



# Horticulture

A/M/V

Front Cover Art provided by Canberra College student Aidan Giddings

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## The ACT Senior Secondary System

The ACT senior secondary system recognises a range of university, vocational or life skills pathways.

The system is based on the premise that teachers are experts in their area: they know their students and community and are thus best placed to develop curriculum and assess students according to their needs and interests. Students have ownership of their learning and are respected as young adults who have a voice.

A defining feature of the system is school-based curriculum and continuous assessment. School-based curriculum provides flexibility for teachers to address students' needs and interests. College teachers have an opportunity to develop courses for implementation across ACT schools. Based on the courses that have been accredited by the BSSS, college teachers are responsible for developing programs of learning. A program of learning is developed by individual colleges to implement the courses and units they are delivering.

Teachers must deliver all content descriptions; however, they do have flexibility to emphasise some content descriptions over others. It is at the discretion of the teacher to select the texts or materials to demonstrate the content descriptions. Teachers can choose to deliver course units in any order and teach additional (not listed) content provided it meets the specific unit goals.

School-based continuous assessment means that students are continually assessed throughout years 11 and 12, with both years contributing equally to senior secondary certification. Teachers and students are positioned to have ownership of senior secondary assessment. The system allows teachers to learn from each other and to refine their judgement and develop expertise.

Senior secondary teachers have the flexibility to assess students in a variety of ways. For example: multimedia presentation, inquiry-based project, test, essay, performance and/or practical demonstration may all have their place. College teachers are responsible for developing assessment instruments with task specific rubrics and providing feedback to students.

The integrity of the ACT Senior Secondary Certificate is upheld by a robust, collaborative, and rigorous structured consensus-based peer reviewed moderation process. System moderation involves all year 11 and 12 teachers from public, non-government and international colleges delivering the ACT Senior Secondary Certificate.

Only students who desire a pathway to university are required to sit a general aptitude test, referred to as the ACT Scaling Test (AST), which moderates student scores across courses and colleges. Students are required to use critical and creative thinking skills across a range of disciplines to solve problems. They are also required to interpret a stimulus and write an extended response.

Senior secondary curriculum makes provision for student-centred teaching approaches, integrated and project-based learning inquiry, formative assessment, and teacher autonomy.

ACT Senior Secondary Curriculum makes provision for diverse learners and students with mild to moderate intellectual disabilities, so that all students can achieve an ACT Senior Secondary Certificate.

The ACT Board of Senior Secondary Studies (BSSS) leads senior secondary education. It is responsible for quality assurance in senior secondary curriculum, assessment, and certification. The Board consists of nominees from colleges, professional bodies, universities, industry, parent/carer organisations and unions. The Office of the Board of Senior Secondary Studies (OBSSS) consists of professional and administrative staff who support the Board in achieving its objectives and functions.

## ACT Senior Secondary Certificate

Courses of study for the ACT Senior Secondary Certificate:

- provide a variety of pathways, to meet different learning needs and encourage students to complete their secondary education
- enable students to develop the essential capabilities for twenty-first century learners
- empower students as active participants in their own learning
- engage students in contemporary issues relevant to their lives
- foster students' intellectual, social, and ethical development
- nurture students' wellbeing, and physical and spiritual development
- enable effective and respectful participation in a diverse society.

Each course of study:

- comprises an integrated and interconnected set of knowledge, skills, behaviours, and dispositions that students develop and use in their learning across the curriculum
- is based on a model of learning that integrates intended student outcomes, pedagogy, and assessment
- outlines teaching strategies which are grounded in learning principles and encompass quality teaching
- promotes intellectual quality, establish a rich learning environment, and generate relevant connections between learning and life experiences
- provides formal assessment and certification of students' achievements.

## Vocational Education and Training in ACT Senior Secondary Schools

The Board of Senior Secondary Studies is responsible for the certification of senior secondary school studies in government and non-government schools in the ACT. Students can undertake Vocational Education and Training (VET) as part of a senior secondary certificate and completion by a student can provide credit towards both a recognised VET qualification and a Senior Secondary School Certificate.

The BSSS certifies VET qualifications and Statements of Attainment on behalf of ACT colleges and high schools that offer Australian VET Qualifications and are Registered Training Organisations (RTOs) or have a Third-Party Service Agreement (TPSA) with an RTO. The Board also recognises VET qualifications delivered by external RTOs and facilitates the allocation of credit towards the ACT Senior Secondary Certificate based on assessment and hours of training.

The BSSS is not an RTO and is not responsible for those aspects that relate to VET delivery in schools or externally that fall within the role of the RTO.

Vocational programs must be assessed in accordance with the *Standards for Registered Training Organisations 2015* and the guidelines outlined in the relevant training package. Students undertaking A, T and M accredited vocational programs will be assessed against the criteria and achievement standards referenced in the framework to produce A-E grades and scores. They will also be assessed against competency standards as described in the relevant training package.

The BSSS certifies VET that:

- is listed on the national training.gov.au website; and
- is delivered and assessed by an ACT college or high school, which is an RTO or has a Third-Party Service Agreement (TPSA) with an RTO that has scope from the Australian Skills Quality Authority (ASQA) to deliver specified qualifications
- is delivered and assessed in accordance with relevant Training Package requirements.

Vocational learning contributes to the ACT Senior Secondary Certificate in a variety of ways:

- BSSS accredited A, T, and M vocational courses with embedded competencies delivered by colleges are reported with A–E grades
- BSSS accredited C courses (competency-based assessment only) delivered and assessed by colleges are reported with the grade 'P' (Pass) where at least one competency is achieved by the student; or 'Q?' 'Participated' where no competencies are achieved but attendance requirements are met
- BSSS E courses recognising study at external RTOs are reported with the grade 'P' (Pass)
- Australian School Based Apprenticeships (ASBAs) are reported as E courses with the grade 'P' (Pass).

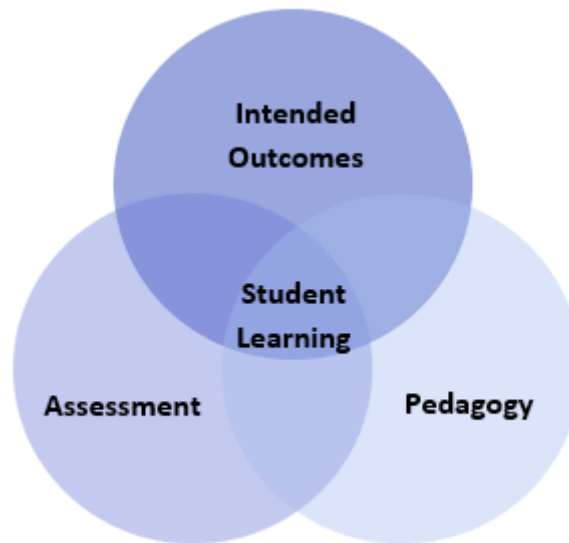
The BSSS credit arrangements recognise VET studies externally:

- through direct credit when the qualification or Units of Competence relate to a VET course that is being studied by the student
- towards the Senior Secondary Certificate, providing the VET does not duplicate content.

*Implementing Vocational Education and Training Courses* (Appendix F) provides further course information, including training package requirements, and should be read in conjunction with course documents.

## Underpinning beliefs

- All students are able to learn.
- Learning is a partnership between students and teachers.
- Teachers are responsible for advancing student learning.



## Learning Principles

1. Learning builds on existing knowledge, understandings, and skills.  
*(Prior knowledge)*
2. When learning is organised around major concepts, principles and significant real -world issues, within and across disciplines, it helps students make connections and build knowledge structures.  
*(Deep knowledge and connectedness)*
3. Learning is facilitated when students actively monitor their own learning and consciously develop ways of organising and applying knowledge within and across contexts.  
*(Metacognition)*
4. Learners' sense of self and motivation to learn affects learning.  
*(Self-concept)*
5. Learning needs to take place in a context of high expectations.  
*(High expectations)*
6. Learners learn in different ways and at different rates.  
*(Individual differences)*
7. Different cultural environments, including the use of language, shape learners' understandings and the way they learn.  
*(Socio-cultural effects)*
8. Learning is a social and collaborative function as well as an individual one.  
*(Collaborative learning)*
9. Learning is strengthened when learning outcomes and criteria for judging learning are made explicit and when students receive frequent feedback on their progress.  
*(Explicit expectations and feedback)*



## General Capabilities

All courses of study for the ACT Senior Secondary Certificate should enable students to develop essential capabilities for twenty-first century learners. These ‘capabilities’ comprise an integrated and interconnected set of knowledge, skills, behaviours, and dispositions that students develop and use in their learning across the curriculum.

The capabilities include:

- literacy
- numeracy
- information and communication technology (ICT)
- critical and creative thinking
- personal and social
- ethical understanding
- intercultural understanding

Courses of study for the ACT Senior Secondary Certificate should be both relevant to the lives of students and incorporate the contemporary issues they face. Hence, courses address the following three priorities. These priorities are:

- Aboriginal and Torres Strait Islander histories and cultures
- Asia and Australia’s engagement with Asia
- Sustainability

Elaboration of these General Capabilities and priorities is available on the ACARA website at [www.australiancurriculum.edu.au](http://www.australiancurriculum.edu.au).

### Literacy

Students develop horticultural industry specific and general literacy as they learn how to communicate ideas, concepts, and proposals to a variety of audiences. They read and interpret written instructions for specific horticultural purposes, often including diagrams and procedural writings such as user manuals, design briefs, plans, working drawings. Students will prepare accurate reports and may write project outlines, briefs, concept proposals, and evaluations.

The vocabulary used in the horticulture industry is often technical and includes specific terms for concepts, processes, and production. Students learn to understand technical information in a variety of forms such as drawings, diagrams, flow charts, models, tables, and graphs. They also learn the importance of listening, talking, and discussing the processes involved in horticultural production and processes, particularly in articulating, questioning, and evaluating ideas.

### Numeracy

Numeracy provides students with the opportunity to interpret and use mathematical knowledge and skills in a range of situations. Students use numbers to calculate, measure, estimate, and record; interpret and draw conclusions; develop, refine, and test concepts; and cost and sequence projects. When using software, materials, tools and equipment, students work with the concepts of number, geometry, scale, proportion, measurement, and volume. Students may create accurate drawings, work with digital models, and use computational thinking in decision-making processes when designing and creating solutions.

### Information and Communication Technology (ICT) Capability

Students develop ICT capability when they enter or retrieve data using digital technologies and software applications according to organisational procedures. They develop skills using a range of software applications and digital hardware that enable them to realise their ideas. Students use ICT when they investigate and analyse information, evaluate systems and models, communicate, and collaborate. They develop design ideas; generate plans and diagrams to communicate their designs and produce solutions using digital technologies.

## **Critical and Creative Thinking**

Students develop capability in critical and creative thinking as they imagine, generate, develop and evaluate ideas for their horticultural productions and processes. They will collaborate in analysing problems, refining ideas, developing, and justifying solutions. Students incorporate the use of technology to assist in problem solving. They identify and explore suitable technologies and incorporate that knowledge into a range of situations. Students consider how data, information, systems, materials, tools, and equipment (past and present) impact the horticulture industry, and how these may be better designed and managed. Experimenting, drawing, modelling, designing, and working with digital tools, equipment and software helps students build their visual and spatial thinking to create solutions and products.

## **Personal and Social Capability**

Students develop personal and social capability by developing their social awareness when they work in a collaborative workspace. They direct their own learning, plan, and carry out investigations, and become independent learners who can apply design thinking, technologies understanding and skills when making decisions. They develop social and employability skills through working cooperatively in teams, sharing resources and processes, making group decisions, and resolving conflict. Horticulture enhances students' personal and social capability by developing their social awareness. Students develop understanding of diversity by researching and identifying client needs. Students consider the impact their decisions have on people, communities, and environments, develop social responsibility, and respect for others.

## **Ethical Understanding**

Students develop the capacity to understand and apply ethical and socially responsible principles when collaborating with others and creating, sharing, and using technologies – materials, data, processes, tools, and equipment. They evaluate horticultural practices against the criteria of environmental sustainability, health, social and emotional responsibility. Students explore issues associated with technologies and consider possibilities. They are encouraged to develop workplace specific values and attitudes. Students learn about safe and ethical procedures when developing and implementing horticultural systems and processes, working with people, products, and materials. They consider the rights of others and their responsibilities in using sustainable practices that protect the planet. Students learn to appreciate and value the part they play in the social and natural systems in which they operate. They develop research skills and learn to detect bias and inaccuracies.

## **Intercultural Understanding**

Students investigate how cultural identities and traditions influence the function and form of solutions, products, services, and environments designed to meet the needs of daily life in the present and in the future.

In their interactions with others, when collaborating on projects, students consider the dynamic and complex nature of cultures, including values, beliefs, practices, and assumptions. They recognise and respond to the challenges of cultural diversity by applying appropriate social protocols.

## Cross-Curriculum Priorities

### Aboriginal and Torres Strait Islander Histories and Cultures

Through research and practical experiences that draw on *Aboriginal and Torres Strait Islander Histories and Cultures* students can learn the importance of Aboriginal and Torres Strait Islander Peoples' knowledge in developing a richer understanding of the Australian environment. Students develop an appreciation of the unique Australian biota and its interactions, the impacts of Aboriginal and Torres Strait Islander Peoples on their environments and the ways in which the Australian landscape has changed over tens of thousands of years. They examine Aboriginal and Torres Strait Islander knowledge of ecosystems and food production over time and the spiritual significance of Country/Place.

### Asia and Australia's Engagement with Asia

Contexts that draw on Asian horticulture practices provide an opportunity for students to investigate *Asia and Australia's engagement with Asia*. Students could explore the diverse environments of the Asia region and develop an appreciation that interaction between human activity and these environments continues to influence the region, including Australia, and has significance for the rest of the world. By examining historical horticulture practices and production from the Asian region, students could appreciate its important role in shaping practices within Australia.

### Sustainability

The Sustainability cross-curriculum priority is explicitly addressed in the Horticulture curriculum. Through investigating the relationships between biological systems students develop an appreciation for the interconnectedness of the biosphere and how horticultural practices impact on these relationships. Students appreciate that science provides the basis for decision making in many areas of horticulture and that these decisions can impact the Earth system. They understand the importance of using research to predict possible effects of human and other activity, and to develop management plans or alternative technologies that minimise these effects and provide for a more sustainable future.

Education for sustainability develops the knowledge, skills, values, and world views necessary for people to act in ways that contribute to more sustainable patterns of living. It enables individuals and communities to reflect on ways of interpreting and engaging with the world. Sustainability education is futures-oriented, focusing on protecting environments and creating a more ecologically and socially just world through informed action. Actions that support more sustainable patterns of living require consideration of environmental, social, cultural, and economic systems and their interdependence.

# Horticulture

## A/M/V

### Rationale

Horticulture A/M/V focuses on the processes and industry practices required to design, create, and maintain plant specific environments and business in an increasingly technological and information rich world. Students develop knowledge and understanding of scientific concepts in plant biology and physiology, soil nutrients and climate in conjunction with the skills to use traditional and contemporary tools, and materials of the horticulture industry for a range of purposes and in an array of contexts. They examine the challenges that exist in the horticulture industry in adapting to new technology, client demands, urbanisation and changing climatic conditions, and explore future options.

Students investigate the purpose of horticulture business, occupations, future directions, and trends. Industry practices and processes for a variety of contexts are explored and applied across a range of subsets within the industry, e.g., nursery, market gardening, arboriculture. Through both individual and collaborative learning experiences, students learn to meet employer expectations and establish productive and appropriate work habits. Participating in industry specific tasks promotes the development of adaptable, competent, self-motivated individuals who consider safety and work collaboratively with colleagues. Students develop skills for communicating orally, in written, and graphical modes. They plan, select, and organise materials to achieve desired horticultural outcomes, to meet design and client briefs. Students apply sustainable practices and environmental considerations. They interpret results and data from their own investigations to draw justified conclusions about sustainability.

Students develop relevant technical, vocational, and interpersonal capabilities suitable for employment and further training in the horticulture industry. The study of Horticulture also provides for the development of employability skills such as communication and teamwork which are transferable to other industry areas. Through the study of this subject, students will gain experiences that can be applied in a range of contexts, including work, study and recreation that will assist them to make informed choices.

This course provides opportunities to complete VET qualifications or a Statement of Attainment from the Agriculture, Horticulture and Conservation and Land Management Training Package (AHC). However, the course may be delivered as A/M/V, A/V, M/V, A or M.

### Goals

This course should enable students to:

- analyse industry practices, processes, and procedures
- analyse technical information and specifications
- understand materials and equipment
- demonstrate industry specific literacy and numeracy skills
- solve problems and use industry specific terminology
- organise resources and material to create quality products and services
- work independently and collaboratively in accordance with WHS principles and industry standards
- communicate in a range of modes and mediums.

## Unit Titles

- Nursery Systems
- Horticulture Maintenance and Management
- Sustainable Horticulture and Conservation
- Producing Food
- Independent Study

## Organisation of Content

### Nursery Systems

Students explore foundational botany and plant physiology concepts for nursery productions. They apply knowledge of plant functions to horticultural nursery techniques and practices. Students develop an understanding of how planting mediums, nutrients, seasons, climatic conditions, and environments influence growth and development. They investigate technology used in plant propagation, care, and maintenance, and apply these in line with Work Health Safety requirements.

### Horticulture Maintenance and Management

Students investigate principles, processes and procedures for the maintenance and management of a variety of horticulture industries and enterprises. They investigate plant characteristics and requirements for optimal growth. Students design, interpret, and implement plans for the maintenance and management of horticultural environments. They develop work and maintenance practices in line with WHS and sustainability requirements.

### Sustainable Horticulture and Conservation

Students explore concepts relating to horticultural conservation. They apply policies, practices and processes used for the improvement and sustainability of natural and built environments. Students explore the physiological properties and characteristics of various plants, and their benefits, to determine suitability for use in public and garden spaces. They investigate practices for the conservation of landscapes, including those of First Nations Australians. Students examine wholistic land care strategies to support biomes and pose solutions for improvement.

### Producing Food

Students explore and research existing and emerging local and urban enterprises producing food. They assess their local context to identify opportunities for food production. Students analyse the benefits associated with local food production, including its carbon footprint. They develop and apply knowledge and skills in the planning and implementation of localised food production. Students research equipment and systems utilised in local food production contexts.

### Independent Study

An Independent Study unit has an important place in senior secondary courses. It is a valuable pedagogical approach that empowers students to make decisions about their own learning. An Independent Study unit can be proposed by an individual student for their own independent study and negotiated with their teacher. The program of learning for an Independent Study unit must meet the unit goals and content descriptions as they appear in the course.

Independent Study units are only available to individual students in Year 12. A student can only study a maximum of one Independent Study unit in each course. Students must have studied at least three standard 1.0 units from this course. An Independent Study unit requires the principal's written approval. Principal approval can also be sought by a student in Year 12 to enrol concurrently in an Independent Study unit and their third or fourth 1.0 unit in this course of study.

## Assessment

The identification of criteria within the achievement standards and assessment task types and weightings provides a common and agreed basis for the collection of evidence of student achievement.

**Assessment Criteria** (the dimensions of quality that teachers look for in evaluating student work) provide a common and agreed basis for judgement of performance against unit and course goals, within and across colleges. Over a course, teachers must use all these criteria to assess students' performance but are not required to use all criteria on each task. Assessment criteria are to be used holistically on a given task and in determining the unit grade.

**Assessment Tasks** elicit responses that demonstrate the degree to which students have achieved the goals of a unit based on the assessment criteria. The Common Curriculum Elements (CCE) is a guide to developing assessment tasks that promote a range of thinking skills (see Appendix C). It is highly desirable that assessment tasks engage students in demonstrating higher order thinking.

**Rubrics** are constructed for individual tasks, informing the assessment criteria relevant for a particular task, and can be used to assess a continuum that indicates levels of student performance against each criterion.

### Assessment Criteria

Students will be assessed on the degree to which they demonstrate:

- knowledge and understanding
- skills.

## Assessment Task Types

	Theory	Practical
	<p><b>Suggested tasks:</b></p> <ul style="list-style-type: none"> <li>• test</li> <li>• folio</li> <li>• assignment</li> <li>• research project</li> <li>• cooperative task</li> <li>• planning tasks</li> <li>• risk assessments</li> <li>• presentations</li> <li>• drawings</li> </ul>	<p><b>Suggested tasks:</b></p> <ul style="list-style-type: none"> <li>• demonstration</li> <li>• individual project/activity</li> <li>• group project</li> <li>• continuous observation (e.g. skills, WH&amp;S)</li> <li>• folio</li> <li>• test</li> <li>• presentations</li> <li>• online collaboration/discussion forum</li> </ul>
<b>Weightings in A/V 1.0 and 0.5 Units</b>	30 - 40%	60 - 70%
<b>Weightings in M/V 1.0 and 0.5 Units</b>	30 - 70%	30 - 70%

### Additional Assessment Information

- For a standard unit (1.0), students must complete a minimum of three assessment tasks and a maximum of five.
- For a half standard unit (0.5), students must complete a minimum of two and a maximum of three assessment tasks.
- Assessment tasks for a standard (1.0) or half-standard (0.5) unit must be informed by the Achievement Standards.
- Students must experience a variety of task types and different modes of communication to demonstrate the Achievement Standards.

## **Achievement Standards**

Years 11 and 12 Achievement Standards are written for A/T courses. A single Achievement Standard is written for M courses.

A Year 12 student in any unit is assessed using the Year 12 Achievement Standards. A Year 11 student in any unit is assessed using the Year 11 Achievement Standards. Year 12 Achievement Standards reflect higher expectations of student achievement compared to the Year 11 Achievement Standards. Years 11 and 12 Achievement Standards are differentiated by cognitive demand, the number of dimensions and the depth of inquiry.

An Achievement Standard cannot be used as a rubric for an individual assessment task. Assessment is the responsibility of the college. Student tasks may be assessed using rubrics or marking schemes devised by the college. A teacher may use the Achievement Standards to inform development of rubrics. The verbs used in Achievement Standards may be reflected in the rubric. In the context of combined Years 11 and 12 classes, it is best practice to have a distinct rubric for Years 11 and 12. These rubrics should be available for students prior to completion of an assessment task so that success criteria are clear.



**Achievement Standards Horticulture A Year 11**

	<i>A student who achieves an A grade typically</i>	<i>A student who achieves a B grade typically</i>	<i>A student who achieves a C grade typically</i>	<i>A student who achieves a D grade typically</i>	<i>A student who achieves an E grade typically</i>
<b>Knowledge and understanding</b>	<ul style="list-style-type: none"> <li>analyses work practices, processes, and procedures</li> <li>analyses technical information and specifications</li> <li>evaluates work, health, and safety practices</li> </ul>	<ul style="list-style-type: none"> <li>explains work practices, processes, and procedures</li> <li>explains technical information and specifications</li> <li>analyses work, health, and safety practices</li> </ul>	<ul style="list-style-type: none"> <li>describes work practices, processes, and procedures</li> <li>describes technical information and specifications</li> <li>describes work, health, and safety practices</li> </ul>	<ul style="list-style-type: none"> <li>identifies work practices, processes, and procedures</li> <li>identifies technical information</li> <li>identifies work, health, and safety practices</li> </ul>	<ul style="list-style-type: none"> <li>identifies some work practices, processes, and procedures</li> <li>identifies some technical information</li> <li>identifies some work, health, and safety practices</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>applies with high proficiency, industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies with high proficiency, technical information, and specifications to create high quality products and/or services</li> <li>solves problems, proposes solutions, and justifies decisions in completing a task</li> <li>demonstrates with high proficiency, industry specific literacy and numeracy skills to a range of tasks</li> <li>demonstrates highly developed behaviours and attitudes and contributes positively to learning and work</li> <li>reflects with insight on own learning processes</li> <li>communicates with high proficiency, using a range of modes and medium using industry terminology and effectively organises materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies with proficiency, industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies with proficiency, technical information, and specifications to create quality products and/or services</li> <li>solves problems, proposes solutions, and explains decisions in completing a task</li> <li>demonstrates with proficiency, industry specific literacy and numeracy skills to a range of tasks</li> <li>demonstrates developed behaviours and attitudes and contributes positively to learning and work</li> <li>explains own learning processes</li> <li>communicates with proficiency, using industry terminology and competently organises materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies effective industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies effectively technical information and specifications to create quality products and/or services</li> <li>solves problems, proposes solutions, and describes decisions in completing a task</li> <li>demonstrates effective industry specific literacy and numeracy skills to tasks</li> <li>demonstrates appropriate behaviours and attitudes and contributes positively to learning and work</li> <li>describes own learning processes</li> <li>communicates effectively, using industry terminology and organises materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies some industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies some technical information and specifications to create products and/or services</li> <li>follows instructions, guidelines, and procedures</li> <li>demonstrates some industry specific literacy and numeracy skills to tasks</li> <li>demonstrates some appropriate behaviours and attitudes and mainly contributes positively to learning and work</li> <li>describes some learning processes</li> <li>communicates using some industry terminology and demonstrates some ability to organise materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies little or no industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies little or no technical information and specifications to create products and/or services</li> <li>follows simple instructions, guidelines, and procedures</li> <li>demonstrates little or no industry specific literacy and numeracy skills to tasks</li> <li>demonstrates limited appropriate behaviours and attitudes</li> <li>describes limited learning processes</li> <li>communicates using little or no industry terminology and demonstrates little or no ability to organise materials and resources</li> </ul>

**Achievement Standards Horticulture A Year 12**

	<i>A student who achieves an A grade typically</i>	<i>A student who achieves a B grade typically</i>	<i>A student who achieves a C grade typically</i>	<i>A student who achieves a D grade typically</i>	<i>A student who achieves an E grade typically</i>
<b>Knowledge and understanding</b>	<ul style="list-style-type: none"> <li>analyses industry practices, processes and procedures and explains their significance in the application to workplace and/or work-related contexts</li> <li>analyses technical information and specifications and evaluates a wide range of materials and equipment</li> <li>evaluates work, health and safety practices and analyses how they apply to the workplace and/or work-related contexts</li> </ul>	<ul style="list-style-type: none"> <li>explains industry practices, processes and procedures and describes their significance in the application to workplace and/or work-related contexts</li> <li>explains technical information and specifications and describes a range of materials and equipment</li> <li>analyses work, health, and safety practices, and explains how they apply to the workplace and/or work-related contexts</li> </ul>	<ul style="list-style-type: none"> <li>describes industry practices, processes and procedures and identifies their significance in the application to workplace and/or work-related contexts</li> <li>describes technical information and specifications and identifies a range of materials and equipment</li> <li>describes work, health and safety practices and identifies how they apply to the workplace and/or work-related contexts</li> </ul>	<ul style="list-style-type: none"> <li>identifies industry practices, processes, and procedures with some reference to their significance in the application to workplace and/or work-related contexts</li> <li>identifies technical information and specifications and identifies some materials and equipment</li> <li>identifies work, health, and safety practices, with some reference to how they apply to the workplace and/or work-related contexts</li> </ul>	<ul style="list-style-type: none"> <li>identifies industry practices, processes, and procedures with little or no reference to their significance in the application to workplace and/or work-related contexts</li> <li>identifies some technical information with little or no reference to materials and equipment</li> <li>identifies work, health, and safety practices, with little or no reference to how they apply to the workplace and/or work-related contexts</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>applies with high proficiency, industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies with high proficiency, technical information, and specifications to create high quality products and/or services</li> <li>solves problems, proposes solutions, and justifies decisions in completing a task</li> <li>demonstrates with high proficiency, industry specific literacy and numeracy skills to a wide range of tasks</li> <li>demonstrates highly developed behaviours and attitudes and contributes positively to learning and work</li> <li>reflects with insight on own learning processes and needs related to industry and the workplace</li> <li>communicates with high proficiency, using industry terminology and effectively organises materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies with proficiency, industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies with proficiency, technical information, and specifications to create quality products and/or services</li> <li>solves problems, proposes solutions, and explains decisions in completing a task</li> <li>demonstrates with proficiency, industry specific literacy and numeracy skills to a range of tasks</li> <li>demonstrates developed behaviours and attitudes and contributes positively to learning and work</li> <li>explains own learning processes and needs related to industry and the workplace</li> <li>communicates with proficiency, using industry terminology and competently organises materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies effective industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies effectively technical information and specifications to create quality products and/or services</li> <li>solves problems, proposes solutions, and describes decisions in completing a task</li> <li>demonstrates effective industry specific literacy and numeracy skills to tasks</li> <li>demonstrates appropriate behaviours and attitudes and contributes positively to learning and work</li> <li>describes own learning processes and needs related to industry and the workplace</li> <li>communicates effectively, using industry terminology and organises materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies some industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies some technical information and specifications to create products and/or services</li> <li>follows instructions, guidelines, and procedures</li> <li>demonstrates some industry specific literacy and numeracy skills to tasks</li> <li>demonstrates some appropriate behaviours and attitudes and mainly contributes positively to learning and work</li> <li>describes some learning processes and needs related to industry and the workplace</li> <li>communicates using some industry terminology and demonstrates some ability to organise materials and resources</li> </ul>	<ul style="list-style-type: none"> <li>applies little or no industry practices, processes, and procedures to deliver a service and/or create a product</li> <li>applies little or no technical information and specifications to create products and/or services</li> <li>follows simple instructions, guidelines, and procedures</li> <li>demonstrates little or no industry specific literacy and numeracy skills to tasks</li> <li>demonstrates limited appropriate behaviours and attitudes</li> <li>describes limited learning processes and needs related to industry and the workplace</li> <li>communicates using little or no industry terminology and demonstrates little or no ability to organise materials and resources</li> </ul>

**Achievement Standards Horticulture M – Years 11 and 12**

	<i>A student who achieves an A grade typically</i>	<i>A student who achieves a B grade typically</i>	<i>A student who achieves a C grade typically</i>	<i>A student who achieves a D grade typically</i>	<i>A student who achieves an E grade typically</i>
<b>Knowledge and understanding</b>	<ul style="list-style-type: none"> <li>describes industry practices, processes, and procedures independently</li> <li>describes technical information and specifications independently</li> <li>describes work, health, and safety practices independently</li> </ul>	<ul style="list-style-type: none"> <li>explains industry practices, processes, and procedures with some assistance</li> <li>explains technical information and specifications with some assistance</li> <li>describes work, health, and safety practices with some assistance</li> </ul>	<ul style="list-style-type: none"> <li>describes industry practices, processes, and procedures with assistance</li> <li>describes technical information and specifications with assistance</li> <li>recounts work, health, and safety practices with assistance</li> </ul>	<ul style="list-style-type: none"> <li>identifies industry practices, processes, and procedures with continuous guidance</li> <li>identifies technical information with continuous guidance</li> <li>recounts work, health, and safety practices with continuous guidance</li> </ul>	<ul style="list-style-type: none"> <li>identifies some industry practices, processes, and procedures</li> <li>identifies some technical information with direct instruction</li> <li>recounts work, health, and safety practices with direct instruction</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>applies industry practices, processes, and procedures to deliver a service and/or create a product independently</li> <li>applies technical information and specifications to products and/or services independently</li> <li>demonstrates industry specific literacy and numeracy skills to a range of tasks independently</li> <li>demonstrates behaviours and attitudes and contributes positively to learning independently</li> <li>communicates ideas using appropriate terminology independently</li> </ul>	<ul style="list-style-type: none"> <li>applies industry practices, processes, and procedures to deliver a service and/or create a product with some assistance</li> <li>applies technical information and specifications to products and/or services with some assistance</li> <li>demonstrates industry specific literacy and numeracy skills to a range of tasks with some assistance</li> <li>demonstrates behaviours and attitudes and contributes positively to learning with some assistance</li> <li>communicates ideas using appropriate terminology with some assistance</li> </ul>	<ul style="list-style-type: none"> <li>applies industry practices, processes, and procedures to deliver a service and/or create a product with assistance</li> <li>applies technical information and specifications to products and/or services with assistance</li> <li>demonstrates industry specific literacy and numeracy skills to a range of tasks with assistance</li> <li>demonstrates behaviours and attitudes and contributes positively to learning with assistance</li> <li>communicates ideas using appropriate terminology with assistance</li> </ul>	<ul style="list-style-type: none"> <li>applies industry practices, processes, and procedures to deliver a service and/or create a product with continuous guidance</li> <li>applies technical information and specifications to products and/or services with continuous guidance</li> <li>demonstrates industry specific literacy and numeracy skills to a range of tasks with continuous guidance</li> <li>demonstrates behaviours and attitudes and contributes positively to learning with continuous guidance</li> <li>communicates ideas using appropriate terminology with continuous guidance</li> </ul>	<ul style="list-style-type: none"> <li>applies industry practices, processes, and procedures to deliver a service and/or create a product with direct instruction</li> <li>applies technical information and specifications to products and/or services with direct instruction</li> <li>demonstrates industry specific literacy and numeracy skills to a range of tasks with direct instruction</li> <li>demonstrates behaviours and attitudes and contributes positively to learning with direct instruction</li> <li>communicates ideas using appropriate terminology with direct instruction</li> </ul>

## Nursery Systems

**Value: 1.0**

**Nursery Systems a**

**Value 0.5**

**Nursery Systems b**

**Value 0.5**

### Unit Description

Students explore foundational botany and plant physiology concepts for nursery production. Students apply knowledge of plant functions to horticultural nursery techniques and practices. They develop an understanding of how planting mediums, nutrients, seasons, climatic conditions, and environments influence growth and development. Students investigate technology used in plant propagation, care, and maintenance, and apply these in line with WHS requirements.

### Specific Unit Goals

This unit should enable students to:

A Course	M Course
<ul style="list-style-type: none"> <li>analyse botany and plant physiology principles</li> <li>analyse nursery techniques and practices</li> <li>analyse technology for growing plants for nursery systems</li> <li>apply information and skills for growing plants in nursery systems</li> </ul>	<ul style="list-style-type: none"> <li>describe botany and plant physiology concepts</li> <li>describe nursery techniques and practices</li> <li>apply information and skills for growing plants in nursery systems</li> </ul>

### Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	M Course
<b>Industry, processes, and procedures</b>	
<ul style="list-style-type: none"> <li>analyse nursery industry practices, processes and procedures used in the preparation and production of nursery products, for example, market demand, climatic conditions, environments, planting mediums, potting requirements, disease, and pest management</li> <li>analyse traditional and modern techniques and technology in the preparation and production of nursery products and reflect on their application, for example, mass production v small scale, climate control systems, agroforestry, urban commercial gardens</li> <li>evaluate WHS practices and procedures, and analyse their application in workplace or work contexts, for example, manual handling, biological hazards such as legionnaires disease, plant toxicity, organic and synthetic plant treatments</li> </ul>	<ul style="list-style-type: none"> <li>describe nursery practices and processes</li> <li>describe traditional techniques and technology used in nursery production</li> </ul>

A Course	M Course
<b>Technical knowledge</b>	
<ul style="list-style-type: none"> <li>• analyse botany and plant physiology concepts in nursery production, for example species diversity, heritage varieties, propagation techniques, growing cycle, naming conventions, identification keys, seed collection</li> <li>• analyse nursery variables on plant growth and development including planting mediums, nutrient supply, and climatic conditions, and discuss and reflect on options for production outcomes, for example, natural and artificial industrial practices, organic versus conventional, GMO seed and chemical labelling</li> </ul>	<ul style="list-style-type: none"> <li>• describe botany and plant physiology concepts</li> <li>• describe nursery variables that impact plant growth</li> </ul>
<b>Skills</b>	
<ul style="list-style-type: none"> <li>• apply industry practices, processes, and procedures common in nurseries with adherence to WHS and sustainable practices including, mutual obligations in implementing WHS practices, for example, toolbox talk, selecting appropriate Personal Protective Equipment, hierarchy of controls, risk management</li> <li>• apply critical thinking skills to justify procedures and practices, for example, plant type selection, plant physiology and propagation, selection, and growth conditions, advising clients, project planning and management</li> <li>• apply creative thinking to meeting client and market needs, and expectations, for example, choice of plants for sale, advising clients, site appropriate plants, horticultural exports to Asia, encourage flowering</li> <li>• apply academic integrity in communicating research, conclusions, plans or solutions</li> <li>• apply communication skills for a variety of audience and purposes, including industry specific purposes, for example, subject specific language, Latin genus, and species communicating with stakeholders, survey customers</li> <li>• apply work skills individually and collaboratively to a variety of tasks to achieve work outcomes to nursery standards, for example, punctuality, efficiency, organisation, meet project deliverable targets, quality assurance</li> </ul>	<ul style="list-style-type: none"> <li>• follow WHS procedures to apply skills in the use of nursery equipment</li> <li>• apply knowledge and skills for problem solving</li> <li>• use reliable information to develop ideas and plans</li> <li>• communicate ideas for horticultural purposes using appropriate terminology and language</li> <li>• demonstrate independent and collaborative behaviours and attitudes to complete tasks</li> </ul>

A Course	M Course
<ul style="list-style-type: none"> <li>• apply industry specific literacy and numeracy skills, using industry specific terminology in a wide range of tasks and settings, for example, following procedures and planting plans, calculation of mediums and mulch, develop timelines for growing cycles</li> <li>• apply ICT skills in a variety of formats, for example, Google suite, Microsoft suite, file sharing</li> </ul>	<ul style="list-style-type: none"> <li>• use ICT skills to meet work and learning needs</li> </ul>
<b>Reflection</b>	
<ul style="list-style-type: none"> <li>• reflect on learning, proposing, and implementing strategies for future improvement</li> </ul>	<ul style="list-style-type: none"> <li>• reflect on learning habits for improvement</li> </ul>

### A guide to reading and implementing content descriptions

Content descriptions specify the knowledge, understanding and skills that students are expected to learn and that teachers are expected to teach. Teachers are required to develop a program of learning that allows students to demonstrate all the content descriptions. The lens which the teacher uses to demonstrate the content descriptions may be either guided through provision of electives within each unit or determined by the teacher when developing their program of learning.

A program of learning is what a college provides to implement the course for a subject. It is at the discretion of the teacher to emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

For colleges wishing to deliver the VET qualification, there is flexibility for a teacher (provided the RTO has scope) to develop a program of learning aligned with the elements of the VET competencies and A/M content descriptions. The knowledge, skills and understandings within the competencies reflect the knowledge, skills, and understandings of the BSSS course unit content descriptions.

Alternatively, a college may choose the A/M course without the VET qualification. In delivering the course teachers will write a program of learning aligned with students’ needs and interests, meeting the A/M content descriptions.

## Units of Competency

Competence must be demonstrated over time and in the full range of **Horticultural** contexts. Teachers must use this unit document in conjunction with the Units of Competence from the **Certificate II in Horticulture or Certificate III in Horticulture**, which provides performance criteria, range statements and assessment contexts.

Teachers must address **all content** related to the competencies embedded in this unit. Reasonable adjustment may be made only to the mode of delivery, context and support provided according to individual student needs.

Competencies are attached to units and must be delivered in those units. However, ongoing assessment of competencies can occur while the student is enrolled as an ACT Senior Secondary student.

In order to be deemed competent to industry standard, assessment must provide authentic, valid, sufficient, and current evidence as indicated in the relevant Training Package.

### Certificate II in Horticulture

The following **core competency** must be delivered and assessed over the semester:

Code	Competency Title
AHCSOL203	Assist with soil or growing media sampling and testing

**And if not already achieved:** AHCWHS202 Participate in work health and safety processes

The following **elective competencies** to meet packaging rules from the list below must also be delivered:

Code	Competency Title
AHCNSY205	Pot up plants
AHCNSY206	Care for nursery plants
AHCNSY207	Undertake propagation activities

### Certificate III in Horticulture

The following **core competency** must be delivered and assessed over the semester:

Code	Competency Title
AHCWHS302	Contribute to work health and safety processes (if not achieved previously)

**At least one elective competency** selected to meet packaging rules from the list below may also be delivered:

Code	Competency Title
AHCNSY313	Implement a propagation plan

It is essential to access [www.training.gov.au](http://www.training.gov.au) for detailed up to date information relating to the above competencies.

## Assessment

Refer to pages 10-12.

## Horticulture Maintenance and Management

**Value: 1.0**

**Horticulture Maintenance and Management a**

**Value 0.5**

**Horticulture Maintenance and Management b**

**Value 0.5**

### Unit Description

Students investigate principles, processes and procedures for the maintenance and management of a variety of horticulture industries and enterprises. They investigate plant characteristics and requirements for optimal growth. Students design, interpret, and implement plans for the maintenance and management of horticultural environments. They develop work and maintenance practices in line with WHS and sustainability requirements.

### Specific Unit Goals

This unit should enable students to:

A Course	M Course
<ul style="list-style-type: none"> <li>• analyse plant characteristics and requirements for optimal growth</li> <li>• analyse principles, processes and procedures for the maintenance and management of a variety of horticulture industries</li> <li>• apply horticulture concepts to plan and implement horticultural management and maintenance</li> <li>• apply industry best practice for the management and maintenance in a variety of horticultural settings</li> </ul>	<ul style="list-style-type: none"> <li>• describe plant characteristics and requirements for growth</li> <li>• describe processes and procedures for maintenance of horticultural context</li> <li>• apply knowledge to implement horticultural maintenance practices</li> </ul>

### Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	M Course
<b>Industry, processes, and procedures</b>	
<ul style="list-style-type: none"> <li>• analyse principles, processes and procedures, regulations for the maintenance and management of a variety of horticulture industries, for example, pruning, soil health, weeds, pests, diseases, project management, ACT Environment legislation, maintenance processes and procedures, urban agriculture</li> <li>• analyse traditional and modern techniques and technology used in horticultural maintenance and management, and reflect on their application, for example, cultural practices, First Nation Australian’s use of fire, synthetic, organic and steam weed management, companion planting, Integrated Pest Management system, biological controls, irrigation</li> </ul>	<ul style="list-style-type: none"> <li>• describe horticulture maintenance processes and procedures</li> <li>• describe traditional techniques and technology used in horticulture maintenance</li> </ul>



A Course	M Course
<ul style="list-style-type: none"> <li>• evaluate WHS practices and procedures, and analyse their application in workplace or work contexts, for example, biological hazards, manual handling, hand tools, safe operating procedures</li> </ul>	
<b>Technical knowledge</b>	
<ul style="list-style-type: none"> <li>• analyse plant characteristics and requirements for optimal growth, for example, growth habit, structure, health of the plant, soil testing, plant cycles, for example, annuals, biennials, perennials, deciduous</li> <li>• analyse plant status and requirements and to propose solutions for improved health, for example, light conditions, drainage, soil compaction, nutrition, inspect for health</li> </ul>	<ul style="list-style-type: none"> <li>• describe plant characteristics which impact growth</li> <li>• describe plant requirements which impact growth</li> </ul>
<b>Skills</b>	
<ul style="list-style-type: none"> <li>• apply industry practices, processes, and procedures for horticultural contexts with adherence to WHS and sustainable practices, for example, noise safety and regulations, PPE, hygienic practices with tools and equipment, working at heights</li> <li>• apply critical thinking skills to justify procedures and practices for example, project management, tool selection, maintenance techniques, irrigation design</li> <li>• apply creative thinking to plan and implement plant and garden care strategies, for example, substitute existing plantings for more appropriate, maintain aesthetics, selection of ground coverage and landscaping materials, hedge pruning</li> <li>• apply academic integrity in communicating research, conclusions, plans or solutions</li> <li>• apply communication skills for a variety of audience and purposes, including industry specific purposes, for example, subject specific language, communicating with stakeholders from a range of background, draw and present garden plan</li> <li>• apply work skills individually and collaboratively to a variety of tasks to achieve work outcomes, for example, punctuality, efficiency, organisation, project deliverable targets, quality assurance</li> </ul>	<ul style="list-style-type: none"> <li>• follow WHS procedures to apply skills in the use of horticultural maintenance equipment</li> <li>• apply knowledge and skills for problem solving</li> <li>• use reliable information to develop ideas and plans</li> <li>• communicate ideas for horticultural purposes using appropriate terminology and language</li> <li>• demonstrate independent and collaborative behaviours and attitudes to complete tasks</li> </ul>

A Course	M Course
<ul style="list-style-type: none"> <li>• apply industry specific literacy and numeracy skills, using industry specific terminology in a wide range of tasks and settings, for example, following procedures and landscaping plans, landscape plans, calculation of volume of mediums and mulch, develop timelines for growing cycles</li> <li>• apply ICT skills in a variety of formats, for example, landscaping apps, maintenance schedules, Gant charts</li> </ul>	<ul style="list-style-type: none"> <li>• use ICT skills to meet work and learning needs</li> </ul>
<b>Reflection</b>	
<ul style="list-style-type: none"> <li>• reflect on learning and experiences in horticultural contexts to engage in career planning for example, landscape conservation, arboriculture, greenkeeping, garden maintenance, nursery production</li> </ul>	<ul style="list-style-type: none"> <li>• reflect on learning habits for improvement</li> </ul>

### A guide to reading and implementing content descriptions

Content descriptions specify the knowledge, understanding and skills that students are expected to learn and that teachers are expected to teach. Teachers are required to develop a program of learning that allows students to demonstrate all the content descriptions. The lens which the teacher uses to demonstrate the content descriptions may be either guided through provision of electives within each unit or determined by the teacher when developing their program of learning.

A program of learning is what a college provides to implement the course for a subject. It is at the discretion of the teacher to emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

For colleges wishing to deliver the VET qualification, there is flexibility for a teacher (provided the RTO has scope) to develop a program of learning aligned with the elements of the VET competencies and A/M content descriptions. The knowledge, skills and understandings within the competencies reflect the knowledge, skills, and understandings of the BSSS course unit content descriptions.

Alternatively, a college may choose the A/M course without the VET qualification. In delivering the course teachers will write a program of learning aligned with students’ needs and interests, meeting the A/M-content descriptions.

## Units of Competency

Competence must be demonstrated over time and in the full range of **Horticultural** contexts. Teachers must use this unit document in conjunction with the Units of Competence from the **Certificate II in Horticulture or Certificate III in Horticulture**, which provides performance criteria, range statements and assessment contexts.

Teachers must address **all content** related to the competencies embedded in this unit. Reasonable adjustment may be made only to the mode of delivery, context and support provided according to individual student needs.

Competencies are attached to units and must be delivered in those units. However, ongoing assessment of competencies can occur while the student is enrolled as an ACT Senior Secondary student.

In order to be deemed competent to industry standard, assessment must provide authentic, valid, sufficient, and current evidence as indicated in the relevant Training Package.

### Certificate II in Horticulture

The following **core competency** must be delivered and assessed over the semester:

Code	Competency Title
AHCPMG202	Treat plant pests, diseases, and disorders
AHCWRK211	Participate in environmentally sustainable work practices

**And if not already achieved:** AHCWHS202 Participate in work health and safety processes

The following **elective competencies** to meet packaging rules from the list below must also be delivered:

Code	Competency Title
AHCPGD208	Prepare and maintain plant displays
AHCPGD209	Prune shrubs and small trees

### Certificate III in Horticulture

The following **core competency** must be delivered and assessed over the semester:

Code	Competency Title
AHCWHS302	Contribute to work health and safety processes

It is essential to access [www.training.gov.au](http://www.training.gov.au) for detailed up to date information relating to the above competencies.

## Assessment

Refer to pages 10-12.

## Sustainable Horticulture and Conservation

**Value: 1.0**

**Sustainable Horticulture and Conservation a**

**Value 0.5**

**Sustainable Horticulture and Conservation b**

**Value 0.5**

### Unit Description

Students explore concepts relating to horticultural conservation. They apply policies, practices and processes used for the improvement and sustainability of natural and built environments. Students explore the physiological properties and characteristics of various plants, and their benefits, to determine suitability for use in public and garden spaces. They investigate practices for the conservation of landscapes, including those of First Nations Australians. Students examine wholistic land care strategies to support biomes and pose solutions for improvement.

### Specific Unit Goals

This unit should enable students to:

A Course	M Course
<ul style="list-style-type: none"> <li>analyse horticultural sustainability and conservation concepts</li> <li>apply knowledge of plant morphology to conservation problems</li> <li>analyse policies and practices for sustainable horticulture and conservation</li> <li>apply skills for sustainable horticulture</li> </ul>	<ul style="list-style-type: none"> <li>describe horticultural sustainability and conservation concepts</li> <li>apply knowledge of plants to conservation</li> <li>describe policies and practices for sustainable horticulture and conservation</li> <li>apply skills for sustainable horticulture</li> </ul>

### Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	M Course
<b>Industry, processes, and procedures</b>	
<ul style="list-style-type: none"> <li>analyse sustainable horticultural industry practices, processes and procedures for restoration, conservation, and sustainable use of natural and built environments, for example, waste management best practice, safe use of chemicals, hygiene practices</li> <li>analyse local and national policies relevant for the restoration and conservation of natural environments, reflecting on environmental and sustainable goals, for example, water management and quality policies, urban wetlands projects</li> <li>evaluate sustainable and conservation practices and procedures, and analyse their application in workplace or work contexts, for example, Weeds of National Significance (WONS), biological hazards, invasive species hygiene, quarantine procedures</li> </ul>	<ul style="list-style-type: none"> <li>describe sustainable horticulture practices and procedures for conservation or restoration</li> <li>describe sustainable horticulture practices and procedures</li> </ul>

A Course	M Course
<b>Technical knowledge</b>	
<ul style="list-style-type: none"> <li>• apply technical knowledge of sustainable practices and conservation, including natives, pests, soil, biodiversity, climate, and water, to analyse practices in horticulture conservation, including First Nation Australians use of fire, relationship of habitat and biodiversity, and access to food</li> <li>• analyse the plant morphology and biome relationships for use in sustainable conservation approaches, for example, companion planting, annual species rotations, Integrated Pest Management (IPM) systems, soil types, pH, potting media, life-cycle analysis of potential endemic pests</li> </ul>	<ul style="list-style-type: none"> <li>• apply knowledge of sustainable practices</li> <li>• describe plant and biome relationships for conservation and sustainability</li> </ul>
<b>Skills</b>	
<ul style="list-style-type: none"> <li>• apply environmentally sustainable industry practices, processes, and procedures in the restoration and conservation of natural and urban spaces, for example, hygienic practices with tools and equipment, best practice planting, soil analysis, waterway protections</li> <li>• apply critical and creative thinking to justify restoration and conservation practices, for example, appropriate plant selection in relation to location, region, soil types, climates</li> <li>• apply critical and creative thinking, and problem solving when implementing restoration and conservation solutions, for example, appropriate plant selection in relation to location, region, soil types, climates, client needs</li> <li>• apply academic integrity in communicating research, conclusions, plans or solutions</li> <li>• apply communication skills for a variety of audiences and purposes, including industry specific purposes, for example, subject specific language, communicating with stakeholders from a range of backgrounds</li> <li>• apply work skills individually and collaboratively to a variety of tasks to achieve work outcomes, for example, efficiency, organisation, meet project deliverable targets, quality assurance</li> </ul>	<ul style="list-style-type: none"> <li>• apply environmentally sustainable industry practices</li> <li>• apply knowledge and skills for problem solving</li> <li>• use reliable information to develop ideas and plans</li> <li>• communicate ideas for horticultural purposes using appropriate terminology and language</li> </ul>

A Course	M Course
<ul style="list-style-type: none"> <li>• apply industry specific literacy and numeracy skills, using industry specific terminology in a wide range of tasks and settings, for example, following procedures and plans, planting plans, for example, landscape plans, calculation of volume of mediums and mulch, develop timelines for growing cycles</li> <li>• apply ICT skills in a variety of formats, for example, landscaping apps, conservation plans, record keeping, accessing online resources</li> </ul>	<ul style="list-style-type: none"> <li>• use ICT skills to meet work and learning needs</li> </ul>
<b>Reflection</b>	
<ul style="list-style-type: none"> <li>• reflect on learning, proposing, and implementing strategies for future improvement</li> </ul>	<ul style="list-style-type: none"> <li>• reflect on learning habits for improvement</li> </ul>

## A guide to reading and implementing content descriptions

Content descriptions specify the knowledge, understanding and skills that students are expected to learn and that teachers are expected to teach. Teachers are required to develop a program of learning that allows students to demonstrate all the content descriptions. The lens which the teacher uses to demonstrate the content descriptions may be either guided through provision of electives within each unit or determined by the teacher when developing their program of learning.

A program of learning is what a college provides to implement the course for a subject. It is at the discretion of the teacher to emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

For colleges wishing to deliver the VET qualification, there is flexibility for a teacher (provided the RTO has scope) to develop a program of learning aligned with the elements of the VET competencies and A/M content descriptions. The knowledge, skills and understandings within the competencies reflect the knowledge, skills, and understandings of the BSSS course unit content descriptions.

Alternatively, a college may choose the A/M course without the VET qualification. In delivering the course teachers will write a program of learning aligned with students’ needs and interests, meeting the A/M content descriptions.

## Units of Competency

Competence must be demonstrated over time and in the full range of **Horticultural** contexts. Teachers must use this unit document in conjunction with the Units of Competence from the **Certificate II in Horticulture or Certificate III in Horticulture**, which provides performance criteria, range statements and assessment contexts.

Teachers must address **all content** related to the competencies embedded in this unit. Reasonable adjustment may be made only to the mode of delivery, context and support provided according to individual student needs.

Competencies are attached to units and must be delivered in those units. However, ongoing assessment of competencies can occur while the student is enrolled as an ACT Senior Secondary student.

In order to be deemed competent to industry standard, assessment must provide authentic, valid, sufficient, and current evidence as indicated in the relevant Training Package.

## Certificate II in Horticulture

The following **core competencies** must be delivered and assessed over the semester:

Code	Competency Title
AHPCM204	Recognise plants
AHCPMG201	Treat weeds
AHCPGD207	Plant trees and shrubs

**And if not already achieved:** AHCWHS202 Participate in work health and safety processes

The following **elective competencies** to meet packaging rules from the list below must also be delivered:

Code	Competency Title
AHCWRK212	Work effectively in industry

## Certificate III in Horticulture

The following **core competency** must be delivered and assessed over the semester **if not achieved previously**:

Code	Competency Title
AHCWHS302	Contribute to work health and safety processes

The following **elective competency** to meet packaging rules from the list below must also be delivered:

Code	Competency Title
AHCWRK320	Apply environmentally sustainable work practices

It is essential to access [www.training.gov.au](http://www.training.gov.au) for detailed up to date information relating to the above competencies.

## Assessment

Refer to pages 10-12.

## Producing Food

**Value: 1.0**

**Producing Food a**

**Value 0.5**

**Producing Food b**

**Value 0.5**

### Unit Description

Students explore and research existing and emerging local and urban enterprises producing food. They assess their local context to identify opportunities for food production. Students analyse the benefits associated with local food production, including its carbon footprint in comparison to traditional commercial settings. They develop and apply knowledge and skills in the planning and implementation of localised food production. Students research equipment and systems utilised in local food production contexts.

### Specific Unit Goals

This unit should enable students to:

A Course	M Course
<ul style="list-style-type: none"> <li>analyse existing and emerging local food production enterprises</li> <li>analyse the benefits associated with local food production, including its carbon footprint apply knowledge and skills in the planning and implementation of localised food production</li> <li>apply knowledge and skills of horticulture equipment and systems to meet market expectations</li> <li>assess local conditions to identify opportunities for food production</li> </ul>	<ul style="list-style-type: none"> <li>describe existing local food production opportunities</li> <li>describe the benefits of local food production</li> <li>apply knowledge and skills to produce food</li> <li>explain local conditions impacting food production</li> </ul>

### Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	M Course
<b>Industry, processes, and procedures</b>	
<ul style="list-style-type: none"> <li>analyse industry practices, processes and procedures used in the planning, development, implementation of localised food production, for example, hydroponics, aquaculture, rainwater capture, local government regulatory requirements</li> <li>analyse the benefits associated with local food production, including its carbon footprint apply knowledge and skills in the planning and implementation of localised food production</li> <li>evaluate case studies of urban and localised food production ventures and enterprises, for example, local co-ops, allotments, zero waste living, permaculture design principles, Urban Green Farms, local businesses</li> </ul>	<ul style="list-style-type: none"> <li>describe local food production practices and procedures</li> <li>describe benefits of local food production</li> </ul>



A Course	M Course
<b>Technical knowledge</b>	
<ul style="list-style-type: none"> <li>• apply knowledge of plant growth and production in local conditions, for example, planting to harvest timelines, micro-climates, pollinators, soil temperatures and seed germination</li> <li>• apply knowledge and skills of equipment and systems to meet market demand and food production, for example, fungiculture</li> </ul>	<ul style="list-style-type: none"> <li>• apply knowledge of plant growth for local food production</li> <li>• apply knowledge and skills of equipment used in local food production</li> </ul>
<b>Skills</b>	
<ul style="list-style-type: none"> <li>• apply industry practices, processes, and procedures for localised food production purposes with adherence to timeframes for production and WHS practices</li> <li>• apply critical and creative thinking to justify solutions to local food production systems, for example, small scale garden plots, market days, adapting to adverse events</li> <li>• apply critical and creative thinking, and problem solving when implementing local food production systems, for example, small scale garden plots, market days, adapting to adverse events</li> <li>• apply academic integrity in communicating research, conclusions, plans or solutions</li> <li>• apply communication skills for a variety of audiences and purposes, including industry specific purposes, for example, subject specific language, communicating with stakeholders from a range of background</li> <li>• apply work skills individually and collaboratively to a variety of tasks to achieve work outcomes, for example, punctuality, efficiency, organisation, meet project deliverable targets, quality assurance</li> <li>• apply industry specific literacy and numeracy skills, using industry specific terminology in a wide range of tasks and settings, for example, following procedures and plans, for example, planting plans, develop timelines for growing cycles</li> <li>• apply ICT skills in a variety of formats, for example, record keeping, accessing online resources, monitoring growing cycles, online regulatory systems</li> </ul>	<ul style="list-style-type: none"> <li>• follow WHS procedures to apply skills for food production</li> <li>• apply knowledge and skills for problem solving</li> <li>• use reliable information to develop ideas and plans</li> <li>• communicate ideas for horticultural purposes using appropriate terminology and language</li> <li>• use ICT skills to meet work and learning needs</li> </ul>

A Course	M Course
<b>Reflection</b>	
<ul style="list-style-type: none"> <li>reflect on learning, proposing, and implementing strategies for future improvement for food production outcomes</li> </ul>	<ul style="list-style-type: none"> <li>reflect on learning habits for improvement</li> </ul>

## A guide to reading and implementing content descriptions

Content descriptions specify the knowledge, understanding and skills that students are expected to learn and that teachers are expected to teach. Teachers are required to develop a program of learning that allows students to demonstrate all the content descriptions. The lens which the teacher uses to demonstrate the content descriptions may be either guided through provision of electives within each unit or determined by the teacher when developing their program of learning.

A program of learning is what a college provides to implement the course for a subject. It is at the discretion of the teacher to emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

For colleges wishing to deliver the VET qualification, there is flexibility for a teacher (provided the RTO has scope) to develop a program of learning aligned with the elements of the VET competencies and A/M content descriptions. The knowledge, skills and understandings within the competencies reflect the knowledge, skills, and understandings of the BSSS course unit content descriptions.

Alternatively, a college may choose the A/M course without the VET qualification. In delivering the course teachers will write a program of learning aligned with students’ needs and interests, meeting the A/M content descriptions.

## Units of Competency

Competence must be demonstrated over time and in the full range of **Horticultural** contexts. Teachers must use this unit document in conjunction with the Units of Competence from the **Certificate II in Horticulture or Certificate III in Horticulture**, which provides performance criteria, range statements and assessment contexts.

Teachers must address **all content** related to the competencies embedded in this unit. Reasonable adjustment may be made only to the mode of delivery, context and support provided according to individual student needs.

Competencies are attached to units and must be delivered in those units. However, ongoing assessment of competencies can occur while the student is enrolled as an ACT Senior Secondary student.

In order to be deemed competent to industry standard, assessment must provide authentic, valid, sufficient, and current evidence as indicated in the relevant Training Package.

**Certificate II in Horticulture**

The following **core competency** must be delivered and assessed over the semester if not already achieved previously:

Code	Competency Title
AHCWHS202	Participate in work health and safety processes
AHCMOM203	Operate basic machinery and equipment

The following **elective competencies** to meet packaging rules from the list below must also be delivered:

Code	Competency Title
AHCWRK213	Participate in workplace communications

**Certificate III in Horticulture**

The following **core competency** must be delivered and assessed over the semester:

Code	Competency Title
AHCPCM306	Provide information on plants and their culture

**If not achieved previously:** AHCWHS302 Contribute to work health and safety processes

It is essential to access [www.training.gov.au](http://www.training.gov.au) for detailed up to date information relating to the above competencies.

**Assessment**

Refer to pages 10-12.

## Independent Study

**Value: 1.0**

**Independent Study a**

**Value 0.5**

**Independent Study b**

**Value 0.5**

### Prerequisites

Independent Study units are only available to individual students in Year 12. A student can only study a maximum of one Independent Study unit in each course. Students must have studied at least three standard 1.0 units from this course. An Independent Study unit requires the principal’s written approval. Principal approval can also be sought by a student in Year 12 to enrol concurrently in an Independent Study unit and their third or fourth 1.0 unit in this course of study.

### Unit Description

An Independent Study unit has an important place in senior secondary courses. It is a valuable pedagogical approach that empowers students to make decisions about their own learning. An Independent Study unit can be proposed by an individual student for their own independent study and negotiated with their teacher. The program of learning for an Independent Study unit must meet the unit goals and content descriptions as they appear in the course.

**NOTE: There are no VET competencies attached to this unit.** VET competencies may be assessed where relevant to the focus of the unit. The competencies selected must align with the requirements of the *Agriculture, Horticulture and Conservation and Land Management Training Package* and to the competencies already completed during the course if students are to achieve the relevant qualifications.

### Specific Unit Goals

This unit should enable students to:

A Course	M Course
<ul style="list-style-type: none"> <li>analyse chosen horticultural area of study practices, process, and procedures</li> <li>analyse advancements in chosen horticultural area of study</li> <li>apply industry standard knowledge and skills in chosen area of study</li> <li>apply critical and creative thinking to solve horticultural challenges</li> </ul>	<ul style="list-style-type: none"> <li>describe chosen horticultural area of study practices, process, and procedures</li> <li>describe advancements in chosen horticultural area of study</li> <li>apply knowledge and skills in chosen area of study</li> <li>apply problems solving skills to chosen area of horticulture</li> </ul>

### Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	M Course
<b>Industry, processes, and procedures</b>	
<ul style="list-style-type: none"> <li>analyse industry practices, processes and procedures used in chosen horticultural area of study</li> <li>analyse advancements horticulture in chosen area of study, reflecting on implications</li> </ul>	<ul style="list-style-type: none"> <li>describe practices, process, and procedures in chosen horticultural area of study</li> <li>describe advancements in chosen horticultural area of study</li> </ul>

A Course	M Course
<b>Technical knowledge</b>	
<ul style="list-style-type: none"> <li>• analyses technical information, specifications, tools, and equipment used in the chosen horticultural area of study</li> <li>• analyse the structure and function of horticultural area of study to understand and propose solutions to industry opportunities and challenges</li> </ul>	<ul style="list-style-type: none"> <li>• apply technical knowledge of chosen area of production</li> <li>• describe the structure and function of horticulture area of study</li> </ul>
<b>Skills</b>	
<ul style="list-style-type: none"> <li>• apply industry practices, processes, and procedures for horticultural contexts with adherence to WHS</li> <li>• apply critical and creative thinking to justify solutions to chosen horticultural area of study</li> <li>• apply critical and creative thinking, and problem solving when implementing solutions to chosen horticultural area of study</li> <li>• apply academic integrity in communicating research, conclusions, plans or solutions in chosen horticultural area of study</li> <li>• apply communication skills for a variety of audiences and purposes, including industry specific purposes in chosen horticultural area of study</li> <li>• apply work skills individually and collaboratively to a variety of tasks to achieve work outcomes in chosen horticultural area of study</li> <li>• apply industry specific literacy and numeracy skills, using industry specific terminology in a wide range of tasks and settings in chosen horticultural area of study</li> <li>• apply ICT skills in a variety of formats in chosen horticultural area of study</li> </ul>	<ul style="list-style-type: none"> <li>• follow WHS procedures to apply skills for chosen horticultural area of study</li> <li>• apply knowledge and skills for problem solving</li> <li>• use reliable information to develop ideas and plans</li> <li>• communicate ideas for horticultural purposes using appropriate terminology and language</li> <li>• use ICT skills to meet work and learning needs</li> </ul>
<b>Reflection</b>	
<ul style="list-style-type: none"> <li>• reflect on learning, proposing, and implementing strategies for future improvement in chosen horticultural area of study</li> </ul>	<ul style="list-style-type: none"> <li>• reflect on learning habits for improvement</li> </ul>

## **A guide to reading and implementing content descriptions**

Content descriptions specify the knowledge, understanding and skills that students are expected to learn and that teachers are expected to teach. Teachers are required to develop a program of learning that allows students to demonstrate all the content descriptions. The lens which the teacher uses to demonstrate the content descriptions may be either guided through provision of electives within each unit or determined by the teacher when developing their program of learning.

A program of learning is what a college provides to implement the course for a subject. It is at the discretion of the teacher to emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

For colleges wishing to deliver the VET qualification, there is flexibility for a teacher (provided the RTO has scope) to develop a program of learning aligned with the elements of the VET competencies and A/M content descriptions. The knowledge, skills and understandings within the competencies reflect the knowledge, skills, and understandings of the BSSS course unit content descriptions.

Alternatively, a college may choose the A/M course without the VET qualification. In delivering the course teachers will write a program of learning aligned with students' needs and interests, meeting the A/M content descriptions.

## **Assessment**

Refer to pages 10-12.

## Appendix A – Implementation Guidelines

### Available course patterns

A standard 1.0 value unit is delivered over at least 55 hours. To be awarded a course, students must complete at least the minimum units over the whole minor or major course.

Course	Number of standard units to meet course requirements
Minor	Minimum of 2 units
Major	Minimum of 3.5 units

Units in this course can be delivered in any order.

### Prerequisites for the course or units within the course

Students must have studied at least three standard 1.0 units from this course in order to access the Independent Study unit. An Independent Study unit requires the principal's written approval. Principal approval can also be sought by a student in Year 12 to enrol concurrently in an Independent Study unit and their third or fourth 1.0 unit in this course of study.

### Arrangements for students continuing study in this course

Students who studied the previous course may undertake any units in this course provided there is no duplication of content.

### Duplication of Content Rules

Students cannot be given credit towards the requirements for a Senior Secondary Certificate for a unit that significantly duplicates content in a unit studied in another course. The responsibility for preventing undesirable overlap of content studied by a student rest with the principal and the teacher delivering the course. While it is acceptable for a student to be given the opportunity to demonstrate competence in VET qualifications over more than one semester, substantial overlap of content is not permitted. Students will only be given credit for covering the content once.

### Relationship to other courses

This course shares common competencies with other BSSS accredited courses:

- Metal Products: AHCMOM203 - Using Hand tools

### New and/or updated Training Package

Training Packages are regularly updated through the mandatory continuous improvement cycle. This may result in updating of qualifications and a change in the composition of competencies within a qualification. Where qualifications from the new Training Package have been deemed to be equivalent, students may continue their study without interruption. Students will be granted direct credit for those competencies already achieved.

Where there are new competencies or updated competencies with significant change and these are deemed not equivalent, students may apply for Recognition of Prior Learning (RPL) for all or part of competencies.

Granting of RPL for competencies does not equate to points towards the Senior Secondary Certificate.

## Recognition of Prior Learning (RPL)

RPL is an assessment process that assesses an individual's formal, non-formal and informal learning to determine the extent to which that individual has achieved the required learning outcomes, competence outcomes, or standards for entry to, and/or partial or total completion of, a VET qualification.

Recognition of competence through the RPL process should be granted to students through gathering supplementary evidence against elements, skills and knowledge from the Training Package as well as through established assessment criteria. RPL may be granted for individual Units of Competence where the evidence is sufficient to do so.

A student having been granted RPL for one or more Units of Competence will still be required to fulfill the time-based component of units that contributes to points and A to E grading for the Senior Secondary Certificate.

To cater for this requirement, curriculum designers should design the course to be flexible enough to accommodate students who have gained some competencies through RPL.

Students may demonstrate the achievement of learning outcomes through challenge testing, interview, or other means that the teacher deems reasonable. Full records of the RPL process and results must be stored by the college for perusal by the National VET Regulator upon request and should confirmation be required for VET certification. The college must be informed of the application of RPL before the start of the unit that includes the competency. For RPL to be awarded, the Units of Competency must be demonstrated in the industry context.

## Guidelines for Delivery

### Program of Learning

A program of learning is what a school provides to implement the course for a subject. This meets the requirements for context, scope and sequence set out in the Board endorsed course. Students follow programs of learning in a college as part of their senior secondary studies. The detail, design, and layout of a program of learning are a college decision.

The program of learning must be documented to show the planned learning activities and experiences that meet the needs of particular groups of students, taking into account their interests, prior knowledge, abilities, and backgrounds. The program of learning is a record of the learning experiences that enable students to achieve the knowledge, understanding and skills of the content descriptions. There is no requirement to submit a program of learning to the OBSSS for approval. The principal will need to sign off at the end of Year 12 that courses have been delivered as accredited.

### Content Descriptions

Are all content descriptions of equal importance? No. It depends on the focus of study. Teachers can customise their program of learning to meet their own students' needs, adding additional content descriptions if desired or emphasising some over others. A teacher must balance student needs with their responsibility to teach all content descriptions. It is mandatory that teachers address all content descriptions and that students engage with all content descriptions.

### Half standard 0.5 units

Half standard units appear on the course adoption form but are not explicitly documented in courses. It is at the discretion of the college principal to split a standard 1.0 unit into two half standard 0.5 units. Colleges are required to adopt the half standard 0.5 units. However, colleges are not required to submit explicit documentation outlining their half standard 0.5 units to the BSSS. Colleges must assess students using the half standard 0.5 assessment task weightings outlined in the framework. It is the responsibility of the college principal to ensure that all content is delivered in units approved by the Board.



## Reasonable Adjustment

Units in this course are suitable for students requiring reasonable adjustment for delivery and assessment. However, standards of competency (outcomes) as dictated by National Training Packages **cannot be modified**. Students must demonstrate competence to the level required by industry in order to gain a Statement of Attainment or Vocational Certificate.

## Moderation

Moderation is a system designed and implemented to:

- provide comparability in the system of school-based assessment
- form the basis for valid and reliable assessment in senior secondary schools
- involve the ACT Board of Senior Secondary Studies and colleges in cooperation and partnership
- maintain the quality of school-based assessment and the credibility, validity, and acceptability of Board certificates.

Moderation commences within individual colleges. Teachers develop assessment programs and instruments, apply assessment criteria, and allocate Unit Grades, according to the relevant Framework. Teachers within course teaching groups conduct consensus discussions to moderate marking or grading of individual assessment instruments and Unit Grade decisions.

### The Moderation Model

Moderation within the ACT encompasses structured, consensus-based peer review of Unit Grades for all accredited courses over two Moderation Days. In addition to Moderation Days, there is statistical moderation of course scores, including small group procedures, for T courses.

### Moderation by Structured, Consensus-based Peer Review

Consensus-based peer review involves the review of student work against system wide criteria and standards and the validation of Unit Grades. This is done by matching student performance with the criteria and standards outlined in the Achievement Standards, as stated in the Framework. Advice is then given to colleges to assist teachers with, or confirm, their judgments. In addition, feedback is given on the construction of assessment instruments.

### Preparation for Structured, Consensus-based Peer Review

Each year, teachers of Year 11 are asked to retain originals or copies of student work completed in Semester 2. Similarly, teachers of a Year 12 class should retain originals or copies of student work completed in Semester 1. Assessment and other documentation required by the Office of the Board of Senior Secondary Studies should also be kept. Year 11 work from Semester 2 of the previous year is presented for review at Moderation Day 1 in March, and Year 12 work from Semester 1 is presented for review at Moderation Day 2 in August.

In the lead up to Moderation Day, a College Course Presentation (comprised of a document folder and a set of student portfolios) is prepared for each A, T and M course/units offered by the school and is sent into the Office of the Board of Senior Secondary Studies.

## **The College Course Presentation**

The package of materials (College Course Presentation) presented by a college for review on Moderation Days in each course area will comprise the following:

- a folder containing supporting documentation as requested by the Office of the Board through memoranda to colleges, including marking schemes and rubrics for each assessment item
- a set of student portfolios containing marked and/or graded written and non-written assessment responses and completed criteria and standards feedback forms. Evidence of all assessment responses on which the Unit Grade decision has been made is to be included in the student review portfolios.

Specific requirements for subject areas and types of evidence to be presented for each Moderation Day will be outlined by the Board Secretariat through the *Requirements for Moderation Memoranda* and Information Papers.

### **Visual evidence for judgements made about practical performances**

It is a requirement that schools' judgements of standards to practical performances (A/T/M) be supported by visual evidence (still photos or video).

The photographic evidence submitted must be drawn from practical skills performed as part of the assessment process.

Teachers should consult the BSSS website for current information regarding all moderation requirements including subject specific and photographic evidence.

## Appendix B – Course Developers

Name	College
Megan Matthews	Hawker College
Mala Rupal	Melba Copland Secondary School
Peter Hay	Senior Horticultural Project Officer, National Capital Authority

## Appendix C – Common Curriculum Elements

Common curriculum elements assist in the development of high-quality assessment tasks by encouraging breadth and depth and discrimination in levels of achievement.

Organisers	Elements	Examples
create, compose, and apply	apply	ideas and procedures in unfamiliar situations, content, and processes in non-routine settings
	compose	oral, written, and multimodal texts, music, visual images, responses to complex topics, new outcomes
	represent	images, symbols, or signs
	create	creative thinking to identify areas for change, growth, and innovation, recognise opportunities, experiment to achieve innovative solutions, construct objects, imagine alternatives
	manipulate	images, text, data, points of view
analyse, synthesise, and evaluate	justify	arguments, points of view, phenomena, choices
	hypothesise	statement/theory that can be tested by data
	extrapolate	trends, cause/effect, impact of a decision
	predict	data, trends, inferences
	evaluate	text, images, points of view, solutions, phenomenon, graphics
	test	validity of assumptions, ideas, procedures, strategies
	argue	trends, cause/effect, strengths, and weaknesses
	reflect	on strengths and weaknesses
	synthesise	data and knowledge, points of view from several sources
	analyse	text, images, graphs, data, points of view
	examine	data, visual images, arguments, points of view
investigate	issues, problems	
organise, sequence, and explain	sequence	text, data, relationships, arguments, patterns
	visualise	trends, futures, patterns, cause, and effect
	compare/contrast	data, visual images, arguments, points of view
	discuss	issues, data, relationships, choices/options
	interpret	symbols, text, images, graphs
	explain	explicit/implicit assumptions, bias, themes/arguments, cause/effect, strengths/weaknesses
	translate	data, visual images, arguments, points of view
	assess	probabilities, choices/options
	select	main points, words, ideas in text
identify, summarise and plan	reproduce	information, data, words, images, graphics
	respond	data, visual images, arguments, points of view
	relate	events, processes, situations
	demonstrate	probabilities, choices/options
	describe	data, visual images, arguments, points of view
	plan	strategies, ideas in text, arguments
	classify	information, data, words, images
	identify	spatial relationships, patterns, interrelationships
	summarise	main points, words, ideas in text, review, draft and edit

## Appendix D – Glossary of Verbs

Verbs	Definition
Analyse	Consider in detail for the purpose of finding meaning or relationships, and identifying patterns, similarities and differences
Apply	Use, utilise or employ in a particular situation
Argue	Give reasons for or against something
Assess	Make a judgement about the value of
Classify	Arrange into named categories in order to sort, group or identify
Compare	Estimate, measure or note how things are similar or dissimilar
Compose	The activity that occurs when students produce written, spoken or visual texts
Contrast	Compare in such a way as to emphasise differences
Create	Bring into existence, to originate
Critically analyse	Analysis that engages with criticism and existing debate on the issue
Demonstrate	Give a practical exhibition an explanation
Describe	Give an account of characteristics or features
Discuss	Talk or write about a topic, taking into account different issues or ideas
Evaluate	Examine and judge the merit or significance of something
Examine	Determine the nature or condition of
Explain	Provide additional information that demonstrates understanding of reasoning and/or application
Extrapolate	Infer from what is known
Hypothesise	Put forward a supposition or conjecture to account for certain facts and used as a basis for further investigation by which it may be proved or disproved
Identify	Recognise and name
Interpret	Draw meaning from
Investigate	Planning, inquiry into and drawing conclusions about
Justify	Show how argument or conclusion is right or reasonable
Manipulate	Adapt or change
Plan	Strategize, develop a series of steps, processes
Predict	Suggest what might happen in the future or as a consequence of something
Reflect	The thought process by which students develop an understanding and appreciation of their own learning. This process draws on both cognitive and affective experience
Relate	Tell or report about happenings, events, or circumstances
Represent	Use words, images, symbols, or signs to convey meaning
Reproduce	Copy or make close imitation
Respond	React to a person or text
Select	Choose in preference to another or others
Sequence	Arrange in order
Summarise	Give a brief statement of the main points
Synthesise	Combine elements (information/ideas/components) into a coherent whole
Test	Examine qualities or abilities
Translate	Express in another language or form, or in simpler terms
Visualise	The ability to decode, interpret, create, question, challenge and evaluate texts that communicate with visual images as well as, or rather than, words

## Appendix E – Glossary for ACT Senior Secondary Curriculum

Courses will detail what teachers are expected to teach and students are expected to learn for year 11 and 12. They will describe the knowledge, understanding and skills that students will be expected to develop for each learning area across the years of schooling.

**Learning areas** are broad areas of the curriculum, including English, mathematics, science, the arts, languages, health, and physical education.

A **subject** is a discrete area of study that is part of a learning area. There may be one or more subjects in a single learning area.

**Frameworks** are system documents for Years 11 and 12 which provide the basis for the development and accreditation of any course within a designated learning area. In addition, frameworks provide a common basis for assessment, moderation and reporting of student outcomes in courses based on the framework.

The **course** sets out the requirements for the implementation of a subject. Key elements of a course include the rationale, goals, content descriptions, assessment, and achievement standards as designated by the framework.

BSSS courses will be organised into units. A unit is a distinct focus of study within a course. A standard 1.0 unit is delivered for a minimum of 55 hours generally over one semester.

**Core** units are foundational units that provide students with the breadth of the subject.

**Additional** units are avenues of learning that cannot be provided for within the four core 1.0 standard units by an adjustment to the program of learning.

An **Independent Study unit** is a pedagogical approach that empowers students to make decisions about their own learning. An Independent Study unit can be proposed by a student and negotiated with their teacher but must meet the specific unit goals and content descriptions as they appear in the course.

An **elective** is a lens for demonstrating the content descriptions within a standard 1.0 or half standard 0.5 unit.

A **lens** is a particular focus or viewpoint within a broader study.

**Content descriptions** refer to the subject-based knowledge, understanding and skills to be taught and learned.

A **program of learning** is what a college develops to implement the course for a subject and to ensure that the content descriptions are taught and learned.

**Achievement standards** provide an indication of typical performance at five different levels (corresponding to grades A to E) following completion of study of senior secondary course content for units in a subject.

ACT senior secondary system **curriculum** comprises all BSSS approved courses of study.

## Appendix F – Implementation of VET Qualifications

### VET Qualifications

For **AHC20422 Certificate II in Horticulture** the following packaging rules apply:

**Total number of units = 15**

**8 core units plus**

**7 elective units**

The elective units consist of:

- 5 units must be from the electives listed below
- the remaining 2 units must be from the electives listed below, or any currently endorsed Training Package or accredited course

This course, with listed competencies, meets these requirements at time of development.

Colleges are advised to check current training package requirements before delivery.

If the full requirements of a Certificate are not met, students will be awarded a Statement of Attainment listing Units of Competence achieved according to Standard 3 of the Standards for Registered Training Organisations (RTOs) 2015.

### Competencies for Certificate II in Horticulture

Code	Competency Title	Core/Elective
AHCMOM203	Operate basic machinery and equipment	Core
AHPCPM204	Recognise plants	Core
AHCPGD207	Plant trees and shrubs	Core
AHCPMG201	Treat weeds	Core
AHCPMG202	Treat plant pests, diseases, and disorders	Core
AHCSOL203	Assist with soil or growing media sampling and testing	Core
AHCWHS202	Participate in work health and safety processes	Core
AHCWRK211	Participate in environmentally sustainable work practices	Core
AHCNSY205	Pot up plants	Elective
AHCNSY206	Care for nursery plants	Elective
AHCNSY207	Undertake propagation activities	Elective
AHCPGD208	Prepare and maintain plant displays	Elective
AHCPGD209	Prune shrubs and small trees	Elective
AHCWRK212	Work effectively in industry	Elective
AHCWRK213	Participate in workplace communications	Elective
AHCWRK208	Provide information on products and services	Elective

### Statement of Attainment in AAHC30722 Certificate III in Horticulture

Colleges are advised to check current training package requirements before delivery.

If the full requirements of a Certificate are not met, students will be awarded a Statement of Attainment listing Units of Competence achieved according to Standard 3 of the Standards for Registered Training Organisations (RTOs) 2015.

### Competencies for Statement of Attainment Certificate III in Horticulture

Code	Competency Title	Core/Elective
AHCPCM302	Provide information on plants and their culture	Core
AHCWHS302	Contribute to work health and safety processes	Core
AHCWRK320	Apply environmentally sustainable work practices	Core
AHCNSY313	Implement a propagation plan	Elective
AHCWRK320	Apply environmentally sustainable work practices	Elective

### VET Competencies Mapped to Course Units

Grouping of competencies within units may not be changed by individual colleges.

Competencies designated at the Certificate III level can only be delivered by schools that have scope to do so. Colleges must apply to have additional competencies at a higher level listed on their scope of registration.

**Note:** When selecting units, colleges must ensure that they follow packaging rules and meet the requirements for the Certificate level. In the event that full Certificate requirements are not met a Statement of Attainment will be issued.

All core competencies must be delivered in the relevant unit. The elective competencies delivered are dependent on the elective units chosen.



## VET Implementation Summary

### AHC20422 Certificate II in Horticulture

BSSS Unit Title	Competencies	
<b>Nursery Systems</b>	<b>Core</b>	
	AHCSOL203	Assist with soil or growing media sampling and testing
	AHCWHS202	Participate in work health and safety processes (if not already achieved)
	<b>Electives</b>	
	AHCNSY205	Pot up plants
AHCNSY207	Undertake propagation activities	
<b>Horticulture Maintenance and Management</b>	<b>Core</b>	
	AHCPMG202	Treat plant pests, diseases, and disorders
	AHCWHS202	Participate in work health and safety processes (if not already achieved)
	AHCWRK211	Participate in environmentally sustainable work practices
	<b>Electives</b>	
	AHCPGD208	Prepare and maintain plant displays
AHCPGD209	Prune shrubs and small trees	
<b>Sustainable Horticulture and Conservation</b>	<b>Core</b>	
	AHPCPM204	Recognise plants
	AHCPMG201	Treat weeds
	AHCWHS202	Participate in work health and safety processes (if not already achieved)
	AHCPGD207	Plant trees and shrubs
	<b>Electives</b>	
AHCWRK212	Work effectively in industry	
<b>Producing Food</b>	<b>Core</b>	
	AHCWHS202	Participate in work health and safety processes
	AHCMOM203	Operate basic machinery and equipment
	<b>Electives</b>	
	AHCWRK213	Participate in workplace communications

## Statement of Attainment in AAHC30722 Certificate III in Horticulture

BSSS Unit Title	Competencies	
Nursery Systems	Core	
	AHCWHS302	Contribute to work health and safety processes (if not achieved previously)
	Electives	
	AHCNSY313	Implement a propagation plan
Horticulture Maintenance and Management	Core	
	AHCWHS302	Contribute to work health and safety processes
	Electives	
		none
Sustainable Horticulture and Conservation	Core	
	AHCWHS302	Contribute to work health and safety processes (if not achieved previously)
	Electives	
	AHCWRK320	Apply environmentally sustainable work practices
Producing Food	Core	
	AHCPCM306	Provide information on plants and their culture
	AHCWHS302	Contribute to work health and safety processes (if not achieved previously)
	Electives	
	none	

## Competency Based Assessment

The assessment of competence must focus on the competency standards and the associated elements as identified in the Training Package. Assessors must develop assessment strategies that enable them to obtain sufficient evidence to deem students competent. This evidence must be gathered over a number of assessment items. Competence to industry standard requires a student to be able to demonstrate the relevant skills and knowledge in a variety of industry contexts on repeated occasions. Assessment must be designed to collect evidence against the four dimensions of competency.

- **Task skills** – undertaking specific workplace task(s)
- **Task management skills** – managing a number of different tasks to complete a whole work activity
- **Contingency management skills** – responding to problems and irregularities when undertaking a work activity, such as: breakdowns, changes in routine, unexpected or atypical results, difficult or dissatisfied clients
- **Job/role environment skills** – dealing with the responsibilities and expectations of the work environment when undertaking a work activity, such as: working with others, interacting with clients and suppliers, complying with standard operating procedures, or observing enterprise policy and procedures.

The most appropriate method of assessing workplace competence is on-the-job in an industry setting under normal working conditions. This includes using industry standard tools, equipment and job aids and working with trade colleagues. Where this is not available, a simulated workplace environment that mirrors the industry setting will be used. The following general principles and strategies apply:

- assessment is competency based
- assessment is criterion-referenced.

Quality outcomes can only be assured through the assessment process. The strategy for assessment is based on an integration of the workplace competencies for the learning modules into a holistic activity. The awarding of vocational qualifications is dependent on successful demonstration of the learning outcomes within the modules through the integrated competency assessment that meets the Training Package rules and requirements.

The integrated assessment activity will require the learner to:

- use the appropriate key competencies
- apply the skills and knowledge which underpin the process required to demonstrate competency in the workplace
- integrate the most critical aspects of the competencies for which workplace competency must be demonstrated
- provide evidence for grades and or scores for the Board course component of the assessment process.

## Standards for Registered Training Organisations 2015

These Standards form part of the VET Quality Framework, a system which ensures the integrity of nationally recognised qualifications.

RTOs are required to comply with these Standards and with the:

- National Vocational Education and Training Regulator Act 2011
- VET Quality Framework.

The purpose of these Standards is to:

- set out the requirements that an organisation must meet in order to be an RTO
- ensure that training products delivered by RTOs meet the requirements of training packages or VET accredited courses, and have integrity for employment and further study
- ensure RTOs operate ethically with due consideration of learners' and enterprises' needs.

To access the standards, refer to:

<https://www.legislation.gov.au/Details/F2017C00663>

To access The Users' Guide to the Standards refer to:

<https://www.asqa.gov.au/standards>

## Guidelines for Colleges Seeking Scope

Colleges must apply to have their scope of registration extended for each new qualification they seek to issue. There is no system-level process. Each college must demonstrate capacity to fulfil the requirements outlined in the Training Package. Applications for extension of scope are lodged through the Australian Skills Quality Authority (ASQA).

## Assessment of Certificate III Units of Competence

Colleges delivering any Units of Competence from Certificate III (apart from those competencies allowed in training package rules) will need to have them listed on their scope **or** negotiate a Third-Party Agreement with a scoped training partner. This document must be kept on record by the college as the RTO.

## Appendix G – Course Adoption

### Condition of Adoption

The course and units of this course are consistent with the philosophy and goals of the college and the adopting college has the human and physical resources to implement the course.

### Adoption Process

Course adoption must be initiated electronically by an email from the principal or their nominated delegate to [bssscertification@ed.act.edu.au](mailto:bssscertification@ed.act.edu.au). A nominated delegate must CC the principal.

The email will include the **Conditions of Adoption** statement above, and the table below adding the **College** name, and circling the **Classification/s** required.

<b>College:</b>					
<b>Course Title:</b>	Horticulture				
<b>Classification/s:</b>	A	M	or	A/V	M/V
<b>Accredited from:</b>	2023				
<b>Framework:</b>	Industry and Services				