

SENIOR SCHOOL
PATHWAYS
DEARS 10 11 122019 UNIT OFFERINGS
HANDBOOK

Overview- Senior School Pathways

UNIQUE ENVIRONMENT- EXTRAORDINARY OPPORTUNITIES

Our VISION is

 To enhance our provision of a unique and extraordinary education in order to maximize potential and ensure vibrant futures for all.

Our MORAL PURPOSE is

✓ To foster a school community of curious, flexible, healthy, and responsible citizens. By nurturing our student's individual talents and capacities, they will thrive in our local and global communities.

At Apollo Bay P-12 College we VALUE

✓	Excellence	We are determined to achieve our best.
✓	Respect	We take pride in and care for ourselves, each other, and our environment.
✓	Integrity	We are honest, courteous, and we take responsibility for all our behaviours and actions.
√	Balance	We make choices that ensure we are happy, healthy and fulfilled. We are flexible and resilient.

Student's in Years 10, 11 and 12 make up our Senior School Pathways

Our senior years "Pathways" Learning Community strives to achieve our overall College moral purpose by providing our young people with breadth and opportunity in all their learning experiences, whilst they are able to acquire and develop new skills desirable for their future pathways. We seek to provide many and varied opportunities via our Senior Years Curriculum so that students can make informed choices regarding their futures educational options.

Curriculum & Learning Choices

YEAR 10	YEAR 11	YEAR 12
Student complete the following-	Students complete the following-	Students complete the following-
Core Subjects: English Maths Science Health & Physical Education Humanities Elective UNITS: A selection of 4 Units across the year	Core Subjects: English plus 5 other subjects MORE OPTIONS? Students may choose to study VCAL or VCE/VCAL double certificate	Core Subjects: English plus 4 other 3-4 sequence subjects MORE OPTIONSP Students may choose to study VCAL or VCE/VCAL double certificate
MORE OPTIONS? Students must complete 1 VET, OR VCE subject STUDENTS THEREFORE O 2-3 YEARS WHERE A UNIT DURATION.	COMPLETE 22 UNITS OVER T IS ONE SEMESTER IN	

Unit Selection Process

Students are required to attend a **Parent Information Evening** where representatives from each Key Learning Area will be in attendance to assist with UNIT choices. Student must complete the hard copy UNIT Selection Planning Sheet. This is to be signed by their parent/guardian and submitted to the General Office as follows.

Students will – after considering their career directions, interests and abilities – choose the subjects they wish to study in 2018 by completing the following steps;

- 1. Read this booklet in conjunction with the "2018 Senior handbook".
- 2. Read VCAA "Where to Now" booklet.
- 3. Attend the Parent & Student Information Evenings
- 4. Complete the Course Planning Selection Form
- 5. HARD COPY- Submit to Brian Humphries

Deadline for submission of the above is:



It is important that all students submit their initial selections as required above by the due date. Late selections may receive a lower priority.

Summary list of Unit offerings 2019

ENGLISH

English Literature Intermediate English (VCAL)

HUMANITIES

Australian History Ancient History Revolutions Geography

HEALTH & PHYSICAL EDUCATION

Physical Education Health and Human Development Outdoor Environmental Studies Certificate II in Outdoor Recreation (VCE VET)

DESIGN & TECHNOLOGY

Visual Communication Design Product Design & Technology Food and Technology Information Technology

MATHEMATICS

Intermediate Maths (VCAL) General Maths Maths Methods Further Maths Specialist Maths

SCIENCES

Chemistry Physics Biology Psychology Agricultural & Horticultural Studies Environmental Science

ARTS

Studio Art Art Media Music Performance Certificate III in Music (VCE VET)

YR 10 ELECTIVES

A variety of subjects that may include: Drama Cooking Gym Design Technology/Woodwork Water based activities Small engines Music Art

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AGRICULTURAL & HORTICULTURAL STUDIES

UNIT 1: Agricultural and horticultural operations

Areas of study

- 1. Influences on agricultural and horticultural systems
- 2. Agricultural and horticultural operations

Outcomes

On completion of this unit the student should be able to:

- describe a range of biological, physical and human resources and their influence on agricultural and/or horticultural systems in the local area, and explain the importance of the application of scientific principles in production.
- plan, implement and evaluate management and production activities to operate a small agricultural and/or a horticultural business project involving the care and monitoring of living plants or animals..

Assessment tasks

- annotated visual displays
- website presentations
- multimedia presentations
- tests (short answer, open book)
- short written reports (including case study report where appropriate)
- oral reports
- practical demonstrations
- production plan, costing, production records, including visual material, evaluation report
- media response
- scientific investigation and report..

UNIT 2: Production

Areas of study

- 1. Biological and environmental factors
- 2. Production systems and processes

Outcomes

On completion of this unit the student should be able to:

- describe the nutritive and reproductive processes of plants and animals, their application to agricultural and/or horticultural production systems, and specific biological and environmental factors that influence production systems.
- plan, implement, monitor and evaluate the production processes and marketing for a small agricultural and/or horticultural business project, demonstrating how the business adds value to the product and manages risk.

Assessment tasks

- annotated visual displays
- website presentations
- multimedia presentations
- tests (short answer, open book)
- short written reports
- oral reports
- research reports
- practical demonstrations
- business plan, including budgets
- evidence of production, including visual material (for example, photographs)
- business report, including production and financial evaluation
- media response
- scientific investigation and report.

UNIT 3: Technology, innovation and business practices

Areas of study

- 1. Current management techniques
- 2. New or emerging technology
- 3. Business design

Outcomes

On completion of this unit the student should be able to:

- analyse and evaluate a range of technologies commonly used in agricultural and/or horticultural businesses, and explain the reasons for the selection and application of technology for a specific business.
- describe and analyse a range of new or emerging technologies, and evaluate the likely impact of a selected innovation on the sustainability of a specific agricultural and/or horticultural business.
- design, implement and report on progress of a small commercial agricultural and/or horticultural business that involves the management and care of living plants or animals.

Assessment tasks

Student performance in each outcome will be assessed using one or more of the following formats:

- an annotated visual display
- a website presentation
- a visual presentation including a poster or multimedia presentation
- a test (short answer, open book)
- a short written report (including laboratory report where appropriate)
- an oral report
- a research report
- a practical demonstration.

Extended coursework task (Part 1)

A written business plan

and

Production work and record of production (text and images) and

An interim report on the progress of the small business.

UNIT 4: Sustainable management

Areas of study

- 1. Sustainability in agriculture and horticulture
- 2. Resource management and maintenance
- 3. Business plan implementation and evaluation

Outcomes

On completion of this unit the student should be able to:

- explain and evaluate sustainable resource management practices within agriculture and/or horticulture, and analyse adaptations in response to climate change.
- apply and analyse management techniques that promote the economic, social and environmental sustainability of agricultural and/or horticultural businesses.
- monitor the progress of, and complete the operation of, a small business project, and evaluate and report on its operation and outcomes in relation to the business plan, and its adherence to sustainability concepts.

Assessment tasks

Any one or a combination of the following formats:

- an annotated visual display
- website presentation
- a datashow presentation
- a multimedia presentation
- a test (short answer, open book)
- a short written report (including laboratory report where appropriate)
- an oral report
- a research report
- a practical demonstration.
- A short report that refers to a property management plan.
- A test (short or extended answer) that refers to a case study and includes a property management plan.
- Production work and record of production including pictorial and written material.
- An evaluation report of the outcomes of the small business project with recommendations for improvement. Pictorial and written material is included in the report.

ART and STUDIO ARTS

CAN I DO BOTH?

Within the VCE **Art** study, theoretical research and investigation informs arm making. Students are encouraged to recognize the interplay between research and art making. VCE **Studio Arts** supports students to recognize their individual potential as professional art makers. The study involves the application of an individual design process to assist the student's production of a folio of artworks.

The two studies are quite separate and both can be undertaken by any one student.





RATIONALE

VCE Art introduces the role of art, in all forms of media, in contemporary and historical cultures and societies. Students build an understanding of how artists, through their practice and the artworks they produce, communicate their experiences, ideas, values, beliefs and viewpoints. In this study, students view artworks and investigate the working practices of artists from different cultures and periods of time.

AIMS

The study is designed to enable students to acquire a broad knowledge of art. This is achieved through both their practical work as well as the study of artists.

UNIT 1: Artworks, experience and meaning

Areas of study

- 3. Artworks and Meaning
- 4. Artmaking and Meaning

Outcomes

On completion of this unit the student should be able to:

- Analyse and interpret a variety of artworks using the Structural Framework and the Personal Framework.
- Use the art process to create visual responses that demonstrate their personal interests and ideas.

Assessment tasks

Outcome 1:

- an extended written response
- short-answer responses supported by visual references
- an annotated visual report
- a presentation using digital technologies
- an oral presentation.

Outcome 2

a range of visual responses to a selection of set tasks and documented evidence of the art process.

UNIT 2: Artworks & contemporary culture

Areas of study

- 1. Contemporary artworks and culture
- 2. Art making and contemporary culture

Outcomes

On completion of this unit the student should be able to:

1. Discuss and compare artworks from different cultures and times using both Cultural and contemporary frameworks

2. Use the art process to produce at least one finished artwork that explores social and/or personal ideas or issues.

Assessment tasks

Outcome 1

- an extended written response
- short-answer responses supported by visual references
- an annotated visual report
- a presentation using digital technologies
- an oral presentation.

Outcome 2

- a range of visual responses including at least one finished artwork
- documentation of the art process using visual language and the Analytical Frameworks.

UNIT 3: Artworks, ideas and values

Areas of study

1. Interpreting art

2. Investigation and interpretation through art making

Outcomes

On completion of this unit the student should be able to use:

- 1. The Analytical Frameworks to analyse and interpret artworks produced before 1990 and since 1990, and compare the meanings and messages of these artworks.
- 2. The art process to produce at least one artwork, and use the Analytical Frameworks to document and evaluate the progressive development and refinement of their artistic practice.

Assessment tasks

Any one or a combination of the following tasks:

- a written report
- an extended response
- short responses
- structured questions
- an annotated visual report
- · a response using digital technologies
- an oral presentation with documented evidence.



A body of work that presents explorations within selected art forms and that clearly demonstrates the development of the student's thinking and working practices. The progressive realisation and resolution of the body of work reflects personal concepts, ideas, directions, explorations, aesthetic qualities and technical skills, and includes at least **two** finished artworks that resolve the student's intentions.

UNIT 4: Artworks, ideas and viewpoints

Areas of study

- 1. Discussing art
- 2. Realisation and resolution

Outcomes

On completion of this unit the student should be able to:

1. Examine and analyse an art idea and its related issues to inform their viewpoint.

2. Apply the art process to progressively communicate ideas, directions and personal concepts in a body of work that includes at least one finished artwork and use selected aspects of the Analytical Frameworks to underpin reflections on their art making.

Assessment tasks

Any one or a combination of the following tasks:

- a written report
- an extended response
- short responses
- structured questions
- an annotated visual report
- an oral presentation with visual evidence
- a presentation using digital technologies.



A body of work that presents explorations within selected art forms and that clearly demonstrates the development of the student's thinking and working practices. The progressive realisation and resolution of the body of work reflects personal concepts, ideas, directions, explorations, aesthetic qualities and technical skills, and includes at least **two** finished artworks that resolve the student's intentions.

STUDIO ARTS

RATIONALE

Studio Arts provides for the establishment of effective art practices through an understanding and application of the design process. It enables students to trial many different materials and techniques before specializing in a specific art form for the development of art works. The theoretical component of the study reinforces students' own art practice. It focuses on how selected studio forms have developed, an examination of artists' working methods and a study of professional practices and art industry issues.

AIMS

This study is designed to enable students to:

- express themselves creatively through art making and come to understand how to support and sustain their art practice
- develop an individual studio process, and practise and refine specialised skills appropriate to particular art forms and media selected for art making
- analyse and draw inspiration from the ways in which artists apply studio processes in the production of their individual artworks
- · develop an understanding of historical and cultural contexts in the production and analysis of artworks
- develop and apply skills in visual analysis, including the use of appropriate terminology in relation to their own artwork and artists studied

UNIT 1: Studio inspiration and techniques

Areas of study

- 1. Researching and recording ideas
- 2. Studio practice
- 3. Interpreting art ideas and use of materials and techniques

Outcomes

On completion of this unit the student should be able to:

- 1. Identify sources of inspiration and artistic influences and outline individual ideas, art forms and aesthetic qualities, and translate these into visual language.
- 2. Produce at least one finished artwork and progressively record the development of their studio practice, conveying individual ideas through the exploration of materials and techniques in the selected art form/s.

3. Discuss the artistic practice of artists from different times and cultures, their sources of inspiration, materials and techniques for at least two artworks by each artist.

Assessment tasks

Outcomes 1 and 2

- an outline of a proposed investigation of studio practice using visual language
- a selection of exploratory work and a visual diary, showing sources of ideas and inspiration translated into visual form through the use of a variety of materials and techniques
- a presentation of at least one finished artwork.

Outcome 3

At least one of:

- an extended response
- a short-answer responses
- a presentation using digital technologies
- an oral presentation.

UNIT 2: Studio exploration and concepts

Areas of study

- 1. Exploration of studio practice and development of artworks
- 2. Ideas and Styles in Artworks.

Outcomes

On completion of this unit the student should be able to:

- 1. Develop an individual exploration proposal to form the basis of a studio process, and from this produce and document a variety of potential directions in a visual diary for at least one artwork.
- 2. Compare a range of historical and contemporary art periods, styles or movements, and analyse the ways in which artists communicate ideas, develop styles and demonstrate aesthetic qualities in artworks.

Assessment tasks

Outcome 1

- undertaking an exploration proposal
- undertaking studio process
- producing at least one artwork.

Outcome 2

- an extended response
- short-answer responses
- a presentation using digital technologies
- an oral presentation.

UNIT 3: Studio practices and processes

Areas of study

- 1. Exploration Proposal.
- 2. Studio process.
- 3. Artists and studio practices

Outcomes

On completion of this unit the student should be able to:

1.Prepare an exploration proposal that formulates the content and parameters of an individual studio process including a plan of how the proposal will be undertaken.

- 2.Progressively present an individual studio process recorded in written and visual form that produces a range of potential directions, and reflects the concepts and ideas documented in the exploration proposal and work plan.
- 3.Examine the practice of at least two artists, with reference to two artworks by each artist, referencing the different historical and cultural context of each artwork.

Assessment tasks

- structured questions
- an annotated visual report
- an essay
- a presentation using digital technologies
- a series of short responses
- an oral presentation with supporting visual evidence

An exploration proposal and a visual diary that presents an individual studio process, which explores and develops the concepts and ideas set out in the exploration proposal, and produces a range of visual explorations and potential directions that will form the basis of at least two finished artworks in Unit 4.

UNIT 4: Studio practice and art industry contexts

Areas of study

- 1. Production and presentation of artworks
- 2. Evaluation
- 3. Art industry contexts

Outcomes

On completion of this unit the student should be able to:

- 1. Present at least two finished artworks based on selected and evaluated potential directions developed through the studio process, which demonstrate refinement and application of materials and techniques, and that realise and communicate the student's ideas expressed in the exploration proposal.
- 2. Provide visual and written documentation that identifies and evaluates the extent to which the artworks reflect the selected potential directions, and effectively demonstrates a cohesive relationship between the works.
- 3. Compare the methods used by artists and considerations of curators in the preparations presentation, conservation and promotion of specific artworks in at least two different exhibitions.

Assessment tasks

- structured questions
- an annotated visual report
- an essay
- a presentation using digital technologies
- an oral presentation with visual evidence from the exhibitions visited.

The presentation of at least two finished artworks with an evaluation of studio processes.

BIOLOGY

RATIONALE

VCE Biology enables students to investigate the processes involved in sustaining life at cellular, system, species and ecosystem levels. In undertaking this study, students examine how life has evolved over time and understand that in the dynamic and interconnected system of life all change has a consequence that may affect an individual, a species or the collective biodiversity of Earth. The study gives students insights into how knowledge of molecular and evolutionary concepts underpin much of contemporary biology, and the applications used by society to resolve problems and make advancements.

AIMS

This study is designed to enable students to:

- Develop knowledge and understanding of key biological models, theories and concepts, from the cell to the whole organism
- Examine the interconnectedness of organisms, their relationship to their environmental context, and the consequences of biological change over time including the impact of human endeavours on the biological processes of species

UNIT 1: How do living things stay alive?

AREAS OF STUDY

- 1. How do organisms function?
- 2. How do living systems sustain life?
- 3. Practical investigation

Outcomes

On completion of this unit the student should be able to:

- 1. Investigate and explain how cellular structures and systems function to sustain life.
- 2. Explain how various adaptations enhance the survival of an individual organism, investigate the relationships between organisms that form a living community and habitat, and anlayse the impacts of factors that affect population growth.
- 3. Design and undertake an investigation related to the survival of an organism or species, and draw conclusions based on evidence from collected data.

Assessment tasks

Assessment tasks for this unit will be selected from the following:

- For Outcomes 1 and 2
 - a report of a fieldwork activity
 - annotations of a practical work folio of activities or investigations
 - a bioinformatics exercise
 - media response
 - data analysis
 - problem solving involving biological concepts, skills and/or issues
 - a reflective learning journal/blog related to selected activities or in response to an issue
 - a test comprising multiple choice and/or short answer and/or extended response.

For Outcome 3

• a report of a student-designed or adapted investigation related to the survival of an organism or a species using an appropriate format, for example a scientific poster, practical report, oral communication or digital presentation.



UNIT 2: How is continuity of life maintained?

Areas of study

- 1. How does reproduction maintain the continuity of life?
- 2. How is inheritance explained?
- 3. Investigation of an issue

Outcomes

- On completion of this unit the student should be able to:
- 1. Compare the advantages and disadvantages of asexual and sexual reproduction, explain how changes within the cell cycle may have an impact on cellular or tissue system function and identify the role of stem cells in cell growth and cell differentiation and medical therapies.
- 2. To describe patterns of inheritance, analyse pedigree charts, predict outcomes of genetic crosses and identify the implications of the uses of genetic screening and decision making related to inheritance.
- 3. Investigate and communicate a substantiated response to a question related to an issue in genetics and/or reproductive science.

Assessment tasks

Assessment tasks for this unit will be selected from the following:

For Outcomes 1 and 2

- a report of a fieldwork activity
- · annotations of a practical work folio of activities or investigations
- a bioinformatics exercise
- media response
- data analysis
- problem solving involving biological concepts, skills and/or issues
- · a reflective learning journal/blog related to selected activities or in response to an issue
- a test comprising multiple choice and/or short answer and/or extended response.

For Outcome 3

 a report of an investigation into genetics and/or reproductive science using an appropriate format, for example, digital presentation, oral communication or written report.

UNIT 3: How do cells maintain life?

Areas of study

- 1. How do cellular processes work?
- 2. How do cells communicate?

Outcomes

On completion of this unit the student should be able to:

- 1. Explain the dynamic nature of the cell in terms of key cellular processes including regulation, photosynthesis and cellular respiration, and analyse factors that affect the rate of biochemical reactions.
- 2. Apply a stimulus-response model to explain how cells communicate with each other, outline human responses to invading pathogens, distinguish between the different ways that immunity may be acquired, and explain how malfunctions of the immune system cause disease.

Assessment tasks

A report related to at least two practical activities from a practical logbook.

The assessment task may be written or multimodal. (approximately 50 minutes or not exceeding 1000 words) At least one task selected from:

- a report of a practical activity
- · annotations of activities or investigations from a practical logbook
- a graphic organizer





- a bioinformatics exercise
- an evaluation of research
- media response
- data analysis
- a response to a set of structured questions
- problem solving involving biological concepts, skills and/or issues
- a reflective learning journal/blog related to selected activities or in response to an issue.

The assessment task/s may be written or multimodal. (approximately 50 minutes or not exceeding 1000 words for each task)

UNIT 4: How does life change and respond to challenges over time?

Areas of study

- 1. How are species related?
- 2. How do humans impact upon biological processes?
- 3. Practical investigation

Outcomes

On completion of this unit the student should be able to:

- 1. Analyse evidence for evolutionary change, explain how relatedness between species is determined, and elaborate on the consequences of biological change in human evolution.
- Describe how tools and techniques can be used to manipulate DNA, explain how biological knowledge is applied to biotechnical applications, and analyse the interrelationship between scientific knowledge and its applications in society.
- 3. Design and undertake an investigation related to cellular processes and/or biological change and continuity over time, and present methodologies, findings and conclusions in a scientific poster.

Assessment tasks

Outcome 1: A report using primary or secondary data. The assessment task may be written or multimodal. (approximately 50 minutes or not exceeding 1000 words)

Outcome 2: A response to an issue OR

A report of a laboratory investigation The assessment task may be written or multimodal. (approximately 50 minutes or not exceeding 1000 words)

Outcome 3: A structured scientific poster according to the VCAA template (not exceeding 1000 words)

Examination

An end-of-year examination of 2.5 hours.

CHEMISTRY

RATIONALE

VCE Chemistry enables students to examine a range of chemical, biochemical and geophysical phenomena through the exploration of the nature of chemicals and chemical processes. In undertaking this study, students apply chemical principles to explain and quantify the behaviour of matter, as well as undertake practical activities that involve the analysis and synthesis of a variety of materials.

AIMS

The study is designed to enable students to:

- apply models, theories and concepts to describe, explain, analyse and make predictions about chemical phenomena, systems, structures and properties, and the factors that can affect them
- understand and use the language and methodologies of chemistry to solve qualitative and quantitative problems in familiar and unfamiliar contexts
- understand the cooperative, cumulative, evolutionary and interdisciplinary nature of science as a human endeavour, including its possibilities, limitations and political and sociocultural influences
- develop a range of individual and collaborative science investigation skills through experimental and inquiry tasks in the field and in the laboratory
- develop an informed perspective on contemporary science-based issues of local and global significance
- apply their scientific understanding to familiar and unfamiliar situations including personal, social, environmental and technological contexts
- develop attitudes that include curiosity, open-mindedness, creativity, flexibility, integrity, attention to detail and respect for evidence-based conclusions
- understand and apply the research, ethical and safety principles that govern the study and practice of the discipline in the collection, analysis, critical evaluation and reporting of data
- communicate clearly and accurately an understanding of the discipline using appropriate terminology, conventions and formats.



UNIT 1: How can the diversity of materials be explained?

Areas of study

- How can knowledge of elements explain the properties of matter?
- How can the versatility of non-metals be explained?
- Research investigation

Outcomes

On completion of this unit the student should be able to

- Relate the position of elements in the periodic table to their properties, investigate the structures and properties of metals and ionic compounds, and calculate mole quantities.
- Investigate and explain the properties of carbon lattices and molecular substances with reference to their structures and bonding, use systematic nomenclature to name organic compounds, and explain how polymers can be designed for a purpose.

Assessment tasks

Assessments tasks for this unit will be selected from the following:

For Outcomes 1 and 2

- annotations of a practical work folio of activities or investigations
- a report of a practical activity or investigation
- a modelling activity
- media response
- problem-solving involving chemical concepts, skills and/or issues
- · a reflective learning journal/blog related to selected activities or in response to an issue
- data analysis
- a test comprising multiple choice and/or short answer and/or extended response.

For Outcome 3

• a report of an independent investigation of a topic selected from Area of Study 1 and/or Area of Study 2, using an appropriate format, for example digital presentation, oral communication or written report.

UNIT 2: What makes water such a unique chemical?

Areas of study

- How do substances interact with water?
- How are substances in water measured and analysed?
- Practical Investigation

Outcomes

On completion of this unit the student should be able to:

- Relate the properties of water to its structure and bonding, and explain the importance of the properties and reactions of water in selected contexts.
- Measure amounts of dissolved substances in water and analyse water samples for salts, organic compounds and acids and bases.
- Design and undertake a quantitative laboratory investigation related to water quality and draw conclusions based on evidence form data collected.

Assessment tasks

Assessments tasks for this unit will be selected from the following:

For Outcomes 1 and 2

- annotations of a practical work folio of activities or investigations
- a report of a practical activity or investigation
- a modelling activity
- media response

- problem solving involving chemical concepts, skills and/or issues
- · a reflective learning journal/blog related to selected activities or in response to an issue
- data analysis
- a test comprising multiple choice and/or short answer and/or extended response.

For Outcome 3

a report of a student-designed quantitative laboratory investigation using an appropriate format, for example digital presentation, oral communication, scientific poster or written report.



UNIT 3: How can chemical processes be designed to optimise Efficiency?

Areas of study

- What are the options for energy production?
- How can the yield of a chemical product be optimised?

Outcomes

On completion of this unit the student should be able to:

- Compare fuels quantitatively with reference to combustion products and energy outputs, apply knowledge of the electrochemical series to design, construct and test galvanic cells, and evaluate energy resources based on energy efficiency, renewability and environmental impact.
- Apply rate and equilibrium principles to predict how the rate and extent of reactions can be optimised, and explain how electrolysis is involved in the production of chemicals and in the recharging of batteries.

Assessment tasks

Outcome 1:

• Analysis and evaluation of stimulus material. OR A report on a laboratory investigation. OR A comparison of two electricity-generating cells. OR A reflective learning journal/blog related to selected activities or in response to an issue. (approximately 50 minutes or not exceeding 1000 words)

Outcome 2: At least one task selected from:

- annotations of at least two practical activities from a practical logbook
- a report of a student investigation
- an evaluation of research
- analysis of data including generalisations and conclusions
- media analysis/response
- a graphic organiser illustrating a chemical process
- an analysis of an unfamiliar chemical manufacturing process or electrolytic cell
- a response to a set of structured questions. (approximately 50 minutes or not exceeding 1000 words for each task)

UNIT 4: How are organic compounds categorized, analysed and Used?

Areas of study

- How can the diversity of carbon compounds be explained and categorized?
- What is the chemistry of food?
- Practical investigation

Outcomes

On completion of this unit the student should be able to:

- Compare the general structures and reactions of the major organic families of compounds, deduce structures of organic compounds using instrumental analysis data, and design reaction pathways for the synthesis of organic molecules.
- distinguish between the chemical structures of key food molecules, analyse the chemical reactions involved in the metabolism of the major components of food including the role of enzymes, and calculate the energy content of food using calorimetry.
- design and undertake a practical investigation related to energy and/or food, and present methodologies, findings and conclusions in a scientific poster.

Assessment tasks

Outcome 1:

At least one task selected from:

- annotations of at least two practical activities from a practical logbook
- a report of a student investigation
- analysis of data including generalisations and conclusions
- media analysis/response
- a response to a set of structured questions
- a reflective learning journal/blog related to comparison of organic structures or pathways. (approximately 50 minutes or not exceeding 1000 words for each task)

Outcome 2:

- Response to stimulus material.
 - OR
- A report of a laboratory investigation. OR
- A comparison of food molecules
 - ' OR
- A reflective learning journal/blog related to selected activities or in response to an issue. (approximately 50 minutes or not exceeding 1000 words)

Outcome 3:

• A structured scientific poster according to the VCAA standard template. (not exceeding 1000 words)

Examination

An end-of-year 2.5 hour examination covering both Unit 3 and Unit 4 content.



ENVIRONMENTAL SCIENCE

UNIT 1: How are Earth's systems connected?

Area of study

- 1. How is life sustained on earth?
- 2. How is earth a dynamic system?
- 3. Practical investigation

Outcomes

On completion of this unit the student should be able to:

- Compare the processes and timeframes for obtaining the key inputs required for life on earth, describe strategies for the minimisation of waste product outputs, and explain how earth's four systems interact to sustain life.
- Describe the flow of matter and energy, nutrient exchange and environmental changes in ecosystems across earth's four systems over different time scales.
- Design and undertake an investigation related to ecosystem monitoring and/or change, and draw a
 conclusion based on evidence from collected data.

Assessment tasks

- For Outcomes 1 and 2
 - a fieldwork report
 - a case study
 - a report of a practical activity involving the collection of primary data
 - annotations of a practical work folio of activities or investigations
 - a research investigation involving the collection of secondary data
 - a model of an aspect of Earth systems
 - a logbook of practical activities
 - analysis of data/results including generalisations/conclusions
 - media analysis/response
 - problem solving involving environmental science concepts, skills and/or issues
 - a test comprising multiple choice and/or short answer and/or extended response
 - a reflective learning journal/blog related to selected activities or in response to an issue
- For Outcome 3
 - a report of a student-designed and/or adapted and/or extended investigation related to ecosystem monitoring and/or change that can be presented in various formats, for example digital presentation, oral presentation, written report or graphic organiser.

UNIT 2: How can pollution be managed?

Area of study

- 1. When does pollution become a hazard?
- 2. What makes pollution management so complex?
- 3. Case study

Outcomes

On completion of this unit the student should be able to:

- Compare a selected pollutant that results in bioaccumulation with an air- or water-borne pollutant, with reference to their sources, characteristics and dispersal, explain how they can be measured and monitored, and describe treatment options.
- Compare the sources, nature, transport mechanism, effects and treatment of three selected pollutants, with reference to their actions in the atmosphere, biosphere, hydrosphere and lithosphere.
- Investigate and communicate a substantiated response, to an issue involving the management of a selected pollutant of local interest.

Assessment tasks

- For Outcome 1
 - a report of a fieldwork exercise
 - a report of a practical activity involving the collection of primary data
 - a research investigation involving the collection of secondary data
 - · annotations of a practical logbook of activities or investigations
 - analysis of data/results including generalisations/conclusions
 - a model of an aspect of Earth systems
 - media analysis/response
 - problem solving involving environmental concepts, skills and/or issues
 - a test comprising multiple choice and/or short answer and/or extended response
 - a reflective learning journal/blog related to selected activities or in response to an issue
- For Outcome 2
 - a comparison of the sources, nature, transport mechanism, effects and treatment of three selected pollutants, with reference to their actions in the atmosphere, biosphere, hydrosphere and lithosphere.
- For Outcome 3
 - a report of a case study involving the management of a selected pollutant of local interest.

UNIT 3: How can biodiversity and development be sustained?

Areas of study

- 1. Is maintaining biodiversity worth a sustained effort?
- 2. Is development sustainable?

Outcomes

On completion of this unit the student should be able to:

- Explain the importance of Earth's biodiversity, analyse the threats to biodiversity, and evaluate management strategies to maintain biodiversity in the context of one selected threatened endemic species.
- Explain the principles of sustainability and environmental management and analyse and evaluate a selected environmental science case study.

Assessment tasks

Outcome 1: An account presented in one of the following formats:

- a written report drawing on data collected from fieldwork or other sources
- a multimodal presentation
- a written response to a set of questions
- an oral presentation drawing on data collected from fieldwork or other sources

Outcome 2:

- An evaluation presented in one of the following formats:
 - a multimodal presentation
 - a written response to a set of questions
 - a written report
 - an oral presentation

UNIT 4: How can the impacts of human energy use be reduced?

Areas of study

- 1. What is a sustainable mix of energy sources?
- 2. Is climate predictable?
- 3. Practical investigation

Outcomes

On completion of this unit the student should be able to:

- Compare the advantages and disadvantages of a range of energy sources, evaluate the sustainability of their use, and explain the impacts of their use on society and the environment.
- Explain the causes and effects of changes to earth's climate, compare methods of measuring and monitoring atmospheric changes, and explain the impacts of atmospheric changes on living things and the environment.
- Design and undertake a practical investigation related to biodiversity or energy use from an environmental management perspective, and present methodologies, findings and conclusions in a scientific poster.

Assessment tasks

Outcome 1: An evaluation and explanation using at least two tasks selected from:

- annotations of at least two practical activities from a practical logbook
- a report of a student investigation
- a model of energy concepts
- a graphic organizer
- an evaluation of research
- media analysis/response
- an analysis of data including generalisations and conclusions
- a response to structured questions
- a reflective learning journal/blog related to selected activities or in response to an issue.

Outcome 2: An explanation using at least one task selected from:

- annotations of at least two practical activities from a practical logbook
- a report of a student investigation
- a model of climate concepts
- a graphic organizer
- an evaluation of research
- media analysis/response
- an analysis of data including generalisations and conclusions
- a response to structured questions
- a reflective learning journal/blog related to selected activities or in response to an issue. (approximately 50 minutes or up to 1000 words)

Outcome 3: A structured scientific poster according to the VCAAtemplate

FOOD TECHNOLOGY

RATIONALE

VCE Food Studies is designed to build the capacities of students to make informed food choices. Students develop their understanding of food while acquiring skills that enable them to take greater ownership of their food decisions and eating patterns. This study complements and supports further training and employment opportunities in the fields of home economics, food technology, food manufacturing and hospitality.

AIMS

This study is designed to enable students to:

- develop as informed, discerning and capable food citizens
- build practical food skills in the planning, preparation, evaluation and enjoyment of food, including the
 principles and practices that ensure the safety of food apply principles of nutrition, food science and sensory
 evaluation to food planning and preparation
- · extend understanding of food origins, cultures, customs and behaviours
- understand global and local systems of food production, distribution and governance
- develop awareness of a diverse range of influences on food choice
- · research and discuss issues relating to economic, environmental and ethical dimensions of our food system
- analyse and draw evidence-based conclusions in response to food information, food advertising and current food trends.

UNIT 1: Food origins

Areas of study

- 1. Foods around the world
- 2. Food in Australia

Outcomes

On completion of this unit the student should be able to:

- 1. Identify and explain major factors in the development of a globalised food supply, and demonstrate adaptations of selected food from earlier cuisines through practical activities.
- 2. Describe patterns of change in Australia's food industries and cultures, and use foods indigenous to Australia and those introduced through migration in the preparation of food products.

Assessment tasks

The assessment for Outcome 1 is:

- a range of practical activities, with records that reflect on two of the practical activities that use ingredients found in earlier cultures. Records can include production plans and evaluations of products or analysis of dietary intake. Plus 1 of:
- a short written report: media analysis, research inquiry, historical timeline, comparative food-testing analysis or product evaluation
- an oral presentation
- a practical demonstration
- a video or podcast.

The assessment for Outcome 2 is:

- a range of practical activities, with records that reflect on two of the practical activities that use ingredients indigenous to Australia and/or ingredients introduced through migration. Records can include production plans and evaluations of products or analysis of dietary intake. Plus 1 of:
- a short written report: media analysis, research inquiry, historical timeline, comparative food-testing analysis or product evaluation
- an oral presentation
- a practical demonstration
- a video or podcast.

UNIT 2: Food makers

Areas of study

- 1. Food industries
- 2. Food in the home

Outcomes

On completion of this unit the student should be able to:

- 1. Describe Australia's major food industries, analyse relationships between food suppliers and consumers, discuss measures in place to ensure a safe food supply and design a brief and a food product that demonstrates the application of commercial principles.
- 2. Compare and evaluate similar foods prepared in different settings, explain the influences on effective food provision and preparation in the home, and design and create a food product that illustrates potential adaptation in a commercial context.

Assessment tasks

The assessment for Outcome 1 is:

• Design and develop a practical food solution in response to an opportunity or a need in the food industry or school community.

The assessment for Outcome 2 is:

 Design and develop a practical food solution in response to an opportunity or a need in a domestic or small scale setting.

UNIT 3: Food in daily life

Areas of study

1. The science of food

2. Food choice, health and wellbeing

Outcomes

On completion of this unit the student should be able to:

- 1. Explain the processes of eating and digesting food and absorption of macronutrients, explain causes and effects of food allergies, food intolerances and food contamination, analyse food selection models, and apply principles of nutrition and food science in the creation of food products.
- 2. Explain and analyse factors affecting food access and choice, analyse the influences that shape an individual's food values, beliefs and behaviours, and apply practical skills to create a range of healthy meals for children and families.

Assessment tasks

Outcome 1:

 a range of practical activities and records‡ of two practical activities related to the functional properties of components of food

AND Any one or a combination of the following:

- a short written report: media analysis, research inquiry, structured questions, case study analysis
- an annotated visual report
- an oral presentation or a practical demonstration
- a video or podcast.

Outcome 2:

 a range of practical activities and records‡ of two practical activities related to healthy meals for children and families

AND

Any one or a combination of the following:

- a short written report: media analysis, research inquiry, structured questions, case study analysis
- an annotated visual report
- an oral presentation or a practical demonstration
- a video or podcast.

UNIT 4: Food issues, challenges and futures

Areas of study

- 1. Environment and ethics
- 2. Navigating food information

Outcomes

On completion of this unit the student should be able to:

- 1. Explain a range of food systems issues, respond to a selected debate with analysis of problems and proposals for future solutions, apply questions of sustainability and ethics to the selected food issue and develop and create a food repertoire that reflects personal food values and goals.
- 2. Explain a variety of food information contexts, analyse the formation of food beliefs, evaluate a selected food trend, fad or diet and create food products that meet the Australian Dietary Guidelines.

Assessment tasks

Outcome 1:

a range of practical activities and records‡ of two practical activities related to sustainable and/or ethical food choices

AND

 a written report that includes a selected food related topic, explanation of concerns related to environment, ethics and/or equity, analysis of work being done to solve problems and support solutions, and a conclusion outlining major findings and suggested set of practical guidelines for food consumers.

Outcome 2:

• a range of practical activities and records‡ of two practical activities related to healthy food choices based on the Australian Guide to Healthy Eating.

AND

Any one or combination of the following:

- a short written report: media analysis, research inquiry, structured questions, case study analysis
- an annotated visual report
- an oral presentation or a practical demonstration
- a video or podcast.

Units 3 and 4 is also assessed by an end of year examination.

PRODUCT DESIGN AND TECHNOLOGY

SCOPE OF STUDY

In VCE Product Design and Technology students assume the role of a designer-maker. In adopting this role, they acquire and apply knowledge of factors that influence design. Students address the design factors relevant to their design situation.

The knowledge and use of resources is integral to product design. These resources include a range of materials, and the tools, equipment and machines needed to transform these materials in a safe manner into useful products. Increasingly, the importance of environmental sustainability is having an impact on product design and development. More sustainable approaches are therefore at the forefront throughout the product lifecycle.

UNIT 1: Sustainable product re development

Areas of study

- 1. Sustainable re development of a product
- 2. Producing and evaluating a re-developed product

Outcomes

On completion of this unit the student should be able to:

- design and plan the redevelopment of a product with the intention of developing a different product with consideration of sustainability issues.
- select and apply materials, tools, equipment and processes to make a redeveloped product, and compare this with the original product.

Assessment Tasks

The two compulsory assessment tasks for this unit are:

- a design folio that contains an analysis of a product's sustainability, a design brief, evaluation criteria, research, visualisations and design options, working drawings, a scheduled production plan, and an evaluation report on the finished product
- a finished product and records of production and modifications.
- Additionally, suitable tasks for assessment may be selected from the following:
- an oral presentation supported by notes and/or visual materials
- a short written report that includes materials testing or trialling activities, industry visits, technical reports
- a case study analysis.

UNIT 2: Collaborative Design

Areas of study

- 1. Designing within a team
- 2. Producing and evaluating within a team

Outcomes

On completion of this unit the student should be able to:

- design and plan a product or range of products collaboratively in response to a design brief.
 - justify, manage and use appropriate production processes to make a product safely and evaluate individually and as a member of a team, the processes and materials used and the suitability of a product or components of a group product/s against the design brief.

Assessment Tasks

The two compulsory assessment tasks for this unit are:

- a design folio that contains a design brief, evaluation criteria, research, visualisations and design options, working drawings, scheduled production plan, and evaluation report
 - product and records of production and modifications

Additionally, suitable tasks for assessment may be selected from the following:

- an oral report supported by notes and/or visual materials
- a short written report that includes materials testing or trialling activities, industry visits, technical reports

UNIT 3: Applying the product design process

Areas of study

- 1. Designing for end users
- 2. Product development in industry
- 3. Designing for others

Outcomes

On completion of this unit the student should be able to:

- investigate and define a design problem, and discuss how the design process leads to product design development.
- explain and analyse influences on the design, development and manufacture of products within industrial settings.
- document the product design process used to meet the needs of an end-user/s, and commence production
 of the designed product.

Assessment tasks

Outcome 1

- A structured, annotated design brief, evaluation criteria and an explanation of how the designer will research and develop design ideas from the design brief, with reference to product design factors.
- Outcome 2

The student's performance on the outcome is assessed using one or more of the following:

- extended response
- a short written report
- an oral presentation accompanied by notes and/or visual materials.

UNIT 4: Product Development and Evaluation

Areas of study

- 1. Product analysis and comparison
- 2. Product manufacture
- 3. Product evaluation

Outcomes

On completion of this unit the student should be able to:

- Compare, analyse and evaluate similar commercial products, taking into account a range of factors and using appropriate techniques.
- Safely apply a range of production skills and processes to make the product designed in Unit 3, and manage time and resources effectively and efficiently.
- evaluate the finished product through testing and feedback against criteria, create end-user/s' instructions or care labels and recommend improvements to future products.

Assessment Tasks

Outcome 1:

The student's performance on the outcome is assessed using one or more of the following:

- an extended response
- a short written report
- structured questions
- an oral presentation accompanied by notes
- an annotated visual report.

Unit 3 Outcome 3 Document the product design process used to meet the needs of an end-user/s, and commence production of the designed product.

A folio comprising: – An end-user/s' profile, a design brief, evaluation criteria, research, visualisations, design options with justification of the selected option, working drawings of final option, a scheduled production plan, a list of relevant processes used for larger scale production, and a record of progress and modifications. The design folio must include documentation of decisions, and acknowledge sources of information. – Production work accompanied by a record of production progress and documentation of modifications with justification of these changes (text and images should be included).

Unit 4 Outcome 2 Apply a range of production skills and processes safely to make the product designed in Unit 3, and manage time and resources effectively and efficiently.

A functional product that conforms to standards of quality indicated in the design brief outline of context.

Outcome 3 Evaluate the finished product through testing and feedback against the criteria, create end-user/s' instructions or care labels and recommend improvements to future products.

- A written report that includes evaluation of the product.
- Relevant end-user/s instructions or care labels which highlight the features, assembly, care and/or repair of
 the product in any of the following formats: video tutorials, annotated image of the product or other multimedia
 format.

ENGLISH

RATIONALE

The study of English contributes to the development of literate individuals capable of critical and creative thinking, aesthetic appreciation and creativity. This study also develops students' ability to create and analyse texts, moving from interpretation to reflection and critical analysis.

Through engagement with texts from the contemporary world and from the past, and using texts from Australia and from other cultures, students studying English become confident, articulate and critically aware communicators and further develop a sense of themselves, their world and their place within it. English helps equip students for participation in a democratic society and the global community.

AIMS

This study is designed to enable students to:

- extend their English language skills through thinking, listening, speaking, reading, viewing and writing
- enhance their understanding, enjoyment and appreciation of the English language in its written, spoken and multimodal forms
- analyse and discuss a range of texts from different periods, styles, genres and contexts
- understand how culture, values and context underpin the construction of texts and how this can affect meaning and interpretation
- understand how ideas are presented by analysing form, purpose, context, structure and language
- analyse their own and others' texts, and make relevant connections to themselves, their community and the world
- convey ideas, feelings, observations and information effectively in written, spoken and multimodal forms to a range of audiences
- recognise the role of language in thinking and expression of ideas
- demonstrate in the creation of their own written, spoken and multimodal texts an ability to make informed choices about the construction of texts in relation to purpose, audience and context
- think critically about the ideas and arguments of others and the use of language to persuade and influence audiences

UNIT 1: English

Where both Units 1 and 2 are undertaken, students must read and study at least four set texts.

Areas of study

- 1. Reading and creating texts
- 2. Analysing and presenting argument

Outcomes

On completion of this unit the student should be able to:

- 1. Produce analytical and creative responses to texts.
 - 2. Analyse how argument and persuasive language can be used to position audiences and create their own texts intended to position audiences.

Assessment Tasks

- an analytical response to a set text
- a creative response to a set text such as a monologue, script, short story, illustrated narrative, short film or graphic text
- an analysis of the use of argument and persuasive language in text/s
- a text intended to position an audience.

Assessment tasks for Outcome 1 must include at least one analytical and one creative response to set texts. One assessment task, but no more than one task, in Unit 1 must be in oral or multimodal form.

UNIT 2: English

Areas of study

- 1. Reading and comparing texts
- 2. Analysing and presenting argument

Outcomes

On completion of this unit the student should be able to:

- 1. Compare the presentation of ideas, issues and themes in 2 texts.
- 2. Idnetify and analyse how argument and persuasive language are used in text/s that attempt to influence an audience, and create a text which presents a point of view

Assessment Tasks

For this unit students are required to demonstrate two outcomes.

- Suitable tasks for assessment in this unit are:
 - a comparative analytical response to set texts
 - a persuasive text that presents an argument or viewpoint
 - an analysis of the use of argument and persuasive language in text/s.
- Assessments tasks for Outcomes 1 and 2 must be in written form.

UNIT 3: English

For Unit 3 Area of Study 1, students must read and study two selected texts

For Unit 4 Area of Study 1, students must read and study one pair of texts (that is, two texts)

At least two set texts must be selected from: novels, plays, collections of short stories or collections of poetry.

Areas of study

- 1. Reading and creating texts
- 2. Analysing argument

Outcomes

On completion of this unit the student should be able to:

- produce an analytical interpretation of a selected text, and a creative response to a different selected text.
- analyse and compare the use of argument and persuasive language in texts that present a point of view on an issue currently debated in the media.

Assessment Tasks

An analytical interpretation of a selected text in written form.

and

- A creative response to a selected text in written or oral form with a written explanation of decisions made in the writing process and how these demonstrate understanding of the text.
- An analysis and comparison, in written form, of argument and the use of persuasive language in two to three texts that present a point of view on an issue. Texts must include written and visual material and have appeared in the media since 1 September of the previous year

UNIT 4: English

Areas of study

- 1. Reading and comparing texts
- 2. Presenting argument

Outcomes

On completion of this unit the student should be able to;

- produce a detailed comparison which analyses how two selected texts present ideas, issues and themes.
- construct a sustained and reasoned point of view on an issue currently debated in the media.

Assessment tasks

- A detailed comparison in written form of how two selected texts present ideas, issues and themes.
- A written statement of intention to accompany the student's own oral presentation, articulating the intention of decisions made in the planning process, and how these demonstrate understanding of argument and persuasive language.
- A point of view presented in oral form using sound argument and persuasive language. The point of view should relate to an issue that has appeared in the media since 1 September of the previous year.

The issue does not have to be the same as the issue selected for study in Outcome 2, Unit 3.

GEOGRAPHY

RATIONALE

VCE Geography enables students to examine natural and human phenomena, how and why they change, their interconnections and the patterns they form across the Earth's surface. In doing so, they develop a better understanding of their own place and its spaces and those in other parts of the world. These spatial perspectives, when integrated with historical, economic, ecological and cultural perspectives, deepen understanding of places, environments and human interactions with these.

AIMS

This study aims to:

- develop a sense of wonder and curiosity about people, culture and environments throughout the world
- develop knowledge and understanding of geographic phenomena at a range of temporal and spatial scales
- understand and apply geographic concepts including place, scale, distance, distribution, movement, region, process, change, spatial association and sustainability to develop their ability to think and communicate geographically
- develop an understanding of the complexity of natural and human induced geographic phenomena across the Earth's surface
- develop a range of skills to assist in analysing information and making informed judgments and decisions about geographic challenges
- understand the importance of Geography in analysing issues and challenges to human welfare and the environment, at a range of scales
- develop an understanding of the role and application of Geography in the planning and management of human welfare and the environment.

UNIT 1: Hazards and disasters

Areas of study

- Characteristics of hazards
- Response to hazards and disasters

Outcomes

At the completion of this unit students should be able to:

- Analyse, describe and explain the nature of hazards and impacts of hazard events at a range of scales.
- Analyse and explain the nature, purpose and effectiveness of a range of responses to selected hazards and disasters.

Assessment tasks

Suitable tasks for assessment in this unit are:

- A fieldwork report of approximately 1500–2000 words (for further information see page 13) and at least one of:
- structured questions
- a case study
- a report
- a folio of exercises.

At least one assessment task will include fieldwork for each unit.

Unit 2: Tourism

Areas of study

- 1. Characteristics of tourism
- 2. Impact of tourism

Outcomes

On completion of this unit the student should be able to:

- Analyse, describe and explain the nature of tourism at a range of scales.
- Analyse and explain the impacts of tourism on people, places and environments and evaluate the effectiveness of strategies for managing tourism

Assessment tasks

Suitable tasks for assessment in this unit are:

- a fieldwork report of approximately 1500–2000 words (for further information see page 13) and at least one of:
- structured questions
- a case study
- a report
- a folio of exercises.

UNIT 3: Changing the land

Areas of study

- 1. Land use change
- 2. Land cover change

Outcomes

On completion of this unit the student should be able to:

- 1. Analyse, describe and explain land use change and assess its impacts
- 2. Analyse, describe and explain processes that result in changes to land cover and discuss the impacts and responses resulting from these changes.

Assessment tasks

Outcome 1

Structured questions (approximately 50-60 minutes) and Fieldwork report (approximately 1500-2000 words).

Outcome 2 Analysis of geographic data (approximately 50–60minutes).

*School-assessed Coursework for Unit 3 contributes 25 per cent.



UNIT 4: Human populations- Trends and issues

Areas of study

- 1. Population dynamics
- 2. Populations issues and challenges

Outcomes

- On completion of this unit the student will be able to:
 - 1. Analyse, describe and explain population dynamics on a global scale.
 - 2. Analyse, describe and explain the nature of significant population issues and challenges in selected locations and evaluate responses.

Assessment tasks

School assessed coursework Outcome 1 Analysis of geographic data (approximately 50–60 minutes).

Outcome 2 Structured questions (approximately 100 minutes).

Total marks 100 *School-assessed Coursework for Unit 4 contributes 25 per cent.

Examination in November on Unit 3 and Unit 4. 50%

HEALTH AND HUMAN DEVELOPMENT

RATIONALE

VCE Health and Human Development provides students with the skills and knowledge to make informed decisions about their own health and to recognise the importance of health in society. In undertaking this study, they will be able to actively participate in making appropriate choices that allow for good health and be able to seek appropriate advice.

VCE Health and Human Development enables students to understand the current ideologies of health and human development in contemporary society. Students critically evaluate the health and development of the individual across the lifespan in the context of both Australia's and global health and human development. VCE Health and Human Development offers students a range of pathways and caters to those who wish to pursue further formal study in areas such as health promotion, community health research and policy development, humanitarian aid work, allied health practices, education, and the health profession.

UNIT 1: Understanding Health and Wellbeing

Areas of study

- 1. Health perspectives and influences
- 2. Health and nutrition
- 3. Youth and wellbeing

Outcomes

On completion of this unit the student should be able to:

1. Explain multiple dimensions of health and wellbeing, explain indicators used to measure health status and analyse factors that contribute to variations in health status of youth.

2. Apply nutrition knowledge and tools to the selection of food and the evaluation of nutrition information.

3. interpret data to identify key areas for improving youth health and wellbeing, and plan for action by analysing one particular area in detail.

Assessment Tasks

1. A short written report, such as a media analysis, a research inquiry, a blog or a case study analysis

- 2. Oral presentation, such as a debate or a podcast
- 2. A visual presentation such as a graphic organiser, a concept/mind map, an annotated poster, a digital presentation
- 3. Structured questions, including data analysis.

UNIT 2: Managing health and development

Areas of study

- 1. Developmental transitions
- 2. Health care in Australia

Outcomes

On completion of this unit the student should be able to

- explain developmental changes in the transition from youth to adulthood, analyse factors that contribute to healthy development during prenatal and early childhood stages of the lifespan and explain health and wellbeing as an intergenerational concept.
- describe how to access Australia's health system, explain how it promotes health and wellbeing in their local community, and analyse a range of issues associated with the use of new and emerging health procedures and technologies.

Assessment Tasks

Suitable tasks for assessment in this unit may be selected from the following:

- a short written report, such as a media analysis, a research inquiry, a blog or a case study analysis
- oral presentation, such as a debate or a podcast
- a visual presentation such as a graphic organiser, a concept/mind map, an annotated poster, a digital presentation
- structured questions, including data analysis.

UNIT 3: Australia's health in a globalized world

Areas of study

- 1. Understanding health and wellbeing
- 2. Promoting Health and wellbeing

Outcomes

On completion of this unit the student should be able to:

- explain the complex, dynamic and global nature of health and wellbeing, interpret and apply Australia's health status data and analyse variations in health status.
- explain changes to public health approaches, analyse improvements in population health over time and evaluate health promotion strategies.

Assessment Tasks

The student's performance on each outcome is assessed using one or more of the following:

- a short written report, such as a media analysis, a research inquiry, a blog or a case study analysis
- oral presentation, such as a debate or a podcast
- a visual presentation such as a graphic organiser, a concept/mind map, an annotated poster, a digital presentation
- structured questions, including data analysis.

UNIT 4: Health and Human Development in a Global Context

Areas of study

- 1. Health and wellbeing in a global context
- 2. Health and sustainable development goals

Outcomes

On completion of this unit the student should be able to:

- analyse similarities and differences in health status and burden of disease globally and the factors that contribute to differences in health and wellbeing.
- analyse relationships between the SDGs and their role in the promotion of health and human development, and evaluate the effectiveness of global aid programs.

Assessment tasks

The student's performance on each outcome is assessed using one or more of the following:

- a short written report, such as a media analysis, a research inquiry, a blog or a case study analysis
- oral presentation, such as a debate or a podcast
- a visual presentation such as a graphic organiser, a concept/mind map, an annotated poster, a digital presentation
- structured questions, including data analysis.

HISTORY

RATIONALE

The study of VCE History assists students to understand themselves, others and their world, and broadens their perspective by examining people, groups, events, ideas and movements. Through studying VCE History, students develop social, political, economic and cultural understanding. They also explore continuity and change: the world is not as it has always been, and it will be subject to change in the future. In this sense, history is relevant to contemporary issues. It fosters an understanding of human agency and informs decision making in the present.

AIMS

The study is designed to enable students to:

- develop an understanding of the nature of history as a discipline and to engage in historical inquiry
- ask questions about the past, analyse primary and secondary sources, and construct historical arguments based on evidence
- use historical thinking concepts such as significance, evidence, continuity and change, and causation
- explore a range of people, places, ideas and periods to develop a broad understanding of the past
- engage with debates between historians in an informed, critical and effective manner
- recognise that the way in which we understand the past informs decision-making in the present
 appreciate that the world in which we live has not always been as it is now, and that it will continue to change in the future.

TWENTIETH CENTURY HISTORY

UNIT 1: Twentieth Century History (1918-1939)

Areas of study

- 1. Ideology and conflict.
- 2. Social and cultural change

Outcomes

On completion of this unit the student should be able to:

- 1. Explain the consequences of the peace treaties which ended World War One, the impact of ideologies on nations and the events that led to World War Two.
- 2. Explain patterns of social life and cultural change in one or more contexts, and analyse the factors which influenced changes to social life and culture, in the inter-war years.

Assessment tasks

Assessment tasks for this unit will be a selection of:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

UNIT 2: Twentieth Century History (1945-2000)

Areas of study

- 1. Competing ideologies
- 2. Challenge and change

Outcomes

On completion of this unit the student should be able to:

- 1. Explain the ideological divisions in the post-war period and analyse the nature, development and impact of the Cold War on nations and people, in relation to one or more particular conflicts in the period.
- 2. Explain the causes and nature of challenge and change in relation to two selected contexts in the second half of the twentieth century and analyse the consequences for nations and people.

Assessment tasks

Assessment tasks for this unit include a selection of:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

HISTORY GLOBAL EMPIRES

UNIT 1: The making of empires 1400-1175

Areas of study

- 1. Exploration and expansion
- 2. Disruptive ideas

Outcomes

On completion of this unit the student should be able to:

- Explain the reasons for European voyages of exploration and analyse the motivations of new globally oriented empires.
- Explain how new ideas and discoveries challenged old certainties and strengthened European empires.

Assessment tasks

Assessment tasks for this unit include a selection of:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

UNIT 1: Empires at work 1400-1175

Areas of study

- 1. New Colonies, new profits
- 2. Challenges of empires

Outcomes

On completion of this unit the student should be able to:

- Analyse the methods used by European powers to establish colonies and the historical significance of new global systems of exchange.
- Analyse the effectiveness of a global empire in dealing with colonial challenges and assess the empire's global standing by 1775.

Assessment tasks

Assessment tasks for this unit include a selection of:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

ANCIENT HISTORY

UNIT 1: Ancient Mesopotamia

Areas of study

- 1. Discovering civilisation
- 2. Ancient empires

Outcomes

On completion of this unit the student should be able to:

- Explain the development of civilisation in Mesopotamia.
- Explain continuity and change in Mesopotamia as new peoples and ruling elites emerged.

Assessment tasks

Assessment tasks for this unit include a selection of:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

UNIT 2: Ancient Egypt

Areas of study

- 1. Egypt: The double crown
- 2. Middle kingdom Egypt: Power & Propaganda

Outcomes

On completion of this unit the student should be able to:

- Explain the distribution of power in Old Kingdom Egypt and the First Intermediate Period, the social, political and economic reasons for the construction of pyramids, and Egyptian beliefs concerning the afterlife.
- Explain the use and representation of power in Middle Kingdom Egypt and the Second Intermediate Period.

Assessment tasks

Assessment tasks for this unit include a selection of:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

UNIT 2: Early China

Areas of study

- 1. Ancient China
- 2. The early empires

Outcomes

On completion of this unit the student should be able to:

- Explain the development of civilisation in Ancient China.
- Explain the rise and fall of the Qin and Han empires.

Assessment tasks

Assessment tasks for this unit include a selection of:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

UNIT 3 & 4: Ancient History

In developing a course, teachers select two societies to be studied from Egypt, Greece and Rome, one for Unit 3 and one for Unit 4. For the two selected societies, both areas of study must be undertaken.

Areas of study

- Living in an ancient society
 People in power, societies in crisis

Outcomes

On completion of this unit the student should be able to:

- Explain and analyse the social, political and economic features of an ancient society. .
- Evaluate the historical significance of a crisis in an ancient society and assess the role of key individuals • involved in that turning point.

Assessment tasks

Each of the following four assessment tasks must be completed over Units 3 and 4:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

AUSTRALIAN HISTORY

RATIONALE

To provide a framework in which to explore the experiences of men and women from the beginnings of European settlement until today.

UNIT 3: Transformations: Colonial society to nation

In VCE Australian History students explore four periods of time which span some of the transformative events and processes that developed and changed the nature of Australian society and created modern Australia. The first slice of time begins in the 1830s with the expansion of European control over much of southern Australia as squatters appropriated country inhabited by Aboriginal peoples. The remaining three time periods consider transformations undergone by the new Australian nation in the twentieth century.

Areas of study

- 1. The reshaping of Port Phillip District/Victoria, 1834-1860
- 2. Making a people and a nation 1890 –1920

Outcomes

On completion of this unit the student should be able to:

- 1. Analyse the nature of change in the Port Phillip District/ Victoria in the period 1834–1860.
- 2. Analyse the visions and actions that shaped the new nation from 1890 to 1920, and the changes and continuities to these visions that resulted from participation in World War One.

Assessment tasks

Each of the following four assessment tasks must be completed over Units 3 and 4:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

UNIT 4: Transformations: Old certainties new visions

Areas of study

- 1. Crises that tested the nation 1929 –1945
- 2. Voices for change 1965 –2000

Outcomes

On completion of this unit the student should be able to:

- 1. Analyse the social, economic and political consequences of a crisis on the nation.
- 2. Analyse and evaluate two key social, economic and political changes in late twentieth century Australia.

Assessment tasks

Each of the following four assessment tasks must be completed over Units 3 and 4:

- a historical inquiry
 - an analysis of primary sources
 - an analysis of historical interpretations
 - an essay.

Examination

50 per cent of final assessment.





HISTORY (REVOLUTIONS)

RATIONALE

In developing a course, teachers select two revolutions to be studied from the following, one for Unit 3 and one for Unit 4:

- The American Revolution of 1776.
- The French Revolution of 1789.
- The Russian Revolution of October 1917.
- The Chinese Revolution of 1949.

UNIT 3 & 4: REVOLUTIONS

Areas of study

- 1. Causes of revolution
- 2. Consequences of revolution

Outcomes

- 1. Analyse the causes of revolution, and evaluate the
- contribution of significant ideas, events, individuals and popular movements.
- 2. Analyse the consequences of revolution and evaluate the extent of change brought to society.

Assessment tasks

Each of the following four assessment tasks must be completed over Units 3 and 4:

- a historical inquiry
- an analysis of primary sources
- an analysis of historical interpretations
- an essay.

Examination

50 per cent of final assessment.

COMPUTING

RATIONALE

The ubiquity and rapid pace of developments in digital systems, and the increasing availability of digitised data and information are having major influences on many aspects of society and the economy. This study equips students with the knowledge and skills to be discerning users of digital systems, data and information and creators of digital solutions. They are equipped to apply new ways of thinking as well as technical and social protocols when developing intellectual and social capital. VCE Computing supports students to participate in a globalised society and economy as they learn how to exploit the capabilities of digital systems and manage risks when communicating and collaborating with others locally and globally. The study provides students with practical opportunities to create digital solutions for real-world problems in a range of settings, developing an essential tool set for current and future learning, work and social endeavours.

AIMS

This study enables students to:

- apply skills, techniques, processes and a methodology to create digital solutions that meet a range of needs and conditions
- understand how data can be represented in digital systems and structured and manipulated to become part
 of a digital solution become independent and discerning users of digital systems, able to critically appraise
 the opportunities and appropriateness of different digital systems in a range of settings
- understand the components of information systems and the architecture of the associated digital systems
- understand how digital systems, processes, legislation and personal behaviours can affect the integrity and security of data and information
- apply computational, design and systems thinking skills when creating digital solutions

UNIT 1: Computing

Areas of study

- 1. Data and graphic solutions
- 2. Networks
- 3. Collaboration and communication

Outcomes

On completion of this unit the student should be able:

- to acquire, secure and interpret data, and design and develop a graphic solution that communicates the findings of an investigation.
- design a network with wireless capability that meets an identified need or opportunity, explain its configuration and predict risks and benefits for intended users.
- design and develop a website collaboratively with others that presents an analysis of a contemporary issue and the team's point of view on the issue.

Assessment Tasks

Assessment tasks for this unit are selected from the following:

- using digital systems and techniques, create a solution in response to a need
- visual presentations
- oral presentations
- written reports.

UNIT 2: Computing

Areas of study

- 1. Programming
- 2. Data analysis and visualisation
- 3. Data management

Outcomes

On completion of this unit the student should be able to:

- design working modules in response to solution requirements, and use a programming or scripting language to develop the modules.
- apply the problem-solving methodology and use appropriate software tools to extract relevant data and create a data visualisation that meets a specified user's needs.
- apply the problem-solving methodology to create a solution using database management software, and explain the personal benefits and risks of interacting with a database.

Assessment Tasks

Assessment tasks for this unit are selected from the following:

- using digital systems and techniques, create a solution in response to a need
 - visual presentations
 - oral presentations
 - written reports.

INFORMATICS

UNIT 3: Informatics

Areas of study

- 1. Organisations and data management
- 2. Data analytics : Drawing conclusions

Outcomes

On completion of this unit the student should be able to:

- design a solution, develop it using a relational database management system, and diagrammatically represent how users interact with an online solution when supplying data for a transaction.
- use a range of appropriate techniques and processes to acquire, prepare, manipulate and interpret complex data to confirm or refute a hypothesis, and formulate a project plan to manage progress.

Assessment tasks

In response to a design brief that includes an analysis of a need or an opportunity and a data set:

• the design and development of a relational database management system solution.

AND In response to a design brief that includes a description of the online transaction requirements of an organisation and its data protection techniques:

• an annotated, diagrammatic representation of a user's interactions with an online solution when conducting a transaction and the user interface for the page that initiates the transaction..

UNIT 4: Informatics

Areas of study

- 1. Data analytics: presenting the findings
- 2. Information management

Outcome 1

On completion of this unit the student should be able to:

- design, develop and evaluate a multimodal online solution that confirms or refutes a hypothesis, and assess the effectiveness of the project plan in managing progress.
- compare and contrast the effectiveness of information management strategies used by two organisations to
 manage the storage and disposal of data and information, and recommend improvements to their current
 practices.

Assessment Tasks

Unit 4 outcome 2:

• A written report OR An annotated visual report

Unit 3 Outcome 2

- Use a range of appropriate techniques and processes to acquire, prepare, manipulate and interpret complex data to confirm or refute a hypothesis, and formulate a project plan to manage progress. A short report that sets out a statement of a student-generated hypothesis, the conclusion that has been drawn and an outline of the findings supporting the conclusion
- A collection of data sets, and information derived from them, that allows a conclusion to be drawn about the hypothesis and evidence of:
- the specifications for creating the information
- acknowledgment of intellectual property
- the validation and manipulation processes and techniques used
- the methods used to secure stored and communicated data and information
- A project plan (Gantt charts) indicating times, resources and tasks.

Unit 4 Outcome 1

- Design, develop and evaluate a multimodal online solution that confirms or refutes a hypothesis, and assess the effectiveness of the project plan in managing progress.
- A folio of two or three alternative design ideas and the detailed design specifications of the preferred design
- A multimodal online solution that communicates the confirmation or refutation of a hypothesis as detailed in Unit 3
- an evaluation of the effectiveness of the solution
- an assessment of the effectiveness of the project plan (Gantt chart) in monitoring project progress in one of the following:
- a written report
- an annotated visual plan.

SOFTWARE DEVELOPMENT

UNIT 3: Software Development

Areas of study

1. Programming practice

2. Analysis and design

Outcomes

On completion of this unit the student should be able to:

- to interpret designs and apply a range of functions and techniques using a programming language to develop working modules.
- analyse and document a need or opportunity, generate alternative design ideas, represent the preferred solution design and formulate a project plan for creating the solution.

Assessment tasks

Unit 3 outcome 1:

• In response to teacher-provided designs, create working modules to meet specific needs.

UNIT 4: Software Development

Areas of study

- 1. Software solutions
- 2. Interactions and impacts

Outcome 1

On completion of this unit the student should be able to:

- apply stages of the problem-solving methodology to create a solution using a programming language that fulfils identified requirements and assess the effectiveness of the project plan in monitoring progress.
- analyse and explain the dependencies between two information systems and evaluate the controls in place in one information system to protect the integrity of its source data.

Assessment tasks

Unit 4 outcome 2: In response to a case study, one of the following:

- a written report
- an annotated visual report.

Unit 3 Outcome 2 Analyse and document a need or opportunity, generate alternative design ideas, represent the preferred solution design and formulate a project plan for creating the solution.

- An analysis that defines the requirements, constraints and scope of a solution in the form of a software requirements specification
- A folio of two to three alternative design ideas and the detailed design specifications of the preferred design
- A project plan (Gantt chart) indicating times, resources and tasks.

Unit 4 Outcome 1 Apply stages of the problem-solving methodology to create a solution using a programming language that fulfils identified requirements and assess the effectiveness of the project plan in monitoring progress.

- A software solution that meets the software requirements specification and the results of the useability test
- An assessment of the extent to which the project plan (Gantt chart) assisted in monitoring project progress in one of the following:
- a written report
- an annotated visual plan.

LITERATURE

RATIONALE

VCE Literature provides opportunities for students to develop their awareness of other people, places and cultures and explore the way texts represent the complexity of human experience. Students examine the evolving and dialogic nature of texts, the changing contexts in which they were produced and notions of value. They develop an understanding and appreciation of literature, and an ability to reflect critically on the aesthetic and intellectual aspects of texts.

AIMS

This study enables students to:

- · develop an enjoyment of language and literature through reading deeply, widely and critically
- appreciate the stylistic and aesthetic qualities of texts and develop an understanding of and sensitivity to nuances in the English language
- read closely, developing the ability to engage in detailed critical analysis of the key literary features of individual texts and to make relevant connections between them
- demonstrate an understanding that the context and perspective of both author and reader influence the reading experience
- · develop the capacity for critical thinking and understanding of the relationship between literature and society
- develop an understanding of literary criticism
- develop the capacity to engage with and contest complex and challenging ideas to develop their own interpretation informed by a range of literary criticism
- develop the capacity for creativity and self-expression, and the ability to write confident analytical and creative responses to texts.

UNIT 1: Approaches to Literature

For Unit 1, students must study at least:

- two complete texts
- one additional text that is either complete or a collection of excerpt/s.
- For Unit 2, students must study at least:
 - two complete texts
 - one additional text that is either complete or a collection of excerpt/s.
- Over the two units, the texts selected for study must include at least:
 - one prose text such as a novel, collection of short stories, biography, autobiography, memoir, or collection of letters
 - four poems (not equivalent to a complete text)
 - one script for stage or screen
 - one film or television or radio or multimedia text
 - one Australian text
 - one text from a past era or another culture (this text will be used for Unit 2 Area of Study 1).

Areas of study

- 1. Reading practices
- 2. Ideas and concerns in texts

Outcomes

On completion of this unit the student should be able to:

- Respond to a range of texts and reflect on influences shaping these responses.
- Analyse the ways in which a selected text reflects or comments on the ideas and concerns of individuals and particular groups in society.

Assessment Tasks

- an essay (comparative, interpretive, analytical or discursive)
- a debate
- a reading journal
- a close analysis of selected passages

- an original piece of writing responding to a text/s studied
- an oral or a written review
- a multimedia presentation
- participation in an online discussion
- performance and commentary.

At least one of the assessment tasks in Unit 1 must be in oral form.

UNIT 2: Contexts and Connections

Areas of study

- 1. The text, the reader and their contexts
- 2. Exploring connections between texts

Outcomes

On completion of this unit the student should be able to:

- Analyse and respond critically and creatively to the ways a text from a past era and/or a different culture reflect or comment on the ideas and concerns of individuals and groups in that context.
- Compare texts considering the dialogic nature of texts and how they influence each other.

Assessment Tasks

Suitable tasks for assessment in this unit are:

- an essay (comparative, interpretive, analytical or discursive)
 - a debate
- journal entries
- a close analysis of selected passages
- an original piece of writing responding to a text(s) studied
- an oral or a written review
- a multimedia presentation
- participation in an online discussion
- performance and commentary.

Demonstration of achievement of Unit 2 Outcome 1 must be based on one complete text. Demonstration of achievement of Unit 2 Outcome 2 must be based on at least one complete text and an additional complete text or excerpt/s. Students must produce an extended written response of approximately 1000–1500 words for this outcome.

UNIT 3: Form and transformation

Text Selection

In Units 3 and 4 students must study at least six texts. Five of the required six texts must be selected from the Text List published by the VCAA. The selection must include:

- one novel
- one collection of poetry
- one play
- two further texts selected from novels, plays, collections of poetry, collections of short stories or other literature.

At least one of the texts selected must be Australian.

Students study a sixth text for Unit 3 Area of Study 1. The text used for Unit 3 Area of Study 1 must be an adaptation of one of the five required texts selected from the Text List published by the VCAA. The text may include but is not limited to:

- live performance by a professional theatre company
- film, including script
- television mini-series
- play script.

A student adaptation cannot be used as the adaptation or transformation text for Unit 3 Area of Study 1.

Areas of study

- 1. Adaptations and transformation
- 2. Creative responses to texts

Outcomes

On completion of this unit the student should be able to:

- Analyse the extent to which meaning changes when a text is adapted to a different form.
- Respond creatively to a text and comment on the connections between the text and the response.

Assessment Tasks

An analysis of how the form of a text influences meaning;

Students may:

- compare a dramatised version of a scene or scenes from a text with the original text
- compare a print text with the text's adaptation into another form
- compare the performance of either a substantial individual text or group of texts with the original text.

A creative response to a text.

- Students may:
 - submit an original piece of writing, presented in a manner consistent with the style and context of the original text
 - re-create or rework an aspect of the text, such as adding to the text, recasting a part of the text in another setting or form, or presenting an episode in the text from another point of view.

AND

Students must submit:

A reflective commentary establishing connections with the original text.

UNIT 4: Interpreting texts

Areas of study

- 1. Literary perspectives
- 2. Close analysis

Outcomes

On completion of this unit students should be able to

- Produce an interpretation of a text using different literary perspectives to inform their view.
- Analyse features of texts and develop and justify interpretations of texts.

Assessment Tasks

Outcome 1: A written interpretation of a text using two different perspectives to inform their response. Outcome 2: A written interpretation of a text, supported by close textual analysis. AND

A written interpretation of a different text from Task 1, supported by close textual analysis. Students may:

- select and discuss the role and significance of particular sections of a text in interpreting the text as a whole
- analyse how certain literary features contribute to an interpretation of a text
- analyse the linkages, parallels and contrasts between different passages from a text

MATHEMATICS

RATIONALE

Mathematics is the study of function and pattern in number, logic, space and structure, and of randomness, chance, variability and uncertainty in data and events. It is both a framework for thinking and a means of symbolic communication that is powerful, logical, concise and precise. Mathematics also provides a means by which people can understand and manage human and natural aspects of the world and inter-relationships between these. Essential mathematical activities include: conjecturing, hypothesising and problem posing; estimating, calculating and computing; abstracting, proving, refuting and inferring; applying, investigating, modelling and problem solving.

Unit Outlines – Year 11 Mathematics

UNITS 1 AND 2: Foundation Mathematics

Foundation Mathematics provides for the continuing mathematical development of students entering VCE needing mathematical skills to support their other VCE subjects including VET and VCAL programs and *who do not intend to undertake Unit 3 and 4 studies in VCE Mathematics in the following year.*

In Foundation Mathematics there is a strong emphasis on using mathematics in practical contexts relating to everyday life, personal work and study. Students are encouraged to use appropriate technology in all areas of their study. These units will be especially useful for students undertaking VET and VCAL programs.

Areas of study

- 1. Space, Shape and Design
- 2. Patterns and number
- 3. Data
- 4. Measurement

Outcomes

On completion of each unit the student should be able to:

- 1. use and apply a range of mathematical concepts, skills and procedures from selected areas of study to solve problems based on a range of everyday and real-life contexts.
- 2. apply mathematical procedures to solve practical problems in both familiar and new contexts, and communicate their results.
- 3. select and use technology to solve problems in practical contexts.

Assessment tasks

- investigations and projects; for example, a report on an application of mathematics such as costing of a birthday party, budgeting for a holiday, a survey of types of television programs or design of a car park
- assignments, summary or review notes of mathematics that students have encountered in their work or study; for example,
- a written or a multimedia or an oral presentation of wages calculations, materials estimation for a task, personal budgeting
- tests of mathematical skills developed across application contexts.



UNITS 1 AND 2: General Mathematics

RATIONALE

General Mathematics provides courses of study for diverse groups of students. Most students studying General Mathematics will intend to study Further Mathematics 3 & 4. A CAS calculator is required for General Mathematics.

Areas of study

- 1. Algebra and structure
- 2. Arithmetic and number
- 3. Discrete mathematics
- 4. Geometry, measurement and trigonometry
- 5. Graphs of linear and non-linear relations
- 6. Statistics

Outcomes

On completion of this unit the student should be able to:

- define and explain key concepts as specified in the selected content from the areas of study, and apply a range of related mathematical routines and procedures.
- select and apply mathematical facts, concepts, models and techniques from the topics covered in the unit to
 investigate and analyse extended application problems in a range of contexts.
- select and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results an

Assessment tasks

- assignments
- tests
- summary or review notes.
- modelling tasks
- problem-solving tasks
- mathematical investigations

UNIT 1: Mathematical Methods

Mathematical Methods Units 1 and 2 are designed as a preparation for Mathematical Methods Units 3 and 4. A CAS calculator is required for Mathematical Mathematics.

Areas of study

- 1. Functions and graphs
- 2. Algebra
- 3. Calculus
- 4. Probability and statistics

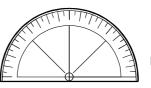
Outcomes

On completion of this unit the student should be able to:

- define and explain key concepts as specified in the content from the areas of study, and apply a range of related mathematical routines and procedures
- apply mathematical processes in non-routine contexts, including situations requiring problem-solving, modelling or investigative techniques or approaches, and analyse and discuss these applications of mathematics.
- use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.

Assessment tasks

- assignments
- tests
- summary or review notes.
- modelling tasks



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- problem-solving tasks
- mathematical investigations.

UNIT 2: Mathematical Methods

Areas of study

- 1. Functions and graphs
- 2. Algebra
- 3. Calculus
- 4. Probability and statistics

Outcomes

On completion of this unit the student should be able to:

- define and explain key concepts as specified in the content from the areas of study, and apply a range of related mathematical routines and procedures
- apply mathematical processes in non-routine contexts, including situations requiring problem-solving, modelling or investigative techniques or approaches, and analyse and discuss these applications of mathematics.
- select and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.

Assessment tasks

- assignments
- tests
- summary or review notes.
- modelling tasks
- problem-solving tasks
- mathematical investigations.

UNITS 1 AND 2: Specialist Mathematics

RATIONALE

Most students studying Specialist Mathematics Units 1 & 2 will also be studying Mathematical Methods 1 & 2 and intend to study Mathematical Methods 3 & 4 and in some cases Specialist Mathematics Units 3 & 4. A CAS calculator is required for Specialist Mathematics and students will be disadvantaged without one.

Areas of study/Topics

- 1. Arithmetic and number
- 2. Geometry, measurement and trigonometry
- 3. Graphs of linear and non-linear relations
- 4. Algebra and structure
- 5. Discrete mathematics
- 6. Statistics

Outcomes

On completion of each unit the student should be able to:

1. define and explain key concepts in relation to the topics from the selected areas of study, and apply a range of related mathematical routines and procedures.

- apply mathematical processes in non-routine contexts, and analyse and discuss these applications of mathematics in at least three areas of study.
- 3. use technology to produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches in at least three areas of study.

Assessment tasks

- assignments
- tests
- summary or review notes.
- modelling tasks
- problem-solving tasks
- mathematical investigations.

Unit Outlines – Year 12 Mathematics

UNITS 3 AND 4: Further Mathematics

RATIONALE

Further Mathematics Units 3 and 4 are intended to be widely accessible. They provide general preparation for employment or further study. The assumed knowledge for Further Mathematics Units 3 and 4 is drawn from General Mathematics Units 1 and 2; students who have done only Mathematical Methods Units 1 and 2 will also have had access to this assumed knowledge.

Areas of study

- 1. 'Data analysis' (Core material)
- 2. 'Applications'

Outcomes

Students should be able to:

- define and explain key concepts and apply related mathematical techniques and models as specified in Area
 of Study 1 in routine contexts.
- select and apply the mathematical concepts, models and techniques as specified in Area of Study 1 in a range of contexts of increasing complexity.
- select and appropriately use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.
- define and explain key concepts as specified in the content from the two selected modules, and apply
 related mathematical techniques and models in routine contexts.
- select and apply the mathematical concepts, models and techniques from the two selected modules in a
 range of contexts of increasing complexity.
- select and appropriately use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.

Assessment Tasks

- given data set with several variables. The task has three components of increasing complexity:
- the construction, description and interpretation of data plots, including smoothed plots where time series data is used
- the calculation and interpretation of summary statistics, including seasonal indices and their application where time series data is used
- the modelling of linear associations, or trends where time series data is used, including the use of data transformation as appropriate.

The application task is to be of 4–6 hours duration over a period of 1–2 weeks.

Modelling or problem-solving task 1 is to relate to Recursion and financial modelling. This task is to be of 2–3 hours duration over a period of 1 week

The first selected module; Modelling or problem solving task 3 is related to the second selected module. The modelling or problem-solving tasks are to be of 2–3 hours duration over a period of 1 week

UNITS 3 AND 4: Mathematical Methods

Mathematical Methods Units 3 and 4 consists of the following areas of study: 'Functions and Graphs', 'Calculus', 'Algebra' and 'Probability' which must be covered in a progression from Unit 3 to Unit 4, with an appropriate selection of content for each of Unit 3 and Unit 4. Mathematical Methods 3 & 4 assumes knowledge of the Mathematical Methods 1 & 2 areas of study. Students must have their own CAS calculator. The exam panel write exam papers with the assumption that students have a CAS calculator thus students without will be severely disadvantaged during exam time.

Areas of study

- 1. Functions and graphs
- 2. Algebra
- 3. Calculus
- 4. Probability and statistics

Outcomes

On completion of each unit the student should be able to:

- define and explain key concepts as specified in the content from the areas of study, and apply a range of related mathematical routines and procedures.
- apply mathematical processes in non-routine contexts, including situations requiring problem-solving, modelling or investigative techniques or approaches, and analyse and discuss these applications of mathematics.
- select and appropriately use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches

Assessment tasks

Application task

- A function and calculus-based mathematical investigation of a practical or theoretical context involving content from two or more areas of study, with the following three components of increasing complexity:
- · introduction of the context through specific cases or examples
- consideration of general features of the context
- variation or further specification of assumption or conditions involved in the context to focus on a particular feature or aspect related to the context.
- The application task is to be of 4–6 hours duration over a period of 1–2 weeks.

One of the modelling or problem-solving tasks is to be related to the **Probability and statistics** area of study. The modelling or problem-solving tasks are to be of 2–3 hours duration over a period of 1 week.

UNITS 3 AND 4: Specialist Mathematics

Students who select this subject must also be studying, or have previously studied, Mathematics Methods (CAS) Units 3 and 4. It is essential that students enjoy learning mathematics and they must have demonstrated good basic skills in

both Mathematics Methods Units 1 and 2, and Specialist Mathematics Units 1 and 2. Students will require an approved CAS Calculator and will be disadvantaged without one.

Areas of study

- 1. Functions and graphs
- 2. Algebra
- 3. Calculus
- Vectors
 Mechanics
- 6. Probability and statistics

Outcomes

On completion of this unit the student should be able to:

- define and explain key concepts as specified in the content from the areas of study, and apply a range of . related mathematical routines and procedures.
- apply mathematical processes, with an emphasis on general cases, in non-routine contexts, and analyse . and discuss these applications of mathematics.
- select and appropriately use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.

Assessment tasks

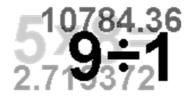
Application task

- A mathematical investigation of a practical or theoretical context involving content from two or more areas of study, with the following three components of increasing complexity:
- ٠ introduction of the context through specific cases or examples
- consideration of general features of the context •
- variation or further specification of assumption or conditions involved in the context to focus on a particular • feature or aspect related to the context.

The application task is to be of 4–6 hours duration over a period of 1–2 weeks.

One of the modelling or problem-solving tasks is to be related to the Mechanics or Probability and statistics area of study.

The modelling or problem-solving tasks are to be of 2-3 hours duration over a period of 1 week.



MEDIA

RATIONALE

The media is ubiquitous in today's world. Working on a personal, local, national and global level, media is deeply embedded within life and culture. It entertains, teaches, informs, and shapes audiences' perception of their lives and the worlds in which they live.

AIMS

- investigate and analyse their and others' experience of the media
- examine the relationship between audiences and the media
- understand the codes and conventions that are used to construct media narratives and products
- develop an understanding of traditional and contemporary media forms, products, institutions and industries through theoretical study and practical application
- develop an understanding of the nature, roles, structure and contexts of creation and distribution of media forms and products
- analyse media stories and narratives to understand how meaning is constructed and how audiences are engaged
- develop an understanding of the relationship between the media and audiences that produce and engage with it
- develop the capacity to investigate, examine and evaluate debates around the role of contemporary media and its implications for society
- develop skills in critically understanding the significance and aesthetics of the media
- develop and refine skills in the design, production, evaluation and critical analysis of media products in a range of contexts and forms for different audiences.

UNIT 1: Media forms, representations and Australian stories

Areas of study

- 1. Media representations
- 2. Media forms in production
- 3. Australian Stories

Outcomes

On completion of this unit the student should be able to:

- explain how media representations in a range of media products and forms, and from different periods of time, locations and contexts, are constructed, distributed, engaged with, consumed and read by audiences.
- use the media production process to design, produce and evaluate media representations for specified audiences in a range of media forms.
- analyse how the structural features of Australian fictional and non-fictional narratives in two or more media forms engage, and are consumed and read by, audiences.

Assessment tasks

Suitable tasks for assessment in this unit may be selected from the following:

- 1. Audiovisual or video sequences
- 2. Radio or audio sequences
- 3. Photographs
- 4. print layouts
- 5. sequences or presentations using digital technologies
- 6. posters
- 7. written responses
- 8. oral reports.

UNIT 2: Narrative across media forms

Areas of study

- 1. Narrative style and genre
- 2. Narratives in production
- 3. Media and change

Outcomes

On completion of this unit the student should be able to:

- analyse the intentions of media creators and producers and the influences of narratives on the audience in different media forms.
- apply the media production process to create, develop and construct narratives.
- discuss the influence of new media technologies on society, audiences, the individual, media industries and institutions.

Assessment tasks

Assessment tasks for this unit include:

- radio or audio sequences
- audiovisual or video sequences
- photographs
- print layouts
- multimedia sequences or presentations
- posters
- written responses
- oral reports



UNIT 3: Media narratives and pre production

Areas of study

- 1. Narrative and ideology
- 2. Media production development
- 3. Media production design

Outcomes

On completion of this unit the student should be able to:

- analyse how narratives are constructed and distributed, and how they engage, are consumed and are read by the intended audience and present day audiences.
- research aspects of a media form and experiment with media technologies and media production processes to inform and document the design of a media production.
- develop and document a media production design in a selected media form for a specified audience.

Assessment tasks

At least one of the following:

- a written report
- an essay
- short responses
- structured questions
- an annotated visual report
- an oral report
- a presentation using digital technologies

UNIT 4: Media production and issues in the media

Areas of study

1. Media production

2. Agency and control in and of the media

Outcomes

On completion of this unit the student should be able to:

- produce, refine and resolve a media product designed in Unit 3.
- discuss issues of agency and control in the relationship between the media and its audience.

Assessment tasks

Outcome 2: The student's performance on the outcome is assessed using one or more of the following:

- a written report
- an essay
- short responses
- structured questions
- an annotated visual report
- an oral report.

Unit 3 Outcome 2 Research aspects of a media form and experiment with media technologies and media production processes to inform and document the design of a media production.

- A research portfolio and accompanying documentation examining aspects of the selected media form.
- Production exercises with accompanying documentation that demonstrate a range of skills in the use of media technologies and production processes relevant to the student selected media form.

Outcome 3 Develop and document a media production design in a selected media form for a specified audience.

• A media production design plan based on the selected media form identified in Unit 3, Outcome 2.

Unit 4 Outcome 1 Produce, refine and resolve a media product designed in Unit 3.

• A media product developed from the media production design produced in Unit 3.

MUSIC

RATIONALE

Music learning requires students' active engagement in the practices of listening, performing and composing. As they learn in music, students apply critical and creative thinking skills to analyse and critique the work of contemporary and historical practitioners and develop their understanding of the diverse ways in which music ideas can be shaped to communicate artistic and expressive intent. Students also develop insights into the music traditions of contemporary and historical global cultures and form understandings of ways in which music can interact with other arts forms and fields of endeavour.

When students perform the works of other musicians, they develop skills in communicating and in working cooperatively and communally to achieve creative outcomes. Through analysing and responding to the work of other musicians, students develop knowledge of music, skills in critical thinking and greater confidence in written and oral expression. Students use communications and music technologies to achieve considered musical outcomes.

AIMS

This study is designed to enable students to:

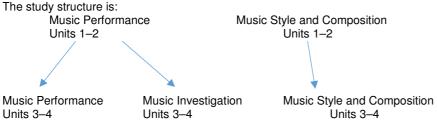
- develop and practise musicianship
- perform, compose, arrange and improvise music from diverse styles and traditions
- engage with diverse music genres, styles, contexts and practices
- communicate understanding of cultural, stylistic, aesthetic and expressive qualities and characteristics of music
- explore and expand personal music interests, knowledge and experiences
- use imagination, creativity and personal and social skills in music making
- access pathways for further education, training and employment in music
- use electronic and digital technologies in making and sharing music and communicating ideas about music
- participate in life-long music learning and the musical life of their community.

ENTRY

To undertake Music Performance or Music Investigation, students should have about three years' experience prior to Year 11 on a musical instrument or in voice.

STRUCTURE

The study is made up of ten units. Each unit deals with specific content contained in areas of study and is designed to enable students to achieve a set of outcomes for that unit. Each outcome is described in terms of key knowledge and key skills.



Students may enrol in all units or select specific combinations of units that cater for their interests and intended pathways.

Selection of instrument or voice

In VCE Music the term 'instrument' includes voice. Students may use a different instrument/s in each of Music Performance Units 1–4 and/or Music Investigation Units 3–4 and/or for study and performance for each of the group and/or solo works in a program.

Music Performance

Units 1–4

The choice of instrument may vary within a unit or between units. Students who work with more than one instrument should select a main instrument for solo performance. All students must perform at least one group work and at least one solo work in each unit.

Units 3 - 4: for students who choose to present their examination program as a member of a group Students who elect to present their end-of-year performance examination as members of a group may select any instrument/s and do not require approval for their choice. Students are assessed on all instruments they use during the examination performance.

Units 3 - 4: for students who choose to present their examination program as a soloist

Students who elect to present their end-of-year performance examination as soloists must select an instrument and a list from the *Prescribed List of Notated Solo Works*. All works performed in the end-of-year performance examination must be selected from one list or be approved alternative works. Students who choose to present their Unit 3–4 end-of-year examination program as soloists are advised to use the same instrument for the solo component of Outcome 1 in Units 3 and 4. The instrument lists, as appropriate, provide details about use of different instruments in the performance. If students elect to present their external end-of-year performance examination as soloists using an instrument for which no list is provided, they must apply for and receive approval to use an Alternative Instrument.

Music Investigation

Units 3–4

An instrument/s is selected for study in these units. For this study, students choose to perform either as soloists or as members of a group. Students who elect to present their end-of-year performance examination as members of a group may select any instrument and do not require approval for their choice of instrument. Students are assessed on all instruments they use during the examination performance. If students elect to present their external end-of-year performance examination as soloists using an instrument for which no list is provided, they must apply for and receive approval to use an Alternative Instrument.

UNIT 1: Music Performance

Areas of study

- 1. Performance
- 2. Preparing for performance
- 3. Music language

Outcomes

On completion of this unit the student should be able to:

- Prepare and perform a program of group and solo works.
- Demonstrate and discuss techniques relevant to the performance of selected works.
- Identify, re-create, extend and notate music language components and short phrases, and describe ways elements of music may be interpreted.





Assessment tasks

Suitable tasks for assessment may be selected from the following:

- performance/s of at least three works including at least one group work and one solo work with accompaniment, as appropriate; the duration of the performance/s will vary depending on the works selected
- a demonstration of material chosen to address challenges in performance of works prepared for Outcome 1, for example an assessment task that includes a test or other performance context
- an explanation of how selected material supports the student's development as an instrumentalist and their preparation of works performed for Outcome 1; the explanation may be presented in one or more of the following formats:
 - ooral
 - o multimedia
 - o written
- aural, written and practical tasks such as:
 - $\circ \quad \text{a folio of exercises} \quad$
 - structured questions
 a workbook of class activities.

UNIT 2: Music Performance

Areas of study

- 1. Performance
- 2. Preparing for performance
- 3. Music language
- 4. Organisation of sound

Outcomes

On completion of this unit the student should be able to:

- Prepare and perform a program of group and solo works.
- Demonstrate and discuss techniques relevant to the performance of selected works.
- re-create, extend and notate music language components and short phrases, and describe ways elements of music may be interpreted.
- devise a composition or an improvisation that uses music language evident in work/s being prepared for performance.

Assessment tasks

Suitable tasks for assessment may be selected from the following:

 performances of at least three works, including at least one group work and one solo work with accompaniment as appropriate; the duration of the performances will vary depending on the works selected



- a demonstration of material chosen to address challenges in performance of works prepared for Outcome 1, for example an assessment task that includes a test or other performance context
- an explanation of how selected material supports the student's development as an instrumentalist and their preparation of works performed for Outcome 1; the explanation may be presented in one or more of the following formats:
 - oral 0
 - multimedia 0 written
 - 0
- aural, written and practical tasks such as:
 - a folio of exercises 0
 - structured questions 0
 - a workbook of class activities 0
- a composition or an improvisation and accompanying documentation that describes use of music language in the exercise/s; the documentation may be presented in one or both of the following formats:
 - 0 multimedia
 - written. 0

UNITS 3 AND 4

For Units 3 and 4 this study divides into two streams:

Music Performance Δ

B Music Investigation

UNIT 3: Music Performance

Areas of study

- 1. Performance
- Preparing for performance 2
- 3. Music language

Outcomes

On completion of this unit the student should be able to:

- Prepare and perform a program of group and solo works, and demonstrate a diverse range of techniques and expressive qualities and an understanding of a wide range of music styles and performance conventions.
- Demonstrate and discuss techniques relevant to the performance of selected works.
- Identify, re-create, notate and transcribe short excerpts of music, and discuss the interpretation of • expressive elements of music in pre-recorded works.

Assessment tasks

Outcome 2: A demonstration of material selected to assist with development of general instrumental technique and preparation of works selected for Outcome 1 including exercise/s created by the student. AND A discussion of how the selected material is supporting the student's development as an instrumentalist and their preparation of works for Outcome 1. The discussion may be presented in one or both of the following formats:

- Oral ٠
- Multimedia.

Outcome 3:A test that includes the following components:

- aural and theory ٠
- written, and .
- practical components.

UNIT 4: Music Performance

Areas of study

- 1. Performance
- 2. Preparing for performance
- 3. Music language

Outcomes

On completion of this unit the student should be able to:

- Prepare and perform informed interpretations in a program of group and solo works, and demonstrate a diverse range of techniques, expressive qualities and understanding of a wide range of music styles and performance conventions.
- Demonstrate and discuss techniques relevant to refining the performance of selected works.
- identify, re-create, notate and transcribe short excerpts of music, and discuss the interpretation of
 expressive elements of music in pre-recorded works.

Assessment Tasks

Outcome 2: A demonstration of material selected to assist with development of general instrumental technique and preparation and presentation of works selected for Outcome 1, including exercise/s created by the student. AND

A discussion of how the selected material is supporting the student's development as an instrumentalist and their preparation of works for Outcome 1. The discussion may be presented in one or both of the following formats:

- oral
- multimedia.

End of year examination

The student will give a live performance in only one of the following contexts:

- as a member of a group
- OR
 - as a soloist.

The live performance will draw on knowledge and skills from Unit 3 Outcome 1 and Unit 4 Outcome 1. An examination is defined as a single assessment period.

Duration of examination

- One assessed performer 25 minutes
- Two or three assessed performers 30 minutes
- Four assessed performers 35 minutes
- Five or six assessed performers 40 minutes.

Group performance examination

Students will present a live performance of at least four contrasting works that represent a range of styles and diversity of character. At least two works in the program must be selected from the Units 3 and 4 *Prescribed List of Group Works* published annually on the VCAA website. Details of examination and program requirements are published in the Prescribed List.

Solo performance examination

Students will present a live performance of works selected from a single list in the Units 3 and 4 *Prescribed List of Notated Solo Works* published annually on the VCAA website. Details of program requirements including the number of works to be performed are published in the Prescribed List.

UNIT 3: Music Investigation

In each unit students:

- critically listen to and analyse performances and music works
- research, learn, interpret and rehearse a representative and characteristic program of work
- build required technical and expressive skills
- · select and create exercises to support development and refinement of specific techniques
- explore relevant contextual issues and performance conventions
- design and present performances to communicate their knowledge and understanding
- compose, improvise or arrange music in a style, tradition or genre relevant to their Investigation Topic.

Areas of study

- 1. Investigation
- 2. Composition/Improvisation/Arrangement
- 3. Performance

Outcomes

On completion of this unit the student should be able to:

- demonstrate understanding of practices and issues that inform performance of works that are representative of a selected music style, tradition and/or genre relevant to the Investigation Topic.
- compose, improvise and/or arrange original music exercises and document and discuss music characteristics and performance practices relevant to the Investigation Topic.
- present a performance of music works and communicate knowledge and understanding of a specific music style, tradition and/or genre relevant to the Investigation Topic.

Assessment tasks

Outcome 1:

 A report that includes written, audio and visual components. The report will be based on research undertaken for Outcome 1 and be presented in a multimedia format.

Outcome 2: A presentation that includes:

- performance of exercises created by the student for Outcome 2
 - demonstration of material from a technical work program developed for Outcome 3, and
- commentary that describes relevance to the Investigation Topic of the exercises created for Outcome 2 and the material from the Outcome 3 technical program.

Outcome 3:

• Responses to questions about material presented in the report and the presentation.

UNIT 4: Music Investigation

In this unit students refine the direction and scope of their end-of-year performance program. They also compose, improvise or arrange and perform a work that is characteristic of the music style, tradition or genre they are investigating and continue developing their understanding of relevant performance practices. Students continue to listen to the work of other performers and develop their ability to execute technical and expressive demands and apply performance conventions to realise their intended interpretations of each work.

Areas of study

- 1. Preparing a performers statement
- 2. Composition/Improvisation/Arrangement
- 3. Performance

Outcomes

On completion of this unit the student should be able to:

 explain and justify their interpretative approach to performance of a program of works.



- compose/improvise/arrange an original music work and perform a music work and explain how it is characteristic of a music style, tradition and/or genre relevant to the Investigation Topic.
- demonstrate artistic intent and understanding in a cohesive and engaging performance of music works.

Assessment tasks

Outcome 2:

- Compose, improvise or arrange, document and perform an original music work that demonstrate understanding of a music style, tradition and/or genre.
- Explain how the work is representative of the music style, tradition and/or genre. The explanation may be in one of the following formats:
 - o Oral
 - o multimedia.

UNIT 1: Music style and composition

In Music Style and Composition Units 1 to 4 students explore ways sound can be organised in music to create expressive outcomes. Through critical listening, analysis and composition, students develop understanding of ways music is organised, created and performed in a range of styles and traditions. Study of music works in diverse styles and traditions involves aural and visual analysis and consideration of the organisation and context of each work. Students' analysis and knowledge of how composers use ideas, stimuli and creative processes becomes a starting point for creating their own music.

Areas of study

- 1. Responses to music
- 2. Organisation and context
- 3. Creative responses

Outcomes

- 1. identify and describe characteristics of music and describe their subjective responses to music.
- 2. identify and describe music characteristics and contexts of selected works.
- 3. compose and/or arrange short music works and describe the creative processes used.

Assessment tasks

Suitable tasks for assessment may be selected from the following:

- a folio of four to eight responses based on aural analysis of excerpts of music from a range of styles and/or traditions, including music that is not representative of the Western art or popular music traditions. Responses may be presented in one or more the following formats:
 - o written
 - o oral
 - o multimedia including a written component.
 - aural and visual analysis and description of characteristics of selected works presented in one of the following formats:
 - a report
 - structured questions
 - \circ a multimedia presentation
 - o an annotated visual report
 - o an oral presentation.
- a folio that includes at least two creative responses and accompanying documentation.

UNIT 2: Music style and composition

Areas of study

- 1. Responses to music
- 2. Organisation and context
- 3. Creative process in music for multi-disciplinary forms

Outcomes

- identify and describe ways in which elements of music and compositional devices are used to create effects and elicit responses.
- describe characteristics of music in two works that combine music and non-music features, and discuss the contexts and processes used to create the music.
- create music for a work that combines music and nonmusic components, and describe the creative processes used.

Assessment tasks

Suitable tasks for assessment may be selected from the following:

- a folio of four to eight responses based on aural analysis of excerpts of music from a range of styles and/or traditions, including music used in multi-disciplnary art works. Responses may be:
 - o written
 - o oral
 - o in a multimedia format including a written component.
- aural and visual analysis and description of characteristics of selected works, and discussion of their context/s and the processes used to create them, presented in one of the following formats:
 - o a report
 - structured questions
 - \circ a multimedia presentation
 - o an annotated visual report
 - \circ an oral presentation.
- a folio that includes music for a work that has musical and non-music components and accompanying documentation.

UNIT 2: Music style and composition

Areas of study

- 1. Responses to music
- 2. Organisation and context
- 3. Creative responses

Outcomes

- to aurally analyse music and make critical responses music.
- analyse and describe the use of the elements of music and compositional devices in music works, and discuss the style and the context from which the works emerged
- create two original music exercises and describe the relationship between the exercises and the source music studied.

Assessment tasks

Outcome 1:

Aural analysis of and written critical responses to four previously unheard excerpts of music in the following format:

• responses to structured questions.

Outcome 2:

Analysis and discussion of selected works in any one or a combination of the following formats:

• a report

- responses to structured questions
- a multimedia presentation.

UNIT 4: Music style and composition

Areas of study

- 1. Responses to music
- 2. Organisation and context
- 3. Creative processes

Outcomes

- to aurally analyse music and make critical responses music.
- analyse and explain the use of the elements of music and compositional devices in a music work, and discuss the style and the context from which the work emerged.
- create, document and evaluate an original work

Assessment tasks

Outcome 1:

Aural analysis of and written critical responses to four excerpts of music in the following format:

responses to structured questions.

Outcome 2:

Analysis of a selected work in any one, or a combination of, the following formats:

- a written reportwritten responses to structured questions
- a multimedia report.

OUTDOOR EDUCATION AND ENVIRONMENTAL STUDIES

RATIONALE

Outdoor Education and Environmental Studies examines ways in which experience in the outdoor/natural environment influences human development. The primary focus of Outdoor Education is on understanding people's relationships with the outdoors and this is learnt in the classroom and through direct practical experience. Empathy for the natural environment is expected and fostered throughout the 4 units. This subject aims to provide the skills and knowledge to safely participate in activities in outdoor environments so that the environment is respected and appreciated. Students are also expected to participate in a week long camp, costing up to \$700.

UNIT 3: Relationships with Outdoor Environments

This unit considers the ecological, historical and social contexts of relationships between humans and environments in Australia.

Areas of study

- 1. Historical relationships with outdoor environments
- 2. Relationships with Australian outdoor environments since 1990

Outcomes

On completion of this unit the student should be able to:

- explain and evaluate how relationships with Australian outdoor environments have changed over time, with reference to specific outdoor experiences.
- analyse and evaluate the factors influencing societal relationships with outdoor environments since 1990, with reference to specific outdoor experiences.

Assessment tasks

Outcome 1 Explain and evaluate how relationships with Australian outdoor environments have changed over time, with reference to specific outdoor experiences.

• A journal or report demonstrating links between theoretical content studied and practical experiences undertaken

AND at least one task from the following:

- a case study
- a multimedia presentation or podcast
- a written report.

Outcome 2 Analyse and evaluate the factors influencing societal relationships with outdoor environments since 1990, with reference to specific outdoor experiences.

• A journal or report demonstrating links between theoretical content studied and practical experiences undertaken

AND at least one task from the following:

- data analysis
- structured questions.

UNIT 4: Sustainable outdoor relationships

This unit focuses on sustainable use and management of natural environments. It emphasises the need to develop a balance between human requirements and the conservation of the environment.

Areas of study

- 1. Healthy outdoor environments.
- 2. Sustainable outdoor environments.

Outcomes

On completion of this unit the student should be able to:

- evaluate the contemporary state of Australian outdoor environments, and analyse the importance of healthy
 outdoor environments and sustainability for individuals and society, with reference to specific outdoor
 experiences.
- analyse conflicts of interest over the use of outdoor environments, and evaluate practices and strategies for sustaining outdoor environments, with reference to specific outdoor experiences.

Assessment tasks

Outcome 1 Evaluate the contemporary state of Australian outdoor environments and analyse the importance of healthy outdoor environments and sustainability for individuals and society, with reference to specific outdoor experiences.

- A journal or report demonstrating links between theoretical content studied and practical experiences undertaken
- AND at least one task from the following:
 - data analysis
 - structured questions
 - a written report.

Outcome 2 Analyse conflicts over the use of outdoor environments, and evaluate practices and strategies for sustaining outdoor environments, with reference to specific outdoor experiences.

- A journal or report demonstrating links between theoretical content studied and practical experiences undertaken
- AND at least one task from the following:
 - a case study
 - structured questions



PHYSICAL EDUCATION

UNIT 1: Human body in motion

Areas of study

- 1. How does the musculoskeletal system work to produce movement?
- 2. How does the cardiorespiratory system function at rest and during physical activity?

Outcomes

On completion of this unit the student should be able to:

- collect and analyse information from, and participate in, a variety of practical activities to explain how the musculoskeletal system functions and its limiting conditions, and evaluate the ethical and performance implications of the use of practices and substances that enhance human movement.
- collect and analyse information from, and participate in, a variety of practical activities to explain how the cardiovascular and respiratory systems function and the limiting conditions of each system, and discuss the ethical and performance implications of the use of practices and substances to enhance the performance of these two systems.

Assessment Tasks

The core assessment task for Outcomes 1 and 2 is:

- a written report analysing participation in at least four physical activities that demonstrate how the musculoskeletal and cardiorespiratory systems work together to produce movement.
- Additionally, at least one task for the assessment of each of Outcomes 1 and 2 is to be selected from the following:
 - a practical laboratory report linking key knowledge and key skills to a practical activity or practical activities
 - a case study analysis
 - a data analysis
 - a critically reflective folio/diary of participation in practical activities
 - a visual presentation such as a graphic organiser, concept/mind map, annotated poster, presentation file
 - a multimedia presentation, including two or more data types (for example, text, still and moving images, sound) and involving some form of interaction or simulation
 - a physical simulation or model
 - an oral presentation such as podcast, debate
 - a written report
 - structure questions.

UNIT 2: Physical activity, sport and society

Areas of study

- 1. What are the relationships between physical activity, sport, health and society?
- 2. What are the contemporary issues associated with physical activity and sport?

Outcomes

On completion of the unit the student should be able to:

- collect and analyse data related to individual and population levels of participation in physical activity and sedentary behaviour to create, undertake and evaluate an activity plan that meets the physical activity and sedentary behaviour guidelines for an individual or a specific group.
- apply a social-ecological framework to research, analyse and evaluate a contemporary issue associated with participation in physical activity and/or sport in a local, national or global setting.

Assessment tasks

The assessment task for Outcome 1 is:

• a written plan and a reflective folio demonstrating participation in a program designed to either increase physical activity levels and/or reduce sedentary behaviour based on the physical activity and sedentary behavior guidelines for an individual or a selected group.

Suitable tasks for assessment of Outcome 2 may be selected from the following:

- a visual presentation such as a graphic organiser, concept/mind map, annotated poster, presentation file
- a multimedia presentation, including two or more data types (for example, text, still and moving images, sound) and involving some form of interaction or simulation
- an oral presentation
- a written report.

UNIT 3: Movement skills and energy for physical activity

Areas of study

- 1. How are movement skills improved?
- 2. How does the body produce energy?

Outcomes

On completion of this unit the student should be able to:

- collect and analyse information from, and participate in, a variety of physical activities to develop and refine movement skills from a coaching perspective, through the application of biomechanical and skill acquisition principles.
- use data collected in practical activities to analyse how the major body and energy systems work together to enable movements to occur, and explain the factors causing fatigue and suitable recovery strategies.

Assessment tasks

Outcome 1:

- Structured questions that draw on primary data which analyses a movement skill using biomechanical and skill acquisition principles.
- Outcome 2:
 - A laboratory report based on primary data collected during participation in a practical activity, which analyses the relative contribution of energy systems and acute responses to exercise.
- A response in one or more of the following forms, which focus on energy system interplay, fatigue and/or recovery.
 - a practical laboratory report
 - a case study analysis
 - a data analysis
 - a critically reflective folio/diary of participation in practical activities
 - a visual presentation
 - a multimedia presentation
 - structured questions.

UNIT 4: Training to improve Performance

Areas of study

1. What are the foundations of an effective training program?

2. How is training implemented effectively to improve fitness?

Outcomes

On completion of this unit the student should be able to:

- analyse data from an activity analysis and fitness tests to determine and assess the fitness components and energy system requirements of the activity
- participate in a variety of training methods, and design and evaluate training programs to enhance specific fitness components.

Assessment tasks

Outcome 1:

 A written report analysing data from an activity analysis to determine the relevant fitness components and energy system requirements in a selected activity, and including justification of the selection of appropriate tests to assess fitness

Outcome 2:

- A reflective folio of participation in a minimum of five different training sessions focusing on the components of the session, the training method completed and the implementation of training principles to the fitness components being trained.
- A written report that will draw on the personal experiences recorded in the folio to design a six-week training
 program for a given case study.
- A response in one or more of the following formats, which links chronic adaptations of the cardiovascular, respiratory and muscular systems to training methods and improved performance:
 - a case study analysis
 - o a data analysis
 - structured questions.



PHYSICS

AIMS

This study enables students to:

- apply physics models, theories and concepts to describe, explain, analyse and make predictions about diverse physical phenomena
- understand and use the language and methodologies of physics to solve qualitative and quantitative problems in familiar and unfamiliar contexts

and more broadly to:

- understand the cooperative, cumulative, evolutionary and interdisciplinary nature of science as a human endeavour, including its possibilities, limitations and political and sociocultural influences
- develop a range of individual and collaborative science investigation skills through experimental and inquiry tasks in the field and in the laboratory
- develop an informed perspective on contemporary science-based issues of local and global significance
- apply their scientific understanding to familiar and to unfamiliar situations, including personal, social, environmental and technological contexts
- develop attitudes that include curiosity, open-mindedness, creativity, flexibility, integrity, attention to detail and respect for evidence-based conclusions
- understand and apply the research, ethical and safety principles that govern the study and practice of the discipline in the collection, analysis, critical evaluation and reporting of data
- communicate clearly and accurately an understanding of the discipline using appropriate terminology, conventions and formats.

UNIT 1: What ideas explain the physical world?

Areas of study

- 1. How can thermal effects be explained?
- 2. How do electric circuits work?
- 3. What is matter and how is it formed?

Outcomes

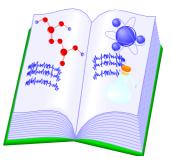
On completion of this unit the student should be able to:

- apply thermodynamic principles to analyse, interpret and explain changes in thermal energy in selected contexts, and describe the environmental impact of human activities with reference to thermal effects and climate science concepts.
- investigate and apply a basic DC circuit model to simple battery-operated devices and household electrical systems, apply mathematical models to analyse circuits, and describe the safe and effective use of electricity by individuals and the community.
- explain the origins of atoms, the nature of subatomic particles and how energy can be produced by atoms

Assessment tasks

For outcomes 1, 2 and 3. A selection of the following:

- an annotated folio of practical activities
- data analysis
- design, building, testing and evaluation of a device
- an explanation of the operation of a device



- a proposed solution to a scientific or technological problem
- a report of a selected physics phenomenon
- a modelling activity
- a media response
- a summary report of selected practical investigations
- a reflective learning journal/blog related to selected activities or in response to an issue
- a test comprising multiple choice and/or short answer and/or extended response

UNIT 2: What do experiments reveal about the physical world?

Areas of study

- 1. How can motion be described and explained?
- 2. Options
 - What are the stars?

What are the stars? Is there life beyond Earth's Solar System? How do forces act on the human body? How can AC electricity charge a DC device? How do heavy things fly? How do fusion and fission compare as viable nuclear energy power sources? How is radiation used to maintain human health? How do particle accelerators work? How can human vision be enhanced? How do instruments make music? How can performance in ball sports be improved? How does the human body use electricity?

3. Practical investigation

Outcomes

On completion of this unit the student should be able to:

- investigate, analyse and mathematically model the motion of particles and bodies.
- apply concepts of light and nuclear physics to describe and explain the genesis and life cycle of stars, and describe the methods used to gather this information.
- apply concepts of light and atomic physics to describe and analyse the search for life beyond Earth's Solar System.
- analyse the physical properties of organic materials including bone, tendons and muscle, and explain the uses and effects of forces and loads on the human body.
- construct, test and analyse circuits that change AC voltage to a regulated DC power supply, and explain the use of transducers to transfer energy
- apply concepts of flight to investigate and explain the motion of objects through fluids.
- apply the concepts of nuclear physics to describe and analyse nuclear energy as a power source.
- use nuclear physics concepts to describe and analyse applications of electromagnetic radiation and particle radiation in medical diagnosis and treatment.
- apply the principles related to the behaviour of charged particles in the presence of electric and magnetic fields to describe and analyse the use of accelerator technologies in high energy physics.
- apply a ray model of light and the concepts of reflection and refraction to explain the operation of optical instruments and the human eye, and describe how human vision can be enhanced.
- apply a wave model to describe and analyse the production of sound in musical instruments, and explain why particular combinations of sounds are more pleasing to the human ear than others.
- apply concepts of linear, rotational and fluid mechanics to explain movement in ball sports.
- explain the electrical behaviour of the human body and apply electricity concepts to biological contexts.
- design and undertake an investigation of a physics question related to the scientific inquiry processes of data collection and analysis, and draw conclusions based on evidence from collected data.

Assessment tasks

For Outcomes 1 and 2

- an annotated folio of practical activities
- data analysis
- design, building, testing and evaluation of a device
- an explanation of the operation of a device
- a proposed solution to a scientific or technological problem
- a report of a selected physics phenomenon
- a modelling activity
- a media response
- a summary report of selected practical investigations
- a reflective learning journal/blog related to selected activities or in response to an issue
- a test comprising multiple choice and/or short answer and/or extended response.

For Outcome 3

• a report of a practical investigation (student-designed or adapted) using an appropriate format, for example a scientific poster, practical report, oral communication or digital presentation.

UNIT 3: How do fields explain motion and electricity?

Areas of study

- 1. How do things move without contact?
- 2. How are fields used to move electrical energy?
- 3. How fast can things go?

Outcomes

On completion of this unit the student should be able to:

- analyse gravitational, electric and magnetic fields, and use these to explain the operation of motors and particle accelerators and the orbits of satellites
- analyse and evaluate an electricity generation and distribution system
- investigate motion and related energy transformations experimentally, analyse motion using Newton's laws of
 motion in one and two dimensions, and explain the motion of objects moving at very large speeds using
 Einstein's theory of special relativity.

Assessment tasks

At least one task (which is different from the task/s selected for Outcomes 2 and 3) selected from:

- annotations of at least two practical activities from a practical logbook
- a report of a student investigation
- a report of a physics phenomenon
- data analysis
- media analysis/response
- design, building, testing and evaluation of a device
- an explanation of the operation of a device
- a proposed solution to a scientific or technological problem
- a response to structured questions
- a reflective learning journal or blog related to selected activities or in response to an issue
- a test (short answer and extended response



UNIT 4: How can two contradictory models explain both light and matter?

Areas of study

- 1. How can waves explain the behaviour of light?
- 2. How are light and matter similar?
- 3. Practical investigation

Outcomes

On completion of this unit the student should be able to:

- apply wave concepts to analyse, interpret and explain the behaviour of light.
- provide evidence for the nature of light and matter, and analyse the data from experiments that supports this evidence.
- design and undertake a practical investigation related to waves or fields or motion, and present methodologies, findings and conclusions in a scientific poster.

Assessment tasks

- annotations of at least two practical activities from a practical logbook
- a report of a student investigation
- a report of a physics phenomenon
- data analysis
- media analysis/response
- design, building, testing and evaluation of a device or physical model
- an explanation of the operation of a device or physical model
- a proposed solution to a scientific or technological problem
- a response to structured questions
- a reflective learning journal or blog related to selected activities or in response to an issue
- a test (short answer and extended response)
- Structured scientific poster according to VCAA template.





PSYCHOLOGY

RATIONALE

VCE Psychology provides students with a framework for exploring the complex interactions between biological, psychological and social factors that influence human thought, emotions and behaviour. In undertaking this study, students apply their learning to everyday situations including workplace and social relations. They gain insights into a range of psychological health issues in society.

UNIT 1: How are behaviour and mental processes shaped?

Areas of study

- How does the brain function? 1.
- 2. What influences psychological development? 3.
 - Student-directed research investigation
 - Topic 1: Biopsychology
 - Topic 2: Brain and the use of technology
 - **Topic 3: Cognition**
 - Topic 4: Psychological development
 - Topic 5: Mental health and disorder
 - Topic 6: Changing thoughts, feelings and behaviour

Outcomes

On completion of this unit students should be able to:

- describe how understanding of brain structure and function has changed over time, explain how different areas of the brain coordinate different functions, and explain how brain plasticity and brain damage can change psychological functioning.
- identify the varying influences of nature and nurture on a person's psychological development, and explain different factors that may lead to typical or atypical psychological development.
- investigate and communicate a substantiated response to a question related to brain function and/or development, including reference to at least two contemporary psychological studies and/or research techniques.

Assessment tasks

Outcomes 1 & 2:

- a report of a practical activity involving the collection of primary data ٠
- a research investigation involving the collection of secondary data
- a brain structure modelling activity
- a logbook of practical activities
- analysis of data/results including generalisations/conclusions
- media analysis/response
- problem solving involving psychological concepts, skills and/or issues
- a test comprising multiple choice and/or short answer and/or extended response
- a reflective learning journal/blog related to selected activities or in response to an issue Outcome 3:
 - a report of an investigation into brain function and/or development that can be presented in various formats, for example digital presentation, oral presentation, or written report.

UNIT 2: How do external factors influence behaviour and mental processes?

Areas of study

- 1. What influences a person's perception of the world?
- 2. How are people influenced to behave in particular ways?
- 3. Student-directed practical investigation

Outcomes

On completion of this unit students should be able to:



- compare the sensations and perceptions of vision and taste, and analyse factors that may lead to the occurrence of perceptual distortions.
- identify factors that influence individuals to behave in specific ways, and analyse ways in which others can influence individuals to behave differently.
- design and undertake a practical investigation related to external influences on behaviour, and draw conclusions based on evidence from collected data.

Assessment tasks

Outcome 1 & 2:

- a report of a practical activity involving the collection of primary data
- a research investigation involving the collection of secondary data
- a brain structure modelling activity
- a logbook of practical activities
- analysis of data/results including generalisations/conclusions
- media analysis/response
- problem solving involving psychological concepts, skills and/or issues
- a test comprising multiple choice and/or short answer and/or extended response
- a reflective learning journal/blog related to selected activities or in response to an issue

Outcome 3:

 a report of an investigation into internal and/or external influences on behaviour that can be presented in various formats, for example digital presentation, oral presentation, scientific poster or written report.

UNIT 3: How does experience affect behaviour and mental processes?

Areas of study

- 1. How does the nervous system enable psychological functioning?
- 2. How do people learn and remember?

Outcomes

On completion of this unit the student should be able to:

- explain how the structure and function of the human nervous system enables a person to interact with the external world and analyse the different ways in which stress can affect nervous system functioning.
- apply biological and psychological explanations for how new information can be learnt and stored in memory, and provide biological, psychological and social explanations of a person's inability to remember information.

Assessment tasks

Outcomes 1 & 2: A selection of at least 2 tasks from the following:

- annotations of at least two practical activities from a practical logbook
- evaluation of research
- a report of a student investigation
- an analysis of data including generalisations and conclusions
- a visual presentation
- media analysis/response
- a response to a set of structured questions
- a reflective blog/learning journal related to selected activities or in response to an issue
- a test
- a flow chart

UNIT 4: How is wellbeing developed and maintained?

Areas of study

- 1. How do levels of consciousness affect mental processes and behaviour?
- 2. What influences mental wellbeing?
- 3. Practical investigation

Outcomes

On completion of this unit the student should be able to:

- explain consciousness as a continuum, compare theories about the purpose and nature of sleep, and elaborate on the effects of sleep disruption on a person's functioning.
- explain the concepts of mental health and mental illness including influences of risk and protective factors, apply a biopsychosocial approach to explain the development and management of specific phobia, and explain the psychological basis of strategies that contribute to mental wellbeing.
- design and undertake a practical investigation related to mental processes and psychological functioning, and present methodologies, findings and conclusions in a scientific poster.

Assessment tasks

Outcome 1:

Analysis and evaluation of stimulus material using at least one task selected from:

- annotations of at least two practical activities from a practical work folio
- comparison of different states of consciousness
- a report of a student investigation
- analysis of data including generalisations and conclusions
- media analysis/response
- a response to a set of structured questions
- a reflective learning journal/blog related to selected activities or in response to an issue

a test

Outcome 2:

Application of a biopsychosocial approach using at least one task (which is different from the type of task/s for Outcome 1) selected from:

- annotations of at least two practical activities from a practical work folio
- analysis of the development of specific phobia or the maintenance of mental health
- a report of a student investigation
- analysis of data including generalisations and conclusions
- media analysis/response
- a response to a set of structured questions
- a reflective learning journal/blog related to selected activities or in response to an issue
- a test

Outcome 3:

• A structured scientific poster according to the VCAA template

VISUAL COMMUNICATION DESIGN

RATIONALE

The Visual Communication Design study examines the way visual language can be used to convey ideas, information and messages in the fields of communication, environmental and industrial design. Designers create and communicate through visual means to shape the everyday quality of life for individuals, communities and societies. Visual communication design relies on drawing as the primary component of visual language to support the conception and visualisation of ideas.

UNIT 1: Introduction to Visual Communication Design

Areas of study

- 1. Drawing as a means of communication
- 2. Design elements and design principles
- 3. Visual Communications in Context

Outcomes

On completion of this unit the student should be able to:

- 1. create drawings for different purposes using a range of drawing methods, media and materials.
- 2. select and apply design elements and design principles to create visual communications that satisfy stated purposes.
- 3. describe how visual communications in a design field have been influenced by past and contemporary practices, and by social and cultural factors.

Assessment tasks

- folio of observational, visualisation and presentation drawings created using manual and/or digital methods
- final presentations created using manual and/or digital methods
- written report of a case study
- annotated visual report of a case study
- oral report of a case study supported by written notes and/or visual materials
- presentation using digital technologies



UNIT 2: Applications of Visual Communication within design fields

Areas of study

- 1. Technical drawing in context
- 2. Type and Imagery in context
- 3. Applying the design process

Outcomes

On completion of this unit the student should be able to:

- 1. create presentation drawings that incorporate relevant technical drawing conventions and effectively communicate information and ideas for a selected design field.
- 2. manipulate type and images to create visual communications suitable for print and screen-based presentations, taking into account copyright
- 3. apply stages of the design process to create a visual communication appropriate to a given brief.

Assessment tasks

- folio of typography and image ideas and concepts created using manual and digital methods
- folio of technical drawings created using manual and/or digital methods
- · written and/or oral descriptions and analysis of historical and contemporary design examples
- folio demonstrating the design process created using manual and/or digital methods
- final presentations of visual communications.

UNIT 3: Visual communication design practices

Areas of study

- 1. Analysis and practice in context
- 2. Design industry practice
- 3. Developing a brief and generating ideas

Outcomes

On completion of this unit the student should be able to:

- 1. create visual communications for specific contexts, purposes and audiences that are informed by their analysis of existing visual communications in the three design fields.
- 2. discuss the practices of a contemporary designer from each of the design fields and explain factors that influence these practices.
- 3. apply design thinking in preparing a brief with two communication needs for a client, undertaking research and generating a range of ideas relevant to the brief.

Assessment tasks

Outcome 1 Create visual communications for specific contexts, purposes and audiences that are informed by their analysis of existing visual communications in the three design fields.

- In response to given stimulus material, create three visual communications designs for different contexts, purposes and audiences. These visual communications will include evidence of:
- two- or three-dimensional presentation drawing
- use of manual and digital methods.

AND

An analysis of the connections between the three visual communications and the stimulus material using one of the following forms:

- annotated visual communications
- written or oral report supported by visual evidence.

Outcome 2 Discuss the practices of a contemporary designer from each of the design fields and explain factors that influence these practices. Any one or a combination of the following tasks:

- a written report
- short and extended responses
- structured questions
- an annotated visual report

UNIT 4: Visual communication design development, evaluation and presentation

Areas of study

- 1. Development, refinement and evaluation
- 2. Final presentations
- 3. Evaluation and explanation

Outcomes

On completion of this unit the student should be able to:

- 1. develop distinctly different concepts for each communication need and devise a pitch to present concepts to an audience, evaluating the extent to which these concepts meet the requirements of the brief.
- 2. produce a final visual communication presentation for each communication need that satisfies the requirements of the brief.

Assessment tasks

Unit 3 Outcome 3 Apply design thinking in preparing a brief with two communication needs for a client, undertaking research and generating a range of ideas relevant to the brief.

A brief that identifies the contexts, constraints, client's needs and target audience, and a folio generating ideas relevant to the brief. The development folio for each need will include evidence of:

- use of design process and design thinking strategies annotated research for information and inspiration
- observational and visualisation drawings
- generation of a wide range of design ideas.

Unit 4 Outcome 1 Develop distinctly different concepts for each communication need and devise a pitch to present concepts to an audience, evaluating the extent to which these concepts meet the requirements of the brief. A folio of conceptual developments for each need. The conceptual development folio for each need will include evidence of:

- use of design process and design thinking strategies
- application of manual and digital methods, media, materials, design elements, design principles, presentation formats
- development and refinement of concepts
- construction and presentation of a pitch to an audience
- reasons for selection of preferred concepts for each need.

Outcome 2 Produce a final visual communication presentation for each communication need that satisfies the requirements of the brief. Two distinct final presentations in two separate presentation formats that fulfil the communication needs of the client as detailed in the brief developed in Unit 3. Evaluate how each presentation satisfies the requirements of the brief and evaluate the design process used to produce final visual communications.



Certificate III in Music CUS 30109

Duration:

This program is conducted over two years

Course Aims

Please note this course can be taken as: Group performance/ **solo or Technical production.** Certificate III in Music develops in student's advanced and diverse performing, technical and business skills in relation to the contemporary music industry.

This program is a performance program and includes areas of study in which students must learn an instrument and perform on that instrument with others and by themselves.

Course Content

The curriculum follows the National Training Package for Music and covers the following National Competency modules.

CUFCMP301A	Implement copyright arrangements	
CUSIND301A	Work effectively in the music industry	
CUSIND302A	Plan a career in the creative arts industry	
CUSMLT302A	Develop and apply aural-perception skills	
CUSMPF204A	Play music from simple written notation	
CUSMPF302A	Prepare for performances	
CUSMPF203A	Develop ensemble skills for playing or singing music	
CUSOHS301A	Follow occupational health and safety procedures	
CUSMPF301A	Develop technical skills in performance	
CUSMPF305A	Develop improvisation skills	
CUSMLT301A	Apply knowledge of genre to music	
CUSMPF402A	Develop and maintain stagecraft skills	
CUSMPF404A	Perform music as part of a group	

Program subject to change

Contribution to the VCE

On completion of Certificate III in Music, students will receive two VCE units at 1-2 level and two units at 3-4 level. This will count as a 3-4 sequence. Students undertake a Scored Assessment contributing towards the ATAR.

Assessment

Vocational Education and Training assessment is competency based and includes practical activities, written assignments, oral and written questioning and observation. This is a hands-on course with practical assessment.

Pathways

This program has pathways into Certificate IV in Music, University and TAFE courses in Music and Audio Engineering.



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Certificate II in Outdoor Recreation SIS20210

Duration:

This program is conducted over one year

Course Aims

This program will provide the students with specific skills and knowledge required to assist in the conduct of activities at outdoor recreation centres and camps.

Course Content

SISOODR201A	Assist in conducting outdoor recreation activities	
SISOOPS201A	Minimise environmental impact	
HLTFA301B	Apply first aid	
SISXIND101A	Work effectively in sport and recreation environments	
SISXCAI102A	Assist in preparing and conducting sport and recreation sessions	
SISOHS101A	Follow occupational health and safety practices	
SISXEMR201A	Respond to emergency situations	
SISOBWG201A	Demonstrate bushwalking skills in a controlled environment	
SISONAV201A	Navigate in a controlled environment	
SISOSNK201A	Demonstrate snorkelling activities	
SISOKYK201A	Demonstrate simple kayaking skills	
SISOFSH201A	Catch and handle fish	
SISOFSH206A	Locate and attract fish	
SISOCYT202A	Demonstrate basic cycling skills	
SISOMBK201A	Demonstrate basic off road cycling skills	
SISOSRF201A	Demonstrate surf survival skills and self-rescue skills	
SISOSRF202A	Demonstrate basic controlled surfing manoeuvres	
SISOOPS202A	Use and maintain a temporary overnight site	
SISFAC201A	Maintain sport and recreation equipment for activities	

• Program subject to change

Assessment

Vocational Education and Training assessment is competency based. This is a hands-on course with practical assessment.

Contribution to the VCE

On completion of Certificate II in Outdoor Recreation students will receive two VCE units at 1-2 level.

Pathways

This program has pathways into the Outdoor Recreation industry and Yr12 Outdoor Environmental studies.

Distance Education

Students may undertake languages other than English not offered at Apollo Bay P-12 College through the Victorian School of Languages. Student must have a background in that language in order for the student to enrol. This may occur where a student has a family background in a particular language or may have past experience in studying that language.

In some instances student may wish to undertake a subject that is not on offer at Apollo Bay P-12 College or where very low numbers of students wishing to enrol in that subject mean that it cannot run. The study may then be undertaken through Distance Education.

Victorian School of Languages

The Victorian School of Languages (VSL) Distance Education offers an extensive range of Languages including:

French	Years 7-12
German	Years 7-12
Italian	Years 7-12
Spanish	Years 7-12



Cost: \$160.00 per annum

Distance Education Centre

The Distance Education Centre offers an extensive range of VCE subjects. A student may only undertake a subject via this study mode if the subject is not on offer at Apollo Bay P-12 College or where a timetable clash occurs. **Cost:** \$160.00

The decision to undertake a study through Distance Education should be thought through very carefully. Students must be highly motivated and well organised.

ONLINE LEARNING

Apollo Bay College has the facilities to support students who wish to study a VCE or VET subject that is not being offered directly at the College through the use of online learning programs. The students will be part of a virtual class that may extend across Victoria and will be delivered by an experienced classroom teacher at one of the participating schools. Students will also be supported in their studies by staff within our College. This program allows students to choose subjects from a wider range including: