



PATTERSON RIVER
SECONDARY COLLEGE

SENIOR HANDBOOK 2022

PERSISTENCE · EXCELLENCE · COMMUNITY · RESPECT

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INTRODUCTION

The Victorian Certificate of Education (VCE) was introduced in Victoria in 1992 as a senior secondary certificate to recognise the successful completion of VCE Years 11 and 12 and to provide a pathway into tertiary education, the TAFE sector or employment.

This digital Senior School Handbook provides information about VCE subjects offered at Patterson River Secondary College to assist current Year 10 students to make informed decisions in planning their pathway through the VCE. Year 10 students should read this handbook carefully to access the information they require as well as generate questions they should ask relevant VCE subject teachers and their assigned Course Counsellor.

How is the VCE structured?

For the majority of students the VCE is completed over two years in Years 11 and 12 although some students will begin their VCE by undertaking one VCE Units 1 and 2 study in Year 10.

A subject is known as a VCE study, for example English or Biology. Each VCE study is made up of four units. Typically VCE Units 1 and 2 is studied in their first year in Year 11 and VCE Units 3 and 4 in the second year in Year 12. Each unit is a semester in length.

In VCE Year 11 students will undertake 6 VCE studies in each semester so that they will complete 12 units by the end of that year.

In VCE Year 12 students will undertake 5 VCE studies in each semester as a Unit 3 – 4 sequence for the purpose of deriving a Study Score from these studies.

How do I successfully achieve my VCE?

The Victorian Curriculum and Assessment Authority (VCAA) administers the VCE and has set the following criteria for successful completion of the VCE:

- the student must satisfactorily complete a minimum of 16 VCE units,
- three units must come from the English group of which two must be a Unit 3 – 4 sequence, and
- the student must satisfactorily complete at least three other Unit 3 – 4 sequences from other studies.

What studies can I undertake in my VCE?

There are a diverse range of VCE studies across English, Sciences, Mathematics, Humanities, the Arts, Technology and Languages. This Senior School Handbook provides descriptions for the 36 VCE studies offered at Patterson River Secondary College in 2022.

English (2021 Domain Leader: Mr Vellios)	Mathematics (2021 Domain Leader: Mr Tweedale)	Science (2021 Domain Leader: Ms Mackenzie)
English EAL Literature	Foundation Maths General Maths Further Maths Maths Methods Specialist Maths	Biology Chemistry Physics Psychology
Health & Physical Education (2021 Domain Leader Health: Ms Daly 2021 Domain Leader PE: Ms Robbins)	Performing Arts (2021 Domain Leader: Ms Griffiths)	Visual Arts (2021 Domain Leader: Ms Stott)
Health & Human Development Outdoor & Environmental Studies Physical Education	Dance Drama Music Performance Music Investigation Theatre Studies	Art Studio Art Visual Communication Design

Humanities (2021 Domain Leader: Ms Molloy)	Business (2021 Domain Leader: Ms Molloy)	Digital Technologies (2021 Domain Leader: Mr Ciappara)
Geography History Philosophy	Business Management Legal Studies	IT Computing Data Analytics Software Development
Technology (2021 Food Studies Domain Leader: Ms Holden) (2021 Design Technology Domain Leader: Ms Royale)	Languages (2021 Domain Leader: Ms Stokes)	
Food Studies Product Design & Technology Systems Engineering	German	

Other VCE studies may be available to students by enrolment in the VCE distance education provider, Virtual School Victoria (VSV) or another language, other than German, through enrolment in the Victorian School of Languages (VSL). Enrolment with these external VCE providers will need to be negotiated with your Course Counsellor.

How do I select my VCE studies?

The most appropriate way to select your VCE program is to select studies that:

- are based on your personal interests and strengths,
- are pre-requisite subjects for admission into tertiary degrees or TAFE courses that align with your career pathway,
- have a degree of flexibility that will allow you to vary your career pathway if required throughout the next two years.

How am I assessed in VCE?

Assessment in VCE Unit 1 – 2 studies is made by your teachers through School-based assessments. School-based assessments are set by your teacher and include School-assessed Coursework (SACs) that are completed at the College, and School-assessed Tasks (SAT) that are completed at the College and at home. These School-based assessments assess your achievement of the learning outcomes in each study.

For Units 1 – 2 studies the College will award you either S (Satisfactory) or N (Not Satisfactory) result and report this result to the VCAA. At Patterson River Secondary College, you will also receive an indication of achievement on each SAC or SAT on your semester report but only the S result contributes to the achievement of your VCE.

For Units 3 – 4 studies you will complete learning outcomes to achieve an S or N result, however you will also receive your level of achievement for that learning outcome. There are three graded assessments for each VCE study at Units 3 – 4. These school-based assessments, as well as the end-of-year examinations, are used to calculate a study score in each VCE study.

External assessments are set and marked by the VCAA. They are the same for all students taking the same VCE study. External assessments are usually a written examination but in some studies can also include a performance examination.

External assessments are marked by VCAA assessors who are experts in their area of study. All VCE studies are marked to the same standard and there are multiple checks to make sure that marking is fair.

What is a VCE Study Score?

In every VCE study where a student completes at least two graded assessments and completes the end-of-year external examination they will receive a Study Score in that study.

A Study Score is a score between 0 to 50 that indicates your ranking against every other student in the state that is also completing that study in that year.

What is an ATAR?

Tertiary institutions use the Australian Tertiary Achievement Rank (ATAR) as a selection instrument to determine which VCE students are offered positions in tertiary degree courses for the following year. For a student to achieve an ATAR they need to have a satisfactory result in at least four Unit 3 – 4 sequences, one of which must come from the English group. The ATAR is calculated by the Victorian Tertiary Admissions Centre (VTAC) and is represented as a number between 0.00 and 99.95 indicating your ranking relative to every other VCE student in the state in that year.

ALPHABETICAL LIST OF VCE STUDIES OFFERED AT PATTERSON RIVER SECONDARY COLLEGE

VCE ART

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study VCE Art should consider the following:

VCE Elective Charge

There is an elective charge of **\$110** for VCE Art Unit 1-2 and for VCE Art Unit 3-4.

This subject will suit you if you enjoy:

Practical and hands on work, creative and inquisitive thinking, experimenting and problem solving, exploring and developing ideas prior to creating artworks, discussing, analysing, writing/responding/drawing meaning from artwork.

This subject can lead to a career pathway in the following areas:

Artist, Graphic Artist, Animation, Architect, Art Advisor, Art Auctioneer, Art Conservator, Art Critic, Art Preservationist, Art Therapist, Ceramicist, Art Teacher, Fabric Designer, Exhibition Manager, Illustrator, Florist, Art Direction, Graphic Design, Interior Decorator, Muralist, Set Design and Construction, Sign Painting, Gallery Education Officer, Concept Design.

Other subjects that complement this subject include:

- Visual Communication Design
- Studio Art
- English (any) and
- Product Design and Technology.

Further considerations:

As a hands-on subject, Art provides the opportunity to develop a folio as a requirement for entry into specific tertiary courses.

Teachers with experience in this subject: Ms Stott

VCE Art Unit Descriptions

In the study of VCE Art, students study artworks and the role of art in society. Students develop their artistic practice, expression and communication of ideas using a range of processes, materials and techniques. By combining a focused study of artworks with practical art making, they are encouraged to recognise the connection between research and art making.

Unit 1: Artworks, experience and meaning.

Students explore how art elements, art principles, materials and techniques and artistic processes communicate meaning. They examine artists in different societies, cultures and historical periods. In their practical work, students explore areas of personal interest and the characteristics of materials and techniques in a visual diary.

Unit 2: Artworks and contemporary culture.

This unit examines different ways artists interpret and present social and personal issues in their artistic practice. In students' own practice, they continue to use the art process and visual language to explore materials and techniques and develop personal and creative responses.

Unit 3: Artworks, ideas and values.

Students study artists who have produced works before 1990 and since 1990. Students use the Analytical Frameworks for analysing and interpreting the meaning of artworks. Their art making is supported through investigation, exploration and application of a variety of materials, techniques and processes, resolving one completed artwork.

Unit 4: Artworks, ideas and viewpoints.

In this unit students study artworks and develop personal points of view. They build their learning and conceptual understanding around art in society and consider how ideas and issues are communicated through artworks. In relation to their artwork, students build upon the ideas and concepts and present a body of work and at least one finished artwork.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed task, school-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 10%

Unit 4 school-assessed coursework: 10%

Units 3 and 4 school-assessed task: 50%

Units 3 and 4 examination: 30%

VCE BIOLOGY

Study Design Accreditation Period: 2022 – 2026

Advice & Pathways

Students choosing to study Biology should consider the following:

VCE Elective Charge

There is no elective charge for VCE Biology.

This subject will suit you if you enjoy:

- Conducting experimental investigations
- Reading and summarise scientific texts
- Memorise facts such as the names and functions of specific biological structures
- Presenting and analysing data
- Using specific vocabulary related to key biological principles and concepts
- Conducting independent and collaborative research and
- Solving problems.

This subject can lead to a career pathway in the following areas:

Biology can lead to a range of careers and studies such as: the Health and Medical Sciences, Sports Science, Agriculture, Animal and Veterinary studies and Science Education.

Other subjects that complement this subject include:

Biology can be undertaken with a range of other studies in the Sciences, Humanities and Mathematics areas; and can be seen as part of a balanced set of studies where breadth of experience is seen as worthwhile. It is typically studied with Chemistry and/or Psychology, as well as Mathematics. Many students choose to study Biology together with studies drawn from the humanities, Health and PE, Arts/Technology and Language areas.

Further considerations:

- Students should always check with Careers Coordinator for Biology as a prerequisite study for tertiary courses.
- Satisfactory completion of Year 10 Science and/or teacher recommendation is recommended. It is strongly recommended that a student completes VCE Biology Units 1 and 2 before undertaking the Unit 3-4 sequence.

Teachers with experience in this subject: Ms Cavey and Ms Mackenzie

Biology Unit Description

Biology is a diverse and evolving science discipline that seeks to understand and explore the nature of life, past and present. Despite the diversity of organisms and their many adaptations for survival in various environments, all life forms share a degree of relatedness and a common origin.

Unit 1: How do organisms regulate their functions?

In this unit students examine the cell as the structural and functional unit of life, from the single celled to the multicellular organism, including the requirements for sustaining cellular processes. Students focus on cell growth, replacement and death and the role of stem cells in differentiation, specialisation and renewal of cells. They explore how systems function through cell specialisation in vascular plants and animals, and consider the role homeostatic mechanisms play in maintaining an animal's internal environment.

Unit 2: How does inheritance impact on diversity?

In this unit students explore reproduction and the transmission of biological information from generation to generation and the impact this has on species diversity. They apply their understanding of chromosomes to explain the process of meiosis. Students consider how the relationship between genes, the environment and epigenetic factors influence phenotypic expression. They explain the inheritance of characteristics, analyse patterns of inheritance, interpret pedigree charts and predict outcomes of genetic crosses.

Students analyse the advantages and disadvantages of asexual and sexual reproductive strategies, including the use of reproductive cloning technologies. They study structural, physiological and behavioural adaptations that enhance an organism's survival. Students explore interdependences between species, focusing on how keystone species and top predators structure and maintain the distribution, density and size of a population. They also consider the contributions of Aboriginal and Torres Strait Islander knowledge and perspectives in understanding the survival of organisms in Australian ecosystems.

Unit 3: How do cells maintain life?

In this unit students investigate the workings of the cell from several perspectives. They explore the relationship between nucleic acids and proteins as key molecules in cellular processes. Students analyse the structure and function of nucleic acids as information molecules, gene structure and expression in prokaryotic and eukaryotic cells and proteins as a diverse group of functional molecules. They examine the biological consequences of manipulating the DNA molecule and applying biotechnologies.

Students explore the structure, regulation and rate of biochemical pathways, with reference to photosynthesis and cellular respiration. They explore how the application of biotechnologies to biochemical pathways could lead to improvements in agricultural practices.

Unit 4: How does life change and respond to challenges?

In this unit students consider the continual change and challenges to which life on Earth has been, and continues to be, subjected to. They study the human immune system and the interactions between its components to provide immunity to a specific pathogen. Students consider how the application of biological knowledge can be used to respond to bioethical issues and challenges related to disease. Students consider how evolutionary biology is based on the accumulation of evidence over time. They investigate the impact of various change events on a population's gene pool and the biological consequences of changes in allele frequencies. Students examine the evidence for relatedness between species and change in life forms over time using evidence from paleontology, structural morphology, molecular homology and comparative genomics. Students examine the evidence for structural trends in the human fossil record, recognising that interpretations can be contested, refined or replaced when challenged by new evidence.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 16%

Unit 4 school-assessed coursework: 24%

Units 3 and 4 examination: 60%

VCE BUSINESS MANAGEMENT

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Business Management should consider the following:

VCE Elective Charge

There is no elective charge for VCE Business Management.

This subject will suit you if you enjoy:

Discussions, creative and critical thinking, solving problems, planning projects, learning key facts, figures and vocabulary.

This subject can lead to a career pathway in the following areas:

Business, Management, Marketing, Commerce, Accounting, Public Relations, Entrepreneur.

Other subjects that complement this subject include:

- Accounting
- IT Computing
- Economics and
- Legal Studies.

Teachers with experience in this subject: Mr O'Brien and Mr Slater

Business Management Unit Description

Unit 1: Planning a business

In this unit students investigate how business ideas are created and how conditions can be fostered for new business ideas to emerge. Students explore some of the issues that need to be considered before a business can be established. Students consider factors from the external environment such as legal, political, social, economic, technological, global and corporate social responsibility factors and the effects these may have on the decisions made when planning a business. Students investigate how the internal environment relates to the external environment and the effects of this relationship on planning a business. Students explore the factors within the internal environment and consider how planning decisions may have an effect on the ultimate success of a business

Unit 2: Establishing a business.

In this unit students are introduced to the legal requirements and financial considerations that are vital to establishing a business. They also consider the implications for the business if these requirements are not met. In this area of study students develop their understanding that marketing encompasses a wide range of management practices, from identifying the needs of the target market and establishing a brand presence, through to considerations on price, product features and packaging, promotion, place, people, physical evidence and processes. They also consider effective public relations strategies and the benefits and costs these can bring to a business. Students examine the staffing requirements that will meet the needs and objectives of the business and contribute to productivity and effectiveness. They research the processes undertaken by the business with relation to the recruitment, selection and induction of staff. Students consider the opportunities that the skills and capabilities of staff can contribute to the business, the legal obligations that must be addressed and the relationship between employers and employees within a business.

Unit 3: Managing a business.

Students investigate potential conflicts between stakeholders and the different demands of stakeholders on a business. They examine a range of management styles and management skills that may be used when managing a business and apply these to contemporary business case studies. Students investigate essential factors such as motivation and training involved in effectively managing employees during their time at a business to ensure the business objectives are achieved. Students examine operations management and consider the best and most responsible use of available resources for the production of quality goods or services in a competitive, global environment.

Unit 4: Transforming a business.

Students investigate the ways a business can search for new business opportunities as a source of future business growth and consider current forces for change on a business. They apply Lewin's Force Field Analysis theory to contemporary case studies and consider approaches to strategic management, using Porter's (1985) Generic Strategies. Students consider the importance of leadership in change management, how leaders can inspire change and the effect change can have on the stakeholders in a business. They consider the principles of Senge's Learning Organisation and apply the Three Step Change Model (Lewin) in implementing change in a business. Using a contemporary business case study from the past four years, students evaluate business practice against theory, considering how corporate social responsibility can be incorporated into the change process.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE CHEMISTRY

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Chemistry should consider the following:

VCE Elective Charge

There is no elective charge for VCE Chemistry.

This subject will suit you if you enjoy:

- Conducting experimental investigations
- Reading and summarise scientific texts
- Memorise details and facts such as the names and formulae and produce
- Presenting and analysing data
- Using specific vocabulary related to key chemical principles and concepts
- Conducting independent and collaborative research and
- Solving problems; many of which will require proficiency in Mathematics.

This subject can lead to a career pathway in the following areas:

Chemistry leads to a range of careers and studies such as those in the health and medical sciences, sports sciences, food sciences, agriculture, engineering, geological sciences, microbiology, oceanography and science education.

Other subjects that complement this subject include:

Chemistry can be undertaken with a range of other studies in the sciences, humanities and mathematics areas and can be seen as part of a balanced set of studies where breadth of experience is seen as worthwhile. It is typically studied with Physics or Biology, as well as Mathematics. Many students choose to study Chemistry together with a range of studies drawn from the humanities, Health and PE, Arts/Technology and Language areas.

Further considerations:

Students should always check with Careers Coordinator for Chemistry as a prerequisite study for tertiary courses.

Teachers with experience in this subject: Mr Chandra

Chemistry Unit Description

Chemistry explores and explains the composition and behaviour of matter and the chemical processes that occur on Earth and beyond. Chemical models and theories are used to describe and explain known chemical reactions and processes. Chemistry underpins the production and development of energy, the maintenance of clean air and water, the production of food, medicines and new materials and the treatment of wastes. VCE Chemistry enables students to explore key processes related to matter and its behaviour.

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

Students focus on the nature of chemical elements, their atomic structure and their place in the periodic table. They investigate the nature of metallic, ionic and covalent bonding. They study a variety of organic compounds and how they are grouped into distinct chemical families. Students apply quantitative concepts to molecular compounds, including mole concept and percentage composition by mass and determine the empirical and molecular formulas of given compounds.

Unit 2: What makes water such a unique chemical?

Students explore the physical and chemical properties of water, the reactions that occur in water and various methods of water analysis. They investigate solubility, concentration, pH and reactions in water including precipitation, acid-base and redox. Students are introduced to stoichiometry and to analytical techniques and instrumental procedures and apply these to determine concentrations of different species in water samples, including chemical contaminants.

Unit 3: How can chemical processes be designed to optimise efficiency?

Students explore energy options and the chemical production of materials. They investigate the combustion of fuels, including the energy transformations involved, the use of stoichiometry to calculate the amounts of reactants and products involved in the reactions, and calculations of the amounts of energy released and their representations. Students consider the purpose, design and operating principles of galvanic cells, fuel cells and electrolytic cells. They investigate and apply the equilibrium law and Le Chatelier's principle to different reaction systems.

Unit 4: How are organic compounds categorised, analysed and used?

Students investigate the structural features, bonding, typical reactions and uses of the major families of organic compounds including those found in food. They consider the nature of the reactions involved to predict the products of reaction pathways and to design pathways to produce particular compounds from given starting materials. Students investigate key food molecules through an exploration of their chemical structures. Students use calorimetry as an investigative tool to determine the energy released in the combustion of foods.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 16%

Unit 4 school-assessed coursework: 24%

Units 3 and 4 examination: 60%

VCE COMPUTING

In Year 11 students undertake VCE Applied Computing Units 1-2 and then can choose to undertake VCE Data Analytics Units 3-4 and/or VCE Software Development Units 3-4.

VCE APPLIED COMPUTING: UNITS 1 - 2

Study Design Accreditation Period: 2020 – 2023

Advice & Pathways

Students choosing to study Applied Computing should consider the following:

VCE Elective Charge

There is an elective Charge of **\$40** for VCE Applied Computing Unit 1-2.

This subject will suit you if you enjoy:

- Logical thinking and problem solving
- Thinking outside the box
- Creativity and
- Mathematics.

This subject can lead to a career pathway in the following areas:

This subject is an entry subject into VCE Data Analytics Unit 3-4 and/or VCE Software Development Unit 3-4.

Other subjects that complement this subject include:

- Any Mathematics subject;
- Any Science subject
- Product Design and Technology and
- Visual Communication Design.

Teachers with experience in this subject: Mr McLoughlin

VCE Applied Computing Unit Description

Unit 1: Applied Computing

In this unit students are introduced to the stages of the problem-solving methodology. Students focus on how data can be used within software tools such as databases and spreadsheets to create data visualisations and the use of programming languages to develop working software solutions. In Area of Study 1, as an introduction to data analytics, students respond to a teacher-provided analysis of requirements and designs to identify and collect data in order to present their findings as data visualisations. They present work that includes database, spreadsheet and data visualisations solutions. In Area of Study 2 students select and use a programming language to create a working software solution. Students prepare, document and monitor project plans and engage in all stages of the problem-solving methodology.

Unit 2: Applied Computing.

In this unit students focus on developing innovative solutions to needs or opportunities that they have identified, and propose strategies for reducing security risks to data and information in a networked environment. In Area of Study 1 students work collaboratively and select a topic for further study to create an innovative solution in an area of interest. The innovative solution can be presented as a proof of concept, a prototype or a product. Students engage in all areas of the problem-solving methodology. In Area of Study 2, as an introduction to cybersecurity, students investigate networks and the threats, vulnerabilities and risks to data and information. They propose strategies to protect the data accessed using a network.

VCE DATA ANALYTICS: UNITS 3 – 4

Study Design Accreditation Period: 2020 – 2023

Advice & Pathways

Students choosing to study Data Analytics should consider the following:

VCE Elective Charge

There is an elective charge of **\$40** for VCE Data Analytics Unit 3-4.

This subject will suit you if you enjoy:

- Logical thinking and problem solving
- Thinking outside the box
- Creativity and
- Mathematics.

This subject can lead to a career pathway in the following areas:

It provides a pathway to further studies in areas such as computer science, information systems, business, systems engineering, robotics, linguistics, logistics, database management and software development, and to careers in digital-technologies based areas such as information architecture, web-design, business analysis and project management. Computer Science, Software Engineering, Design and Technology, Science.

Other subjects that complement this subject include:

- Any Mathematics subject;
- Any Science subject;
- Product Design and Technology; and
- Visual Communication Design

Further consideration:

Students can undertake both Unit 3 & 4 sequences in both VCE Data Analytics and VCE Software Development for credit towards the VCE.

Teachers with experience in this subject: Mr McLoughlin

VCE Data Analytics Unit Descriptions

Unit 3: Data Analytics.

In this unit students apply the problem-solving methodology to identify and extract data through the use of software tools such as database, spreadsheet and data visualisation software to create data visualisations or infographics presentations. Through their coursework students develop an understanding of the analysis, design and development stages of the problem-solving methodology. In Area of Study 1 students respond to teacher-provided solution requirements and designs. Students develop data visualisations and use appropriate software tools to present findings. Appropriate software tools include database, spreadsheet and data visualisation software. In Area of Study 2 students propose a research question, prepare a project plan, collect and analyse data, and design infographics or dynamic data visualisations. Area of Study 2 forms the first part of the School-assessed Task (SAT) that is completed in Unit 4, Area of Study 1.

Unit 4: Informatics.

In this unit students focus on determining the findings of a research question by developing infographics or dynamic data visualisations based on large complex data sets and on the security strategies used by an organisation to protect data and information from threats. In Area of Study 1 students apply the problem-solving stages of development and evaluation to develop their preferred design prepared in Unit 3, Area of Study 2, into infographics or dynamic data visualisations and evaluate the solutions and project plan. Area of Study 1 forms the second part of the School-assessed Task (SAT). In Area of Study 2 students investigate security practices of an organisation. They examine the threats to data and information, evaluate security strategies and recommend improved strategies for protecting data and information.

Levels of achievement for satisfactory completion.

Unit 3 and 4

School-assessed coursework, school-assessed task and an end-of-year examination.

Unit 3 school-assessed coursework: 10%

Unit 4 school-assessed coursework: 10%

SAT (electronic folio): 30%

Units 3 and 4 examination: 50%

VCE SOFTWARE DEVELOPMENT: UNITS 3 - 4

Study Design Accreditation Period: 2020 – 2023

Advice & Pathways

Students choosing to study Software Development should consider the following:

VCE Elective Charge

There is an elective charge of **\$40** for VCE Software Development Unit 3-4.

This subject will suit you if you enjoy:

- Logical thinking and problem solving
- Thinking ‘outside the box’
- Creativity and
- Mathematics.

This subject can lead to a career pathway in the following areas:

Computer Science, Software Engineering, Design and Technology, Science.

Other subjects that complement this subject include:

- Any Mathematics subject
- Any Science subject
- Product Design and Technology and
- Visual Communication Design.

Further considerations:

Students are recommended to be concurrently enrolled in at least one VCE Mathematics Unit 3-4 sequence if choosing Software Development.

Teachers with experience in this subject: Mr McLoughlin

Software Development Unit Descriptions

Unit 3: Software Development.

In this unit students apply the problem-solving methodology to develop working software modules using a programming language. Students develop an understanding of the analysis, design and development stages of the problem-solving methodology. In Area of Study 1 students respond to teacher-provided solution requirements and designs and develop a set of working modules through the use of a programming language. Students examine a simple software requirements specification and a range of software design tools in order to apply specific processing features of a programming language to create working modules. In Area of Study 2 students analyse a need or opportunity, select an appropriate development model, prepare a project plan, develop a software requirements specification and design a software solution. Area of Study 2 forms the first part of the School-assessed Task (SAT) that is completed in Unit 4, Area of Study 1.

Unit 4: Software Development.

In this unit students focus on how the information needs of individuals and organisations are met through the creation of software solutions. They consider the risks to software and data during the software development process, as well as throughout the use of the software solution by an organisation. In Area of Study 1 students apply the problem-solving stages of development and evaluation to develop their preferred design prepared in Unit 3, Area of Study 2, into a software solution and evaluate the solution, chosen development model and project plan. Area of Study 1 forms the second part of the School-assessed Task (SAT). In Area of Study 2 students examine the security practices of an organisation and the risks to software and data during the development and use of the software solutions. Students evaluate the current security practices and develop a risk management plan.

Levels of achievement for satisfactory completion.

Unit 3 and 4

School-assessed coursework, school-assessed task and an end-of-year examination.

Unit 3 school-assessed coursework:	10%
Unit 4 school-assessed coursework:	10%
SAT (electronic folio):	30%
Units 3 and 4 examination:	50%

VCE DANCE

Study Design Accreditation Period: 2019 – 2023

Advice & Pathways

Students choosing to study Dance should consider the following:

VCE Elective Charge

There is an elective charge of **\$20** for VCE Dance Unit 1 and 2 and VCE Dance Unit 3 and 4.

This subject will suit you if you enjoy:

- Practical activities
- Choreography and Dance
- Viewing and analysing
- Discussion, research, creating and performing
- Memorising vocabulary and
- Collaboration (working with a group).

This subject can lead to a career pathway in the following areas:

Dance allows students to develop a range of skills across the board including - but not limited to communication, planning, organising, teamwork, problem solving and self-management. Study in Dance may also lead to career opportunities in Performance, Musical Theatre, Acting, Education, Dance Teaching in local dance schools, Physical Education, Fitness, Stage Management, Events Coordinator, Director, Choreographer, employment in the Arts Industry, Performing Arts projects. It will also allow you to further continue doing something that you really enjoy!

Other subjects that complement this subject include:

- English and
- Physical Education.

Further considerations

In Dance, there is an equal amount of practical and written work. Students will be expected to work on practical tasks in their own time, in addition to class time.

Teachers with experience in this subject: Ms McMahon

VCE Dance Unit Descriptions

VCE Dance provides opportunities for students to explore the potential of movement as a means of creative expression and communication. In VCE Dance students create and perform their own dance works as well as studying the dance works of others through performance and analysis. In each unit, students undertake regular and systematic dance training to develop their physical skills and advance their ability to execute a diverse range of expressive movements. Students also develop and refine their choreographic skills by exploring personal and learnt movement vocabularies. They study ways other choreographers have created and arranged movement to communicate an intention and create their own dance works. Students perform learnt solo and group dance works and their own works. They also analyse ways that ideas are communicated through dance and how dance styles, traditions and works can influence dance practice, the arts, artists and society more generally.

Unit 1: Dance

In this unit students explore the potential of the body as an instrument of expression and communication in conjunction with the regular and systematic development of physical dance skills. Students discover the diversity of expressive movement and purposes for dancing in dances from different times, places, cultures, traditions and/or styles. They commence the process of developing a personal movement vocabulary and also begin the practices of documenting and analysing movement. Through this work they develop understanding of how other choreographers use these practices. Students learn about relevant physiology and approaches to health and wellbeing and about care and maintenance of the body. They apply this knowledge through regular and systematic dance training. Students explore the choreographic process through movement studies, cohesive dance compositions and performances. They discuss influences on other choreographers and the impact of these influences on intentions and movement vocabulary in selected dance works.

Unit 2: Dance

In this unit students extend their personal movement vocabulary and skill in using a choreographic process by exploring elements of movement (time, space and energy), the manipulation of movement through choreographic devices and the types of form used by choreographers. Students use the choreographic process to develop and link movement phrases to create a dance work. They apply their understanding of the processes used to realise a solo or group dance work – choreographing and/or learning, rehearsing, preparing for performance and performing. Students are introduced to a range of dance traditions, styles and works. Dance traditions, styles and works selected for study should encompass the dance output of traditional and/or contemporary Aboriginal and Torres Strait Islander Peoples and other Australian dance artists. Students may also study material such as dance from other cultures, music theatre, the work of tap/jazz or street performers, ballet choreographers, and/or modern dance. Students describe the movement vocabulary in their own and others' dances by identifying the use of movement categories and ways the elements of movement have been manipulated through the use of choreographic devices. Students make links between the theoretical and practical aspects of dance across the areas of study through analysis and discussion of the way their own and other choreographers' intentions are communicated and through the ways movement has been manipulated and structured.

Unit 3: Dance

In this unit students choreograph, rehearse and perform a solo dance work that allows them to execute a diverse range of physical skills and actions drawn from all movement categories. Students continue regular and systematic dance training and learn and perform a duo or group dance work created by another choreographer. They continue to develop their ability to safely execute movement vocabulary and perform with artistry. Students analyse the realisation of their solo and the learnt duo or group dance work, focusing on the processes of choreographing or learning, rehearsing, preparing for performance and performing. This analysis connects each student's work as a choreographer to the work of professional choreographers. Students further develop their understanding of the choreographic process through analysis of two dance works by choreographers of the twentieth and/or twenty-first centuries. These dance works must be selected from the Prescribed list of dance works for Unit 3. The prescribed list for Unit 3 includes solo works, duos and works where the performance of a particular dancer in a group can be studied independently. Students analyse how the intentions chosen by choreographers are developed through the use of choreographic devices and arrangement of phrases and sections. They analyse the dance design and use of movement vocabulary in the selected works and consider influences on the choreographers' choices of intention, movement vocabulary and production aspects of the dance works. Students consider the influence these choreographers and/or the selected dance works have had on the arts, artists and/or society.

Unit 4: Dance

In this unit students choreograph, rehearse and perform a solo dance work with a cohesive structure. When rehearsing and performing this dance work students focus on communicating the intention with accurate execution of choreographic variations of spatial organisation. They explore how they can demonstrate artistry in performance. Students document and analyse the realisation of the solo dance work across the processes of choreographing, rehearsing, preparing to perform and performing the dance work. Students continue to develop their understanding of the choreographic process through analysis of a group dance work by a twentieth or twenty-first century choreographer. This analysis focuses on ways in which the intention is expressed through the manipulation of spatial relationships. Students analyse the use of group structures (canon, contrast, unison and asymmetrical and symmetrical groupings and relationships) and spatial organisation (direction, level, focus and dimension) and investigate the influences on choices made by choreographers in these works. In this unit the group work studied for Outcome 1 must be different from any works studied in Unit 3, and the term 'choreographer' can be understood as one or more choreographers.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and two end-of-year examinations.

Units 3 and 4 school-assessed coursework: 25%

Units 3 and 4 written examination: 25%

Unit 4 Performance examination: 50%

VCE DRAMA

Study Design Accreditation Period: 2019 – 2024

Advice & Pathways

Students choosing to study Drama should consider the following:

VCE Elective Charge

There is no elective charge for VCE Drama. **Drama will only be offered for Year 11 VCE Units 1 –2 in 2022.**

This subject will suit you if you enjoy:

- thinking with creativity and imagination
- analysing and interpreting texts
- public speaking
- working collaboratively as part of a team
- planning and realising a goal.

This subject can lead to a career pathway in the following areas:

Drama may lead to a career as an actor, dramatist, theatre producer, theatre director, costume designer, set designer, make-up artist, lighting engineer, sound technician.

Other subjects that complement this subject include:

- Dance
- Art/Studio Art
- English (any)

Further considerations:

As a requirement for successful completion of this subject students are advised that they must attend out of school hours excursions to view selected drama productions.

Teachers with experience in this subject: Mr Thomson & Ms Walters

VCE Drama Descriptions

In VCE Drama, students use practice of performance-making to create and communicate meaning. Drama connects students to traditions of drama practice across a range of social, historical and cultural contexts. They develop skills of communication, criticism, aesthetic understanding and aesthetic control. VCE Drama equips students with knowledge, skills and confidence to communicate as individuals and collaboratively in a broad range of social, cultural and work-related contexts. The study of drama may provide pathways to training and tertiary study in acting, dramaturgy, theatre-making, script writing, communication and drama criticism.

Unit 1: Introducing Performance Styles

In this unit students study performance styles from social, historical and cultural contexts. They examine drama traditions of ritual and storytelling to devise performances. This unit focuses on creating, presenting and analysing an ensemble performance with characters and is based on stimulus material that reflects personal, cultural and/or community experiences and stories. This unit also involves analysis of a student's own performance work and a work by professional drama performers. Students apply play-making techniques and manipulate expressive and performance skills to create and help understand how character can be created for performance. They document the processes they use as they explore a range of stimulus material, and experiment with production areas, dramatic elements, conventions and performance styles.

Unit 2: Australian Identity

In this unit students study aspects of Australian identity in drama. This unit focuses on the use and documentation of the processes involved in constructing a devised solo or ensemble performance. Students create, present and analyse a performance based on a person, an event, an issue, a place, an artwork, a text and/or an icon from a contemporary or historical Australian context. Students use stimulus material that allows them to explore Australian identity. They examine selected performance styles and their conventions. Students further develop their knowledge of dramatic elements and production areas while exploring eclectic conventions and how they can be manipulated to create meaning in performance. Students analyse their own performance work as well as undertaking an analysis of a performance of an Australian work.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

VCE ENGLISH

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students studying English should consider the following:

VCE Elective Charge

There is no elective charge for VCE English.

This subject will suit you if you enjoy:

- Reading texts independently
- Learning about issues in society and Australia's role in them
- Writing extended responses and analysing texts
- Discuss and debating ideas.

This subject can lead to a career pathway in the following areas:

Journalism, Teaching, Acting, Historian, Speech Pathology, Marketing, Media, Publishing, Librarian, Writer, Editor.

Other subjects that complement this subject include:

- Literature
- Every VCE subject that has a written communication component.

Further considerations

English is a prerequisite subject in over 80% of tertiary courses.

Teachers with experience in this subject: Ms Lang, Ms Jeacle

VCE English Unit Descriptions

This study aims to develop competence in the understanding and use of English for a variety of purposes in order to meet the demands of post-school employment, further education and participation in a democratic society.

Unit 1

In this unit, students read and respond to texts analytically and creatively. They analyse arguments and the use of persuasive language in texts and create their own texts intended to position audiences. Students develop their skills in creating written, spoken and multimodal texts.

Unit 2

In this unit students compare the presentation of ideas, issues and themes in texts. They analyse arguments presented and the use of persuasive language in texts and create their own texts intended to position audiences. Students develop their skills in creating written, spoken and multimodal texts.

Unit 3

In this unit students read and respond to texts analytically and creatively. They analyse arguments and the use of persuasive language in texts.

Unit 4

In this unit students compare the presentation of ideas, issues and themes in texts. They create an oral presentation intended to position audiences about an issue currently debated in the media.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed task: 25%

Units 3 and 4 examination: 50%

VCE FOOD STUDIES

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Food Studies should consider the following:

VCE Elective Charge.

There is an elective charge of **\$205** for VCE Food Studies Unit 1-2 and for VCE Food Studies Unit 3-4.

This subject will suit you if you enjoy:

Practical food production, analysing diets and food products, debating world issues relating to food security, team and individual work and independent research.

This subject can lead to a career pathway in the following areas:

Nutritionist, dietician, consumer science, Food Studies educators, hospitality, food promotion, food product development, food stylist.

Other subjects that complement this subject include:

Psychology, Biology, Health and Human Development, Business Management, Geography, Chemistry, Visual Communication Design.

Teachers with experience in this subject: Ms Holden and Ms Kloas

Food Studies Unit Description

This study takes an interdisciplinary approach to the exploration of food, with an emphasis on extending food knowledge and skills. Students build individual pathways to health and wellbeing through the application of practical food skills.

Unit 1: Food origins.

This unit focuses on food from historical and cultural perspectives. Students investigate the origins and roles of food through time and across the world - examining the hunter-gatherer system to today's urban living. Students also study Australian indigenous food prior to European settlement and the influence of migration on Australian cuisine.

Unit 2: Food makers.

Students investigate food systems in contemporary Australia. They compare commercial food production industries with food produced in small-scale domestic settings. They investigate the capacity of industry to provide safe, high-quality food.

Unit 3: Food in daily life.

This unit explores the science of food. Students investigate the physiology of eating and microbiology of digesting and the absorption and utilisation of macronutrients. They apply food science terminology relating to chemical changes that occur during food preparation and cooking.

Unit 4: Food challenges, issues and futures.

Students examine debates about global and Australian food systems - issues such as the environment, ethics, farming practices, use of technologies and the challenges of food security. They also develop responses to food information and misinformation and how to empower consumers to make discerning food choices.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 30%

Unit 4 school-assessed coursework: 30%

Units 3 and 4 examination: 40%

VCE German

Study Design Accreditation Period: 2019 – 2023.

Advice & Pathways

Students choosing to study German should consider the following:

VCE Elective Charge

There is **no** 2020 Elective Charge for VCE German Unit 1-2 and VCE German Unit 3-4.

This subject will suit you if you enjoy...

Learning German language and culture.

This subject can lead to a career pathway in the following areas...

Interpreter, Translator, Tour Guide, Airline Cabin Crew, LOTE teacher

German Unit Description

The language to be studied and assessed is modern standard German. The German language is a pluricentric language with different national standards in Austria, Germany and Switzerland and with regional varieties across Europe. Students are required to know that different standard versions exist in written and spoken German, but they are not required to study them.

Scope of study VCE German focuses on student participation in interpersonal communication, interpreting the language of other speakers, and presenting information and ideas in German on a range of themes and topics. Students develop and extend skills in listening, speaking, reading, writing and viewing in German in a range of contexts and develop cultural understanding in interpreting and creating language. Students develop their understanding of the relationships between language and culture in new contexts and consider how these relationships shape communities. Throughout the study students are given opportunities to make connections and comparisons based on personal reflections about the role of language and culture in communication and in personal identity.

Unit 1

In this unit students develop an understanding of the language and culture/s of German-speaking communities through the study of three or more topics from the prescribed themes. Each area of study in the unit must focus on a different subtopic. Students access and share useful information on the topics and subtopics through German and consolidate and extend vocabulary and grammar knowledge and language skills. They focus on analysing cultural products or practices including visual, spoken or written texts. Cultural products or practices can be drawn from a diverse range of texts, activities and creations. These may include the following: stories, poems, plays, novels, songs, films, photographs, artworks, architecture, technology, food, clothing, sports and festivals. Students apply acquired knowledge of the German culture and language to new contexts. Students reflect on the interplay between language and culture, and its impact on the individual's language use in specific contexts and for specific audiences.

Unit 2

In this unit students develop an understanding of aspects of language and culture through the study of three or more topics from the prescribed themes. Each area of study must focus on a different subtopic. Students analyse visual, spoken and written texts. They access and share useful information on the topics and subtopics through German and consolidate and extend vocabulary, grammar knowledge and language skills. Cultural products or practices can be used to demonstrate how culture and perspectives may vary between communities. Students reflect on the interplay between language and culture, and its impact on meaning, understanding and the individual's language use in specific contexts and for specific audiences.

Unit 3

In this unit students investigate the way German speakers interpret and express ideas, and negotiate and persuade in German through the study of three or more subtopics from the prescribed themes and topics. Each area of study must cover a different subtopic, though teachers may choose to teach more than one subtopic in an area of study. Students interpret information, inform others, and reflect upon and develop persuasive arguments. They access and share useful information on the subtopics through German, and consolidate and extend vocabulary and grammar knowledge and language skills. Students consider the influence of language and culture in shaping meaning and reflect on the practices, products and perspectives of the cultures of German-speaking communities. They reflect on how knowledge of German and German-speaking communities can be applied in a range of contexts and endeavours, such as further study, travel, business or community involvement.

Unit 4

In this unit students investigate aspects of culture through the study of two or more subtopics from the prescribed themes and topics. Area of Study 1 and Area of Study 2 may focus on the same subtopic. Area of Study 3 should cover a different subtopic to the subtopic/s chosen for Areas of Study 1 and 2. Students build on their knowledge of German-speaking communities, considering cultural perspectives and language and explaining personal observations. Students consolidate and extend vocabulary, grammar knowledge and language skills to investigate the topics through German. Students identify and reflect on cultural products or practices that provide insights into German-speaking communities. Cultural products or practices can be drawn from a diverse range of texts, activities and creations. Students reflect on the ways culture, place and time influence values, attitudes and behaviours. They consider how knowledge of more than one culture can influence the ways individuals relate to each other and function in the world.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Oral performance examination 25%

Units 3 and 4 examination: 25%

VCE GEOGRAPHY

Study Design Accreditation Period: 2016 – 2022

Advice & Pathways

Students choosing to study Geography should consider the following:

VCE Elective Charge

There is no elective charge for VCE Geography. **Geography will only be offered for Year 11 VCE Units 1 –2 in 2022.**

This subject will suit you if you enjoy:

- Classroom discussion
- Analysis of data and linking of key material and
- Memorising specific definitions and understandings.

This subject can lead to a career pathway in the following areas:

The career prospects from the subject are broad. In terms of university courses it leads to courses such as (but not limited to); Cartography, Travel and Tourism, Conservation and Land Management

Other subjects that complement this subject include:

- Biology
- Outdoor and Environmental Education.

Teachers with experience in this subject: Ms Lewis

VCE Geography Unit Descriptions

The study of Geography is a structured way of exploring, analysing and understanding the characteristics of places that make up our world. Geographers are interested in key questions concerning places and geographic phenomena: What is there? Where is it? Why is it there? What are the effects of it being there? How is it changing over time and how could, and should, it change in the future? How is it different from other places and phenomena? How are places and phenomena connected? Students explore these questions through fieldwork and investigation of a wide range of secondary sources. These methods underpin the development of a unique framework for understanding the world, enabling students to appreciate its complexity, the diversity and interactions of its environments, economies and cultures, and the processes that helped form and transform them.

Unit 1: Hazards and disasters.

In this unit students undertake an overview of hazards before investigating two contrasting types of hazards and the responses to them by people. Hazards represent the potential to cause harm to people and or the environment whereas disasters are judgments about the impacts of hazard events. Hazards include a wide range of situations including those within local areas, such as fast moving traffic or the likelihood of coastal erosion, to regional and global hazards such as drought and infectious disease. Students examine the processes involved with hazards and hazard events, including their causes and impacts, human responses to hazard events and interconnections between human activities and natural phenomena. This unit investigates how people have responded to specific types of hazards, including attempts to reduce vulnerability to, and the impact of, hazard events.

Unit 2: Tourism.

In this unit students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed and continues to change and its impacts on people, places and environments. They select contrasting examples of tourism from within Australia and elsewhere in the world to support their investigations. Tourism involves the movement of people travelling away from and staying outside of their usual environment for more than 24 hours but not more than one consecutive year. The study of tourism at local, regional and global scales emphasises the interconnection within and between places. For example, the interconnections of climate, landforms and culture help determine the characteristics of a place that can prove attractive to tourists. There is an interconnection between places tourists originate from and their destinations through the development of communication and transport infrastructure, employment, together with cultural preservation and acculturation. The growth of tourism at all scales requires careful management to ensure environmentally sustainable and economically viable tourism.

Unit 3: Changing the land.

This unit focuses on two investigations of geographical change: change to land cover and change to land use. Land cover includes biomes such as forest, grassland, tundra and wetlands, as well as land covered by ice and water. Land cover is the natural state of the biophysical environment developed over time as a result of the interconnection between climate, soils, landforms and flora and fauna and, increasingly, interconnections with human activity. Natural land cover has been altered by many processes such as geomorphological events, plant succession and climate change. People have modified land cover to produce a range of land uses to satisfy needs such as housing, resource provision, communication and recreation. Students investigate three major processes that are changing land cover in many regions of the world:

- deforestation
- desertification, and
- melting glaciers and ice sheets.

Unit 4: Human population – trends and issues.

In this unit students investigate the geography of human populations. They explore the patterns of population change, movement and distribution, and how governments, organisations and individuals have responded to those changes in different parts of the world. Students study population dynamics before undertaking an investigation into two significant population trends arising in different parts of the world. They examine the dynamics of populations and their economic, social, political and environmental impacts on people and places. Population movements such as voluntary and forced movements over long or short terms add further complexity to population structures and to economic, social, political and environmental conditions. Many factors influence population change, including the impact of government policies, economic conditions, wars and revolution, political boundary changes and hazard events.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE HEALTH AND HUMAN DEVELOPMENT

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Health and Human Development should consider the following:

VCE Elective Charge

There is no elective charge for VCE Health and Human Development.

This subject will suit you if you enjoy:

- Classroom discussion
- Analysis of data and linking of key material and
- Memorising specific definitions and understandings.

This subject can lead to a career pathway in the following areas:

The career prospects from the subject are broad. In terms of university courses it leads to courses such as (but not limited to) Health Science, Health Promotion, Nursing, International Studies and Aid, Nutrition, Community Health Research and Policy Development, Humanitarian Aid Work, Allied Health Practices, Education and other types of health professions.

In terms of career pathways examples (not limited to this list) include; Nutritionist, Health Promotion Project Officer, Aid Worker, Nurse, Community Health Officer, Youth Worker.

Other subjects that complement this subject include:

- Physical Education
- Food Studies
- Psychology
- Biology

Teachers with experience in this subject: Ms Ford and Ms Kloas

Health and Human Development Unit Descriptions

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. 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.

Unit 1: The health and development of Australia's youth.

In this unit students are introduced to the concepts of health and individual human development. Students develop an understanding of the physical, social, emotional and intellectual changes associated with the developmental stage of youth. Students investigate one health issue in detail and analyse personal, community and government strategies or programs that affect youth health and individual human development. They also explore the importance of nutrition for the provision of energy and growth.

Unit 2: Individual human development and health issues.

This unit focuses on prenatal health and on the lifespan stages of childhood and adulthood. Students study the physical changes that occur from conception to birth. Students develop an understanding of the health and individual development of Australia's children and adults, including the elderly. They explore the physical, social, emotional and intellectual changes that occur. Students will identify a range of health issues that are having an impact on Australia's health system.

Unit 3: Australia's health.

Australians generally enjoy good health and are among the healthiest people in the world. The health status of Australians can be measured in many ways, such as consideration of burden of disease, health adjusted life expectancy, disability adjusted life years (DALYs), life expectancy, under-five mortality rate, mortality and morbidity rates, incidence and prevalence of disease. Despite Australia's good health status, there is still potential for improvements. The National Health Priority Areas (NHPAs) initiative provides a national approach that aims to improve health status in the areas that contribute most of the burden of disease in Australia. Regardless of how health is measured, health is not shared equally by all Australians. Different levels of health are experienced by different groups, which can be attributed to the determinants of health, including the physical environment, biological, behavioural and social.

Unit 4: Global health and development.

This unit takes a global perspective on achieving sustainable improvements in health and human development. In the context of this unit human development is about creating an environment in which people can develop to their full potential and lead productive, creative lives in accord with their needs and interests. It is about expanding people's choices and enhancing capabilities (the range of things people can be and do), having access to knowledge, health and a decent standard of living, and participating in the life of their community and decisions affecting their lives (adapted from the United Nations Development Programme, 1990). Sustainability 'implies meeting the needs of the present without compromising the ability of future generations to meet their own needs'

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE HISTORY

Study Design Accreditation Period: 2022 – 2026

Advice & Pathways

Students choosing to study History should consider the following:

VCE Elective Charge

There is no elective charge for VCE History.

This subject will suit you if you enjoy:

Independent thinking, reading, independent research, and developing critical thinking skills and being able to look at sources and examine their strengths and weaknesses.

This subject can lead to a career pathway in the following areas:

History is a great pathway into many higher education courses, including Arts degrees, and other Social Sciences. Employers like it because it demonstrates good independent learning skills, research, and critical thinking skills. Employment opportunities include Historian, Teacher, Journalist, Lawyer, Anthropologist, Sociologist, Public Relations Officer, Genealogist.

Other subjects that complement this subject include:

- Legal Studies
- Geography
- Philosophy
- English
- Literature
- Art
- Outdoor Education
- Other analytical and investigative subjects.

Teachers with experience in this subject: Ms Chadwick and Ms Molloy

History Unit Description

History involves inquiry into human action in the past, to make meaning of the past using primary sources as evidence. As historians ask new questions, revise interpretations or discover new sources, fresh understandings come to light. Although history deals with the particular – specific individuals and key events – the potential scope of historical inquiry is vast and formed by the questions that historians pursue, the availability of sources and the capacity of historians to interpret those sources. VCE History reflects this range of inquiry by enabling students to engage with a range of times, people, places and ideas.

Unit 1. Modern History: Change and Conflict

In this unit students investigate the nature of social, political, economic and cultural change in the later part of the 19th century and the first half of the 20th century. Modern History provides students with an opportunity to explore the significant events, ideas, individuals and movements that shaped the social, political, economic and technological conditions and developments that have defined the modern world. The late 19th century marked a challenge to existing empires, alongside growing militarism and imperialism. Empires continued to exert their powers as they competed for new territories, resources and labour across Asia-Pacific, Africa and the Americas, contributing to tremendous change. This increasingly brought these world powers into contact and conflict. During this time the everyday lives of people significantly changed. The period after World War One, in the contrasting decades of the 1920s and 1930s, was characterised by significant social, political, economic, cultural and technological change. In 1920 the League of Nations was established, but despite its ideals about future peace, subsequent events and competing ideologies would contribute to the world being overtaken by war in 1939. New fascist governments used the military, education and propaganda to impose controls on the way people lived, to exclude particular groups of people and to silence criticism. Writers, artists, musicians, choreographers and filmmakers reflected, promoted or resisted political, economic and social changes.-

Unit 2. Modern History: The Changing World Order

In this unit students investigate the nature and impact of the Cold War and challenges and changes to social, political and economic structures and systems of power in the second half of the twentieth century and the first decade of the twenty-first century. The establishment of the United Nations (UN) in 1945 was intended to take an internationalist approach to avoiding warfare, resolving political tensions and addressing threats to human life and safety. However, despite internationalist moves, the second half of the twentieth century was dominated by the Cold War, competing ideologies of democracy and communism and proxy wars. The period also saw continuities in and challenges and changes to the established social, political and economic order in many countries. The second half of the twentieth century also saw the rise of social movements that challenged existing values and traditions, such as the civil rights movement, feminism and environmental movements, as well as new political partnerships, such as the UN, European Union, APEC, OPEC, ASEAN and the British Commonwealth of Nations. The beginning of the twenty-first century heralded both a changing world order and further advancements in technology and social mobility on a global scale. However, terrorism remained a major threat, influencing politics, social dynamics and the migration of people across the world.

Unit 3. Australian History: Power and Resistance (1788-1998)

Students investigate the ways in which the colonisation of Australia began as a complex story of the exercise of power and resistance to authority. Aboriginal and Torres Strait Islander peoples confronted the challenge of colonisation in a variety of ways, from frontier battles and conflicts that resisted the dispossession of their land, to adaptation and attempts to coexist, survive and preserve their culture. Resistance also emerged among the settler communities and their descendants who challenged governing structures, sought democratic rights, land reforms, and social, political and economic rights and reforms. Students investigate how Australian democracy and society were challenged in the post-colonial world that emerged after 1945 and the extent to which these challenges were influenced by perspectives of, and events in, other nations. The end of World War Two saw increased challenges from Aboriginal and Torres Strait Islander peoples claiming citizenship and land rights, struggles for improved workers' rights and conditions, the push for women's equality and demands for LGBTIQ+ rights. Over this time there was increasing awareness and acceptance of social movements and protests as a feature of Australian democracy.

Unit 4. Australian History: War and Upheaval (1909-1992)

Students investigate the debates and perspectives about Australia's participation in World War One and World War Two. Students analyse the ways in which social, political and economic cohesion of the nation was influenced by the impacts of these conflicts, including different perspectives about participation in war and conflict, enlistment and conscription and the ways that different groups experienced the war. Students investigate Australia's involvement and reasons for participation in post-World War Two conflicts and the subsequent debates arising from these conflicts. The changing reasons for Australia's participation in conflicts was influenced by shifting alliances, fears of Communism, desires for regional security, concerns regarding terrorism and the evolving nature of enlistment and service in the military forces. Students consider the impacts of these conflicts on groups in Australian society and the differing ways in which Australians responded.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE LEGAL STUDIES

Study Design Accreditation Period: 2018 – 2022

Advice & Pathways

Students choosing to study Legal Studies should consider the following:

VCE Elective Charge

There is no elective charge for VCE Legal Studies.

This subject will suit you if you enjoy:

- Memorising facts and vocabulary
- Argumentative discussion
- Being process driven and
- Writing well researched and rational essays.

This subject can lead to a career pathway in the following areas:

Solicitor, Barrister, Judge, Magistrate, Clerk of Courts, Para-Legal, Police Officer, Correctional Services, Border Security, Customs Officer.

Other subjects that complement this subject include:

- Business Management

Further considerations:

This subject requires significant reading and research and high level written expression skills.

Teachers with experience in this subject: Ms Lewis and Mr O'Brien

Legal Studies Unit Description

VCE Legal Studies examines the institutions and principles which are essential to Australia's legal system. Students develop an understanding of the rule of law, law-makers, key legal institutions, rights protection in Australia, and the justice system. Through applying knowledge of legal concepts and principles to a range of actual and/or hypothetical scenarios, students develop their ability to use legal reasoning to argue a case for or against a party in a civil or criminal matter. They consider and evaluate recent and recommended reforms to the criminal and civil justice systems, and engage in an analysis of the extent to which our legal institutions are effective and our justice system achieves the principles of justice. For the purposes of this study, the principles of justice are fairness (fair legal processes are in place and all parties receive a fair hearing); equality (all people treated equally before the law, with an equal opportunity to present their case) and access (understanding of legal rights and ability to pursue their case).

Unit 1: Guilt and liability.

Criminal law and civil law aim to achieve social cohesion and protect the rights of individuals. Criminal law is aimed at maintaining social order and infringing criminal law can result in charges. Civil law deals with the infringement of a person's or group's rights and breaching civil law can result in litigation. In this unit students develop an understanding of legal foundations, such as the different types and sources of law and the existence of a court hierarchy in Victoria. Students investigate key concepts of criminal law and civil law and apply these to actual and/or hypothetical scenarios to determine whether an accused may be found guilty of a crime, or liable in a civil dispute. In doing so, students develop an appreciation of the way in which legal principles and information are used in making reasoned judgments and conclusions about the culpability of an accused, and the liability of a party in a civil dispute.

Unit 2: Sanctions, remedies and rights.

Criminal law and civil law aim to protect the rights of individuals. When rights are infringed, a case or dispute may arise which needs to be determined or resolved and sanctions or remedies may be imposed. This unit focuses on the enforcement of criminal law and civil law, the methods and institutions that may be used to determine a criminal or resolve a civil dispute and the purposes and types of sanctions and remedies and their effectiveness. Students undertake a detailed investigation of two criminal cases and two civil cases from the past four years to form a judgment about the ability of sanctions and remedies to achieve the principles of justice. Students develop their understanding of the way rights are protected in Australia and in another country, and possible reforms to the protection of rights. They examine a significant case in relation to the protection of rights in Australia.

Unit 3: Rights and justice.

The Victorian justice system, which includes the criminal and civil justice systems, aims to protect the rights of individuals and uphold the principles of justice: fairness, equality and access. In this unit students examine the methods and institutions in the justice system and consider their appropriateness in determining criminal cases and resolving civil disputes. Students consider the Magistrates' Court, County Court and Supreme Court within the Victorian court hierarchy, as well as other Victorian legal institutions and bodies available to assist with cases. Students explore matters such as the rights available to an accused and to victims in the criminal justice system, the roles of the judge, jury, legal practitioners and the parties, and the ability of sanctions and remedies to achieve their purposes. Students investigate the extent to which the principles of justice are upheld in the justice system. They discuss recent reforms from the past four years and recommended reforms to enhance the ability of the justice system to achieve the principles of justice.

Unit 4: The people and the law.

The study of Australia's laws and legal system involves an understanding of institutions that make and reform our laws, and the relationship between the Australian people, the Australian Constitution and law-making bodies. In this unit, students explore how the Australian Constitution establishes the law-making powers of the Commonwealth and state parliaments, and protects the Australian people through structures that act as a check on parliament in law-making. Students develop an understanding of the significance of the High Court in protecting and interpreting the Australian Constitution. They investigate parliament and the courts, and the relationship between the two in law-making, and consider the roles of the individual, the media and law reform bodies in influencing law reform.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE LITERATURE

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study English Literature should consider the following:

VCE Elective Charge

There is no elective charge for VCE Literature.

This subject will suit you if you enjoy:

Reading, writing, analysing how writers create meaning, discussing, independent learning, research, engaging with novels, poetry, plays, short stories, film.

This subject can lead to a career pathway in the following areas:

Journalism, Teaching, Acting, Historian, Speech Pathology, Marketing, Media, Publishing, Librarian, Writer, Editor.

Other subjects that complement this subject include:

- English and
- Philosophy.

Further considerations:

You need to be an open-minded reader who likes a challenge. You will be required to read texts with adult themes. You need to enjoy reading and writing.

Teachers with experience in this subject: Ms Huggard

Literature Unit Descriptions

Literature involves the study and enjoyment of a wide range of literary texts - classical, popular, traditional and modern. Its distinctive focus is on the use of language to illuminate and give insight into the nature of experience. Literature is an interactive study between the text, the social, political and economic context in which the text was produced, and the experience of life and of literature that the reader brings to the text.

Unit 1: Approaches to literature.

In this unit students focus on the ways in which the interaction between text and reader creates meaning. Students respond critically, creatively and reflectively to the ideas and concerns of texts and gain insights into how texts function as representations of human experience.

Unit 2: Context and connections.

In this unit students explore the ways literary texts connect with each other and with the world. They deepen their examination of the ways their own culture and the cultures represented in texts can influence their interpretations and shape different meanings. Students analyse the similarities and differences across texts and establish connections between them.

Unit 3: Form and transformation.

In this unit students investigate ways writers adapt and transform texts and how meaning is affected as texts are adapted and transformed. They consider how the perspectives of those adapting texts may inform or influence the adaptations.

Unit 4: Interpreting texts.

In this unit students develop critical and analytic responses to texts. They consider the context of their responses to texts as well as the ideas explored in the texts, the style of the language and points of view. They investigate literary criticism informing both the reading and writing of texts.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE MATHEMATICS

At Patterson River Secondary College there are four levels of mathematics offered at VCE Unit 1-2. These are:

- Foundation Maths Units 1-2
- General Maths Units 1-2
- Maths Methods (CAS) Units 1-2
- Specialist Maths Units 1-2.

At Patterson River Secondary College there are three levels of mathematics offered at VCE Unit 3-4 level. These are:

- Further Maths Units 3-4
- Maths Methods (CAS) Units 3-4
- Specialist Maths Units 3-4 (commencing 2022).

Pre-requisites for Year 11

MATHS SUBJECT	YEAR 11 PRE-REQUISITES	YEAR 12 MATHEMATICS OPTIONS
Foundation Mathematics	None	This course does not lead to any Year 12 Mathematics course
General Mathematics	Students working at the expected level in Mathematical Methods or Mathematics General in Year 10	This course leads to Year 12 Further Mathematics.
Mathematical Methods	Students demonstrate well developed skills in Algebra in Year 10 Mathematical Methods	This course leads to Further Mathematics, Mathematic Methods and, if taken with Specialist Mathematics at Year 11, Year 12 Specialist Mathematics.
Specialist Mathematics	Students demonstrate well developed skills in Algebra in Year 10 Mathematical Methods and should be paired with Year 11 Mathematical Methods	This course leads to Year 12 Mathematical Methods and/or Year 12 Specialist Mathematics.

VCE FOUNDATION MATHEMATICS

Study Design Accreditation Period: 2017 – 2022

Foundation Mathematics Unit Description

Units 1 -2: Foundation Mathematics

Foundation Mathematics provides for the continuing mathematical development of students entering VCE and who do not necessarily intend to undertake Unit 3 and 4 studies in VCE Mathematics in the following year. This course is designed to complement General Mathematics and Mathematical Methods. Students completing this course would need to undertake additional targeted mathematical study in order to attempt Further Mathematics Units 3 and 4. In Foundation Mathematics there is a strong emphasis on the use of mathematics in practical contexts encountered in everyday life in the community, at work and at study. The areas of study for Units 1 and 2 of Foundation Mathematics are 'Space, shape and design', 'Patterns and number', 'Data' and 'Measurement'. All four areas of study are to be completed over the two units. The content should be developed using contexts present in students' other studies, work and personal or other familiar situations. In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, equations and graphs with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout each unit as applicable.

Teachers with experience in this subject: Mr Tweedale

VCE GENERAL MATHEMATICS: UNITS 1 – 2

Study Design Accreditation Period: 2017 – 2022

General Mathematics Unit Description

General Mathematics Units 1 and 2

General Mathematics provides for different combinations of student interests and preparation for study of VCE Mathematics at the Unit 3 and 4 level. The areas of study for General Mathematics Unit 1 and Unit 2 are 'Algebra and structure', 'Arithmetic and number', 'Discrete mathematics', 'Geometry, measurement and trigonometry', 'Graphs of linear and non-linear relations' and 'Statistics'.

For Units 1 and 2, to suit the range of students entering the study, content must be selected from the six areas of study using the following rules:

- for each unit, content covers four or more topics in their entirety, selected from at least three different areas of study
- courses intended as preparation for study at the Units 3 and 4 level should include a selection of topics from areas of study that provide a suitable background for these studies
- topics can also be selected from those available for Specialist Mathematics Units 1 and 2
- content covered from an area of study provides a clear progression in knowledge and skills from Unit 1 to Unit 2.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations and graphs with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic, financial and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout each unit as applicable.

Teachers with experience in this subject: Ms Koller and Mr Moody

VCE FURTHER MATHEMATICS: UNITS 3 – 4

Study Design Accreditation Period: 2017 – 2022

Further Mathematics Unit Description

Further Mathematics Units 3 and 4

Further Mathematics consists of two areas of study, a compulsory core area of study to be completed in Unit 3 and an Applications area of study to be completed in Unit 4. The core comprises 'Data analysis' and 'Recursion and financial modelling'. The Applications comprises two modules to be completed in their entirety, from a selection of four possible modules: 'Matrices', 'Networks and decision mathematics', 'Geometry and measurement' and 'Graphs and relations'. 'Data analysis' comprises 40 per cent of the content to be covered, 'Recursion and financial modelling' comprises 20 per cent of the content to be covered, and each selected module comprises 20 per cent of the content to be covered. Assumed knowledge and skills for the core are contained in the General Mathematics Units 1 and 2 topics: 'Computation and practical arithmetic', 'Investigating and comparing data distributions', 'Investigating relationships between two numerical variables', 'Linear graphs and modelling', 'Linear relations and equations', and 'Number patterns and recursion'. For each module there are related topics in General Mathematics Units 1 and 2.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, and graphs. They should have a facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic, financial and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout each unit as applicable.

Teachers with experience in this subject: Ms Koller and Mr Moody

VCE MATHEMATICAL METHODS (CAS): UNITS 1 – 4

Study Design Accreditation Period: 2017 – 2022

Mathematical Methods Unit Description

Mathematics is the study of relationships and patterns in number, logic, space and structure. It provides both a framework for thinking and a means of symbolic communication that is powerful, logical, concise and unambiguous and a means by which people can understand and manage their environment. Essential mathematical activities include abstracting, applying, investigating, modelling and problem solving. A CAS calculator is an essential tool in all VCE Mathematics units.

Unit 1

Mathematical Methods Units 1 and 2 provide an introductory study of simple elementary functions of a single real variable, algebra, calculus, probability and statistics and their applications in a variety of practical and theoretical contexts. They are designed as preparation for Mathematical Methods Units 3 and 4 and contain assumed knowledge and skills for these units. The focus of Unit 1 is the study of simple algebraic functions, and the areas of study are 'Functions and graphs', 'Algebra', 'Calculus' and 'Probability and Statistics'. At the end of Unit 1, students are expected to have covered the content outlined in each area of study, with the exception of 'Algebra' which extends across Units 1 and 2. This content should be presented so that there is a balanced and progressive development of skills and knowledge from each of the four areas of study with connections between and across the areas of study being developed consistently throughout both Units 1 and 2.

In undertaking this unit, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs and differentiation with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout the unit as applicable.

Unit 2

In Unit 2 students focus on the study of simple transcendental functions and the calculus of simple algebraic functions. The areas of study are 'Functions and graphs', 'Algebra', 'Calculus', and 'Probability and Statistics'. At the end of Unit 2, students are expected to have covered the material outlined in each area of study.

In undertaking this unit, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs, differentiation and anti-differentiation with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout the unit as applicable.

Mathematical Methods Units 3 and 4

Mathematical Methods Units 3 and 4 are completely prescribed and extend the introductory study of simple elementary functions of a single real variable, to include combinations of these functions, algebra, calculus, probability and statistics, and their applications in a variety of practical and theoretical contexts. Units 3 and 4 consist of the areas of study 'Functions and graphs', 'Calculus', 'Algebra' and 'Probability and statistics', which must be covered in progression from Unit 3 to Unit 4, with an appropriate selection of content for each of Unit 3 and Unit 4. Assumed knowledge and skills for Mathematical Methods Units 3 and 4 are contained in Mathematical Methods Units 1 and 2, and will be drawn on, as applicable, in the development of related content from the areas of study, and key knowledge and skills for the outcomes of Mathematical Methods Units 3 and 4.

For Unit 3 a selection of content would typically include the areas of study 'Functions and graphs' and 'Algebra', and applications of derivatives and differentiation, and identifying and analysing key features of the functions and their graphs from the 'Calculus' area of study. For Unit 4, this selection would typically consist of remaining content from the areas of study: 'Functions and graphs', 'Calculus' and 'Algebra', and the study of random variables and discrete and continuous probability distributions and the distribution of sample proportions. For Unit 4, the content from the 'Calculus' area of study would be likely to include the treatment of anti-differentiation, integration, the relation between integration and the area of regions specified by lines or curves described by the rules of functions, and simple applications of this content.

The selection of content from the areas of study should be constructed so that there is a development in the complexity and sophistication of problem types and mathematical processes used (modelling, transformations, graph sketching and equation solving) in application to contexts related to these areas of study. There should be a clear progression of skills and knowledge from Unit 3 to Unit 4 in each area of study.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs, differentiation, anti-differentiation, integration and inference with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout each unit as applicable.

Teachers with experience in this subject: Ms McDonald and Mr Zahra

VCE SPECIALIST MATHEMATICS: UNITS 1 – 2

Study Design Accreditation Period: 2017 – 2022

Specialist Maths Unit Description

Specialist Maths Units 1 and 2

Specialist Mathematics Units 1 and 2 provide a course of study for students who wish to undertake an in-depth study of mathematics, with an emphasis on concepts, skills and processes related to mathematical structure, modelling, problem solving and reasoning. This study has a focus on interest in the discipline of mathematics in its own right and investigation of a broad range of applications, as well as development of a sound background for further studies in mathematics and mathematics related fields. Mathematical Methods Units 1 and 2 and Specialist Mathematics Units 1 and 2, taken in conjunction, provide a comprehensive preparation for Specialist Mathematics Units 3 and 4. The areas of study for Units 1 and 2 of Specialist Mathematics are 'Algebra and structure', 'Arithmetic and number', 'Discrete mathematics', 'Geometry, measurement and trigonometry', 'Graphs of linear and non-linear relations' and 'Statistics'. In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational, real and complex arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations and graphs with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout each unit as applicable.

Teachers with experience in this subject: Ms Cosma

VCE MUSIC PERFORMANCE

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Music should consider the following:

Students must be having instrumental music lessons from a registered music teacher.

VCE Elective Charge

There is no elective charge for VCE Music Performance.

This subject will suit you if you enjoy:

- Practical performance
- Musical composition
- Score reading and listening analysis
- Exploring ways of refining performances
- Developing skills in music theory and practical music tasks.

This subject can lead to a career pathway in the following areas:

- Bachelor of Music, including performance, composition and musicology
- Live performance opportunities
- Music therapy
- Teaching.

Further considerations:

In music, students must participate in a school ensemble to satisfy the ensemble requirement of the performance outcomes. Students entering Unit 1 and 2 Music Performance must be auditioned if they did not complete classroom music in Years 7 to 10.

Teachers with experience in this subject: Mr Mitchelmore

VCE Music Performance Unit Description

Music offers students opportunities to engage in performing, creating and studying music that is representative of diverse genres, styles and cultures. Students develop knowledge of stylistic, aesthetic and expressive qualities and characteristics of music and develop their ability to communicate their understanding through music making: performing, composing, arranging and/or improvising; and musicianship: aural perception, analysis and music language.

Units 1 & 2: Music Performance.

These units focus on building performance and musicianship skills. Students present performances of selected group and solo music works using one or more instruments. They study the work of other performers and explore strategies to optimise their own approach to performance. They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and practise technical work to address these challenges. They also develop skills in performing previously unseen music. Students study aural, theory and analysis concepts to develop their musicianship skills and apply this knowledge when preparing and presenting performances.

Units 3 & 4: Music Performance.

These units prepare students to present convincing performances of group and solo works. Students select a program of group and solo works representing a range of styles and diversity of character for performance. They develop instrumental techniques that enable them to interpret the works and expressively shape their performances. They also develop an understanding of performance conventions they can use to enhance their performances. Students develop skills in unprepared performance, aural perception and comprehension, transcription, music theory and analysis. Students study ways in which Australian performers interpret works that have been created since 1910 by Australian composers/songwriters.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and two end-of-year examinations.

Unit 3 School-assessed Coursework: 20%

Unit 4 School-assessed Coursework: 10%

End-of-year performance examination: 50%

End-of-year aural and written examination: 20%

VCE MUSIC INVESTIGATION

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Music should consider the following:

Students must be having instrumental music lessons from a registered music teacher.

VCE Elective Charge

There is no elective charge for VCE Music Investigation.

This subject will suit you if you enjoy:

- Practical performance
- Musical composition
- Score reading and listening analysis
- Exploring ways of refining performances
- Developing skills in music theory and practical music tasks.

This subject can lead to a career pathway in the following areas:

- Bachelor of Music, including performance, composition and musicology
- Live performance opportunities
- Music therapy
- Teaching.

Teachers with experience in this subject : Mr Mitchelmore

VCE Music Investigation Unit Description

In this study students research performance practices relevant to a music style, tradition or genre. The music style, tradition or genre selected for study may be representative of music practice in a specific time, place or culture, and/or the work of a particular performer or composer. Students design an Investigation Topic as the basis for study of performance techniques and conventions, interpretative possibilities and contextual issues. Through this study they develop listening, aural, theoretical, interpretative and technical musicianship skills and demonstrate findings through performance of established repertoire, music they have composed, improvised or arranged, and commentary about issues that have informed their interpretation of a representative program of works.

Throughout Music Investigation the terms style, tradition and/or genre may refer to one or more styles, traditions and/or genres. Students electing to undertake this study choose whether they will present their end-of-year performance examination program as members of a group OR as soloists.

Units 3: Music Investigation.

In this unit students design and conduct an investigation into performance practices that are characteristic of a music style, tradition or genre. They describe and explore their selected Investigation Topic and its practices through critical listening, analysis and consideration of technical, expressive and contextual issues, and through composition, improvisation or arrangement and performance. Students begin by researching a representative sample of music and related contextual issues. They develop their knowledge and understanding of techniques and ways of achieving expressive outcomes and other aspects relevant to performance practice in the style, tradition or genre they are investigating. In this study research involves critical listening, analysis of live and recorded performances and study of scores/charts and other texts as appropriate to the Investigation Topic.

Students develop and maintain a portfolio to document evidence of their research and findings. The portfolio also includes exercises, sketches or recorded improvisations that demonstrate their developing understanding of the Investigation Topic.

Concurrently, students select, rehearse and prepare to perform a program of works that are representative and characteristic of their Investigation Topic. Through performance, students demonstrate knowledge and understanding of expressive and instrumental techniques and conventions and other relevant aspects of performance practice. As they learn and practise each work in the program, students use findings from their research to trial and make decisions about interpretative options and develop their ability to master technical and expressive features of the music.

Units 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.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and two end-of-year examinations.

Unit 3 School-assessed Coursework: 30%

Unit 4 School-assessed Coursework: 20%

End-of-year performance examination: 50%

VCE OUTDOOR & ENVIRONMENTAL STUDIES

Study Design Accreditation Period: 2018 – 2022

Advice & Pathways

Students choosing to study Outdoor and Environmental Studies should consider the following:

VCE Elective Charge

There is an elective charge of **\$500** for VCE Outdoor & Environmental Studies Unit 1-2 and **\$550** for VCE Outdoor & Environmental Studies Unit 3-4.

This subject will suit you if you enjoy:

- Drawing information from experiences and interactions with outdoor environments
- Reflecting on these environments and discussing sustainable environmental practices and
- Remembering, understanding, applying, reflection and researching.

This subject can lead to a career pathway in the following areas:

The career prospects from the subject are broad. In terms of university courses it leads to courses such as Environmental Science, Outdoor Education, Sport and Outdoor Recreation.

In terms of career pathways examples are not limited to this list but could include; Environmental Conservationist, National Park Ranger, Outdoor Recreation Officer, Outdoor Education Teacher, Environmental Scientist and Aboriginal Education Officer.

Other subjects that complement this subject include:

- Physical Education
- Health and Human Development and
- Biology.

Further considerations

There is an expectation and assessment requirements that you attend all of the camps and practical experiences. In combination with this there is a significant theoretical component to complement the practical experiences, which focuses not only on outdoor recreation but also heavily on the environment and human interaction with the environment.

Teachers with experience in this subject: Mr Cook and Ms Riddle

Outdoor & Environmental Studies Unit Descriptions

VCE Outdoor and Environmental Studies provides students with the skills and knowledge to safely participate in activities in outdoor environments and to respect and value diverse environments. The blend of direct practical experience of outdoor environments with more theoretical ways of knowing, enables informed understanding of human relationships with nature. Historically, humans have modified outdoor environments to meet survival, commercial, conservation and recreation needs. For many, outdoor environments have become places of adventure, relaxation, scientific study, social action and enterprise. Outdoor environments also provide space for connectedness with nature and opportunities for reflection upon the past, present and future. These varying values and approaches generate differing impacts and can cause pressures and tensions between user groups, leading to issues concerning the preservation and sustainability of outdoor environments.

Unit 1: Exploring outdoor experiences.

This unit examines some of the ways in which humans understand and relate to nature through experiences of outdoor environments. The focus is on individuals and their personal responses to and experiences of outdoor environments. Students are provided with the opportunity to explore the many ways in which nature is understood and perceived. Students develop a clear understanding of the range of motivations for interacting with outdoor environments and the factors that affect an individual's access to outdoor experiences and relationships with outdoor environments. Through outdoor experiences, students develop practical skills and knowledge to help them live sustainably in outdoor environments. Students understand the links between practical experiences and theoretical investigations, gaining insight into a variety of responses to, and relationships with, nature.

Unit 2: Discovering outdoor environments.

This unit focuses on the characteristics of outdoor environments and different ways of understanding them, as well as the human impacts on outdoor environments. In this unit students study nature's impact on humans, as well as the ecological, social and economic implications of human impact on outdoor environments. Students develop a clear understanding of the impact of technologies and changing human lifestyles on outdoor environments. Students examine a number of case studies of specific outdoor environments, including areas where there is evidence of human intervention. They develop the practical skills required to minimise human impact on outdoor environments. Students are provided with practical experiences as the basis for comparison between outdoor environments and reflection to develop theoretical knowledge about natural environments

Unit 3: Relationships with outdoor environments.

Students explore how Australians have understood and interacted with outdoor environments over time. Students examine the unique nature of Australian outdoor environments and investigate a range of human relationships with outdoor environments, from various Indigenous cultural experiences, through to the influence of a number of major events and issues subsequent to European settlement. Students examine current relationships between humans and outdoor environments. They examine a number of ways outdoor environments are portrayed in different media; the dynamic nature of relationships between humans and their environment and the social, cultural, economic and political factors that influence these relationships. Students engage in practical outdoor experiences that enable them to further their understanding of these key concepts.

Unit 4: Sustainable outdoor relationships.

This area of study explores the contemporary state of environments in Australia and the importance of natural environments for individuals and society. Students examine the nature of sustainability and, using key indicators, evaluate the health of outdoor environments. They investigate current and potential impacts of damage to outdoor environments. Students focus on the sustainability of environments in order to support the future needs of ecosystems, individuals and society, and the skills needed to be an environmentally responsible citizen. Students develop an understanding that management strategies and policies, together with legislation and agreements, contribute to maintaining the health and sustainability of outdoor environments in contemporary Australian society. Students use their outdoor experiences to enhance their understanding and skills

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE PHILOSOPHY

Study Design Accreditation Period: 2019 – 2023

Advice & Pathways

Students choosing to study Philosophy should consider the following:

VCE Elective Charge

There is no elective charge for VCE Philosophy.

This subject will suit you if you enjoy:

- Thinking
- 'Community of inquiry'-based learning
- Lots of group discussion
- Independent research tasks, reading texts and articles and written reflections and
- Being challenged because there is no clear 'right or wrong' answer.

This subject can lead to a career pathway in the following areas:

Law, Arts, Fine Arts, any Medical field where they have to consider ethics eg: Biology, Psychology, Government. The skills developed in Psychology also assist in design and planning or anything where you need to think logically.

Other subjects that complement this subject include:

- English (any)
- Sciences - where you need to consider the validity of science and truth; and
- Psychology - looking at the brain.

Further considerations

Students need to keep an open mind to study Philosophy and be prepared to discuss and write about philosophical issues.

Teachers with experience in this subject: Mr Wakefield

Philosophy Unit Description

Philosophy is broadly concerned with questions of ethics, epistemology and metaphysics. Philosophy is the founding discipline of logic, and continues to develop and refine the tools of critical reasoning, influencing approaches in mathematics, digital coding, science and the humanities. Philosophers grapple with the problems that lie at the foundation of issues of public debate such as artificial intelligence, justification for a charter of human rights and freedom of speech VCE Philosophy contains a broad introduction to western philosophy and its methods of inquiry. It explores themes and debates within metaphysics, epistemology (philosophy of knowledge) and value theory, as well as techniques of reasoning and argument drawn from formal and informal logic. It investigates human nature through questions about the relationship between body and mind, and personal identity, leading to an examination of the good life. Prescribed texts by significant philosophers are used to develop a critical appreciation of key questions and contemporary debates. Where religious concepts and traditions of thought are discussed, they are considered from a philosophical rather than theological point of view.

Unit 1: Existence, knowledge and reasoning.

What is the nature of reality? How can we acquire certain knowledge? These are some of the questions that have challenged humans for millennia and underpin ongoing endeavours in areas as diverse as science, justice and the arts. This unit engages students with fundamental philosophical questions through active, guided investigation and critical discussion of two key areas of philosophy: epistemology and metaphysics. The emphasis is on philosophical inquiry – ‘doing philosophy’, for example through formulation of questions and philosophical exchanges with others. Hence the study and practice of techniques of reasoning are central to this unit. As students learn to think philosophically, appropriate examples of philosophical viewpoints and arguments, both contemporary and historical, are used to support, stimulate and enhance their thinking about central concepts and problems.

Unit 2: Questions of value.

What are the foundations of our judgments about value? What is the relationship between different types of value? How, if at all, can particular value judgments be defended or criticised? This unit enables students to explore these questions in relation to different categories of value judgment within the realms of morality, political and social philosophy and aesthetics. Students also explore ways in which viewpoints and arguments in value theory can inform and be informed by contemporary debates. They study at least one primary philosophical text, using the complete text or an extract and develop a range of skills including formulating philosophical questions and informed responses. For the purposes of this study a primary text is defined as offering a positive argument or viewpoint rather than mere critique.

Unit 3: Minds, bodies and persons.

This unit considers basic questions regarding the mind and the self through two key questions: Are human beings more than their bodies? Is there a basis for the belief that an individual remains the same person over time? Students critically compare the viewpoints and arguments put forward in philosophical sources to their own views on these questions and to contemporary debates. For the purposes of this study, arguments make a claim supported by propositions and reasoning, whereas a viewpoint makes a claim without necessarily supporting it with reasons or reasoning. Philosophical debates encompass philosophical questions and associated viewpoints and arguments within other spheres of discourse such as religion, psychology, sociology and politics.

Unit 4: The good life.

This unit considers the crucial question of what it is for a human to live well. What does an understanding of human nature tell us about what it is to live well? What is the role of happiness in a life well lived? Is morality central to a good life? How does our social context impact on our conception of a good life? In this unit, students explore philosophical texts that have had a significant impact on western ideas about the good life. Students critically compare the viewpoints and arguments in set texts to their views on how we should live, and use their understandings to inform a reasoned response to contemporary debates. For the purposes of this study, arguments make a claim supported by propositions and reasoning, whereas a viewpoint makes a claim without necessarily supporting it with reasons or reasoning. Philosophical debates encompass philosophical questions and associated viewpoints and arguments within other spheres of discourse such as psychology, sociology, science, engineering and politics.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE PHYSICAL EDUCATION

Study Design Accreditation Period: 2018 – 2022

Advice & Pathways

Students choosing to study Physical Education should consider the following:

VCE Elective Charge

There is an elective charge of **\$80** for VCE Physical Education Unit 1-2 and for VCE Physical Education Unit 3-4.

This subject will suit you if you enjoy:

Developing an understanding of theoretical and practical understanding of the body and physical performance and then applying this knowledge in a practical context.

This subject can lead to a career pathway in the following areas:

University courses it leads to: Exercise Science, Human Movement, Physiotherapy and other related courses, Health Sciences, Sports Management, Community Health courses and Physical Education Teaching.

Career pathways examples: Sport Scientist, Strength and Conditioning Coach, PE Teacher, Health Promotion Officer, Community Health Project Officer, Sports Coach, Fitness Instructor, Personal Trainer, Physiotherapist, Sports Administration, Massage Therapist.

Other subjects that complement this subject include:

- Health and Human Development
- Biology and
- Outdoor and Environmental Studies.

Further considerations:

Students will be expected to participate regularly in physical activities throughout the units.

Teachers with experience in this subject: Ms Ford and Mr Leith

Physical Education Unit Description

Physical Education examines the biological, physiological, psychological, social and cultural influences on performance and participation in physical activity. It focuses on the interrelationship between motor learning and psychological, biomechanical, physiological and sociological factors that influence physical performances, and participation in physical activity. It integrates theoretical knowledge with practical application through participation in physical activities.

Unit 1: The Human Body in motion.

Students explore how the musculoskeletal and cardiorespiratory systems work together to produce movement. Through practical activities students explore the relationships between the body systems and physical activity, sport and exercise, and how the systems adapt and adjust to the demands of the activity. They consider the implications of the use of legal and illegal practices to improve the performance.

Unit 2: Physical activity, sport and society.

This unit develops students' understanding of physical activity, sport and society from a participatory perspective. Students are introduced to types of physical activity and the role participation in physical activity and sedentary behaviour plays in their own health and wellbeing as well as in other people's lives in different population groups.

Unit 3: Movement, skills and energy for physical activity.

This unit introduces students to the biomechanical and skill acquisition principles used to analyse human movement skills and energy production from a physiological perspective. Students use a variety of tools and techniques to analyse movement skills and apply biomechanical and skill acquisition principles to improve and refine movement in physical activity, sport and exercise. They use practical activities to demonstrate how correct application of these principles can lead to improved performance in physical activity and sport. Students investigate the relative contribution and interplay of the three energy systems to performance in physical activity, sport and exercise. In particular, they investigate the characteristics of each system and the interplay of the systems during physical activity. Students explore the causes of fatigue and consider different strategies used to postpone fatigue and promote recovery.

Unit 4: Training to improve performance.

In this unit students analyse movement skills from a physiological, psychological and sociocultural perspective, and apply relevant training principles and methods to improve performance within physical activity at an individual, club and elite level. Improvements in performance, in particular fitness, depend on the ability of the individual and/or coach to gain, apply and evaluate knowledge and understanding of training. Students analyse skill frequencies, movement patterns, heart rates and work to rest ratios to determine the requirements of an activity. Students consider the physiological, psychological and sociological requirements of training to design and evaluate an effective training program. Students participate in a variety of training sessions designed to improve or maintain fitness and evaluate the effectiveness of different training methods. Students critique the effectiveness of the implementation of training principles and methods to meet the needs of the individual, and evaluate the chronic adaptations to training from a theoretical perspective.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 25%

Unit 4 school-assessed coursework: 25%

Units 3 and 4 examination: 50%

VCE PHYSICS

Study Design Accreditation Period: 2016 – 2022

Advice & Pathways

Students choosing to study Physics should consider the following:

VCE Elective Charge

There is no elective charge for VCE Physics.

This subject will suit you if you enjoy:

- Conducting experimental investigations
- Reading and summarising scientific texts
- Memorising details and facts such as the names and formula
- Presenting and analysing data often requiring mathematical interpretation
- Using specific vocabulary related to key physical principles and concepts
- Conducting independent and collaborative research and
- Solving problems, most of which will require proficiency in Mathematics.

This subject can lead to a career pathway in the following areas:

Physics leads to a range of careers and studies such as those in the Health and Medical Sciences, Telecommunications, Meteorology, Architecture, a wide variety of Engineering disciplines, Geophysical sciences, Microbiology, Oceanography and Science Education.

Other subjects that complement this subject include:

Physics can be undertaken with a range of other studies in the Sciences, Humanities and Mathematics areas; and can be seen as part of a balanced set of studies where breadth of experience is seen as worthwhile. It is typically studied with Mathematics. Many students choose to study Physics together with a range of studies drawn from mathematics, humanities, Health & PE, Arts/ Technology and Language areas.

Further considerations:

Students should always check with Careers Coordinator for Physics as a prerequisite study for tertiary courses.

Teachers with experience in this subject: Mr Van Vliet

Physics Unit Description

Physics is the systematic study of the physical universe, ranging from the minute building blocks of matter to the broad expanses of the Universe. Students use thermodynamic principles to explain phenomena related to changes in thermal energy. They apply thermal laws when investigating energy transfers within and between systems and assess the impact of human use of energy on the environment. Students examine the motion of electrons and explain how it can be manipulated and utilised. They explore current scientifically accepted theories that explain how matter and energy have changed since the origins of the Universe.

Unit 1: What ideas explain the physical world?

In this area of study students observe motion and explore the effects of balanced and unbalanced forces on motion. They analyse motion using concepts of energy, including energy transfers and transformations, and apply mathematical models during experimental investigations of motion. They describe and analyse graphically, numerically and algebraically the motion of an object, using specific physics terminology and conventions.

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

In this unit students observe motion and explore the effects of balanced and unbalanced forces on motion. They analyse motion using concepts of energy, including energy transfers and transformations and apply mathematical models during experimental investigations of motion. They describe and analyse graphically, numerically and algebraically the motion of an object, using specific physics terminology and conventions.

Unit 3: How do fields explain motion and electricity?

In this unit students explore the importance of energy in explaining and describing the physical world. They examine the production of electricity and its delivery to homes. Students consider the field model as a construct that has enabled an understanding of why objects move when they are not apparently in contact with other objects. Students use Newton's laws to investigate motion in one and two dimensions and are introduced to Einstein's theories to explain the motion of very fast objects.

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

In this unit, students explore the use of wave and particle theories to model the properties of light and matter. They examine how the concept of the wave is used to explain the nature of light and explore its limitations in describing light behaviour. Students learn to think beyond the concepts experienced in everyday life to study the physical world from a new perspective. Students design and undertake investigations involving at least two continuous independent variables.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 21%

Unit 4 school-assessed coursework: 19%

Units 3 and 4 examination: 60%

VCE PRODUCT DESIGN AND TECHNOLOGY

Study Design Accreditation Period: 2018 – 2022

Advice & Pathways

Students choosing to study Product Design & Technology should consider the following:

VCE Elective Charge

There is an elective charge of **\$175** for VCE Product Design & Technology Unit 1-2 and for VCE Product Design & Technology Unit 3-4.

This subject will suit you if you enjoy:

- Enjoy a range of learning styles including reading, research, creating and solving problems
- Design and design discussions; Working systematically and independently and
- Working from drawings and your own design to create product.

This subject can lead to a career pathway in the following areas:

There is an interesting and wide range of design fields that product design leads to such as industrial design (Automotive, Furniture, Products), Textile Design, Engineering, Fashion and Architecture.

Other subjects that complement this subject include:

- Art
- Visual Communication Design.

Further considerations

As a hands-on subject Product Design and Technology provides the opportunity to develop a folio as a requirement for entry into specific tertiary courses.

Teachers with experience in this subject: Ms Royale & Mr Byrnes

Product Design and Technology Unit Description

Designers play an important part in our daily lives. In this study students transform drawings and plans into the creation of useful products. They take into account the sustainability of resources and develop skills in critically analysing existing products.

Unit 1: Product re-design and sustainability.

In this unit students will re-design a product with the aim of improving its aesthetics, functionality and/or quality. They will use a range of materials, tools, equipment and processes to compare their product or prototype to their original drawings.

Unit 2: Collaborative design.

Students will work individually and in a team to develop a response to a design brief based on a common theme. They will design and produce a product that meets the needs outlined in the brief.

Unit 3: Applying the product design process.

Students use the product design process to work as a designer with a client. They develop a design brief and produce a folio that documents all stages of the process.

Unit 4: Product development and evaluation.

In this unit students produce the product designed in Unit 3 and evaluate the outcome of the designing, planning and production activities. Students also undertake a comparison between their product and similar commercial items.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework, school-assessed task and an end-of-year examination.

Unit 3 school-assessed coursework: 12%

Unit 4 school-assessed coursework: 8%

SAT (electronic folio): 50%

Units 3 and 4 examination: 30%

VCE PSYCHOLOGY

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Psychology should consider the following:

VCE Elective Charge

There is no elective charge for VCE Psychology.

This subject will suit you if you enjoy:

- Conducting investigations
- Reading and summarising scientific texts
- Memorising details and facts such as the names and functions of specific neural structures
- Presenting and analysing data
- Using specific vocabulary related to key psychological principles and concepts
- Conducting independent and collaborative research and
- Solving problems.

This subject can lead to a career pathway in the following areas:

Psychology can lead to a range of careers and studies such as those in the Health and Medical Sciences, Welfare, Social Work, Human Resource Management and Justice areas.

Other subjects that complement this subject include:

Psychology can be undertaken with a range of other studies in the sciences, humanities and mathematics areas; and can be seen as part of a balanced set of studies where breadth of experience is seen as worthwhile. It is typically studied with a variety of other studies. Many students choose to study Psychology together with studies drawn from other Sciences, Mathematics, Humanities, Health and PE, Arts/Technology and Language areas.

Further considerations:

Students should always check with Careers Coordinator for Psychology as a prerequisite study for tertiary courses.

Teachers with experience in this subject: Ms Marinucci

Psychology Unit Description

Psychology is a broad discipline that incorporates both the scientific study of human behaviour through biological, psychological and social perspectives and the systematic application of this knowledge to personal and social circumstances in everyday life.

Unit 1: How are behaviour and mental processes shaped?

In this unit, students investigate the development of human cognition, emotion and behaviour. They learn about the structure and functions of the human brain and the role it plays in the nervous system. Students explore brain plasticity and the influence that brain damage may have on a person’s psychological functioning. They consider the complex nature of psychological development, including situations where it may not occur as expected. Students examine the contribution that classical and contemporary studies have made to an understanding of the human brain and its functions, and to the development of different psychological models and theories used to predict and explain the development of thoughts, feelings and behaviours.

Unit 2: How do external factors influence behaviour and mental health?

In this unit, students investigate how perception of stimuli enables a person to interact with the world around them and how this perception can be distorted. They evaluate the role social cognition plays in a person’s attitudes, perceptions of themselves and relationships with others. Students explore a variety of factors and contexts that can influence the behaviour of individuals and groups. They examine the contribution that classical and contemporary research has made to the understanding of human perception and why individuals and groups behave in specific ways.

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

In this unit students examine both macro-level and micro-level functioning of the nervous system to explain how the human nervous system enables a person to interact with the world around them. They explore how stress may affect a person’s psychological functioning and consider the causes and management of stress. Students investigate how mechanisms of memory and learning lead to the acquisition of knowledge, the development of new capacities and changed behaviours.

Unit 4: How is wellbeing developed and maintained?

In this unit students examine the nature of consciousness and how changes in levels of consciousness can affect mental processes and behaviour. They consider the role of sleep and the impact that sleep disturbances may have on a person’s functioning. Students explore the concept of a mental health continuum and apply a biopsychosocial approach, as a scientific model, to analyse mental health and disorder.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and an end-of-year examination.

Unit 3 school-assessed coursework: 16%

Unit 4 school-assessed coursework: 24%

Units 3 and 4 examination: 60%

VCE STUDIO ARTS

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Studio Arts should consider the following:

VCE Elective Charge

There is an elective charge of **\$150** for VCE Studio Arts Unit 1-2 and for VCE Studio Arts Unit 3-4.

This subject will suit you if you enjoy:

Hands-on practical application including taking photographs using film and/or digital, Using and experimenting with materials and techniques (including the darkroom and computers/ computer software, such as Photoshop, analysis of artworks through annotations, reflective writing.

This subject can lead to a career pathway in the following areas:

Career in Photography, Teaching, Advertising, Film, Television, Fashion, Geological Surveillance and Architecture.

Other subjects that complement this subject include:

- Art
- Visual Communication Design
- Product Design and Technology
- Food Studies.

Further considerations:

For Studio Arts, it is helpful but not essential for students to have personal access to a camera to use outside of school hours and the camera can be analogue and/or digital.

Teachers with experience in this subject: Mr Johnstone

Studio Art Unit Descriptions

In this study, students research focuses on critical, reflective and creative thinking, the visual analysis of artworks and seek inspiration and influences in their art making. They study how artists have developed styles and explored their cultural identity in their artwork. Students use this knowledge to inform their own studio practice and to support art making.

Unit 1: Studio Inspiration and techniques.

In this unit students focus on developing their understanding of studio practice and explore, develop, refine, resolve and present artworks. Students research and analyse the ways in which artists have developed their studio practice to interpret and express ideas and apply materials and techniques in artworks.

Unit 2: Studio exploration and concepts.

In this unit students establish and use studio practices to produce artworks. Students explore and develop ideas, creating aesthetic qualities and recording the development of the work. Through the study of art movements and styles, students begin to understand the use of other artists' work in their own work.

Unit 3: Studio practices and processes.

In this unit students focus on the implementation of an individual studio process leading to the production of potential directions. Students develop and use an exploration proposal to define an area of creative exploration. The study of artists and their work practices may provides inspiration for students' own art.

Unit 4: Studio practices and industry contexts.

In this unit students focus on the planning, production and evaluation required to develop, refine and present artworks that link to the ideas resolved in Unit 3. Students produce at least two finished artworks. Students investigate the preparation, presentation and conservation of artworks.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and school assessed task and one end-of-year examinations.

Unit 3 school-assessed coursework: 5%

Unit 4 school-assessed coursework: 5%

Units 3 and 4 school-assessed task: 60%

Units 3 and 4 examination: 30%

VCE SYSTEMS ENGINEERING

Study Design Accreditation Period: 2019 – 2023

Advice & Pathways

Students choosing to study Systems Engineering should consider the following:

VCE Elective Charge

There is an elective charge of **\$110** for VCE Systems Engineering Unit 1-2 and for VCE Systems Engineering Unit 3-4.

This subject will suit you if you enjoy:

- Identifying, analysing and solving problems
- Converting a conceptual plan into a functional outcome
- Undertaking highly detailed and intricate production tasks
- Enjoy working with tools and machinery
- Enjoy technical design

This subject can lead to a career pathway in the following areas:

Careers in Aerospace engineer, Communications engineer, instrumentation engineer, Design engineer, Electrical engineer, Electronics engineer, IT consultant, Network engineer, Technician, Manufacturing and assembly.

Other subjects that complement this subject include:

- Art
- Visual Communication Design
- Product Design and Technology
- Food Studies.

Teachers with experience in this subject: Mr Bradshaw

Systems Engineering Unit Descriptions

VCE Systems Engineering involves the design, production, operation, evaluation and iteration of integrated systems, which mediate and control many aspects of human experience. Integral to VCE Systems Engineering is the identification and quantification of systems goals, the generation of system designs, trial and error, justified design trade-offs, selection and implementation of the most appropriate design. Students test and verify that the system is well-built and integrated. They evaluate how well the completed system meets the intended goals and reflect on the systems engineering process to create a satisfactory design outcome. This study can be applied to a diverse range of engineering fields such as manufacturing, transportation, automation, control technologies, mechanisms and mechatronics, electrotechnology, robotics, pneumatics, hydraulics, and energy management. VCE Systems Engineering considers the interactions of these systems with people, society and ecosystems. The rate and scale of human impact on global ecologies and environments demands that systems design and engineering take a holistic approach by considering the overall sustainability of any system throughout its life cycle. Key engineering goals include using a project management approach to maximise system efficiency and to optimise system performance through innovation processes. Lean, agile and fast prototyping engineering and manufacturing concepts and systems thinking are integral to this study.

Unit 1: Mechanical systems

This unit focuses on engineering fundamentals as the basis of understanding concepts, principles and components that operate in mechanical systems. The term 'mechanical systems' includes systems that utilise all forms of mechanical components and their linkages. While this unit contains the fundamental physics and theoretical understanding of mechanical systems and how they work, the focus is on the creation of a system. The creation process draws heavily upon design and innovation processes. Students create an operational system using the systems engineering process. The focus is on a mechanical system; however, it may include some electrotechnological components. All systems require some form of energy to function. Students research and quantify how systems use or convert the energy supplied to them. Students are introduced to mechanical engineering principles including mechanical subsystems and devices, their motions, elementary applied physics, and related mathematical calculations that can be applied to define and explain the physical characteristics of these systems.

Unit 2: Electrotechnological systems

In this unit students study fundamental electrotechnological engineering principles. The term 'electrotechnological' encompasses systems that include electrical/electronic circuitry including microelectronic circuitry. Through the application of the systems engineering process, students create operational electrotechnological systems, which may also include mechanical components or electro-mechanical subsystems. While this unit contains fundamental physics and theoretical understanding of electrotechnological systems and how they work, the focus is on the creation of electrotechnological systems, drawing heavily upon design and innovation processes.

Electrotechnology is a creative field that responds to, and drives rapid developments and change brought about through technological innovation. Contemporary design and manufacture of electronic equipment involves increased levels of automation and inbuilt control through the inclusion of microcontrollers and other logic devices. In this unit students explore some of these emerging technologies. Students study fundamental electrotechnological principles including applied electrical theory, standard representation of electronic components and devices, elementary applied physics in electrical circuits and mathematical processes that can be applied to define and explain the electrical characteristics of circuits.

Unit 3: Integrated and controlled systems.

In this unit students study engineering principles used to explain physical properties of integrated systems and how they work. Students design and plan an operational, mechanical and electrotechnological integrated and controlled system. They learn about the technologies used to harness energy sources to provide power for engineered systems. Students commence work on the creation of an integrated and controlled system using the systems engineering process. This production work has a strong emphasis on innovation, designing, producing, testing and evaluating.

Students manage the project, taking into consideration the factors that will influence the creation and use of their integrated and controlled system. Students' understanding of fundamental physics and applied mathematics underpins the systems engineering process, providing a comprehensive understanding of mechanical and electrotechnological systems and how they function. Students learn about sources and types of energy that enable engineered technological systems to function. Comparisons are made between the use of renewable and non-renewable energy sources and their impacts. Students develop their understanding of technological systems developed to capture and store renewable energy and technological developments to improve the credentials of non-renewables.

Unit 4: Systems control.

In this unit students complete the creation of the mechanical and electrotechnological integrated and controlled system they researched, designed, planned and commenced production of in Unit 3. Students investigate new and emerging technologies, consider reasons for their development and analyse their impacts. Students continue producing their mechanical and electrotechnological integrated and controlled system using the systems engineering process. Students develop their understanding of the open-source model in the development of integrated and controlled systems, and document its use fairly. They effectively document the use of project and risk management methods throughout the creation of the system. They use a range of materials, tools, equipment and components. Students test, diagnose and analyse the performance of the system. They evaluate their process and the system. Students expand their knowledge of emerging developments and innovations through their investigation and analysis of a range of engineered systems. They analyse a specific emerging innovation, including its impacts.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and school assessed task and one end-of-year examinations.

Unit 3-4 school-assessed coursework: 20%

Units 3 and 4 school-assessed task: 50%

Units 3 and 4 examination: 30%

VCE THEATRE STUDIES

Study Design Accreditation Period: 2019 – 2022

Advice & Pathways

Students choosing to study Theatre Studies should consider the following:

VCE Elective Charge

There is no elective charge for VCE Theatre Studies. **Theatre Studies will only be offered for Year 12 VCE Units 3 – 4 in 2022.**

This subject will suit you if you enjoy:

- thinking with creativity and imagination
- analysing and interpreting texts
- public speaking
- working collaboratively as part of a team
- planning and realising a goal.

This subject can lead to a career pathway in the following areas:

Theatre Studies may lead to a career as an actor, dramatist, theatre producer, theatre director, costume designer, set designer, make-up artist, lighting engineer, sound technician.

Other subjects that complement this subject include:

- Dance
- Art/Studio Art
- English (any)

Further considerations:

As a requirement for successful completion of this subject students are advised that they must attend out of school hours excursions to view selected drama productions.

Teachers with experience in this subject: Mr Thomson

Theatre Studies Unit Descriptions

In VCE Theatre Studies students interpret scripts from the pre-modern era to the present day and produce theatre for audiences. Students apply dramaturgy and work in the production roles of actor, director and designer, developing an understanding and appreciation of the role and place of theatre practitioners. Through the study of plays and theatre styles, and by working in production roles to interpret scripts, students develop knowledge and understanding of theatre, its conventions and the elements of theatre composition. Students analyse and evaluate the production of professional theatre performances and consider the relationship to their own theatre production work. Students learn about and demonstrate an understanding of safe, ethical, and responsible personal and interpersonal practices in theatre production.

Unit 3: Producing theatre.

In this unit students develop an interpretation of a script through the three stages of the theatre production process: planning, development and presentation. Students specialise in two production roles, working collaboratively, creatively and imaginatively to realise the production of a script. They use knowledge developed during this process to analyse and evaluate the ways work in production roles can be used to interpret script excerpts previously unstudied. Students develop knowledge and apply elements of theatre composition, and safe and ethical working practices in the theatre. Students attend a performance selected from the prescribed VCE Theatre Studies Unit 3 Playlist and analyse and evaluate the interpretation of the script in the performance. The Playlist is published annually on the VCAA website.

Unit 4: Presenting an interpretation.

In this unit students study a scene and an associated monologue. They initially develop an interpretation of the prescribed scene. This work includes exploring theatrical possibilities and using dramaturgy across the three stages of the production process. Students then develop a creative and imaginative interpretation of the monologue that is embedded in the specified scene. To realise their interpretation, they work in production roles as an actor and director, or as a designer. Students' work for Areas of Study 1 and 2 is supported through analysis of a performance they attend. The performance must be selected from the VCE Theatre Studies Unit 4 Playlist. The Playlist is published annually on the VCAA website. Students analyse acting, direction and design and the use of theatre technologies, as appropriate to the production. In conducting their work in Areas of Study 1 and 2, students develop knowledge in and apply safe and ethical theatre practices.

Levels of achievement for satisfactory completion.

Unit 3 and 4

School-assessed coursework and school assessed task and an end-of-year examination.

Unit 3 school-assessed coursework:	30%
Unit 4 school-assessed coursework:	15%
End-of-year performance examination:	25%
Units 3 and 4 examination:	30%

VCE VISUAL COMMUNICATION DESIGN

Study Design Accreditation Period: 2017 – 2022

Advice & Pathways

Students choosing to study Visual Communication Design should consider the following:

VCE Elective Charge

There is an elective charge of **\$100** for VCE Visual Communication Design Unit 1-2 and for VCE Visual Communication Design Unit 3-4.

This subject will suit you if you enjoy:

- Hands on problem solving
- Independent research and
- 3D visualising.

This subject can lead to a career pathway in the following areas:

Visual Communication Design may lead to a career in Graphic/Communication Design, Architecture, Illustration, Industrial Design, Visual Merchandising, Interior Design, and/or Art.

Other subjects that complement this subject include:

- Product Design & Technology
- Studio Art
- Art
- English (any)
- Media and
- Mathematics.

Further considerations:

For Visual Communication Design, an ability to draw is advantageous. There are a number of written components in Visual Communication Design; it is not 100% practical. Computers are utilized as a tool in the classroom, but are also not used 100% of the time and students will be required to have good time management and organisation skills to be successful in this subject. Studying more than two folio subjects in VCE is not recommended.

Teachers with experience in this subject: Mr Robinson

Visual Communication Design Unit Descriptions

This study is intended to assist students in the understanding, use and interpretation of a range of visual communications within the areas of Industrial, Environmental and Communication design. It involves a study of the vocabulary of visual communication, which includes an understanding of, and application of, drawing and drawing conventions, design elements, and principles and function of design in communication. The study also provides the opportunity to develop an informed, critical and discriminating approach to visual communications encountered in everyday life.

Unit 1: Introduction into Visual Communication Design.

This unit will enable students to use visual language to communicate messages, ideas and concepts, through instrumental, visualisation, observational and presentation drawing methods. Design elements and principles are explored, applied and analysed. Students study the history of design, and will be introduced to the first stages of the visual communication design process.

Unit 2: Applications of Visual Communication Design.

This unit will enable students to apply design knowledge, thinking skills and drawing methods to create visual communications that meet specific purposes. The fields of environmental, industrial and communication design will be covered. Typography will be a focus of communication design. The visual communication production process will be applied to generate and develop concepts in response to a brief.

Unit 3: Design thinking and practice.

In this unit students gain insight into how the selection of methods, media, materials and the application of design elements and design principles can create effective visual communications for specific audiences and purposes. Students will use research and analysis of designers to support their own work. They establish a brief, with two distinctly different needs, and apply design thinking skills through the design process. The brief and investigation work underpin the developmental and refinement work undertaken in Unit 4.

Unit 4: Design development and presentation.

The focus of this unit is the development of design concepts and two final presentations of visual communications to meet the requirements of the brief. This involves applying the design process twice to meet each of the stated needs. Students evaluate their visual communications and devise a pitch to communicate their design thinking to an audience.

Levels of achievement for satisfactory completion.

Unit 1 and 2.

Individual school decision on levels of achievement.

Unit 3 and 4

School-assessed coursework and school assessed task and an end-of-year examination.

Unit 3 school-assessed coursework: 33%

Unit 4 school-assessed task: 33%

Units 3 and 4 examination: 34%