BSSS
AUSTRALIAN CAPITAL TERRITORY

DRAFT Agriculture

A/T/M

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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:

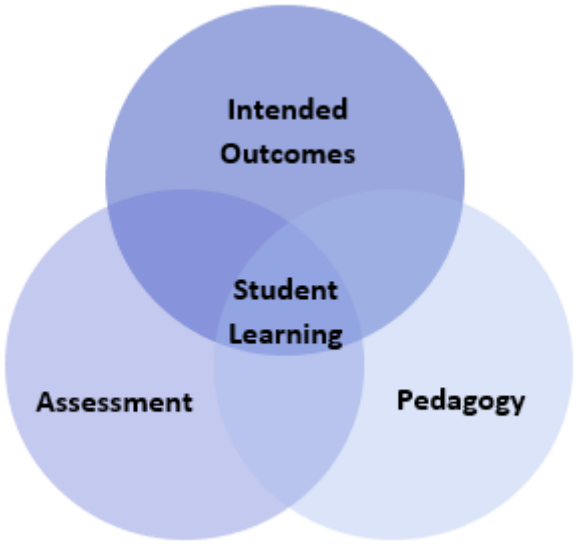
- provide a variety of pathways, to meet different learning needs and encourage students to complete their secondary education
- enable students to develop the essential capabilities for twenty-first century learners
- empower students as active participants in their own learning
- engage students in 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, establishes a rich learning environment, and generates relevant connections between learning and life experiences
- provides formal assessment and certification of students' achievements.

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.

Literacy

Students develop literacy capability as they learn how to build knowledge in relation to agricultural information, concepts, and ideas. Students progressively learn to use a wide range of informational, persuasive, and imaginative texts in multiple modes. These texts include stories, narrative recounts, reports, explanations, arguments, debates, timelines, maps, tables, graphs, images, often supported by references from primary and secondary sources.

Students learn to make increasingly sophisticated language and text choices, understanding that language varies according to context, including the nature and stages of their inquiry. They learn to use language features and text structures to comprehend and compose cohesive texts about places, people, events, processes, systems, and perspectives of the past, present and future. These include topic-specific vocabulary; appropriate tense verbs; and complex sentences that describe sequential, cause-and-effect and comparative relationships. They recognise how language and images can be used to make and manipulate meaning and evaluate texts for shades of meaning and opinion. Students also participate in debates and discussions and develop a considered point of view when communicating conclusions and preferred social and environmental futures to a range of audiences.

Numeracy

Students develop numeracy capability as they apply numeracy skills in relation to historical, geographical, civic, and economic inquiries in agriculture. Students count and measure data and information, construct and interpret tables and graphs, and calculate and interpret statistics in their investigations. Students learn to use scaled timelines, including those involving negative and positive numbers, as well as calendars and dates, to recall information on topics of historical significance and to illustrate the passing of time. They collect data through methods such as surveys and field tests, and construct and interpret maps, models, diagrams and remotely sensed and satellite images, working with numerical concepts of grids, scale, distance, area, and projections.

Students learn to analyse numerical data to make meaning of the past; to test relationships in patterns and between variables, such as the effects of location and distance; and to draw conclusions. They make predictions and forecast outcomes based on civic, economic, and business data and environmental and historical information and represent their findings in numerical and graphical form. Students use numeracy to understand the principles of financial management, and to make informed financial and business decisions. They appreciate the ways numeracy knowledge and skills are used in society and apply these to hypothetical and/or real-life experiences in agriculture.

Information and Communication Technology (ICT) Capability

Students develop ICT capability when they locate, process, analyse, evaluate, and communicate agricultural information using digital technologies. Students access and use digital technologies, including spatial technologies, as an investigative and creative tool. They seek a range of digital sources of information to resolve inquiry questions or challenges of historical, geographic, civic, and economic relevance, being aware of intellectual property. They critically analyse evidence and trends and critique source reliability. Using digital technologies, students present and represent their learning; and collaborate, discuss, and debate to co-construct their knowledge. They plan, organise, create, display, and communicate data and information digitally using multimodal elements for a variety of reasons and audiences.

Students enhance their understanding of ICT by exploring the increasing use of technology and the effects of technologies on people, places, and civic and economic activity in agriculture over time and place. They learn about and have opportunities to use social media to collaborate, communicate, and share information, and build consensus on issues of social, civic, economic, and environmental significance, whilst using an awareness of personal security protocols and ethical responsibilities.

Critical and Creative Thinking

Students develop critical and creative thinking as they investigate agricultural concepts and ideas through inquiry-based learning. Students develop critical thinking by learning to develop and clarify investigative questions, and to question sources and assess reliability when selecting information from sources. Students learn discipline-specific ways of thinking, including interpreting the past from incomplete documentation, developing an argument using evidence, interpreting, and analysing scientific data and/or information, and systems thinking to inform predictions and propose solutions. They learn to think logically when evaluating and using evidence, testing explanations, analysing arguments, and making decisions, and when thinking deeply about questions that do not have straightforward answers.

Students learn the value and process of developing creative questions and the importance of speculation. They apply concepts and skills to new contexts and learn to develop new interpretations to explain aspects of the past and present that are contested or not well understood. They are encouraged to be curious and imaginative in investigations and fieldwork, and to consider multiple perspectives about issues and events. They imagine alternative futures in response to social, environmental, civic, and economic challenges that require problem solving and innovative solutions, proposing appropriate and alternative courses of action and considering the effects on their own lives and the lives of others. In so doing, students develop enterprising behaviours and capabilities and learn to apply decision-making processes including negotiation and conflict-resolution.

Personal and Social Capability

Students' personal and social capability is enhanced as they gain understanding about people, places, processes, and phenomena in agriculture. Through inquiry, collaboration and reflective practice, students develop an appreciation of the insights and perspectives of others, past and present; and an understanding of what informs their personal identity and sense of belonging, including place and their cultural and national heritage. Inquiry-based learning assists students to develop their capacity for self-management, directing their own learning and providing opportunities to express and reflect on their opinions, beliefs, values, and questions appropriately.

As students work independently and collaboratively, they are encouraged to develop personal and interpersonal skills, behaviours and dispositions that enable communication, empathy, teamwork, negotiation, and conflict resolution to maintain positive relationships. They learn and apply enterprising behaviours and capabilities such as leadership, resilience, goal setting and advocacy skills, and informed responsible decision-making. In turn, students develop the capacity to achieve desired outcomes peacefully and to make a contribution to their communities and society more broadly.

Ethical Understanding

Students' capacity for ethical understanding is enhanced by the unique contexts offered through issues in agriculture. Students investigate the ways that diverse values and principles have influenced human activity and recognise that examining the nature of evidence deepens their understanding of ethical issues. Students learn about ethical procedures for investigating and working with people and places, including with Aboriginal and Torres Strait Islander Peoples. Students critically explore ethical behaviour of people of different times and places that may be the result of differing standards and expectations and changing societal attitudes. They evaluate their findings about consumer choices, and about current issues within agriculture such as genetic modification and against the criteria of environmental protection, economic prosperity, and social advancement, raising ethical questions about human rights, animal welfare and citizenship. Students discuss and apply ethical concepts such as equality, respect, and fairness, and examine shared beliefs and values which support Australian democracy and citizenship.

As students develop informed, ethical values and attitudes as they explore different perspectives, ambiguities and ethical considerations related to social and environmental issues, they become aware of their own roles, rights, and responsibilities as participants in their social, economic, and natural world. They consider the consequences of personal and civic decisions, for individuals, society and other forms of life that share the environment.

Intercultural Understanding

Agriculture allows students to develop intercultural understanding as they learn about the diversity of the world's places, peoples and their lives, cultural practices, values, beliefs, and ways of knowing. Students learn the importance of understanding their own and others' histories, recognising the significance of Aboriginal and Torres Strait Islander peoples' histories and cultures and the contribution of Australian migrants within agriculture. They have opportunities to learn about the historic benefits and challenges of interacting with other countries and cultural groups over time, and come to understand the nature, causes and consequences of cultural interdependence, dispossession, and conflict. They learn of Australia's economic and political relationship with other countries and the role of intercultural understanding for the present and future.

As students investigate the interconnections between people and the significance that places hold, they learn how various cultural identities, including their own, are shaped. Students come to see the critical role of shared beliefs and values in an evolving Australian identity. They reflect on their own intercultural experiences and explore how people interact across cultural boundaries, considering how factors such as group membership, traditions, customs, and religious and cultural practices impact on civic life. They recognise similarities as well as differences within and across cultural groups, recognising the importance of practising empathy and learning to challenge stereotypical or prejudiced representations of social and cultural groups where they exist. They demonstrate respect

for cultural diversity and the human rights of all people and learn to facilitate dialogue to understand different perspectives.

Cross-Curriculum Priorities

Aboriginal and Torres Strait Islander Histories and Cultures

Through an investigation of contexts that draw on *Aboriginal and Torres Strait Islander histories and cultures* students could investigate the importance of Aboriginal and Torres Strait Islander Peoples' knowledge in developing a richer understanding of the Australian environment. Students could 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 could 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 scientific research and development and collaborative endeavours in the Asia Pacific region 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 developments in agricultural science and production, students could appreciate that the Asia region plays an important role in scientific research and development, including through collaboration with Australian scientists, in such areas as medicine, natural resource management, biosecurity and food security.

Sustainability

The sustainability cross-curriculum priority is explicitly addressed in the Agriculture curriculum. By investigating the relationships between biological systems and system components, and how systems respond to change, students develop an appreciation for the interconnectedness of the biosphere and how agricultural practices impact on these relationships. Students appreciate that science provides the basis for decision making in many areas of and that these decisions can impact the Earth system. They understand the importance of using science 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.

Agriculture
A/T/M

Rationale

Agriculture A/T/M engages students in investigating the complex relationships between consumer and market demands and the systems which underpin agricultural production. Students develop the scientific and technological skills to engage with the study of contemporary agriculture. They develop knowledge and understanding about complex biological, chemical, and physical systems and their interactions that underpin agriculture. Students develop the scientific skills to investigate key systems in particular and localised case studies. They develop the technological skills to acquire and process data that inform understanding and solve problems in meeting market demands. They understand the challenges of producing and disseminating reliable scientific knowledge in a heavily contested space. They appreciate and address the challenges of applying contemporary research findings and recommendations in a context characterised by tradition, economic pressures, and policy conflict. This course prepares students for further work and study in a growing economic sector in which well-paid and meaningful employment is available. It also develops general scientific capacity for further work and study in other areas of science and social science.

Goals

This course should develop students':

- sense of wonder and curiosity about nature and an appreciation of how scientific knowledge can be used to address contemporary issues
- understanding of the theories and models used to describe, explain, and make predictions about systems, structures, and properties to provide a reliable basis for action
- understanding that scientific knowledge is developing over time, is being used in a variety of contexts; and influences, and is continuing to be influenced by, historical, social, economic, cultural, and ethical considerations and new discoveries understanding that Science is experimental and has developed through independent and collaborative research, and has significant impacts on society and implications for decision making
- ability to design and conduct a variety of field and laboratory investigations involving collection and critical analysis of data, and interpretation of evidence
- ability to critically evaluate scientific concepts, interpretations and claims in order to solve problems and generate informed, considered ,and ethical conclusions
- ability to communicate scientific understanding, findings, arguments, and conclusions using appropriate representations, modes, and genres.

Unit Titles

- Sustainable Agriculture
- Farming in Context
- Meeting Market Demand
- Contemporary Agriculture
- Independent Study

Organisation of Content

Sustainable Agriculture

Students investigate the interconnected systems that underpin agriculture locally, nationally, and globally. They inquire into how agricultural production depends on and affects the ecosystems in which it operates. Students apply rigorous data collection, data analysis and experimental methods to quantify and understand systems. Students critically analyse how technological solutions can be used effectively to improve production and sustainability. They examine how agricultural practices can be varied to achieve reductions in carbon emissions and environmental pollution and increases in biodiversity while sustaining food and fibre production.

Farming in Context

Students examine agriculture in the students' region. They investigate the nature of the local ecologies, climate and geology that determine outcomes for primary producers. They evaluate agricultural processes to reflect on their efficacy and sustainability. Students investigate the challenges and opportunities facing agriculture in their region due to climate change, environmental challenges, and government policy changes.

Meeting Market Demand

Students analyse agriculture from the perspective of plate to paddock. They examine the demands of consumer markets and regulatory regimes and work backward to investigate how agricultural enterprises can meet those requirements. In working backward, they apply rigorous scientific processes to understand the intersecting systems and parameters of problems, evaluate possible solutions and determine the best choices.

Contemporary Agriculture

Students investigate the challenges and opportunities facing contemporary farmers globally. They inquire into a range of technological, biological, and engineering solutions to challenges in the local context. They critically analyse proposed solutions to challenges and problems in agriculture, including global hunger and rural poverty worldwide. Students develop the scientific and technological skills to quantify and understand problems and propose solutions in agriculture.

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 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 understanding of:

- concepts, models, and application
- contexts
- inquiry skills.

Assessment Task Types

Suggested tasks

Individual tasks may incorporate one or more of the following:

- models
- commentary
- debate
- portfolio/journal
- field work
- investigation
- document/source analysis
- practical report
- role play
- research report
- test/quiz
- seminar/workshop/lecture
- poster
- response to stimulus
- essay
- multimedia presentation
- creative response
- interview
- discussion forum
- rationale/validation
- practical skills

It is recommended that a student conceived investigation be undertaken at least once during a minor and twice during a major. This investigation may either be theoretical or practical, or a combination of both.

Weightings in A/T/M 1.0 and 0.5 Units:

No task to be weighted more than 45% for a standard 1.0 unit.

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.
- Students must experience a variety of task types and different modes of communication to demonstrate the Achievement Standards in both theoretical and practical tasks.
- All Achievement Standards must be demonstrated in standard (1.0) or half-standard (0.5) units.
- Task types need to be selected to address all Achievement Standards within the Concepts, Models and Applications, Contexts, and Inquiry Skills strands across a standard (1.0) or half-standard (0.5) unit.
- For tasks completed in unsupervised conditions, schools need to have mechanisms to uphold academic integrity, for example: student declaration, plagiarism software, oral defence, interview, or other validation tasks.

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.

BSSS Achievement Standards for Science A Course – Year 11

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Concepts, Models and Applications	• analyses the fundamental properties and functions of system components, processes, and interactions, and how they are affected by factors across a range of temporal and spatial scales • analyses the nature, functions, limitations and applications of theories and models using evidence, in unfamiliar contexts • assesses processes and claims, provides a critique based on evidence, and discusses alternatives	• explains the fundamental properties and functions of system components, processes, and interactions, and how they are affected by factors across a range of temporal and spatial scales • explains the nature, functions, limitations and applications of theories and models using evidence, in familiar contexts • explains processes and claims, provides a critique with reference to evidence, and identifies alternatives	• describes the fundamental properties and functions of system components, processes, and interactions, and how they are affected by factors across a range of temporal and spatial scales • describes the nature, functions, limitations and applications of theories and models with supporting evidence • describes processes and claims, and identifies alternatives with some reference to evidence	• identifies the fundamental properties and functions with some identification of system components and factors that affect processes across a range of temporal and spatial scales • identifies the nature, functions, applications, and some possible limitations of theories and models, with some evidence • identifies processes and claims, and identifies the need for improvements with some reference to evidence	• identifies the fundamental properties and functions with little or no identification of system components, processes, interactions, and contextual scales • identifies the nature, function of theories and models, with an assertion of a few possible limitations • identifies processes and the need for some improvements, with little or no reference to evidence
Contexts	• analyses how the practice and applications of science meet needs, make decisions; and is influenced by social, economic, technological, and ethical factors	• explains how the practice and applications of science meet needs, make decisions, and is influenced by social, economic, technological, and ethical factors	• describes how the applications of science meet needs, make decisions, and is influenced by social, economic, technological, and ethical factors	• identifies ways in the applications of science meet needs, and is influenced by some factors	• identifies ways in which the application of science has been used in society to meet needs
Inquiry Skills	• designs, conducts and improves safe, ethical and original inquiries individually and collaboratively, that efficiently collect valid and reliable data in response to a complex question • analyses causal and correlational relationships, anomalies, reliability and validity of data and representations, and analyses errors • reflects with insight on their own thinking and learning and evaluates planning, time management and use of appropriate strategies to work independently and collaboratively • communicates concisely, effectively, and accurately, demonstrating scientific literacy in a range of modes, styles, representations, and genres for specific audiences and purposes, with appropriate evidence and accurate referencing	• designs, conducts, and improves safe, ethical inquiries individually and collaboratively, that collect valid data in response to a complex question • explains causal and correlational relationships, anomalies, reliability and validity of data and representations, and explains errors • reflects on their own thinking and analyses planning, time management, use of appropriate strategies to work independently and collaboratively • communicates clearly and accurately, demonstrating scientific literacy in a range of modes, styles, representations and genres for specific audiences and purposes, with appropriate evidence and accurate referencing	• plans and conducts safe, ethical inquiries individually and collaboratively, that collect valid data in response to a question • describes relationships in data sets, reliability and validity of data and representations, and describes common errors • reflects on their own thinking and explains planning, time management, use of appropriate strategies to work independently and collaboratively • communicates accurately demonstrating scientific literacy, in a range of modes, styles, representations, and genres for specific purposes, with appropriate evidence and mostly consistent referencing	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data in response to a question with varying success • identifies trends and anomalies in data and representations, with general comments about errors • reflects on their own thinking with some reference to planning, time management, use of appropriate strategies to work independently and collaboratively • communicates demonstrating some scientific literacy, in a range of modes, representations, and genres with some evidence and inconsistent referencing	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data with little or no connection to a question • identifies trends in data and representations, with little or no reference to anomalies and errors • reflects on their own thinking with little or no reference to planning, time management, use of appropriate strategies to work independently and collaboratively • communicates demonstrating limited scientific literacy, in a range of modes and representations, with inconsistent and inaccurate referencing

BSSS Achievement Standards for Science T Course – Year 11

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Concepts, Models and Applications	• critically analyses the fundamental properties and functions of system components, processes and interactions, and the effects of factors across a range of scales • evaluates the nature, functions, limitations and applications of theories and models using evidence, in unfamiliar contexts • analyses evidence with reference to models and/or theories, and develops evidence-based conclusions and evaluates limitations	• analyses the fundamental properties and functions of system components, processes and interactions, and the effects of factors across a range of scales • analyses the nature, functions, limitations and applications of theories and models using evidence, in familiar contexts • assesses evidence with reference to models and/or theories, and develops evidence-based conclusions and discusses limitations	• explains the fundamental properties and functions of system components, processes and interactions and the effects of factors across a range of scales • explains the nature, functions, limitations and applications of theories and models using evidence, in familiar contexts • explains evidence with reference to models and/or theories, and develops evidence-based conclusions and identifies limitations	• describes the fundamental properties and functions, and with some description of system components, processes and interactions, and the effects of factors across a range of scales • describes the nature, functions, limitations and applications of theories and models with supporting evidence • describes evidence, and develops conclusions with some reference to models and/or theories	• identifies the fundamental properties and functions of system and identifies components, processes and interactions, and the effects of factors across a range of scales • identifies the nature, functions, applications, and some possible limitations of theories and models, with some evidence • identifies evidence, and asserts conclusions with little or no reference to models and/or theories
Contexts	• critically analyses epistemology, role of peer review, collaboration, and technology in developing knowledge • critically analyses the influence of social, economic, ethical, and cultural factors on Science	• analyses epistemology, role of peer review and technology in developing knowledge • analyses the influence of social, economic, ethical, and cultural factors on Science	• explain epistemology, role of peer review and technology in developing knowledge • explains the influence of social, economic, ethical, and cultural factors on Science	• describes the role of peer review in developing knowledge • describes the influence of social, economic, ethical, and cultural factors on Science	• identifies that scientific knowledge has changed over time • identifies the influence of social, economic, ethical, and cultural factors on Science
Inquiry Skills	• designs, conducts and improves safe, ethical and original inquiries individually and collaboratively, that collect valid, reliable data in response to a complex question • analyses causal and correlational relationships, anomalies, reliability and validity of data and representations, and analyses errors • analyses processes and claims, and provides a critique based on evidence, and critically analyses alternatives • reflects with insight on own thinking and that of others, and evaluates planning, time management, and use of appropriate work strategies to work independently and collaboratively • communicates concisely, effectively, and accurately, demonstrating scientific literacy in a range of modes, styles, representations, and genres for specific audiences and purposes, with appropriate evidence and accurate referencing	• designs, conducts, and improves safe, ethical inquiries individually and collaboratively, that collect valid, reliable data in response to a question • analyses causal and correlational relationships, anomalies, reliability and validity of data and representations, and discusses errors • assesses processes and claims, and provides a critique with reference to evidence, and analyses alternatives • reflects on their own thinking and analyses planning, time management, use of appropriate work strategies to work independently and collaboratively • communicates clearly and accurately, demonstrating scientific literacy in a range of modes, styles, representations and genres for specific audiences and purposes, with appropriate evidence and accurate referencing	• plans and conducts safe, ethical inquiries individually and collaboratively, that collect valid data in response to a familiar question • explains causal and correlational relationships, anomalies, reliability and validity of data and representations, and cites common errors • explains processes and claims, and identifies alternatives with reference to reliable evidence • reflects on their own thinking and explains planning, time management, use of appropriate work strategies to work independently and collaboratively • communicates accurately demonstrating scientific literacy, in a range of modes, styles, representations, and genres for specific purposes, with appropriate evidence and mostly consistent referencing	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data in response to a simple question with varying success • describes trends, relationships, and anomalies in data, identifies anomalies, and some possible sources of error • describes processes and claims, and identifies the need for improvements with some reference to evidence • reflects on their own thinking, with reference to planning and the use of appropriate work strategies to work independently and collaboratively • communicates demonstrating some scientific literacy, in a range of modes, representations, and genres with some evidence and inconsistent referencing	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data with little or no connection to a question • identifies trends and relationships in data, with little or no reference to sources of error • identifies processes and the need for some improvements, with little or no reference to evidence • reflects on their own thinking with little or no reference to planning, time management, and use of work strategies to work independently and collaboratively • communicates demonstrating limited scientific literacy, in a range of modes and representations, with inconsistent and inaccurate referencing

BSSS Achievement Standards for Science A Course – Year 12

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Concepts, Models and Applications	• analyses the fundamental properties and functions of system components, processes and interactions, and the effects of factors across a range of scales • analyse the nature, functions, limitations and applications of theories and models using evidence, in unfamiliar contexts • assesses evidence with reference to models and/or theories, and develops evidence-based conclusions and evaluates limitations	• explains the fundamental properties and functions of system components, processes and interactions, and the effects of factors across a range of scales • explains the nature, functions, limitations and applications of theories and models using evidence, in familiar contexts • explains evidence with reference to models and/or theories, and develops evidence-based conclusions and discusses limitations	• describes the fundamental properties and functions of system components, processes and interactions, and the effects of factors across a range of scales • describes the nature, functions, limitations and applications of theories and models using evidence, in familiar contexts • describes evidence with reference to models and/or theories, and develops evidence-based conclusions and identifies limitations	• describes the fundamental properties and functions of system components, processes and interactions, and the effects of one or more factors • describes the nature, functions, limitations and applications of theories and models with supporting evidence • describes evidence, and develops conclusions with some reference to models and/or theories	• identifies the fundamental properties and functions of system components, processes and interactions, and the effects of factors • identifies the nature, functions, applications, and some limitations of theories and models with some evidence • identifies evidence, and asserts conclusions with little or no reference to models and/or theories
Contexts	• analyses epistemology, role of peer review, collaboration, and technology in developing knowledge • analyses the influence of social, economic, ethical, and cultural factors on Science	• explains epistemology, role of peer review and technology in developing knowledge • explains the influence of social, economic, ethical, and cultural factors on Science	• describes epistemology, role of peer review and technology in developing knowledge • describes the influence of social, economic, ethical, and cultural factors on Science	• describes role of peer review and technology in developing knowledge • describes the influence of social, economic, ethical, and cultural factors on Science	• identifies that scientific knowledge has changed over time • identifies the influence of social, economic, ethical, and cultural factors on Science
Inquiry Skills	• designs, conducts and improves safe, ethical and original inquiries individually and collaboratively, that collect valid, reliable data in response to a complex question • analyses causal and correlational relationships, anomalies, reliability and validity of data and representations, and analyses errors • analyses processes and claims, and provides a critique based on evidence, and analyses alternatives • reflects with insight on own thinking and that of others and, evaluates planning, time management and use of appropriate independent and collaborative work strategies • communicates concisely, effectively, and accurately, demonstrating scientific literacy in a range of modes, styles, representations, and genres for specific audiences and purposes, with appropriate evidence and accurate referencing	• designs, conducts, and improves safe, ethical inquiries individually and collaboratively, that collect valid, reliable data in response to a question • analyses causal and correlational relationships, anomalies, reliability and validity of data and representations, and discusses errors • explains processes and claims, and provides a critique with reference to evidence, and proposes alternatives • reflects on their own thinking and analyses planning, time management, and use of appropriate independent and collaborative work strategies • communicates clearly and accurately, demonstrating scientific literacy in a range of modes, styles, representations and genres for specific audiences and purposes, with appropriate evidence and accurate referencing	• plans and conducts safe, ethical inquiries individually and collaboratively, that collect valid data in response to a familiar question • describes causal and correlational relationships, anomalies, reliability and validity of data and representations, and cites common errors • describes processes and claims, and identifies alternatives with reference to reliable evidence • reflects on their own thinking and explains planning, time management, and use of appropriate independent and collaborative work strategies • communicates accurately demonstrating scientific literacy, in a range of modes, styles, representations, and genres for specific purposes, with appropriate evidence and mostly consistent referencing	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data in response to a simple question with varying success • describes trends, relationships, and anomalies in data, identifies anomalies, and some possible sources of error • describes processes and claims, and identifies the need for improvements with some reference to evidence • reflects on their own thinking, with reference to planning and the use of appropriate independent and collaborative work strategies • communicates demonstrating some scientific literacy, in a range of modes, representations, and genres with some evidence and inconsistent referencing	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data with little or no connection to a question • identifies trends and relationships in data, with little or no reference to sources of error • identifies processes and the need for some improvements, with little or no reference to evidence • reflects on their own thinking with little or no reference to planning, time management, and use of appropriate independent and collaborative work strategies • communicates demonstrating limited scientific literacy, in a range of modes and representations, with inconsistent and inaccurate referencing

BSSS Achievement Standards for Science T Course – Year 12

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Concepts, Models and Applications	• critically analyses the properties and functions of system components, processes and interactions, and the interplay and effects of factors across a range of scales	• analyses the properties and functions of system components, processes and interactions, and the interplay and effects of factors across a range of scales	• explains the fundamental properties and functions of system components, processes and interactions, and the effects of factors across a range of scales	• describes the fundamental properties and functions of system components, processes and interactions, and the effects of one or more factors	• identifies the fundamental properties and functions of system components, processes and interactions, and some affective factors
	• evaluates applications, limitations, and predictions of theories and models to explain systems and create solutions, with evidence, in unfamiliar contexts	• analyses applications, limitations, and predictions of theories and models to explain systems and create plausible solutions, with evidence in familiar contexts	• explains applications, limitations, and predictions of theories and models to explain systems and create plausible solutions in familiar contexts	• describes the nature, functions, limitations and applications of theories and models to create solutions to problems with supporting evidence	• identifies the nature, functions, limitations and applications of theories and models, and suggest solutions to problems with supporting evidence
	• evaluates evidence with reference to critical analysis of models and/or theories, and develops evidence-based conclusions and evaluates limitations	• analyses evidence with reference to models and/or theories, and develops evidence-based conclusions and discusses limitations	• describes evidence with reference to models and/or theories, and develops evidence-based conclusions and identifies limitations	• describes evidence, and develops conclusions with some reference to models and/or theories	• identifies evidence, and asserts conclusions with little or no reference to models and/or theories
Contexts	• critically analyses epistemology, role of peer review, collaboration, and technology in developing knowledge	• analyses epistemology, role of peer review and technology in developing knowledge	• explains epistemology, role of peer review and technology in developing knowledge	• describes role of peer review and technology in developing knowledge	• identifies that scientific knowledge has changed over time
	• critically analyses the influence of social, economic, ethical, and cultural factors on Science	• analyses the influence of social, economic, ethical, and cultural factors on Science	• explains the influence of social, economic, ethical, and cultural factors on Science	• describes the influence of social, economic, ethical, and cultural factors on Science	• identifies the influence of social, economic, ethical, and cultural factors on Science
Inquiry Skills	• designs, conducts and improves safe, ethical and original inquiries individually and collaboratively, that collect valid, reliable data in response to a complex question	• designs, conducts, and improves safe, ethical inquiries individually and collaboratively, that collect valid, reliable data in response to a question	• plans and conducts safe, ethical inquiries individually and collaboratively, that collect valid data in response to a familiar question	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data in response to a simple question with varying success	• follows a procedure to conduct safe, ethical inquiries individually and collaboratively, to collect data with little or no connection to a question
	• critically analyses cause and correlation, anomalies, reliability and validity of data and representations, and critically analyses errors	• analyses cause and correlation, anomalies, reliability and validity of data and representations, and analyses errors	• describes causal and correlational relationships, anomalies, reliability and validity of data and representations, and discusses common errors	• describes trends, relationships, and anomalies in data, identifies anomalies, and cites sources of error	• identifies trends and relationships in data with reference to sources of error
	• evaluates processes and claims, and provides a critique based on evidence, and critically analyses alternatives	• explains processes and claims, and provides a critique with reference to evidence, and analyses alternatives	• describes processes and claims, and identifies alternatives with reference to reliable evidence	• describes processes and claims, and identifies the need for improvements with some reference to evidence	• identifies processes and the need for some improvements, with little or no reference to evidence
	• reflects with insight on own thinking and that of others, evaluates planning, time management, and use of appropriate independent and collaborative work strategies	• reflects on their own thinking and analyses planning, time management, and use of appropriate independent and collaborative work strategies	• reflects on their own thinking and explains planning, time management, and use of appropriate independent and collaborative work strategies	• reflects on their own thinking, with reference to planning and the use of appropriate independent and collaborative work strategies	• reflects on their own thinking with little or no reference to planning, time management, and use of appropriate independent and collaborative work strategies
	• communicates concisely, effectively, and accurately, with scientific literacy in a range of modes, representations, and genres for specific audiences and purposes, and accurate referencing	• communicates clearly and accurately, with scientific literacy in a range of modes, representations and genres for specific audiences and purposes, and accurate referencing	• communicates accurately demonstrating scientific literacy, in a range of modes, representations, and genres for specific purposes, and mostly consistent referencing	• communicates demonstrating some scientific literacy, in a range of modes, representations, and genres with some evidence and inconsistent referencing	• communicates demonstrating limited scientific literacy, in a range of modes and representations, with inconsistent and inaccurate referencing

Achievement Standards for Science M Course – Years 11 and 12

	*A student who achieves an **A** grade typically*	*A student who achieves a **B** grade typically*	*A student who achieves a **C** grade typically*	*A student who achieves a **D** grade typically*	*A student who achieves an **E** grade typically*
Concepts, Models and Applications	• describes the properties and functions of system components and processes with independence • describes system components and processes with some reference to how they are affected by factors with independence	• describes the properties and functions of system components, processes, and interactions with assistance • describes system components, processes, and interactions with some reference to how they are affected by factors with assistance	• identifies the properties and functions of system components, processes, and interactions with independence • identifies system components, processes, and interactions with independence	• identifies the properties and functions of system components, processes, and interactions with assistance • identifies system components, processes, and interactions with assistance	• identifies the properties and functions of system components, processes, and interactions with direct instruction • identifies system components, processes, and interactions with direct instruction
Contexts	• describes the impact of science on an aspect of society with independence	• describes the impact of science on an aspect of society with some independence	• identifies the impact of science on an aspect of society with independence	• identifies the impact of science on an aspect of society with assistance	• identifies the impact of science on an aspect of society with direct instruction
Inquiry Skills	• plans and conducts investigations in response to a question or problem with independence • draws evidence-based conclusions from investigations with independence • reflects on own thinking and learning in science with independence • communicates findings effectively with independence	• plans and conducts investigations in response to a question or problem with some independence • draws evidence-based conclusions from investigations with some independence • reflects on own thinking and learning in science with some independence • communicates findings effectively with some independence	• plans and conducts investigations in response to a question or problem with assistance • draws evidence-based conclusions from investigations with assistance • reflects on own thinking and learning in science with assistance • communicates findings with assistance	• plans and conducts investigations in response to a question or problem with repeated cueing • draws evidence-based conclusions from investigations with repeated cueing • reflects on own thinking and learning in science with repeated cueing • communicates findings with repeated cueing	• follows a procedure to conduct investigations to collect data with direct instruction • draws evidence-based conclusions from investigations with direct instruction • reflects on own thinking and learning in science with direct instruction • communicates findings with direct instruction

Sustainable Agriculture — Value: 1.0

Sustainable Agriculture — **Value 0.5**

Sustainable Agriculture — **Value 0.5**

Unit Description

In this unit, students investigate the interconnected systems that underpin agriculture locally, nationally, and globally. They inquire into how agricultural production depends on and affects the ecosystems in which it operates. Students apply rigorous data collection, data analysis and experimental methods to quantify and understand systems. They critically analyse how technological solutions can be used effectively to improve production and sustainability. Students examine how agricultural practices can be varied to achieve reductions in carbon emissions and environmental pollution and increases in biodiversity while sustaining food and fibre production.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• analyse the nature of environmental systems that underpin agriculture • analyse the effects of agriculture on ecosystems • analyse the sustainability of agriculture practices • analyse the impact of a range of contexts on the sustainability of agriculture	• critically analyse the nature of environmental systems that underpin agriculture • critically analyse the effects of agriculture on ecosystems • evaluate the sustainability of agriculture practices • critically analyse the impact of a range of contexts on the sustainability of agriculture	• describe the nature of environmental systems that underpin agriculture • describe the effects of agriculture on ecosystems • describe the sustainability of agriculture practices • describe the impact of environmental contexts on the sustainability of agriculture

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Concepts, Models and Applications		
• analyse the nature of environmental and biological systems that underpin agriculture locally, nationally, and/or globally to analyse implications for sustainable agricultural production, for example, soil microbiology, plant physiology, water cycle, carbon cycle, nutrients, and energy	• critically analyse the nature of environmental and biological systems that underpin agriculture locally, nationally, and globally to critically analyse implications for sustainable agricultural production, for example, soil microbiology, plant physiology, water cycle, carbon cycle, nutrients, and energy	• describe and explain the nature of environmental and biological systems that underpin agriculture and implications for sustainable production, for example, soil microbiology, plant physiology, water cycle, carbon cycle, nutrients, and energy

A Course	T Course	M Course
• analyse how agricultural production affects the ecosystems in which it operates, for example, the decline in insect and bee populations, topsoil degradation, dependence on fossil fuel chemicals, biodiversity	• critically analyse how agricultural production affects the ecosystems in which it operates, for example, the decline in insect and bee populations, topsoil degradation, dependence on fossil fuel chemicals, biodiversity	• describe how agricultural production affects the ecosystems in which it operates, for example, the decline in insect and bee populations, topsoil degradation, dependence on fossil fuel chemicals, biodiversity
• analyse possible means by which agricultural practices can be varied to achieve sustainability, for example, compositing vs fertilisers, soil rehabilitation, coppicing vs clear cutting, whole farm planning	• evaluate possible means by which agricultural practices can be varied to achieve sustainability, for example, compositing vs fertilisers, soil rehabilitation, coppicing vs clear cutting, whole farm planning	• identify possible means by which agricultural practices can be varied to achieve sustainability, for example, compositing vs fertilisers, soil rehabilitation, coppicing vs clear cutting, whole farm planning
Science as Human Endeavour		
• analyse a range of scientific and media texts to investigate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• critically analyse a range of scientific and media texts to evaluate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• use scientific and media texts to identify processes, claims or conclusions by considering the quality of available evidence
• analyse contextual considerations on the capacity of agricultural enterprises to work towards sustainability, for example, social, economic, geographic, cultural, environmental, and ethical	• critically analyse contextual considerations on the capacity of agricultural enterprises to work towards sustainability, for example, social, economic, geographic, cultural, environmental, and ethical	• describe the impact of contextual considerations that affect agricultural enterprises
• investigate current and emerging technologies and plausible or innovative applications for these technologies in sustainable agriculture	• evaluate current and emerging technologies and plausible or innovative applications for these technologies in sustainable agriculture	• describe current and emerging technologies or innovative applications for these in sustainable agriculture
Inquiry Skills		
• analyse data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• evaluate data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• interpret data and representations to identify relationships

A Course	T Course	M Course
• conduct ethical and safe investigations in response to complex questions to collect and analyse valid and reliable data using contemporary technology	• design and conduct ethical and safe investigations in response to complex questions to collect and analyse valid and reliable data using contemporary technology	• conduct scientific investigations using contemporary technology
• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy using appropriate language
• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively
Reflection		
• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and learning

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 emphasise 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.

Assessment

Refer to pages 10-12.

Farming in Context — Value: 1.0

Farming in Context — **Value 0.5**

Farming in Context — **Value 0.5**

Unit Description

Students examine agriculture in the students' region. They investigate the nature of the local ecologies, climate and geology that determine outcomes for primary producers. Students evaluate agricultural processes to reflect on their efficacy and sustainability. They investigate the challenges and opportunities facing agriculture in their region due to climate change, environmental challenges, and government policy changes.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• analyse relevant systems on a local and regional level • analyse local agricultural practices • analyse opportunities and challenges for agriculture in the local area • analyse the impact of a range of contexts on local agriculture	• critically analyse relevant systems on a local and regional level • evaluate local agricultural practices • evaluate opportunities and challenges for agriculture in the local area • critically analyse the impact of a range of contexts on local agriculture	• describe relevant systems on a local or regional level • describe local agricultural practices • describe opportunities and challenges for agriculture in the local area • describe the impact of a context on local agriculture

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Concepts, Models and Applications		
• analyse particular ecologies in the context of climate and geology to and implications for agricultural production in the region, for example, cool climate vineyard yields, pasture wool quality, plant adaptations to climate, indigenous land management	• critically analyse particular ecologies in the context of climate and geology to critically analyse implications for agricultural production in the region, for example, cool climate vineyard yields, pasture wool quality, plant adaptations to climate, indigenous land management	• describe ecologies in the context of climate or geology and implications on agricultural production in the region

A Course	T Course	M Course
• analyse agricultural practices in the students' region for efficacy and sustainability, for example, land management practices, native versus exotic pastures, logistics	• evaluate agricultural practices in the students' region for efficacy and sustainability, for example, land management practices, native versus exotic pastures, logistics	• describe efficacy or sustainable agricultural practices in the region
• analyse the changes, challenges and opportunities facing agriculture in their region due to climate change, environmental challenges, and government policy changes for example mitigation of erosion, GMO, genetic patents	• critically analyse the changes, challenges and opportunities facing agriculture in their region due to climate change and environmental challenges and government policy changes for example mitigation of erosion, GMO, genetic patents	• identify challenges and opportunities facing agriculture in their region
Science as Human Endeavour		
• analyse a range of scientific and media texts to investigate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• critically analyse a range of scientific and media texts to evaluate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• use scientific and media texts to identify processes, claims or conclusions by considering the quality of available evidence
• analyse contextual considerations on agricultural enterprises to adapt to regional variability, for example, social, economic, geographic, cultural, environmental, and ethical	• critically analyse contextual considerations on agricultural enterprises to adapt to regional variability, for example, social, economic, geographic, cultural, environmental, and ethical	• describe the impact of contextual considerations that affect agricultural enterprises in the local region
• investigate current and emerging technologies and plausible or innovative applications for these technologies in a regional context	• evaluate current and emerging technologies and plausible or innovative applications for these technologies in a regional context	• describe current and emerging technologies or innovative applications for these technologies in a regional agriculture
Inquiry Skills		
• analyse data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• evaluate data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• interpret data and representations to identify relationships

A Course	T Course	M Course
• conduct ethical and safe investigations in response to complex questions to collect and analyse valid and reliable data using contemporary technology	• design and conduct ethical and safe investigations in response to complex questions to collect and analyse valid and reliable data using contemporary technology	• conduct scientific investigations using contemporary technology
• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy using appropriate language
• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively
Reflection		
• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and learning

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 emphasise 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.

Assessment

Refer to pages 10-12.

Meeting Market Demand — Value: 1.0

Meeting Market Demand — **Value 0.5**

Meeting Market Demand — **Value 0.5**

Unit Description

Students analyse agriculture from the perspective of plate to paddock. They examine the demands of consumer markets and regulatory regimes and work backward to investigate how agricultural enterprises can meet those requirements. In working backward, they apply rigorous scientific processes to understand the intersecting systems and parameters of problems, evaluate possible solutions and determine the best choices.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• analyse problems raised by market demand • analyse the capacity of intersecting systems to sustainably meet demand • analyse solutions to agricultural problems • analyse the impact of a range of contexts on agricultural enterprises	• critically analyse problems raised by market demand • evaluate the capacity of intersecting systems to sustainably meet demand • evaluate solutions to agricultural problems • critically analyse the impact of a range of contexts on agricultural enterprises	• describe problems raised by market demand • describe the role of intersecting systems to meet demand • describe solutions to agricultural problems • describe the impact of a context on agricultural enterprises

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Concepts, Models and Applications		
• analyse the demands of consumer markets and the impact of regulatory regimes with respect to economically sustainable agricultural production, for example, the demand for almond milk, river management, land management regulations, organic regulations	critically analyse the demands of consumer markets and the impact of regulatory regimes with respect to economically sustainable agricultural production, for example, the demand for almond milk, river management, land management regulations, organic regulations	• describe agricultural demands of consumers and impacts on meeting these

A Course	T Course	M Course
• analyse the limitations and opportunities provided by intersecting systems in meeting consumer demand and regulatory requirements, for example, supply and demand, marketing, quality assurance	• evaluate the limitations and opportunities provided by intersecting systems in meeting consumer demand and regulatory requirements, for example, supply and demand, marketing, quality assurance	• describe agricultural opportunities for meeting consumer demands
• analyse the efficacy of agricultural solutions, using case studies, to meet demands from consumers and regulators, for example traditional vs no till practices, economic potential of native species	• evaluate the efficacy of agricultural solutions, using case studies, to meet demands from consumers and regulators, for example traditional vs no till practices, economic potential of native species	• identify existing agricultural solutions for meeting consumer demands
Science as Human Endeavour		
• analyse a range of scientific and media texts to investigate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• critically analyse a range of scientific and media texts to evaluate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• use scientific and media texts to identify processes, claims or conclusions by considering the quality of available evidence
• analyse contextual considerations on agricultural enterprises to meet the demand and regulatory obligations, for example social, economic, geographic, cultural, environmental, and ethical	• critically analyse contextual considerations on agricultural enterprises to meet the demand and regulatory obligations, for example social, economic, geographic, cultural, environmental, and ethical	• describe the impact of contextual considerations that affect meeting agricultural demands
• investigate current and emerging technologies and plausible or innovative applications for these technologies in meeting consumer demand and regulator obligations	• evaluate current and emerging technologies and plausible or innovative applications for these technologies in meeting consumer demand and regulatory obligations	• describe current and emerging technologies or innovative applications for these technologies in meeting agricultural demands

A Course	T Course	M Course
Inquiry Skills		
• analyse data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• evaluate data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• interpret data and representations to identify relationships
• conduct ethical and safe investigations in response to complex questions to collect and analyse valid and reliable data using contemporary technology	• design and conduct ethical and safe investigations in response to complex questions	• conduct scientific investigations using contemporary technology
• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy using appropriate language
• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively
Reflection		
• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and learning

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 emphasise 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.

Assessment

Refer to pages 10-12.

Contemporary Agriculture — Value: 1.0

Contemporary Agriculture — **Value 0.5**

Contemporary Agriculture — **Value 0.5**

Unit Description

Students investigate the challenges and opportunities facing contemporary farmers globally. They inquire into a range of technological, biological, and engineering solutions to challenges in the local context. They critically analyse proposed solutions to challenges and problems in agriculture, including global hunger and rural poverty worldwide. Students develop the scientific and technological skills to quantify and understand problems and propose solutions in agriculture.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• analyse contemporary problems facing agriculture globally	• critically analyse contemporary problems facing agriculture globally	• describe contemporary problems facing agriculture
• analyse a range of local challenges that contribute to global problems	• critically analyse a range of local challenges that contribute to global problems	• describe local challenges that contribute to global problems
• analyse proposed agricultural solutions to global hunger and poverty	• evaluate proposed agricultural solutions to global hunger and poverty	• describe proposed agricultural solutions to problems of hunger or poverty
• analyse the impact of a range of contexts on global agriculture	• critically analyse the impact of a range of contexts on global agriculture	• describe the impact of contexts on global agriculture

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Concepts, Models and Applications		
• analyse the challenges and opportunities facing contemporary farmers globally and the implications for agricultural production, for example, insect protein, carbon pricing and offsets, genetic engineering, CRISPR	• critically analyse the challenges and opportunities facing contemporary farmers globally and the implications for agricultural production, for example, insect protein, carbon pricing and offsets, genetic engineering, CRISPR	• describe challenges and opportunities facing contemporary farmers

A Course	T Course	M Course
• analyse a range of technological, biological, and engineering solutions to challenges in the local context, for example smart farms, technological integration, robotics, vertical farming, hydroponics, propagation techniques	• critically analyse a range of technological, biological, and engineering solutions to challenges in the local context, for example smart farms, technological integration, robotics, vertical farming, hydroponics, propagation techniques	• describe a technological, biological, or engineering solution to challenges in agriculture
• analyse proposed solutions to challenges and problems in agriculture, including global hunger and rural poverty worldwide, for example Haber – Bosch fertiliser production, global supply chains, international collaboration	• evaluate proposed solutions to challenges and problems in agriculture, including global hunger and rural poverty worldwide, for example Haber – Bosch fertiliser production, global supply chains, international collaboration	• identify proposed solutions to challenges and problems in contemporary agriculture
Science as Human Endeavour		
• analyse a range of scientific and media texts to investigate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• critically analyse a range of scientific and media texts to evaluate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• use scientific and media texts to identify processes, claims or conclusions by considering the quality of available evidence
• analyse contextual considerations on agricultural enterprises to meet contemporary challenges, for example social, economic, geographic, cultural, environmental, and ethical	• critically analyse contextual considerations on agricultural enterprises to meet contemporary challenges, for example social, economic, geographic, cultural, environmental, and ethical	• describe the impact of contextual considerations that affect contemporary agricultural
• investigate current and emerging technologies and plausible or innovative applications for these technologies in solving contemporary challenges in agricultural production	• evaluate current and emerging technologies and plausible or innovative applications for these technologies in solving contemporary challenges in agricultural production	• describe current and emerging technologies or innovative applications for these technologies in contemporary agriculture

A Course	T Course	M Course
Inquiry Skills		
• analyse data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• evaluate data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• interpret data and representations to identify relationships
• conduct ethical and safe investigations in response to complex questions to collect and analyse valid and reliable data using contemporary technology	• design and conduct ethical and safe investigations in response to complex questions	• conduct scientific investigations using contemporary technology
• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy using appropriate language
• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively
Reflection		
• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and learning

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 emphasise 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.

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 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.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• analyse systems relevant to the chosen area of study	• critically analyse systems relevant to the chosen area of study	• describe systems relevant to the chosen area of study
• analyse challenges and opportunities for agriculture in the chosen area of study	• critically analyse challenges and opportunities for agriculture in the chosen area of study	
• analyse proposed solutions in the chosen area of study	• evaluate proposed solutions in the chosen area of study	• describe proposed solutions in the chosen area of study
• analyse the impact of context on the chosen area of study	• critically analyse the impact of context on the chosen area of study	

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Concepts, Models and Applications		
• analyse scientific theories and principles relevant to the area of study	• critically analyse scientific theories and principles relevant to the area of study	• describe systems relevant to the chosen area of study

A Course	T Course	M Course
• analyse case studies relevant to the area of study	• critically analyse case studies relevant to the area of study	
• analyse proposed solutions to problems in the area of study	• evaluate proposed solutions to problems in the area of study	• describe proposed solutions in the chosen area of study
Science as Human Endeavour		
• analyse a range of scientific and media texts to explain processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• critically analyse a range of scientific and media texts to evaluate processes, claims and conclusions by considering the quality of available evidence, for example peer review versus popular claims	• use scientific and media texts to identify processes, claims or conclusions by considering the quality of available evidence
• analyse the influence of social, economic, geographic, cultural, environmental, or ethical considerations in the area of study	• critically analyse the influence of social, economic, geographic, cultural, environmental, and ethical considerations in the area of study	• describe the impact of contextual considerations that affect the chosen area of study
• analyse current and emerging technologies and plausible or innovative applications for this technology in solving problems in the area of study	• evaluate current and emerging technologies and plausible or innovative applications for this technology in solving problems in the area of study	• describe current and emerging technologies or innovative applications for these technologies in the chosen area of study
Inquiry Skills		
• analyse data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• evaluate data and representations to identify causal and correlational relationships, anomalies, reliability and validity and sources of error	• interpret data and representations to identify relationships
• design and conduct ethical and safe investigations in response to questions that collect valid, reliable data	• design and conduct ethical and safe investigations in response to complex questions that collect valid, reliable data	• conduct scientific investigations using contemporary technology
• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy to specific audiences and purposes using appropriate metalanguage, genres, and modes	• communicate ideas demonstrating scientific literacy using appropriate language

A Course	T Course	M Course
• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively to develop solutions	• apply strategies to work both independently and collaboratively
Reflection		
• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and evaluate planning, time management, use of appropriate work strategies	• reflect on own thinking and learning

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 emphasise 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.

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 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, rests with the principal and the teacher delivering the course. Students will only be given credit for covering the content once.

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.

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

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
Critically analyse	To use ideas from critics or scholars to inform an analysis
Create	Bring into existence, to originate
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. Independent Study units 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 – 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 to bssscertification@ed.act.edu.au by the principal or their nominated delegate.

The email will include the **Conditions of Adoption** statement above, and the table below adding the **College** name, and **A** and/or **T** and/or **M** and/or **V** to the **Classification/s** section of the table.

College:					
Course Title:	Agriculture				
Classification/s:	**A**	**T**	**M**		
Framework:	Science				
Dates of Course Accreditation:		**from**	2023	**to**	20XX