BSSS
AUSTRALIAN CAPITAL TERRITORY

Designed Environments

A / T / M

Cover Art provided by Canberra College student Aidan Giddings

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The ACT Senior Secondary System

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

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

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

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

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

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

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

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

Senior secondary curriculum makes provision for student-centred teaching approaches, integrated and project-based learning inquiry, formative assessment and teacher autonomy. ACT Senior Secondary Curriculum makes provision for diverse learners and students with mild to moderate intellectual disabilities, so that all students can achieve an ACT Senior Secondary Certificate.

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

ACT Senior Secondary Certificate

Courses of study for the ACT Senior Secondary Certificate:

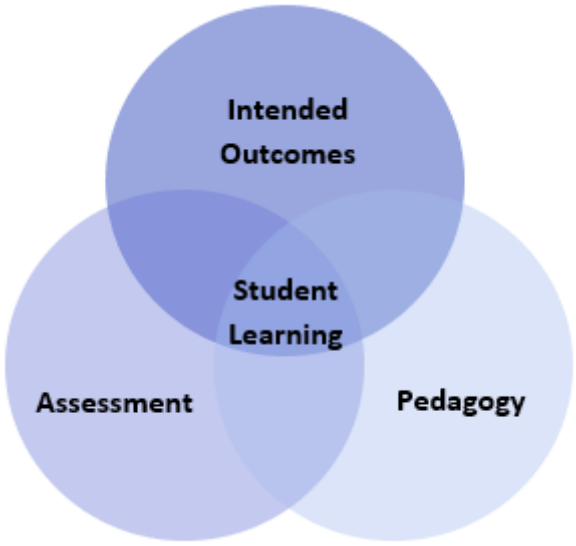
- provide a variety of pathways, to meet different learning needs and encourage students to complete their secondary education
- enable students to develop the essential capabilities for twenty-first century learners
- empower students as active participants in their own learning
- engage students in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

Each course of study:

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

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 as they learn how to communicate ideas, concepts and proposals to a variety of audiences. They read and interpret detailed written instructions technologies, often including diagrams and procedural writings such as software user manuals and design briefs. Students interpret online documentation and tutorial materials that support coding, prepare software instructions and write reports, project outlines, proposals and evaluations. They use computer-generated images to communicate product or systems design ideas to suit particular contexts and audiences. Students understand and use terminology specific to design and technology, in both written and oral forms, to communicate ideas about product or systems design.

Numeracy

Designed Environments gives students opportunities to interpret and use mathematical knowledge and skills in a range of real-life situations. Students use number to calculate, measure and estimate; interpret and draw conclusions from statistics; measure and record throughout the process of generating ideas; develop, refine and test concepts; and cost and sequence when making products and managing projects. In using software, materials, tools and equipment, students work with the concepts of number, geometry, scale, proportion, measurement and volume. They use three-dimensional models, create accurate technical drawings, work with digital models and use computational thinking in decision-making processes when designing and creating best-fit solutions.

Information and Communication Technology (ICT) Capability

In Designed Environments students create digital solutions that consider economic, environmental and social factors in learning about and applying the design process, students gain skills using a range of software applications and digital hardware that enable them to realise their design ideas. Students use ICT when they investigate and analyse information and evaluate design ideas and communicate and collaborate online. They develop design ideas; generate plans and diagrams to communicate their designs and produce solutions using digital technologies, for example, creating simulations, drawings and models and manufacturing solutions (from basic drawing programs to computer-aided design/manufacture and rapid prototyping).

Critical and Creative Thinking

Students develop capability in critical and creative thinking through challenging problems that do not have straightforward solutions. Students identify and deconstruct problems of interest, refine concepts and reflect on the decision-making process by engaging in systems, design and computational thinking. They identify, explore and clarify technologies information and use that knowledge in a range of situations. Students consider how data, information, systems and tools impact on our lives, and how these elements might be better designed and managed. Visualising possibilities, modelling and scoping solutions, designing and working with digital tools, equipment and software helps students to build their visual and spatial thinking, test hypotheses and to create solutions, products, services and environments.

Personal and Social Capability

Students develop personal and social capability as they engage in project management and development in a collaborative workspace. They direct their own learning, plan and carry out investigations, and become independent learners who can apply design thinking, technologies understanding and skills when making decisions. Students develop social and employability skills through working cooperatively in teams, sharing resources and processes, making group decisions, resolving conflict and showing leadership. Designing and innovation involve a degree of risk-taking and as students work with the uncertainty of sharing new ideas they develop resilience.

Ethical Understanding

Students develop the capacity to understand and apply ethical and socially responsible principles when collaborating with others and creating, sharing and using technologies. When engaged in systems thinking, students evaluate their findings against the criteria of legality, environmental sustainability, economic viability, health, social and emotional responsibility, and social awareness. Students learn about safe and ethical procedures for investigating and working with people, data and materials. They consider their own roles and responsibilities as discerning citizens and learn to detect bias and inaccuracies. Understanding the protection of data, intellectual property and individual privacy in the school environment helps students to be ethical digital citizens.

Intercultural Understanding

Students consider how technologies are used in diverse communities at local, national, regional and global levels, including their impact and potential to transform people's lives. They explore ways in which past and present practices enable people to use technologies to interact with one another across cultural boundaries. Students investigate how cultural identities and traditions influence the function and form of solutions, products, services and environments designed to meet the needs of daily life now and in the future. In their interactions with others in online communities, students consider the dynamic and complex nature of cultures, including values, beliefs, practices and assumptions.

Cross Curriculum Priorities

Aboriginal and Torres Strait Islander Histories and Cultures

The curriculum may provide an opportunity for students to engage with Aboriginal and Torres Strait Islander histories and cultures. It acknowledges that Aboriginal and Torres Strait Islander people have longstanding use of technology and design knowledge and traditions. Teachers may reference these as appropriate to course content. This will inform understanding of the Australian environment and use of technology and the ways in which it has changed over time.

Asia and Australia's Engagement with Asia

Students investigate a range of contexts that draw on Asia and Australia's engagement with Asia. Students could explore the technological environment within the Asia region and develop an appreciation that technology developed in one area has significant impacts across the world. Students could appreciate that the Asia region plays an important role in technology and design research and development.

Sustainability

Students appreciate the importance of looking at potential use of materials and design to predict possible effects on human and other activity, and the environment, to develop management plans or alternative technologies that minimise these effects and provide for a more sustainable future.

Designed Environments
A/T/M

Rationale

Designed Environments focuses on the fields of architecture, interior design, urban design, landscape and sustainable building design. This course gives students opportunities to explore the concept that good design has the power to transform and provide lasting solutions that improve our lives. It considers sustainability, aesthetics, human interaction, ergonomics, the ethical use of space and functionality. Students apply problem solving skills in making appropriate design solutions to create attractive and functional spaces such as playgrounds, buildings and galleries.

Designers apply creative and open approaches to defining and solving problems, to enable businesses and industries to overcome rigid or outdated ways of doing things. Design has applications in the creation and improvement of cities, buildings, transport networks, furniture, websites, processes, bridges, landscapes and environment. Designers are innovators who enhance the way we live and interact with the world around us.

In Designed Environments, students will apply design and systems thinking, and design processes to investigate and refine ideas. They will plan and evaluate design solutions to develop innovative design projects, services and environments. Students will learn about the design process and its application, and develop research skills, computational thinking and a range of communication skills. They will have opportunities to use design thinking and apply creativity through structured, collaborative and project based learning, solve problems, develop practical skills and apply critical thinking in the development of new ideas.

A course of study in Environmental Design forms a pathway for further study in areas such as building design, civil engineering, and architecture, interior design, set design and landscape design, concepts design and furniture design.

Goals

All courses based on this Framework should enable students to:

- analyse problems or challenges to determine needs for solutions or products
- apply the process of design (investigate, design, plan, manage, create, evaluate solutions)
- use critical and creative thinking to design innovative solutions
- produce or create solutions or products to address a need, problem or challenge
- evaluate and use technologies in a range of contexts
- demonstrate problem solving skills
- communicate to different audiences using a range of methods
- engage confidently with and responsibly select and manipulate appropriate technologies – materials, data, systems, tools and equipment.

Unit Titles

- Architectural Design
- Landscape Architecture
- Interior Design
- Town Planning & Urban Design
- Independent Study

Organisation of Content

Architectural Design

Examines architecture and design theory. Students learn that architects investigate new technologies and materials, and environmental sustainability. Students engage with established methodologies for generating creative design concepts, learning strategies for idea generation and communication. Students learn the contextual elements that contribute to designed environments including ethics.

Landscape Architecture

This unit examines architecture and design theory. Students learn that architects investigate new technologies and materials to create buildings or structures and ensure that what is designed is environmentally sustainable and addresses the user(s) needs. Students engage with established methodologies for generating creative design concepts, learning strategies for idea generation and communication.

Interior Design

Interior designers shape perceptions and responses to physical space (including commercial, residential and temporary) through form, light, colour, texture, and sound. Good interior design enables spaces to be more efficiently, comfortably, aesthetic fulfilling, evoke an emotional response and are functional for its user(s). Students learn the principles of design, the elements they need to consider in their design solution and communication skills in presenting ideas through using appropriate terms and technology.

Town Planning & Urban Design

Town Planning and Urban design are concerned with shaping cities, towns and regions by managing the development, infrastructure and services in order to make them attractive and convenient for people who live there. Students learn that design concepts include sustainability, aesthetics, human interaction, the ethical use of space and functionality.

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:

- knowledge and understanding
- skills.

Assessment Task Types

	Design Process	Design Solution(s)
	Suggested tasks: • design development • design documentation • essay • extended response • oral presentation • podcast • portfolio (design process) • project management • report • research task • return brief • review • seminar • short response • storyboard • web portfolio • workshop	**Suggested tasks:** • digital artefact • digital asset • major project • network • portfolio • product • prototyping • software application • storyboard • website
Weightings in A/V 1.0 and 0.5 units	30 - 70%	30 - 70%
Weightings in T/V 1.0 and 0.5 units	40 - 60%	40 - 60%
Weightings in M/V 1.0 and 0.5 units	30 - 70%	30 - 70%

Additional Assessment Information

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

Achievement Standards

Years 11 and 12 achievement standards are written for A/T courses. A single achievement standard is written for M courses.

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

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

Achievement Standards Technologies 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*
Knowledge and understanding	• analyses the design process and explains decision making • analyses technology concepts and principles and explains the properties of materials or data or systems to address a need, problem, or challenge • analyses technologies, explains ethical and sustainable application • thinks critically, drawing on data and information to solve complex problems and analyses opportunities for application of technology	• explains the design process and describes decision making • explains technology concepts and principles and describes the properties of materials or data or systems to address a need, problem, or challenge • explains technologies, describes ethical and sustainable application • thinks critically, drawing on data and information to solve problems and explains opportunities for application of technology	• describes the design process with reference to decision making • describes technology concepts and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge • describes technologies with some reference to ethical and sustainable application • draws on data and information to solve problems and describes opportunities for application of technology	• identifies major features of the design process with minimal reference to decision making • identifies major technology concepts and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge • identifies major features of technologies with minimal reference to ethical and sustainable application • identifies some opportunities for application of technology with minimal use of information and data	• identifies some features of the design process • identifies few technology concepts and principles with minimal reference to properties of materials or data or systems to address a need, problem, or challenge • identifies some features of technologies with minimal reference to ethical and sustainable application • identifies some opportunities for application of technology with minimal evidence of use of information and data
Skills	• applies technology concepts, strategies and methodologies with control and precision demonstrating understanding of the historical and cultural context and its impact • creates innovative and high-quality design solutions/products using techniques and approaches and justifies ideas • analyses potential prototypes and solutions analysing their appropriateness and effectiveness via iterative improvement and review • communicates complex ideas and insights effectively in a range of mediums and justifies ideas coherently using appropriate evidence, metalanguage, and accurate referencing • reflects with insight on their own thinking and evaluates inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with control demonstrating understanding of the historical and cultural context and its impact • creates high-quality design solutions/products using techniques and approaches and explains ideas • explains potential prototypes and solutions and explains their appropriateness and effectiveness via iterative improvement and review • communicates ideas effectively in a range of mediums and justifies ideas coherently using appropriate evidence, metalanguage and referencing • reflects on their own thinking and analyses inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with some control demonstrating understanding of context and its impact • creates functional design solutions/products using techniques and approaches and explains ideas • describes potential prototypes and solutions and explains their appropriateness and effectiveness via iterative improvement and review • communicates ideas appropriately in mediums and explains ideas coherently using appropriate evidence, metalanguage and referencing • reflects on their own thinking and explains inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with minimal control demonstrating understanding of its impact • creates simple, functional design solutions/products using some techniques and approaches and describes ideas • identifies potential prototypes and solutions and describes their appropriateness and effectiveness via iterative improvement and review • communicates ideas in mediums and describes ideas with some use of appropriate evidence with minimal use metalanguage and referencing • reflects on their own thinking with some reference to planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with limited control demonstrating minimal evidence of understanding its impact • creates simple design solutions/products using some basic techniques and approaches and description of ideas • identifies potential prototypes and solutions with minimal reference to their appropriateness and effectiveness via iterative improvement and review • communicates basic ideas in few mediums and describes ideas with ~~or no~~ minimal use of appropriate evidence and referencing • reflects on their own thinking with minimal reference to planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively

Achievement Standards Technologies 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*
Knowledge and understanding	• critically analyses the design process and evaluates constraints and implications for decision making • synthesises technology theories, concepts and principles and evaluates the properties of materials or data or systems to address a need, problem, or challenge • critically analyses technologies and evaluates ethical and sustainable application of technology • thinks critically and creatively, drawing on data and information to solve complex problems	• analyses the design process and explains constraints and implications for decision making • analyses technology theories, concepts and principles and explains the properties of materials or data or systems to address a need, problem, or challenge • analyses technologies and explains ethical and sustainable application of technology • thinks critically, drawing on data and information to solve complex problems	• explains the design process and describes constraints and implications for decision making • explains technology theories, concepts and principles and describes the properties of materials or data or systems to address a need, problem, or challenge • explains technologies and describes ethical and sustainable application of technology • thinks critically, drawing on data and information to solve problems	• describes the design process with some reference to constraints and implications for decision making • describes technology theories, concepts, and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge • describes technologies with some reference to ethical and sustainable application of technology • draws on data and information to solve problems and describes opportunities	• identifies features of the design process with minimal reference to decision making • identifies technology theories, concepts, and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge • identifies some features of technologies with minimal reference to ethical and sustainable application of technology • applying minimal use of information and data
Skills	• applies technology concepts, strategies and methodologies with control and precision demonstrating understanding of the historical and cultural context and its impact • creates innovative and high quality design solutions/products using techniques and approaches and justifies ideas coherently • analyses potential prototypes and solutions analysing their appropriateness and effectiveness via iterative improvement and review • communicates complex ideas and insights effectively in a range of mediums to a variety of audiences using appropriate evidence, metalanguage, and accurate referencing • reflects with insight on their own thinking and that of others and evaluates inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work independently and collaboratively	• applies technology concepts, strategies and methodologies with control demonstrating understanding of the historical and cultural context and its impact • creates high-quality design solutions/products using techniques and approaches and justifies ideas coherently • analyses potential prototypes and solutions explaining their appropriateness and effectiveness via iterative improvement and review • communicates ideas effectively in a range of mediums to a variety of audiences using appropriate evidence, metalanguage, and accurate referencing • reflects on their own thinking and analyses inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work independently and collaboratively	• applies technology concepts, strategies and methodologies with some control demonstrating understanding of context and its impact • creates functional quality design solutions/products using techniques and approaches and explains ideas coherently • explains potential prototypes and solutions describing their appropriateness and effectiveness via iterative improvement and review • communicates ideas appropriately in a range of mediums to a variety of audiences using appropriate evidence, metalanguage, and accurate referencing • reflects on their own thinking and explains inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work independently and collaboratively	• applies technology concepts, strategies and methodologies with minimal control demonstrating understanding of its impact • creates simple, functional design solutions/products using some techniques and approaches and explains ideas • describes potential prototypes and solutions with some reference to their appropriateness and effectiveness via iterative improvement and review • communicates ideas in mediums to a variety of audiences using some evidence, metalanguage, and referencing • reflects on their own thinking with some reference to inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work independently and collaboratively	• applies technology concepts, strategies and methodologies with limited control demonstrating minimal evidence of understanding its impact • creates design solutions/products using some basic techniques and approaches and describes ideas • identifies potential prototypes and solutions with minimal reference to their appropriateness and effectiveness via iterative improvement and review • communicates basic ideas in mediums to a variety of audiences using minimal evidence, metalanguage, and some referencing • reflects on their own thinking with minimal reference to planning, time management, use of appropriate techniques and strategies and capacity to work independently and collaboratively

Achievement Standards Technologies 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*
Knowledge and understanding	• analyses the design process and explains opportunities, constraints and implications for decision making • analyses technology theories, concepts and principles and explains the properties of materials or data or systems to address a need, problem, or challenge • analyses technologies in a range of contexts and explains ethical and sustainable application • thinks critically, drawing on data and information to solve complex problems and analyses opportunities for application of technology	• explains the design process and describes opportunities, constraints and implications for decision making • explains technology theories, concepts and principles and describes the properties of materials or data or systems to address a need, problem, or challenge • explains technologies in a range of contexts and describes ethical and sustainable application • thinks critically, drawing on data and information to solve problems and explains opportunities for application of technology	• describes the design process with reference to opportunities, constraints and implications for decision making • describes technology theories, concepts, and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge • describes technologies in a range of contexts with some reference to ethical and sustainable application • draws on data and information to solve problems and describes opportunities for application of technology	• identifies major features of the design process with minimal reference to opportunities, constraints and implications for decision making • identifies major technology theories, concepts, and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge • identifies major features of technologies with minimal reference to ethical and sustainable application • identifies some opportunities for application of technology with limited use of information and data	• identifies some features of the design process with minimal understanding of opportunities, constraints, and implications • identifies few technology theories, concepts, and principles with minimal reference to properties of materials or data or systems to address a need, problem, or challenge • identifies some features of technologies with no reference to ethical and sustainable application • identifies some opportunities for application of technology with minimal evidence of use of information and data
Skills	• applies technology concepts, strategies and methodologies with control and precision demonstrating understanding of the historical and cultural context and its impact • creates innovative and high-quality design solutions/products using efficient techniques and approaches and justifies ideas • analyses potential prototypes and solutions, and analyses their appropriateness and effectiveness via iterative improvement and review • communicates complex ideas and insights effectively in a range of mediums and justifies ideas coherently using appropriate evidence, metalanguage, and accurate referencing • reflects with insight on their own thinking and evaluates inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with control demonstrating understanding of the historical and cultural context and its impact • creates high-quality design solutions/products using techniques and approaches and explains ideas • explains potential prototypes and solutions, and explains their appropriateness and effectiveness via iterative improvement and review • communicates ideas effectively in a range of mediums and justifies ideas coherently using appropriate evidence, metalanguage and referencing • reflects on their own thinking and analyses inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with some control demonstrating understanding of context and its impact • creates functional design solutions/products using some techniques and approaches and explains ideas • describes potential prototypes and solutions, and describes their appropriateness and effectiveness via iterative improvement and review • communicates ideas appropriately in mediums and explains ideas coherently using appropriate evidence, metalanguage and referencing • reflects on their own thinking explains inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with minimal control demonstrating understanding of its impact • creates functional design solutions/products using some techniques and approaches and describes ideas • identifies potential prototypes and solutions, and identifies their appropriateness and effectiveness via iterative improvement and review • communicates ideas in mediums and describes ideas with some use of appropriate evidence with minimal use metalanguage and referencing • reflects on their own thinking with some reference to planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• applies technology concepts, strategies and methodologies with limited control demonstrating minimal evidence of understanding its impact • creates simple design solutions/products using basic techniques and approaches and description of ideas • identifies potential prototypes and solutions with minimal reference to their appropriateness and effectiveness via iterative improvement and review • communicates basic ideas in few mediums and describes ideas with minimal use of appropriate evidence and referencing • reflects on their own thinking with minimal reference to planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively

Achievement Standards Technologies 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*
Knowledge and understanding	• critically analyses the design process and evaluates opportunities, constraints and implications for decision making	• analyses the design process and explains opportunities, constraints and implications for decision making	• explains the design process and describes opportunities, constraints and implications for decision making	• describes the design process with some reference to opportunities, constraints and implications for decision making	• identifies features of the design process with minimal reference to decision making
	• critically analyses strategies, methodologies and procedures and evaluates their validity and reliability	• analyses strategies, methodologies and procedures and explains their validity and reliability	• explains strategies, methodologies and procedures and describes their validity and reliability	• describes strategies, methodologies, and procedures with some reference to validity and reliability	• identifies some strategies, methodologies, and procedures with minimal reference to validity and reliability
	• synthesises technology theories, concepts and principles and evaluates the properties of material or data or systems to address a need, problem, or challenge	• analyses technology theories, concepts and principles and explains the properties of materials or data or systems to address a need, problem, or challenge	• explains technology theories, concepts and principles and describes the properties of materials or data or systems to address a need, problem, or challenge	• describes technology theories, concepts, and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge	• identifies technology theories, concepts, and principles with some reference to properties of materials or data or systems to address a need, problem, or challenge
	• critically analyses technologies in a range of contexts and evaluates ethical and sustainable application of technology	• analyses technologies in a range of contexts and explains ethical and sustainable application of technology	• explains technologies in a range of contexts and describes ethical and sustainable application of technology	• describes technologies in a range of contexts with some reference to ethical and sustainable application of technology	• identifies some features of technologies in a range of contexts with minimal reference to ethical and sustainable application of technology
	• thinks critically and creatively, drawing on data and information to solve complex problems and evaluates opportunities for application of technology	• thinks critically, drawing on data and information to solve complex problems and analyses opportunities for application of technology	• thinks critically, drawing on data and information at times to solve problems and explains opportunities for application of technology	• draws on data and information at times to solve problems and describes opportunities for application of technology	• identifies some opportunities for application of technology with limited use of information and data
Skills	• applies technology concepts, strategies and methodologies demonstrating an understanding of the historical and cultural context and impact on individuals, groups, communities, and society	• applies technology concepts, strategies and methodologies with control demonstrating understanding of the historical and cultural context and impact on individuals, groups, communities, and society	• applies technology concepts, strategies and methodologies with some control demonstrating understanding of context and the impact on individuals, groups, communities, and society	• applies technology concepts, strategies and methodologies with minimal control demonstrating understanding of the impact on individuals, groups, communities, and society	• applies technology concepts, strategies and methodologies with limited control demonstrating little evidence of understanding of the impact on individuals, groups, communities, and society
	• creates innovative and high-quality design solutions/products using techniques and approaches and justifies ideas logically and coherently	• creates high quality design solutions/products using techniques and approaches and justifies ideas coherently	• creates functional design solutions/products using techniques and approaches and justifies ideas	• creates functional design solutions/products using some techniques and approaches and explains ideas	• creates simple, functional design solutions/products using basic techniques and approaches and describes ideas
	• critically analyses potential prototypes and solutions evaluating their appropriateness and effectiveness via iterative improvement and review	• analyses potential prototypes and solutions analysing their appropriateness and effectiveness via iterative improvement and review	• explains potential prototypes and solutions explaining their appropriateness and effectiveness via iterative improvement and review	• describes potential prototypes and solutions describing their appropriateness and effectiveness via iterative improvement and review	• identifies potential prototypes and solutions identifying their appropriateness and effectiveness via iterative improvement and review
	• communicates complex ideas and insights effectively in a range of mediums to a variety of audiences using appropriate evidence, metalanguage, and accurate referencing	• communicates ideas effectively in a range of mediums to a variety of audiences using appropriate evidence, metalanguage, and accurate referencing	• communicates ideas appropriately in a range of mediums to a variety of audiences using appropriate evidence, metalanguage, and accurate referencing	• communicates ideas in mediums to a variety of audiences using some evidence, metalanguage and referencing	• communicates basic ideas in mediums to a variety of audiences using minimal evidence, metalanguage, and some referencing
	• reflects with insight on their own thinking and that of others and evaluates inter and intrapersonal skills including planning, time management, use of appropriate techniques & strategies and capacity to work independently and collaboratively	• reflects on their own thinking and that of others and analyses inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• reflects on their own thinking and that of others and explains inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• reflects on their own thinking with some reference to inter and intrapersonal skills including planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively	• reflects on their own thinking with minimal reference to planning, time management, use of appropriate techniques and strategies and capacity to work both independently and collaboratively

Achievement Standards Technologies M Course

	*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*
Knowledge and understanding	• describes and uses the design process and procedures with independence • describes practical techniques and materials required to address a need or solve a problem with independence	• describes and uses the design process and procedures with some assistance • describes practical techniques and materials required to address a need or solve a problem with some assistance	• recounts design procedures used with assistance • recounts practical techniques and materials used to solve a problem with assistance	• identifies design procedures with continuous guidance • uses practical techniques and materials required with continuous guidance	• identifies design procedures with direct instruction • identifies practical techniques and materials with direct instruction
Skills	• communicates ideas using appropriate terminology with independence • makes discerning choice of strategies and procedures to use technology with independence • demonstrates interpersonal and intrapersonal skills in a range of technology contexts with independence • plans and undertakes independent inquiries with independence • create design solutions/products with independence	• communicates ideas using appropriate terminology with some assistance • selects strategies and procedures to use technology with some assistance • demonstrates interpersonal and intrapersonal skills in a range of technology contexts with some assistance • plans and undertakes independent inquiries with some assistance • create design solutions/products with some assistance	• communicates ideas using appropriate, terminology with assistance • selects strategies and procedures to use technology with assistance • demonstrates interpersonal and intrapersonal skills in technology contexts with assistance • undertakes guided inquiries with assistance • create design solutions/products with assistance	• communicates ideas using appropriate, terminology with continuous guidance • selects strategies and procedures to use technology with continuous guidance • demonstrates interpersonal and intrapersonal skills in technology contexts with continuous guidance • undertakes guided inquiries with continuous guidance • create design solutions/products with continuous guidance	• communicates ideas using appropriate terminology with direct instruction • selects strategies and procedures to use technology with direct instruction • demonstrates interpersonal and intrapersonal skills in technology contexts with direct instruction • undertakes simple research on a topic with direct instruction • create design solutions/products with direct instruction

Architectural Design — Value: 1.0

Architectural Design a — **Value: 0.5**

Architectural Design b — **Value: 0.5**

Unit Description

Examines architecture and design theory. Students learn that architects investigate new technologies and materials, and environmental sustainability. Students engage with established methodologies for generating creative design concepts, learning strategies for idea generation and communication. Students learn the contextual elements that contribute to designed environments including ethics.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• understand design theory • apply principles, strategies and methodologies to generate ethical and sustainable architectural design solutions	• critically analyse and apply design theory • apply principles, strategies and methodologies to generate ethical, social and sustainable architectural design solutions that address user(s) needs	• demonstrate elements of design theory • construct a simple architectural design

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Design process		
• understand elements and principles of design and apply to the creation of buildings and structures, for example, balance, proximity, alignment, tone, line, proportion and space • analyse the role of buildings and structure, for example need, opportunity or situation, specifications, constraints and set criteria	• understand elements and principles of design and apply to the creation of buildings and structures, for example, balance, proximity, alignment, tone, line, proportion and space • evaluate the role of buildings and structure including user(s) needs, opportunity or situation, specifications, constraints and set criteria	• describe the design process

A Course	T Course	M Course
• understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live	• understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live together	
Strategies, methodologies and procedures		
• interpret a design brief, for example, design and siting	• analyse and interpret a design brief, for example, design and siting	• interpret a design brief
• understand professional requirements for elements, for example, building codes in design solutions	• understand professional requirements for elements, including, building codes in design solutions	
• create and display design solutions in a variety of forms, for example, rough plans, sketches, models and 3D forms	• create and display design solutions in a variety of forms, including, rough plans, sketches, models and 3D forms	• present design solutions using modes, for example, rough plans, sketches and or models
• understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	• understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	
Theories, concepts and materials		
• analyse elements of ecologically sustainable and climatic responsive design, for example, resource efficiency, orientation, active and passive principles, embodied energy, site impact	• critically analyse elements of ecologically sustainable and climatic responsive design, for example, resource efficiency, orientation, active and passive principles, embodied energy, site impact	• understand elements of ecologically sustainable design
• work independently and/or collaboratively to design buildings and structures	• work independently and/or collaboratively to design buildings and structures	• describe a variety of building materials and their use
	• evaluate the validity and reliability of strategies, methodologies and procedures of architectural design	
• analyse properties of building materials and their use in the building process	• analyse properties of building materials and their use in the building process	

A Course	T Course	M Course
Contexts		
• analyse how architectural design is influenced by historical and cultural context and its impact on individuals, groups or society • analyse ethical and sustainable considerations in the application of architectural design	• critically analyse how architectural design is influenced by historical and cultural context and its impact on individuals, groups or society • critically analyse ethical and sustainable considerations in the application of architectural design	• recognise cultural aspects of architectural design • recognise historical aspects of architectural design
Communication		
• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting architectural design concepts and solutions, for example, CAD techniques, scale drawings and floor plans • justify ideas coherently using appropriate evidence and accurate referencing	• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting architectural design concepts and solutions, for example, CAD techniques, scale drawings and floor plans • justify ideas coherently using appropriate evidence and accurate referencing	• communicate ideas to others using technical terms, both orally and in writing • explore digital ways of presenting designs • communicate ideas and describe choices
Reflection		
• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on how to manage deadlines and improve own 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 emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

Assessment

Refer to pages 9-11.

Landscape Architecture — Value: 1.0

Landscape Architecture a — **Value: 0.5**

Landscape Architecture b — **Value: 0.5**

Unit Description

This unit examines architecture and design theory. Students learn that architects investigate new technologies and materials to create buildings or structures and ensure that what is designed is environmentally sustainable and addresses the user(s) needs. Students engage with established methodologies for generating creative design concepts, learning strategies for idea generation and communication.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• understand the process of creating a design solution in landscape architecture • apply principles, strategies and methodologies to generate landscape design solutions	• critically analyse and apply the design process in creating a design solution in landscape architecture • analyse and apply principles, strategies and methodologies to generate landscape design solutions that addresses user(s) needs	• produce landscape designs • describe key elements of landscape design

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Design process		
• understand elements and principles of design and apply to outdoor areas, landmarks and structures, for example, climate, environment, accessibility, aesthetics • analyse the role of open space, structures and landscapes for example, need, opportunity or situation, specifications, constraints and set criteria	• understand elements and principles of design and apply to outdoor areas, landmarks and structures, for example, climate, environment, accessibility, aesthetics, user(s) needs • evaluate the role of open space, structures and landscapes including user(s) needs, opportunity or situation, specifications, constraints and set criteria	• produce and present landscape design plans

A Course	T Course	M Course
• understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live	• understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live together	
Strategies, methodologies and procedures		
• interpret a design brief, for example, topographical implications for design • understand the roles of landscape designers in areas, for example, design of outdoor spaces, parks, landmarks and structures • create landscape design using a range of tools, for example, hand drafting, CAD technologies • understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	• analyse and interpret a design brief, including, topographical implications for design • understand the roles of landscape designers in areas, including, design of outdoor spaces, parks, landmarks and structures • create landscape design using a range of tools, for example, hand drafting, CAD technologies • understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	• represent landscape design elements using pen and paper and technologies
Theories, concepts and materials		
• analyse the environmental impact of landscape design and the principles of ecological sustainability, for example, choice of vegetation, water efficiency, waste management, shade • work independently and/or collaboratively to design outdoor areas, landmarks and structures • demonstrate an understanding of materials and horticultural elements and the principles of selection	• critically analyse the environmental impact of landscape design and the principles of ecological sustainability, including, choice of vegetation, water efficiency, waste management, shade • work independently and/or collaboratively to design outdoor areas, landmarks and structures • evaluate the reliability and validity of methodologies, strategies and procedures of landscape design • demonstrate an understanding of materials and horticultural elements and the principles of selection	• describe landscapes considering the relationships to animals/plants and/or people • identify suitable plants and materials for design and justify choices

A Course	T Course	M Course
	• evaluate landscapes considering the significance and relationships to animals/plants and/or people	
Contexts		
• analyse how landscape design is influenced by historical and cultural context and its impact on individuals, groups or society • analyse ethical and sustainable considerations in the application of landscape design	• critically analyse how landscape design is influenced by historical and cultural context and its impact on individuals, groups or society • critically analyse ethical and sustainable considerations in the application of landscape design	
Communication		
• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting landscape design concepts and solutions, for example, CAD techniques, scale drawings and site plans • use evidence, metalanguage and referencing, to justify ideas and choices • justify ideas coherently using appropriate evidence and accurate referencing	• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting landscape design concepts and solutions, for example, CAD techniques, scale drawings and site plans • use evidence, metalanguage and referencing, to justify ideas and choices • justify ideas coherently using appropriate evidence and accurate referencing	• communicate ideas to others using technical terms, both orally and in writing • communicate ideas using appropriate terminology • communicate ideas and describe choices

A Course	T Course	M Course
Reflection		
• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on how to manage deadlines and improve own 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 emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

Assessment

Refer to pages 9-11.

Interior Design — Value: 1.0

Interior Design a — **Value: 0.5**

Interior Design b — **Value: 0.5**

Unit Description

Interior designers shape perceptions and responses to physical space (including commercial, residential, public and temporary) through form, light, colour, texture, and sound. Good interior design enables spaces to be more efficiently, comfortably, aesthetic fulfilling, evoke an emotional response and are functional for its user(s). Students learn the principles of design, the elements they need to consider in their design solution and communication skills in presenting ideas through using appropriate terms and technology.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• analyse design process in creating a proposed solution in interior design • apply principles, strategies and methodologies to generate interior design solutions	• critically analyse design process in creating a proposed solution in interior design • apply principles, strategies and methodologies to generate interior design solutions that addresses user(s) needs	• describe the design process in creating a proposed solution in interior design • produce and present interior design proposals and plans

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Design process		
• understand elements and principles of design and apply to interior spaces, for example, colour, texture, light • analyse the role of interior spaces for example, need, opportunity or situation, specifications, constraints and set criteria • understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live	• understand elements and principles of design and apply to interior spaces, including, colour, texture, light, balance, proportions • evaluate the role of interior spaces including need, opportunity or situation, specifications, constraints and set criteria • understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live together	• produce and present interior design plans

A Course	T Course	M Course
Strategies, methodologies and procedures		
• interpret a design brief, for example, accessibility and aesthetics	• analyse and interpret a design brief, including, accessibility, aesthetics and evoke an emotional response	• describe the focus of interior designers
• understand interior design principles to satisfy design standards	• understand interior design principles to satisfy design standards	• describe features of an interior design plan
• create interior designs using a range of tools, for example, hand drafting, CAD technologies, models	• create interior designs using a range of tools, for example, hand drafting, CAD technologies, models	• apply interior design principles
• understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	• understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	
Theories, concepts and materials		
• analyse interior environments, for example, furniture, ergonomics, lighting, materials, flow, acoustics, flooring, accessible design	• critically analyse interior environments, for example, furniture, ergonomics, lighting, materials, flow, acoustics, flooring, accessible design	• identify elements of interior design
• work independently and/or collaboratively to design interior spaces	• work independently and/or collaboratively to design interior spaces	• describe materials and suitable uses
	• evaluate the reliability and validity of methodologies, strategies and procedures of interior design	
• analyse the properties of different materials and their suitability for use	• evaluate the properties of different materials and their suitability for use	
	• evaluate the impact of advancements in technology on interior design	

A Course	T Course	M Course
Contexts		
• analyse how interior design is influenced by historical and cultural context and its impact on individuals, groups or society • analyse ethical and sustainable considerations in the application of interior design	• critically analyse how interior design is influenced by historical and cultural context and its impact on individuals, groups or society • critically analyse ethical and sustainable considerations in the application of interior design	
Communication		
• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting interior design concepts and solutions, for example, CAD techniques, scale drawings and interior perspectives • justify ideas coherently using appropriate evidence and accurate referencing	• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting interior design concepts and solutions, for example, CAD techniques, scale drawings and interior perspectives • justify ideas coherently using appropriate evidence and accurate referencing	• communicate ideas to others using technical terms, both orally and in writing • communicate ideas using appropriate terminology • communicate ideas and describe choices
Reflection		
• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on how to manage deadlines and improve own 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 emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

Assessment

Refer to pages 9-11.

Town Planning & Urban Design — Value: 1.0

Town Planning & Urban Design a — **Value: 0.5**

Town Planning & Urban Design b — **Value: 0.5**

Unit Description

Town Planning and Urban design are concerned with shaping cities, towns and regions by managing the development, infrastructure and services in order to make them attractive and convenient for people who live there. Students learn that design concepts include sustainability, aesthetics, human interaction, the ethical use of space and functionality.

Specific Unit Goals

This unit should enable students to:

A Course	T Course	M Course
• analyse design process in creating a proposed solution in town planning/urban design	• critically analyse and apply the design process in creating a proposed solution in town planning/urban design	• understand features of town planning/urban design to create a design
• apply principles, strategies and methodologies to generate town planning/urban design solutions	• apply principles, strategies and methodologies to generate town planning/urban design solutions that address user(s) needs	• apply principles and strategies and to generate town planning/urban design solutions

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Design process		
• understand elements and principles of design and apply to cities, towns and regions, for example, equitable access, zoning, traffic flow, accessibility	• understand elements and principles of design and apply to cities, towns and regions, including, equitable access, zoning, traffic flow, accessibility	• produce and present design plans
• analyse the role of urban areas and infrastructure for example, need, opportunity or situation, specifications, constraints and set criteria	• evaluate the role of urban areas and infrastructure including user(s) needs, opportunity or situation, specifications, constraints and set criteria	• use appropriate technologies in town planning/urban design

A Course	T Course	M Course
• understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live	• understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live together	
Strategies, methodologies and procedures		
• interpret a design brief, for example, social and cultural interaction	• analyse and interpret a design brief, including, social and cultural interaction	
• understand the role of legislative and cultural requirements in designing, for example, building standards and protocols	• understand the role of legislative and cultural requirements in designing, including, building standards and protocols	• identify how a design impacts on individuals and communities
• create urban design using a range of tools, for example, hand drafting, CAD technologies	• create urban design using a range of tools, for example, hand drafting, CAD technologies	• identify challenges in town planning
• understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	• understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	
Theories, concepts and materials		
• analyse features of an urban design plan and determine its consideration of aspects, for example, sustainability, aesthetics, human interaction, the ethical use of space, functionality and revitalisation	• critically analyse features of an urban design plan and determine its consideration of aspects, for example, sustainability, aesthetics, human interaction, the ethical use of space, functionality and revitalisation	• describe important features of an urban/town planning design
• work independently and/or collaboratively within a design for a city, town and region	• work independently and/or collaboratively within a design for a city, town and region	
	• evaluate the reliability and validity of methodologies, strategies and procedures of urban design	
• analyse urban design factors and the appropriate selection of materials	• evaluate urban design factors and the appropriate selection of materials	

A Course	T Course	M Course
Contexts		
• analyse how urban design is influenced by historical and cultural context and its impact on individuals, groups or society • analyse ethical and sustainable considerations in the application of urban design	• critically analyse how urban design is influenced by historical and cultural context and its impact on individuals, groups or society • critically analyse ethical and sustainable considerations in the application of urban design	
Communication		
• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting urban design concepts and solutions, for example, CAD techniques, scale drawings and site plans • communicate complex ideas and insights in a range of mediums to a variety of audiences using appropriate evidence, metalanguage and referencing • justify ideas coherently using appropriate evidence and accurate referencing	• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • use hand drafting and/or digital technology for presenting urban design concepts and solutions, for example, CAD techniques, scale drawings and site plans • communicate complex ideas and insights in a range of mediums to a variety of audiences using appropriate evidence, metalanguage and referencing • justify ideas coherently using appropriate evidence and accurate referencing	• communicate ideas to others using technical terms, both orally and in writing • use appropriate terminology to share ideas • communicate ideas and describe choices

A Course	T Course	M Course
Reflection		
• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on how to manage deadlines and improve own 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 emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

Assessment

Refer to pages 9-11.

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 design theories, strategies, processes and methodologies relating to the area of study • create a design product relating to the area of study	• evaluate design theories, strategies, processes and methodologies relating to the area of study • create a design product relating to the area of study	• describe design theories, strategies, processes relating to the area of study • create a design product relating to the area of study

Content Descriptions

All knowledge, understanding and skills below must be delivered:

A Course	T Course	M Course
Design process		
• apply the design process, evaluating opportunities and constraints • understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live	• apply the design process, evaluating opportunities and constraints • understand that a design process is a method that is used to solve challenges to change and improve the environment for the way we live together	• apply the design process to create a product

A Course	T Course	M Course
Strategies, methodologies and procedures		
• interpret a design brief • analyse and apply design strategies, processes and methodologies within the focus area of designed environments • understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	• analyse and interpret a design brief • evaluate and apply design strategies, processes and methodologies within the focus area of designed environments • understand there are design tools which can, like any other tool, extend and improve our ability to accomplish goals	• interpret a design brief • apply design strategies, processes
Theories, concepts and materials		
• analyse designed environments' theories, concepts and materials related to the area of study • work independently and/or collaboratively within a design related to the area of study	• evaluate designed environments' theories, concepts and materials related to the area of study • work independently and/or collaboratively within a design related to the area of study	• describe designed environments' materials and concepts related to the area of study
Contexts		
• analyse ethical and sustainable considerations in the application of environment design	• evaluate ethical and sustainable considerations in the application of environment design	• describe the concept of sustainability in environmental design
Communication		
• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • justify ideas coherently using appropriate evidence and accurate referencing	• communicate accurately with others using correct terms in an appropriate format, both orally and in writing including structured reports • communicate ideas and insights in a range of appropriate mediums to a variety of audiences • justify ideas coherently using appropriate evidence and accurate referencing	• communicate ideas to others using technical terms, both orally and in writing • communicate ideas and describe choices

A Course	T Course	M Course
Reflection		
• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on own learning style and performance, including planning and time management, to develop strategies to improve own learning • reflect on final solution against the design brief	• reflect on how to manage deadlines and improve own 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 emphasis some content descriptions over others. The teacher may teach additional (not listed) content provided it meets the specific unit goals. This will be informed by the student needs and interests.

Assessment

Refer to pages 9-11.

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, major, major/minor or double 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 Course 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
Terence Pereira	Marist College
Delisia Wiild	Narrabundah College
Kevin Robertson	St John Paul II 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
Create	Bring into existence, to originate
Critically analyse	Analysis that engages with criticism and existing debate on the issue
Demonstrate	Give a practical exhibition an explanation
Describe	Give an account of characteristics or features
Discuss	Talk or write about a topic, taking into account different issues or ideas
Evaluate	Examine and judge the merit or significance of something
Examine	Determine the nature or condition of
Explain	Provide additional information that demonstrates understanding of reasoning and /or application
Extrapolate	Infer from what is known
Hypothesise	Put forward a supposition or conjecture to account for certain facts and used as a basis for further investigation by which it may be proved or disproved
Identify	Recognise and name
Interpret	Draw meaning from
Investigate	Planning, inquiry into and drawing conclusions about
Justify	Show how argument or conclusion is right or reasonable
Manipulate	Adapt or change
Plan	Strategize, develop a series of steps, processes
Predict	Suggest what might happen in the future or as a consequence of something
Reflect	The thought process by which students develop an understanding and appreciation of their own learning. This process draws on both cognitive and affective experience
Relate	Tell or report about happenings, events or circumstances
Represent	Use words, images, symbols or signs to convey meaning
Reproduce	Copy or make close imitation
Respond	React to a person or text
Select	Choose in preference to another or others
Sequence	Arrange in order
Summarise	Give a brief statement of the main points
Synthesise	Combine elements (information/ideas/components) into a coherent whole
Test	Examine qualities or abilities
Translate	Express in another language or form, or in simpler terms
Visualise	The ability to decode, interpret, create, question, challenge and evaluate texts that communicate with visual images as well as, or rather than, words

Appendix E – Glossary for ACT Senior Secondary Curriculum

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

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

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

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

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

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

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

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

An **independent study unit** is a pedagogical approach that empowers students to make decisions about their own learning. 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

Conditions of Adoption

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

Adoption Process

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

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

College:	
Course Title:	**Designed Environments**
Classification/s:	**A T M**
Accredited from:	2020
Framework:	Technologies 2018