of the cost of workplace injury: <ul style="list-style-type: none"> – human – social – economic – organisational • primary roles of key bodies involved in OHS • identification of internal and external sources of workplace OHS information • importance of acting within level of authority in relation to OHS in the workplace: <ul style="list-style-type: none"> – taking initiative – problem-solving – decision-making
OHS compliance
<ul style="list-style-type: none"> • the differences between an act, regulation, code of practice, industry standards and workplace/enterprise standards • purpose and intent of OHS legislation and codes of practice and their application to a primary industries workplace and a specific job role: <ul style="list-style-type: none"> – OHS legislation: <ul style="list-style-type: none"> ▪ <i>Occupational Health and Safety Act 2000</i> (NSW) and amendments ▪ <i>Occupational Health and Safety Regulations 2001</i> (NSW) and amendments – codes of practice: <ul style="list-style-type: none"> ▪ OHS Consultation ▪ Risk Assessment ▪ Manual Handling ▪ Control of workplace hazardous substances ▪ Safe use and storage of chemicals (including pesticides and herbicides) in agriculture • OHS rights and responsibilities of the employer and employees • consequences of failure to comply with OHS workplace policy and procedures and legislative requirements • safety signs, symbols and barricades used in primary industries and their use in the workplace: <ul style="list-style-type: none"> – legislative requirements – meaning of colour and shape – appropriate placement and positioning

OHS compliance cont/d

- acknowledge that OHS is everyone's responsibility in the workplace and the implications of this responsibility
- requirements (including election/formation) of an OHS committee or representative and their role and responsibilities in the workplace
- industry and workplace/enterprise requirements for monitoring and reporting in relation to workplace safety
- describe how, when and to whom to report:
 - types:
 - formal/informal
 - written
 - verbal
 - reporting to appropriate persons
- purpose and importance of monitoring and reporting

safe work practices and procedures

- importance of safe work practices and procedures
- safe work practices and procedures for a primary industries workplace and their purposes:
 - selection, use, maintenance and storage of personal protective equipment (PPE)
 - manual handling techniques:
 - when working individually, in pairs and with a team:
 - moving
 - lifting, carrying and placing items down
 - working with tools, equipment and machinery
 - loading and unloading
 - bending and twisting
 - mechanical aids/lifting equipment
 - working at heights
 - transferring hazardous materials
 - undertaking repetitious tasks
 - legal weight limits
 - clean up procedures and waste disposal with due consideration of OHS and the environment
 - hazardous substances commonly used in primary industries workplaces/enterprises:
 - correct handling, application, labelling, transport and storage
 - material safety data sheets (MSDS)
 - training (general, work activity and site-specific)
 - workplace/enterprise OHS policies and procedures:
 - safe systems of work
 - safe operating procedures (SOP)
 - access to appropriate communication processes and devices

safe work practices and procedures cont/d

- tools, equipment and machinery:
 - appropriate selection
 - correct use
 - maintenance
- propose safe work practices and procedures for a specific workplace/enterprise within primary industries

risk management

- difference between a hazard and a risk
- risk management and its application in the workplace:
 - hazard identification:
 - potential hazards to self, colleagues, other people, animals and the environment
 - range of hazards:
 - tools, equipment and machinery
 - plants and animals
 - manual handling
 - hazardous substances (chemicals, gases and waste materials)
 - work processes and practices
 - work environment
 - human factors (self, colleagues and others)
 - risk assessment
 - risk control:
 - eliminate the risk
 - minimise the risk:
 - substitution
 - modification
 - isolation
 - engineering control
 - other controls:
 - administrative
 - safe work practices
 - PPE
 - monitor and review

3.3 Sustainability – mandatory focus area

3.3.1 Outcomes

The student:

- explains the fundamental principles of sustainability
- analyses resource consumption in the primary industries workplace
- evaluates the workplace in relation to environmentally sustainable work practices
- proposes improvements for resource efficiency and sustainability in a primary industries workplace
- understands environmental hazard identification and risk control.

3.3.2 Associated units of competency

The scope of learning for the HSC must be read and delivered in conjunction with the following associated units of competency:

either

- [AHCWRK209A Participate in environmentally sustainable work practices](#)
- or**
- [AHCWRK313A Implement and monitor environmentally sustainable work practices.](#)

Details of these units of competency are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

The unit descriptor, elements and critical aspects for assessment for each of these units of competency are provided below.

AHCWRK209A Participate in environmentally sustainable work practices

Descriptor This unit covers the performance outcomes, skills and knowledge required to effectively measure current resource use and to carry out improvements including reducing the negative environmental impact of work practices. This unit requires the ability to access industry information, and applicable legislative and Occupational Health and Safety (OHS) guidelines.

- Elements*
1. Identify current resource use
 2. Comply with environmental regulations
 3. Seek opportunities to improve resource efficiency.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- accessing, interpreting and complying with a range of environment/sustainability legislation and procedural requirements relevant to daily responsibilities
- accurately following organisational information to participate in and support an improved resource efficiency process and reporting as required
- developing and/or using tools such as inspection checklists, to collect and measure relevant information on organisation resource consumption, within work role

- identifying organisational improvements by applying efficient resource use to daily activities
- knowledge of environmental and resource hazards/risks.

AHCWRK313A Implement and monitor environmentally sustainable work practices

Descriptor This unit covers the performance outcomes, skills and knowledge required to effectively analyse the workplace in relation to environmentally sustainable work practices and to implement improvements and monitor their effectiveness. This unit requires the ability to access industry information, applicable legislative and Occupational Health and Safety (OHS) guidelines.

While no licensing, legislative, regulatory or certification requirements apply holistically to this unit at the time of publication, relevant national, state and territory legislation, regulations and codes of practice impact upon this unit.

- Elements*
1. Investigate current practices in relation to resource usage
 2. Set targets for improvements
 3. Implement performance improvement strategies
 4. Monitor performance.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- knowledge of relevant compliance requirements within work area
- developing plans to make improvements
- planning and organising work group activities in relation to measuring current use and devising strategies to improve usage
- monitoring resource use and improvements for environmental performance relative to work area and supervision
- ensuring appropriate action is taken within work area in relation to environmental/sustainability compliance and potential hazards
- implementing new approaches to work area in an effort to resolve and improve environmental and resource efficiency issues and reporting as required.

3.3.3 Employability skills

The following employability skills have been considered in the development of the scope of learning for the HSC:

- communication
- teamwork
- problem-solving
- initiative and enterprise
- planning and organising.

3.3.4 Scope of learning for the HSC

environment

- current environmental issues affecting primary industries:
 - biodiversity
 - conservation
 - salinity
 - energy use and efficiency
 - fire management
 - natural resource management
 - recycling/re-use
 - resource use and efficiency
 - sustainability
 - waste management
 - water resource management
- potential impact of primary industries workplace practices on the environment
- consequences of poor environmental planning on:
 - waterways
 - wildlife habitats
 - neighbouring properties
- environmental responsibilities of employees in a primary industries workplace/enterprise:
 - follow work instructions, standard operating procedures and inspection processes
 - report and communicate environmental issues
 - maintain environmental records:
 - incident and accident reports
 - inspection reports
- concept of sustainability in the workplace/enterprise and environmentally sustainable work practices

resources

- definition of 'resource'
- resources used in primary industries and in a specific job role:
 - energy
 - infrastructure
 - human
 - materials
 - natural
 - stock and supply
 - technology and associated consumables
- concept of resource efficiency in a primary industries work environment

resources cont/d

- measuring and monitoring resource consumption within a primary industries workplace/enterprise:
 - sources of data:
 - resources in work area
 - material use analysis
 - invoices from suppliers
 - stocktake
 - techniques to collect and measure resource consumption:
 - examination, measurement and documentation of resources, materials and products on the worksite and from suppliers
 - measuring resource usage under different conditions
 - monitoring and examination of data on efficiency and resource reduction
 - instructions and reports from other parties involved in the process of identifying and reporting on improvements
 - electronic and manual tools to measure and document resource use:
 - checklists
 - software:
 - spreadsheets
 - databases
 - graphs
 - stocktake tools
- identify opportunities for improved resource efficiency in a primary industries work environment

environmental hazard identification and risk control

- range of environmental hazards:
 - pollution
 - soil erosion
 - natural disasters
 - discharge into waterways
 - wildlife habitat destruction
 - chemical/gas spillage/leakage
 - inappropriate human interaction
 - faulty tools, equipment and machinery
- personnel responsible for environmental hazard identification and risk control in a primary industries workplace/enterprise
- organisation structure and lines of reporting in a primary industries workplace/enterprise:
 - appropriate persons
 - verbal and written reporting

environmental compliance

- definition of:
 - ‘compliance’
 - ‘best practice’

environmental compliance cont/d

- levels of compliance in relation to environmental requirements:
 - workplace/enterprise
 - industry
 - government (local, State/Territory and Commonwealth)
 - international
- consequences of failure to comply with environmental requirements
- purpose and intent of environmental legislation and its application to the industry, the workplace/enterprise and a specific job role
- workplace/enterprise policy and procedures relating to environmental compliance
- environmental responsibilities of the workplace/enterprise and the individual worker
- industry and workplace/enterprise requirements for monitoring and reporting in relation to the environment
- describing how, when and to whom to report:
 - types:
 - formal/informal
 - written
 - verbal
 - reporting to appropriate persons
- primary role/function of key environmental bodies:
 - NSW Department of Environment, Climate Change and Water [incorporating Environment Protection Authority (EPA)]
 - local government

environmentally sustainable work practices

- strategies and procedures to work in an environmentally sustainable manner for a specific primary industries workplace and job role:
 - environmental hazard and risk identification
 - avoidance or minimisation strategies:
 - purchasing sustainable products
 - regular maintenance of tools, equipment and machinery
 - use of biodegradable/non-toxic material
 - soil conservation
 - habitat protection
 - revegetation and stabilisation
 - waste management
 - efficient use of energy and resources
 - use of alternative forms of energy or energy conservation
 - reducing emissions of greenhouse gases
 - use of renewable, recyclable, reusable and recoverable resources

environmentally sustainable work practices cont/d

- removal and disposal of non-reusable materials in a responsible manner:
 - consumables
 - chemicals
 - hazardous substances
- workplace/enterprise policy and procedures for environmentally sustainable work practices
- proposing improvements for environmentally sustainable work practices:
 - workplace/enterprise
 - team
 - individual worker

3.4 Weather – mandatory focus area

3.4.1 Outcomes

The student:

- understands the concepts of weather and climate
- interprets weather and climate information
- evaluates the impact of weather and climate on farming operations and work practices.

3.4.2 Associated units of competency

The scope of learning for the HSC must be read and delivered in conjunction with the following associated units of competency:

either

- [AHCWRK201A Observe and report on weather](#)

or

- [AHCWRK302A Monitor weather conditions.](#)

Details of these units of competency are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

The unit descriptor, elements and critical aspects for assessment for each of these units of competency are provided below.

AHCWRK201A Observe and report on weather

Descriptor This unit covers the process of observing and reporting on weather and climate conditions for an agricultural, horticultural or land management enterprise and defines the standard required to: monitor and interpret weather information; communicate warnings and concerns; identify weather and climate conditions and its impact upon farming and grazing activities; follow directions to minimise loss and damage to staff, livestock, crops, property; produce and review farm enterprises and operations for weather risk.

- Elements*
1. Check weather and climate information
 2. Carry out preventative action
 3. Monitor weather and climate.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor and interpret weather information
- communicate warnings and concerns
- identify weather and climate conditions and its impact upon farming and grazing activities
- follow directions to minimise loss and damage to staff, livestock, crops, property and produce
- review farm enterprises and operations for weather risk.

AHCWRK302A Monitor weather conditions

Descriptor This unit covers the process of monitoring and interpreting weather and climate conditions and assessing its likely impact on staff, crops, livestock, produce, property, natural resources, equipment and work tasks and defines the standard required to: monitor and interpret weather and climate information; communicate warnings and concerns; identify resource requirements and dangers; minimise loss and damage to staff, livestock, crops, natural resources, property, and produce; implement alternative livestock or other programs; continue to monitor weather changes.

Elements

1. Interpret weather and climate information
2. Carry out preventative action
3. Monitor weather and climate.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor and interpret weather and climate information
- communicate warnings and concerns
- identify resource requirements and dangers
- minimise loss and damage to staff, livestock, crops, natural resources, property, and produce
- implement alternative livestock or other programs and continue to monitor weather changes.

3.4.3 Employability skills

The following employability skills have been considered in the development of the scope of learning for the HSC:

- communication
- problem-solving
- initiative and enterprise
- planning and organising
- technology.

3.4.4 Scope of learning for the HSC

weather and climate

- the difference between weather and climate
- elements of weather and climate:
 - temperature:
 - heat
 - cold
 - humidity
 - wind:
 - wind chill
 - wind shear
 - precipitation
 - atmospheric pressure
 - atmospheric particle count
- meteorological conditions
- identification of weather and climate conditions:
 - likely
 - current
 - changes
 - signs
 - extreme

monitoring conditions

- access and use of a range of sources of weather and climate information:
 - Bureau of Meteorology
 - media
 - technology:
 - internet
 - interpretive tools
 - weather station
 - word of mouth
- range of different types of weather and climate information relevant to primary industries:
 - data
 - grazier alerts
 - reports
 - updates
 - warnings
- forecasting techniques for monitoring weather conditions:
 - interpreting weather maps
 - taking local measurements:
 - temperature

monitoring conditions cont/d

- precipitation
- air pressure
- interpreting weather and climate information
- importance of maintaining current information

managing conditions

- an awareness of potential implications of weather and climate changes for a primary industries workplace on the following:
 - crops
 - commercial decisions and activities
 - environment
 - livestock/grazing
 - natural resources
 - property
 - safety
 - work tasks
- primary industries workplace/enterprise planning (long-term and contingency) for climate and weather conditions:
 - workplace/enterprise operations
 - work practices
 - schedule of work tasks
- preventative action to minimise loss, damage or harm as a result of changes in weather and climate conditions, including revision and adjustment of work program and work tasks

reporting and recording

- lines of communication to appropriate personnel within a primary industries workplace
- industry and workplace/enterprise requirements for documentation in relation to recording and reporting weather and climate conditions and changes
- purpose and importance of disseminating information to supervisors, colleagues and others

3.5 Working in the industry – mandatory focus area

3.5.1 Outcomes

The student:

- understands the nature of working in primary industries
- explains how to work effectively with colleagues and clients in a primary industries workplace
- applies workplace and industry standards to ensure quality work outcomes in primary industries.

3.5.2 Associated unit of competency

The scope of learning for the HSC must be read and delivered in conjunction with the associated unit of competency [AHCWRK204A Work effectively in the industry](#).

Details of these units of competency are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

The unit descriptor, elements and critical aspects for assessment for each of these units of competency are provided below.

AHCWRK204A Work effectively in the industry

Descriptor This unit of competency covers the process of working effectively on an individual basis and with others and defines the standard required to: meet the standards required in the industry for dress and work practices; implement the quality standards for workplace products or services; interpret instructions and establish work tasks and priorities; demonstrate communication skills with supervisors and co workers.

- Elements*
1. Obtain information about the industry
 2. Observe employment requirements
 3. Accept responsibility for quality of own work
 4. Plan and conduct own work
 5. Promote workplace cooperation
 6. Contribute to a productive work environment
 7. Undertake an activity to workplace requirements.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- meet the standards required in the industry for dress and work practices
- implement the quality standards for workplace products or services
- interpret instructions and establish work tasks and priorities
- demonstrate communication skills with supervisors and co workers.

3.5.3 Employability skills

The following employability skills have been considered in the development of the scope of learning for the HSC:

- communication
- teamwork
- problem-solving
- initiative and enterprise
- planning and organising
- self-management
- learning
- technology.

3.5.4 Scope of learning for the HSC

sources of information
<ul style="list-style-type: none">• basic research skills in order to obtain information:<ul style="list-style-type: none">– identify relevant information– develop questioning techniques to obtain information– sort, summarise and present information• sources of information relevant to primary industries that can be used when gathering current industry information:<ul style="list-style-type: none">– industry bodies– professional associations– unions– journals– internet– networks– workplace documents• access and use of a range of sources of information relating to working in the industry:<ul style="list-style-type: none">– job description– role/duty statement– workplace/enterprise manuals– manager/supervisor/team leader– colleagues– standard operating procedures (SOP)– work plan/schedule• strategies for understanding and clarifying work instructions
nature of the industry
<ul style="list-style-type: none">• sectors within primary industries:<ul style="list-style-type: none">– primary role– products and/or services provided– occupational areas– examples of organisations/businesses• interrelationships between various sectors within primary industries• organisational structures typical to primary industries workplaces/organisations
working in the industry
<ul style="list-style-type: none">• the difference between legal and ethical• the differences between an act, regulation, code of practice, by-law, industry standards and workplace/enterprise standards• requirements that apply to working in the industry:<ul style="list-style-type: none">– industry standards

working in the industry cont/d

- workplace policy, guidelines and procedures
- legislation:
 - purpose and intent for particular sector/department
 - application for specific workplace and job role
- ethical considerations
- work standards applicable to primary industries:
 - value
 - expected standards
 - consequences of non-compliance
 - for specific job role
 - seeking opportunities to improve work practices

employment

- career pathways across primary industries and the knowledge and skills required for different job roles
- types of employment in primary industries:
 - full-time
 - part-time
 - casual
 - contract
- the differences between an award, agreement and contract and how they apply to workers in primary industries
- investigate the employment terms and conditions for a specific job role
- working knowledge and understanding of employee and employer rights and responsibilities in relation to employment and work
- principles of equal employment opportunity (EEO)
- primary roles of a range of key industry bodies for both employers and employees:
 - employer and employee groups
 - industry groups (eg National Farmers Federation)
 - unions
 - training
- purpose and value of codes of conduct for the primary industries worker and the industry

primary industries worker

- primary industries worker:
 - personal attributes and work ethic valued by the industry
 - interpersonal skills
 - presentation standards for specific workplace and job role

primary industries worker cont/d

- how personal values, opinions and ethics can affect everyday work
- roles and responsibilities:
 - duties and responsibilities for a specific job role within primary industries
 - relationship between the individual roles and the role of teams
 - differences between individual and workplace/enterprise goals and plans
- work practices in accordance with industry standards and workplace/enterprise policy, guidelines and procedures:
 - the effect of poor work practices on:
 - colleagues
 - workplace
 - industry
 - an awareness of the effects of emerging technologies
 - work sequencing:
 - receiving instruction
 - organising for the task
 - carry out the task
 - clean up after task completion
 - importance of time and task management:
 - principles
 - techniques
- quality assurance in primary industries:
 - definition
 - role of employees
 - implications of non-adherence
 - quality systems
- feedback and improvement:
 - value of feedback to an individual worker, workplace and industry
 - sources of feedback:
 - personal reflection
 - formal/informal
 - direct/indirect
 - positive/negative
 - strategies for obtaining and interpreting
 - how to deal with positive and negative feedback
 - responsibility of a worker to seek/provide feedback and improve

working with others

- importance of developing collegial work relationships
- communication in the workplace:
 - with colleagues and others
 - communication process

working with others cont/d

- workplace examples of types of communication:
 - verbal
 - non-verbal
 - written
- effective verbal, non-verbal and written
- effective questioning and listening techniques
- barriers to effective communication and strategies to overcome them
- workplace protocols and procedures in relation to working with others
- importance of teamwork when working in the primary industries workplace:
 - definition
 - characteristics of effective teamwork
 - benefits
 - examples of teams or work groups
- delivering quality work outcomes through teamwork and work groups

cultural diversity

- concepts of cultural diversity, cultural awareness and inclusiveness
- workplace diversity:
 - benefits of workplace diversity
 - need for tolerance and respect in the workplace
 - importance of respect and sensitivity
 - proactive strategies for promoting workplace diversity and accommodating individual differences in the workplace
 - culturally appropriate work practices
 - effective cross-cultural communication skills

anti-discrimination

- implications of bullying and harassment in the workplace:
 - indirect
 - direct
 - types:
 - verbal
 - physical
 - psychological
 - sexual
- anti-discrimination:
 - principles
 - intent of legislation
 - reciprocal rights and responsibilities of employers and employees
 - workplace/enterprise policy and procedures relating to anti-discrimination

anti-discrimination cont/d

- strategies to eliminate bias and harassment in the workplace
- consequences, including legal ramifications, of inappropriate workplace behaviour
- recourse available to individuals in the event of inappropriate workplace behaviour

misunderstandings and conflict

- conflict in the workplace:
 - the differences between being passive, aggressive and assertive
 - causes of misunderstanding and conflict when working with others
 - the extent to which conflict can be a positive or negative experience
- conflict management:
 - conflict resolution techniques
 - different approaches to conflict management including problem-solving, negotiation and mediation
 - workplace/enterprise policy and procedures regarding management conflict
- identifying when it is appropriate to seek assistance when misunderstandings or conflict arise and from whom assistance should be sought when conflict escalates

3.6 Livestock health and welfare – stream focus area

Students undertaking the Primary Industries (240 indicative hours) course must address all of the mandatory focus areas (see Section 3.1–3.5) plus ONE stream focus area.

3.6.1 Outcomes

The student:

- explains principles and techniques for monitoring and maintaining the health and welfare of livestock
- applies knowledge of animal health and welfare to the handling and treatment of livestock.

3.6.2 Associated units of competency

The scope of learning for the HSC must be read and delivered in conjunction with the following associated units of competency:

either

- [AHCLSK202A Care for health and welfare of livestock](#)

or

- [AHCLSK309A Implement animal health control programs.](#)

Details of these units of competency are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

The unit descriptor, elements and critical aspects for assessment for each of these units of competency are provided below.

AHCLSK202A Care for health and welfare of livestock

Descriptor This unit covers the process required to monitor the health and welfare of livestock and defines the standard required to: monitor and assess livestock health and welfare; select, use and maintain specialised animal health equipment; prepare treatment site, facilities and equipment; administer drenches, vaccines and medication to livestock; monitor the effectiveness of treatments and report issues and keep and maintain records.

Elements

1. Monitor and assess livestock health and welfare
2. Implement livestock health and welfare procedures
3. Administer drenches, vaccines and prescribed medicines to livestock
4. Prepare, maintain and store animal health equipment
5. Monitor treated livestock and maintain records.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor and assess livestock health and welfare
- select, use and maintain specialised animal health equipment
- prepare treatment site, facilities and equipment

- administer drenches, vaccines and medication to livestock.
- monitor the effectiveness of treatments and report issues
- keep and maintain records.

AHCLSK309A Implement animal health control programs

Descriptor This unit covers the functions required to implement animal health control programs in animals and defines the standard required to: monitor animal health status and refer to the production plan for intervention strategies; accurately diagnose the type and severity of infection or parasite infestation; determine the type and scope of treatment; administer treatments and observe withholding periods; monitor animals for treatment effectiveness.

- Elements*
1. Assess animal health status and treatment options
 2. Prepare for treatment of animals
 3. Treat animals
 4. Complete treatment process.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- monitor animal health status and refer to the production plan for intervention strategies
- accurately diagnose the type and severity of infection or parasite infestation
- determine the type and scope of treatment
- administer treatments and observe withholding periods
- monitor animals for treatment effectiveness.

3.6.3 Employability skills

The following employability skills have been considered in the development of the scope of learning for the HSC:

- communication
- problem-solving
- planning and organising.

3.6.4 Scope of learning for the HSC

The scope of learning for the HSC should be addressed in the context of at least one relevant type of livestock used in primary industries (refer to the range statement of the unit of competency for appropriate livestock).

identification

- broad knowledge of classification methods used to identify livestock:
 - breed
 - production type
 - identification system
- methods and techniques to identify livestock
- purpose and importance of accurate livestock identification

working with livestock

- understanding the responsibility of the primary industries workplace/enterprise and its employees to maintain a duty of care towards livestock
- requirements when working with livestock:
 - legislation and regulations
 - industry codes of practice
 - workplace/organisation policy and procedures
- application of animal welfare guidelines
 - legislative
 - ethical
 - workplace/organizational
- importance of safe work practices when working with livestock:
 - livestock
 - handlers
- quarantine and biosecurity issues and their management:
 - hygiene procedures
 - minimising disease introduction to:
 - humans
 - livestock
 - safe and hygienic procedure for dealing with animal residue and waste:
 - clean up
 - disposal
- reporting and recording requirements in relation to animal health and welfare:
 - ill health/disease incidence
 - livestock losses
 - treatment
 - handling records

behavior

- importance of observing livestock behaviour when undertaking work tasks
- recognise behavioural characteristics of livestock:
 - normal
 - abnormal
 - changed
- common signs of fear and aggression in livestock and appropriate responses to these behaviours

handling

- principles and procedures for handling livestock:
 - reducing stress and discomfort
 - minimising risk to livestock, self and others
- techniques and methods used to handle livestock:
 - move
 - draft
 - control
 - inspect
 - restrain

nutrition

- an understanding of the relationship between livestock health and nutrition
- livestock diet and nutritional requirements
- feeding of livestock:
 - systems:
 - intensive
 - extensive
 - elements
 - types of feed
 - feed supplements
 - water:
 - supply
 - quantity
 - quality
 - safe feed supply:
 - hygiene
 - toxic/noxious plants
 - contaminants

health

- recognise and assess livestock condition:
 - normal

health cont/d

- abnormal
- injuries
- ill health in livestock:
 - common diseases and disorders:
 - signs and symptoms
 - mode of transmission
 - parasite infestations:
 - signs and symptoms
 - severity
 - resistance
 - testing procedures
 - prevention and treatment strategies
- health status of livestock:
 - assess:
 - physiological
 - health
 - issues identified
 - monitor:
 - regular checks
 - post-treatment

treatment

- workplace/enterprise procedures for dealing with sick and dead livestock
- common treatment procedures to maintain livestock health and welfare:
 - types of treatments:
 - drenches
 - vaccines:
 - mode of action
 - prescribed medicines
 - treatment site and facilities
 - equipment and materials used in the treatment of livestock:
 - name and general features
 - selection:
 - correct for task
 - manufacturers' specifications for use
 - use/application:
 - calibration
 - dosage/rates according to label
 - legislative requirements
 - safe disposal
 - cleaning
 - maintenance:
 - faults and malfunctions
 - reporting and recording
 - storage

treatment cont/d

- preparation of treatments
- administering the treatment
- withholding periods for treated livestock:
 - compliance
 - isolation
 - monitoring

3.7 Plant pests, diseases and disorders – stream focus area

Students undertaking the Primary Industries (240 indicative hours) course must address all of the mandatory focus areas (see Section 3.1–3.5) plus ONE stream focus area.

3.7.1 Outcomes

The student:

- demonstrates an understanding of plant characteristics and features to enable recognition of plant pests, diseases and disorders
- explores the processes for treating plant pests, diseases and disorders
- analyses the impact of plant pests, diseases and disorders and their treatment and control.

3.7.2 Associated units of competency

The scope of learning for the HSC must be read and delivered in conjunction with the following associated units of competency:

either

- [AHCPMG202A Treat plant pests, diseases and disorders](#)

or

- [AHCPMG302A Control plant pests, diseases and disorders.](#)

Details of these units of competency are available in the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#) at www.training.gov.au.

The unit descriptor, elements and critical aspects for assessment for each of these units of competency are provided below.

AHCPMG202A Treat plant pests, diseases and disorders

Descriptor This unit covers the process of treating plant pests, diseases and disorders and defines the standard required to: identify significant plant pests, diseases and disorders for the enterprise; apply a range of control or treatment options; recognise and control risks to environment (including spray drift and chemical spillage); clean and store equipment correctly; observe the treatment site and record plant treatments.

Elements

1. Prepare to treat plant pests, diseases and disorders
2. Apply treatments to plant pests, diseases and disorders
3. Carry out post treatment operation.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify significant plant pests, diseases and disorders for the enterprise
- apply a range of control or treatment options
- recognise and control risks to environment (including spray drift and chemical spillage)
- clean and store equipment correctly
- observe the treatment site
- record plant treatments.

AHCPMG302A Control plant pests, diseases and disorders

Descriptor This unit covers the process of controlling plant pests, diseases and disorders taking into consideration Integrated Pest Management (IPM) options and defines the standard required to: identify a range of pests, diseases and disorders, and beneficial organisms; assess damage or threat to plants; select pest and disease controls and timing of operations; prepare and calibrate equipment; apply a range of pest and disease control methods and keep records; monitor the effectiveness of controls.

- Elements*
1. Assess pests and disease infestation
 2. Plan the implementation of control measures
 3. Implement control measures
 4. Monitor control methods.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- identify a range of pests, diseases and disorders, and beneficial organisms
- assess damage or threat to plants
- select pest and disease controls and timing of operations
- prepare and calibrate equipment
- apply a range of pest and disease control methods and keep records
- monitor the effectiveness of controls.

3.7.3 Employability skills

The following employability skills have been considered in the development of the scope of learning for the HSC:

- communication
- problem-solving
- planning and organising.

3.7.4 Scope of learning for the HSC

The scope of learning for the HSC should be addressed in the context of significant plant pests, diseases and disorders for a particular workplace/enterprise/situation in primary industries.

range of plants
<ul style="list-style-type: none"> • an awareness of a range of plants common to a sector of primary industries: <ul style="list-style-type: none"> – types: <ul style="list-style-type: none"> ▪ native ▪ introduced ▪ beneficial ▪ weeds – common name – characteristics and features: <ul style="list-style-type: none"> ▪ parts: <ul style="list-style-type: none"> ○ stems ○ roots ○ leaves ○ flowers ○ fruit ▪ growth characteristics
recognition of plant pests, diseases and disorders
<ul style="list-style-type: none"> • difference between a plant pest, disease and disorder • for a range of significant plant pests, diseases and disorders: <ul style="list-style-type: none"> – common name – identification and assessment: <ul style="list-style-type: none"> ▪ signs and symptoms ▪ level of infestation – tolerable levels • potential impact of plant pests, diseases and disorders within primary industries: <ul style="list-style-type: none"> – threat – damage
management
<ul style="list-style-type: none"> • difference between treatment and control measures • importance of safe work practices in the treatment and control of plant pests, diseases and disorders • methods for the treatment and control of plant pests, diseases and disorders: <ul style="list-style-type: none"> – biological – chemical – cultural – mechanical – physical

management cont/d

- treatment of plant pests, diseases and disorders
 - types
 - preparation
 - including consequences of incorrect preparation
 - methods of application
 - including the importance of minimising non-target damage
 - post-treatment operations
 - clean-up
 - waste disposal
- appropriate selection of treatment for significant plant pests, diseases and disorders for a particular workplace/enterprise/situation
- principles and strategies for control of plant pests, diseases and disorders
- appropriate selection of control measures for significant plant pests, diseases and disorders for a particular workplace/enterprise/situation
- range of equipment used in the treatment and control of plant pests, diseases and disorders:
 - name and general features
 - selection
 - correct for task
 - manufacturers' specification for use
 - use/application:
 - calibration
 - legislative requirements
 - cleaning
 - maintenance
 - storage
- assess the environmental impact of the treatment and control of plant pests, diseases and disorders and recommend measures to minimise the impact
- requirements applying to the treatment and control of plant pests, diseases and disorders:
 - legislation and regulations
 - industry codes of practice
 - workplace/organisation policy and procedures

recording and reporting

- recording and reporting related to treatment and control of plant pests, diseases and disorders
 - occurrence
 - treatment
 - monitoring
 - records

4 HSC examination

The Primary Industries Curriculum Framework includes an HSC examination which provides the opportunity for students to have their HSC mark contribute to the calculation of their Australian Tertiary Admission Rank (ATAR).

The Primary Industries HSC examination can contribute up to two units towards the calculation of a student's ATAR.

Students who have completed the Primary Industries (240 indicative hours) course are eligible to sit for the Primary Industries HSC examination.

Students who want to sit for the Primary Industries HSC examination must be entered for both the Primary Industries course and the Primary Industries examination on *Schools Online (Administration)*.

The HSC examination specifications, which describe the format of the external HSC examination, are contained in the [Assessment and Reporting in Primary Industries Stage 6](#) document.

The HSC examination is independent of the competency-based assessment undertaken during the course and has no impact on student eligibility for AQF VET qualifications.

4.1 Examinable outcomes and content

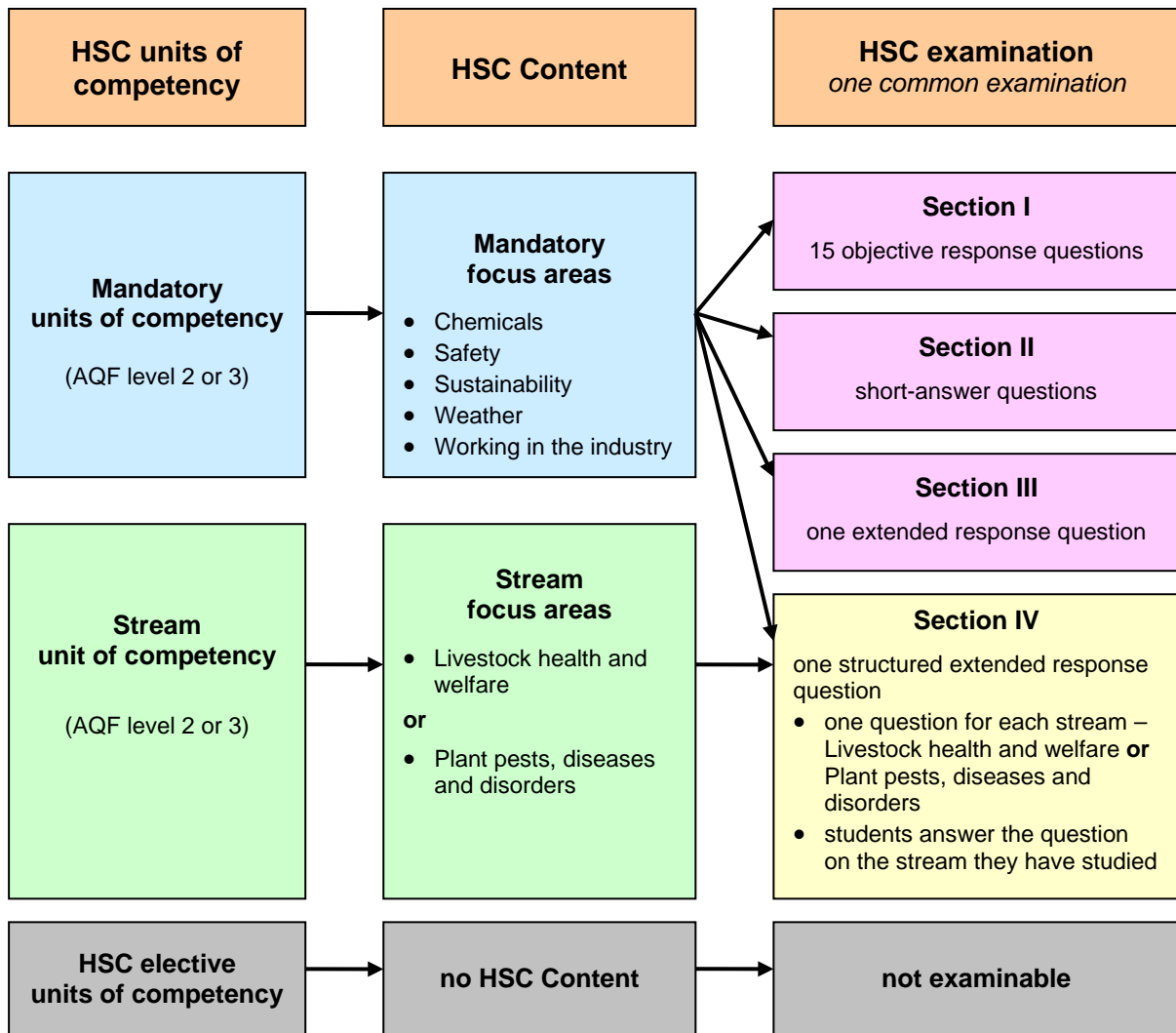
The HSC examination in Primary Industries is based on the HSC Content and employability skills for the Certificate II qualifications in this Framework (refer to the [Employability Skills in Primary Industries](#) document).

The HSC Content for the Primary Industries Curriculum Framework is organised into:

- five mandatory focus areas:
 - Chemicals
 - Safety
 - Sustainability
 - Weather
 - Working in the industry
- two stream focus areas (students undertaking the 240 indicative hour course must address ONE stream focus area):
 - Livestock health and welfare
 - Plant pests, diseases and disorders.

The HSC Content is detailed in Section 3 of this Syllabus.

4.1.1 Relationship of the Primary Industries (240 indicative hours) course structure to the HSC examination



5 Other important information

5.1 Recognition of Prior Learning (RPL) and credit transfer within VET courses

Students undertaking HSC courses within the Primary Industries Curriculum Framework may already hold units of competency or have current knowledge, skills and experience relevant to the units of competency within the courses.

Students can be granted credit (RPL or credit transfer) for:

- units of competency within AQF VET qualifications
- HSC VET course outcomes and content as defined by the indicative hour requirements of HSC VET courses
- mandatory work placement requirements.

The RPL requirements of the VET Quality Framework (formerly referred to as the AQTF) and the Board of Studies must be met.

Further information about the arrangements for RPL and credit transfer within VET courses, including processes, application forms and examples of possible scenarios, is available on the Board's website at www.boardofstudies.nsw.edu.au/voc_ed/rpl.html.

5.2 School-based apprentices and trainees

The Primary Industries Curriculum Framework includes provision for school-based apprentices and trainees to gain unit credit towards the HSC for the formal training component of their apprenticeship or traineeship.

Information on requirements and arrangements for NSW school-based apprenticeships and traineeships in primary industries is available at www.training.nsw.gov.au/individuals/apprenticeships_traineeships/school_based/index.html

Students may choose to complete the Board endorsed *Stage 6 Industry-based Learning Course* enabling them to gain HSC credit for the on-the-job training component of the school-based apprenticeship or traineeship. Details of the course requirements are contained in the *Industry-based Learning* course description.

Further information is available on the Board's website at www.boardofstudies.nsw.edu.au/voc_ed/apprenticeships-traineeships.html.

5.3 Students with special education needs

Courses in the Primary Industries Curriculum Framework are available to all students.

Students with special education needs may access:

- all courses within the Primary Industries Curriculum Framework under regular course arrangements

or

- units of competency selected through the collaborative curriculum planning process from the relevant course units of competency detailed in Section 2 of this Syllabus.

It is recommended that the collaborative curriculum planning should prioritise units of competency that provide essential foundation skills for employment in primary industries and work towards the achievement of an AQF VET certificate.

Work placement

Students with special education needs **must** undertake the minimum work placement requirements for courses within the Primary Industries Curriculum Framework, described in Section 2.1.4 of this Syllabus.

Assessment

Students with special education needs are subject to the assessment requirements detailed in Section 1.7 of this Syllabus and in the document [Assessment and Reporting in Primary Industries Stage 6](#). Some students may require adjustments to assessment strategies as well as additional time to demonstrate the required level of competence.

AQF VET qualifications

Eligibility for AQF VET qualifications is the same for all students. To receive AQF VET qualifications, students with special education needs must meet the assessment requirements of the [Agriculture, Horticulture and Conservation and Land Management Training Package \(AHC10\)](#). A qualified assessor must conduct the assessment.

Further information

Further advice on VET courses for students with special education needs is contained in the *VET Courses and Students with Special Education Needs* fact sheet and *Industry Curriculum Frameworks Support Document for Students with Special Education Needs* document.

These documents are available on the Board's website at www.boardofstudies.nsw.edu.au/syllabus_hsc/primary-industries.html.

5.4 Access by students in Years 9 and 10 (Stage 5)

In certain circumstances students in Years 9 and 10 may access HSC VET course(s). Further information is available on the Board of Studies website at www.boardofstudies.nsw.edu.au/voc_ed/stage-5.html.

For further advice contact your school system and/or RTO.

6 Glossary

AQF	Australian Qualifications Framework The AQF is the policy framework that defines all qualifications recognised nationally in post-compulsory education and training in Australia. The AQF comprises titles and guidelines that define each qualification, as well as the principles and protocols covering cross-sectoral qualification links and the issuing of qualifications and statements of attainment.
AQTF	See VET Quality Framework.
Australian Apprenticeships	Australian Apprenticeships encompass all apprenticeships and traineeships. They combine time at work with training and can be full-time, part-time or school-based (www.australianapprenticeships.gov.au).
competency	The broad concept of industry competency concerns the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency requires the application of specified skills, knowledge and attitudes relevant to effective participation in an industry, industry sector or enterprise.
competency standard	Competency standards in Training Packages are determined by industry to meet identified industry skill needs. Competency standards are made up of a number of units of competency, each of which describes a key function or role in a particular job function or occupation. Each unit of competency within a Training Package is linked to one or more AQF qualifications.
core units of competency	Units of competency required by the Training Package to be eligible for the AQF VET qualification.
DEEWR	Department of Education, Employment and Workplace Relations (Commonwealth)
elements of competency	The basic building blocks of a unit of competency which describe the key activities or elements of the work covered by the unit.
focus areas	Contains the HSC Content, prescribing the scope of learning for the HSC.
mandatory units of competency	Units of competency that must be studied for an HSC VET course.
recognition of prior learning (RPL)	The result of an assessment of an individual's non-formal and informal learning to determine the extent to which that individual has achieved the required learning outcomes, competency outcomes, or standards for entry to, and/or partial or total completion of, a qualification.
RTO	Registered Training Organisation A training organisation registered by a registering body in accordance with the VET Quality Framework (formerly referred to as the AQTF), within a defined scope of registration (RTOs include TAFE NSW, private providers and schools or colleges as part of school system RTOs).

scope of registration	<p>The particular services and products an RTO is registered to provide. The RTO's scope defines the specific AQF VET qualifications, units of competency and accredited courses it is registered to provide, and whether it is registered to provide:</p> <ul style="list-style-type: none"> • both training delivery and assessment services, and to issue the relevant AQF VET qualifications and statements of attainment, or • only assessment services, and to issue the relevant AQF VET qualifications and statements of attainment.
Stage 5	In NSW, Stage 5 relates to Years 9 and 10 of schooling.
Stage 6	In NSW, Stage 6 relates to Years 11 and 12 of schooling.
Statement of Attainment	May be issued in the vocational education and training sector by an RTO when an individual has completed one or more units of competency from nationally recognised qualification(s)/course(s).
training.gov.au	<p>www.training.gov.au</p> <p>The national register for recording information about RTOs, Training Packages and accredited courses.</p>
Training Package	A nationally endorsed, integrated set of competency standards, assessment guidelines and AQF VET qualifications for a specific industry, industry sector or enterprise.
training plan	A documented program of training and assessment required for an apprenticeship/traineeship training contract. It is developed by an RTO in consultation with the parties to the contract as the basis for training and assessing a person undertaking an apprenticeship or traineeship.
unit of competency	Specification of industry knowledge and skill and the application of that knowledge and skill to the standard of performance expected in the workplace.
VET	Vocational Education and Training
VET qualification	<p>Formal certification in the VET sector by an RTO that a person has satisfied all requirements of the units of competency or modules that comprise an AQF VET qualification, as specified by:</p> <ul style="list-style-type: none"> • a nationally endorsed Training Package, or • an accredited course that provides training for the qualification.
VET Quality Framework	<p>VET Quality Framework</p> <p>The VET Quality Framework comprises:</p> <ul style="list-style-type: none"> • the Standards for NVR Registered Training Organisations • the Fit and Proper Person Requirements • the Financial Viability Risk Assessment Requirements • the Data Provision Requirements, and • the Australian Qualifications Framework. <p>The VET Quality Framework replaces references to the Australian Quality Training Framework (AQTF).</p>