

# 2027 YEAR 10 CURRICULUM GUIDE

Hume Anglican Grammar  
Freier Campus

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Anglican Grammar  
**Hume**

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**Aim High, Be Proud**

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## Year 10 Course Overview

At Year 10, students continue to have lessons in the core areas of English, Mathematics, Science and Humanities as prescribed by the Australian Curriculum:

ACARA: <http://www.acara.edu.au/curriculum/curriculum.html>

Further, all students must complete one compulsory semester of Health and Physical Education. After this, they have greater choice to create a course that suits their interests and prospective post-schooling pathways. To this end, we recommend that students consult personnel such as the Careers Counsellor, the Heads of Learning, the VCE Coordinator and the Head of Teaching and Learning - Secondary to gain advice and make informed decisions.

A general Year 10 course will follow the structure below:

<b>Semester 1</b>	English	Mathematics	Science*	Humanities*	Elective 1	Elective 2
<b>Semester 2</b>	English	Mathematics	HPE*	Elective 1	Elective 2	Elective 3

*\*Depending on students' subject preferences, the semester-long core subjects may be timetabled in different semesters to the example above.*

In addition to the core curriculum, all students choose five elective subjects. Each subject, core or elective, is allocated the same load of eight periods per cycle. While we aim to run all electives and try to give each student their chosen preferences, sometimes this may not be possible due to timetabling constraints or low enrolment numbers.

All Year 10 students will participate in Ethics seminar days as well as a pastoral care program which will be delivered during Homeroom sessions, Chapels and Assemblies.

## Subject Selection Timeline

For further information contact the Head of Teaching and Learning – Secondary or relevant Head of Faculty/Subject Coordinator – see 'Contacts' page.

Date	Action
Final Week of Term 2	Curriculum Guides emailed to students and parents.
Week 2, Term 3 <b>Tuesday 21 July</b>	Attend Subject Selection Information Evening with parents.
Week 2, Term 3	<b>Web preferences open</b> for students Years 8-11 for subject selection.
Week 3, Term 3 <b>Friday 31 July</b>	Web preferences <b>close</b> .
Early November	Confirmation of subjects sent to students.

## Year 10 Accelerated Studies Guidelines

The VCE program is normally studied over a two-year period with subjects benchmarked for student ability in Years 11 and 12. Students who are excelling in their academic studies in Year 9 may be eligible to take up the challenge of accelerating in a VCE subject, thus completing their VCE studies over a three-year period. These students will have demonstrated that they are working above the level expected of their current year, placing them within the top 16% of students of those in the year above (equal to a study score above 36). Selecting a single Unit 1 and 2 sequence in Year 10, alongside Year 10 subjects, allows students to experience the rigour, pleasures, and requirements of studying a Year 11 course, helping them know what to expect in their final years at school.

### Requirements to Accelerate

Students who accelerate are expected to be able to cope with both the demands of their accelerated subject, as well as maintaining a high level of achievement and attitude in their other subjects. Acceleration will only be on an invitational basis; due to the negative impact it can have on a student's achievement and some students may not perform as well as they could if studying the subject in the same year as their peers. Several sources of student data will be thoroughly analysed to ensure we identify students who will be able to meet the academic and social/emotional demands of their acceleration subject and the rest of their Year 10 program.

Students may be eligible to accelerate if they meet the following required criteria:

1. Student results in English are above 85% (with the only exception being if they wish to accelerate in Art Making and Exhibiting or Systems Engineering, where the English results are above 75%).
2. Students achieve an average result across all subjects of 85% or higher.
3. Student has demonstrated a commitment to their studies in all subjects.
4. Student attendance rate is at or above 90%.

Only students who meet all criteria may be eligible to accelerate. This will be an extra challenge for students, and they will need to demonstrate that they have the maturity, attitude, ability, and social/emotional capability to balance their workload. In addition, the student's wellbeing will be taken into account to ensure they are able to cope emotionally with the additional pressures involved in the acceleration program.

Identified students will be notified by the VCE Office that they are eligible to apply for acceleration. Final approval for student acceleration will be made by relevant members of the Curriculum Committee.

### Ongoing Review

The performance of accelerated students will be reviewed at the end of Semesters One and Two. They will be monitored by a panel (VCE Coordinator, Year 10 Coordinator, Head of Teaching and Learning – Secondary). If a student is not progressing as expected in either their accelerated subject or maintaining their expected average in the other Year 10 subjects, they will not be permitted to continue with the Unit 3 and 4 in that subject and, hence, may be withdrawn from the acceleration program. Any breaches to VCAA rules, attendance below 90% or significant changes in the student's wellbeing may result in a withdrawal at the discretion of the VCE Panel. Please note that a minor review will also be undertaken this year to ensure grades remain consistently high in Term 4 and Semester 2 examinations.

A Year 10 student studying a Unit 1 and 2 subject studies alongside Year 11 students, will result in the student completing five Year 10 subjects rather than six. All students who accelerate are to complete a full Year 12 program of five subjects in their final year at school, which will equate to studying six VCE subjects in total.

## Available Subjects and Prerequisites

The following subjects are available for acceleration with any additional prerequisites are listed below:

Subject	Prerequisites
Politics	Results of 85% or above in Humanities.
Accounting	Results of 85% or above in Humanities.
Art Making & Exhibiting	Results of 85% or above in a Visual Arts subject.
Biology	Results of 85% or above in Science.
Business Management	Results of 85% or above in Humanities.
Environmental Science	Results of 85% or above in Science.
Geography	Results of 85% or above in Humanities.
Health and Human Development	Results of 85% or above in PE.
History	Results of 85% or above in Humanities.
Legal Studies	Results of 85% or above in Humanities.
Physical Education	Results of 85% or above in PE.
Psychology	Results of 85% or above in Science.
Religion and Society	Results of 85% or above in Humanities.
Systems Engineering	Results of 85% or above in a Technology subject.

## Core Subject Information

### English

#### Overview

English is structured around 3 core strands, language, literacy and literature. Through the study of English students are encouraged to develop and refine their ability to read, write, speak and listen in complex and critical ways. Students read and respond to a wide variety of texts for enjoyment. These texts engage students in exploring themes of human experience and cultural significance, interpersonal relationships, and ethical and global dilemmas within real world and fictional settings, representing a variety of perspectives. Students explore and create a range of imaginative, informative and persuasive text types including narratives, procedures, performances, reports, discussions, literary analyses, transformations of texts and reviews. The English course seeks to build upon key skills and knowledge developed in previous year levels.

#### Duration

This subject runs for TWO semesters.

#### Educational Objectives

- Participate in dynamic and inquisitive classrooms, in activities that challenge them to form ideas and build upon the ideas of others, solving problems, justifying opinions and developing and expanding arguments
- Read and respond to a broad and diverse range of texts, which challenge them to create complex interpretations, which are supported through evidence
- Build an awareness of the way in which language is a system of meaning that is reliant on grammatical elements and vocabulary choices, which can not only be identified but replicated and manipulated to create greater expression and meaning in their own texts
- Create and present a wide range of oral texts; both informative and persuasive with greater control of the features of oral language such as pace, pitch, tone and intonation. Ensuring an understanding of the significance of audience and purpose to the effectiveness of speaking and presenting
- Examine the world of media texts, learning to focus on, identify and engage with complex language devices and discuss the ways in which these are used to position and persuade readers

#### Topics of Study

- Text studies – a range of novels, plays, short stories, documentaries, films, poetry and other multimodal texts
- Argument and language analysis
- Language development, including vocabulary, grammar and sentence structure
- Writing for a range of purposes and audiences
- Oral presentations with statements of intention

#### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Text analysis essays
- Comparative writing tasks
- Writing folio pieces
- Argument and language analysis tasks
- Oral presentations
- Creative writing tasks
- End-of-semester examinations

#### VCE Course Pathways

This course will prepare students for VCE English.

## Humanities

### Overview

In Humanities, students explore the four subjects of Civics and Citizenship, History, Geography and Economics and Business, based on the Australian Curriculum. Humanities involves understanding of knowledge and application of skills that include source and data analysis and exploring differing perspectives. Students engage in understanding the values and practices involved in democracy and social cohesion, examine Australia's position in world affairs during the 20<sup>th</sup> century, explore concepts relating to wellbeing and the nature of this on a variety of populations, and consider standards of living and the government's role in improving the lives of citizens.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Explain patterns of change and continuity over time
- Analyse the causes and effects of events
- Explain the significance of events and developments from a range of perspectives
- Explain different interpretations of the past and recognise the evidence used to support these interpretations
- Geographies of human wellbeing
- Predict changes in the characteristics of places and environments over time
- Evaluate living standards and wealth distribution in relation to economic performance
- Examine cohesiveness in a society – how is it threatened, maintained and protected

### Topics of Study

- Struggles of Indigenous Australians
- Geographical wellbeing of Australia and a comparison of another country
- Australia's Parliamentary structure

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Research projects
- Field study
- Tests
- Case studies
- Oral presentations
- End-of-semester examinations

### VCE Course Pathways

This unit is intended to prepare and showcase potential VCE pathways in Humanities subjects such as Geography, History, Legal Studies, Accounting, Australian and Global Politics, Religion and Society and Business Management. The skills developed are meaningful and relevant in a range of VCE studies across all disciplines.

## Mathematics

### Overview

Year 10 Mathematics covers a broad range of mathematical topics designed specifically to prepare students for mathematics courses in Years 11 and 12. Our aim is to provide a challenging and enriching course relevant and suitable for every student. Accordingly, students are grouped in three strands – Foundation, Mainstream and Advanced – based on results obtained in Year 9 Mathematics. All students study the core Australian Curriculum mathematics course for Year 10 while being in a class that is appropriate to their capabilities, providing sound and specific preparation for a suitable subject from the VCE Mathematics courses offered in the senior years. The structure of the three-strand model is dynamic and flexible, with teachers responsive to each individual student's progress. All students in Year 10 will be introduced to Computer Algebra System (CAS) technology, enabling them to become familiar with the technology in preparation for any future Mathematics courses.

### Duration

This subject runs for TWO semesters.

### Educational Objectives

- Recognise the connection between simple and compound interest
- Solve problems involving linear equations and inequalities
- Make the connections between algebraic and graphical representations of relations
- Recognise the relationships between parallel and perpendicular lines
- Solve surface area and volume problems relating to composite solids
- Apply deductive reasoning to proofs and numerical exercises involving shapes
- Use triangle and angle properties to prove congruence and similarity
- Compare data sets by referring to the shapes of the various data displays
- Describe bivariate data where the independent variable is time
- Describe statistical relationships between two continuous variables
- Evaluate statistical reports
- List outcomes for multi-step chance experiments and assign probabilities
- Calculate quartiles and inter-quartile ranges
- Expand binomial expressions and factorise monic quadratic expressions
- Find unknown values after substitution into formulas
- Perform the four operations with simple algebraic fractions
- Solve simple quadratic equations and pairs of simultaneous equations
- Use trigonometry to calculate unknown angles in right-angled triangles

### Topics of Study

- Financial mathematics
- Algebra
- Measurement
- Linear relationships
- Trigonometry
- Advanced trigonometry\*
- Statistics and probability
- Geometry
- Non-linear relationships
- Polynomials\*
- Surds and logarithms\*

*\*These topics will be covered in the Advanced stream only and considered at broader levels in Mainstream and Foundation Mathematics.*

## Class Streams

### Foundation

This course will provide students with a comprehensive preparation for General Mathematics Unit 1 and 2 in Year 11, however, students will need to show a solid understanding of the topics in this Year 10 course to be recommended to continue with Mathematics in their VCE studies. This course will focus on the applied topics of the Year 10 curriculum such as Trigonometry, Linear Graphs, Financial Mathematics and Statistics. The use of Computer Algebra System (CAS) technology will be highly encouraged in this course to aid students' understanding of the mathematical content.

### Mainstream

This course is intended to prepare students for Mathematical Methods Units 1 and 2 or General Mathematics Units 1 and 2, by covering topics from both the applied and abstract areas of Mathematics. Students wishing to continue into Mathematical Methods 1 and 2 from this Mainstream class will need to show a solid understanding of the mathematics covered, especially in the areas of Algebra, Linear Relationships and Non-Linear Relationships.

### Advanced

This course is intended to prepare students for Mathematical Methods Units 1 and 2 and Specialist Mathematics Units 1 and 2 by extending students further in their mathematical thinking. The topics covered will include all topics from the mainstream course as well as additional topics from the Australian Curriculum: Mathematics 10A such as Polynomials, Advanced Trigonometry and Surds and Logarithms.

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Written skills and analysis tests
- Assignments/problem-solving exercises and homework sheets
- End-of-semester examinations

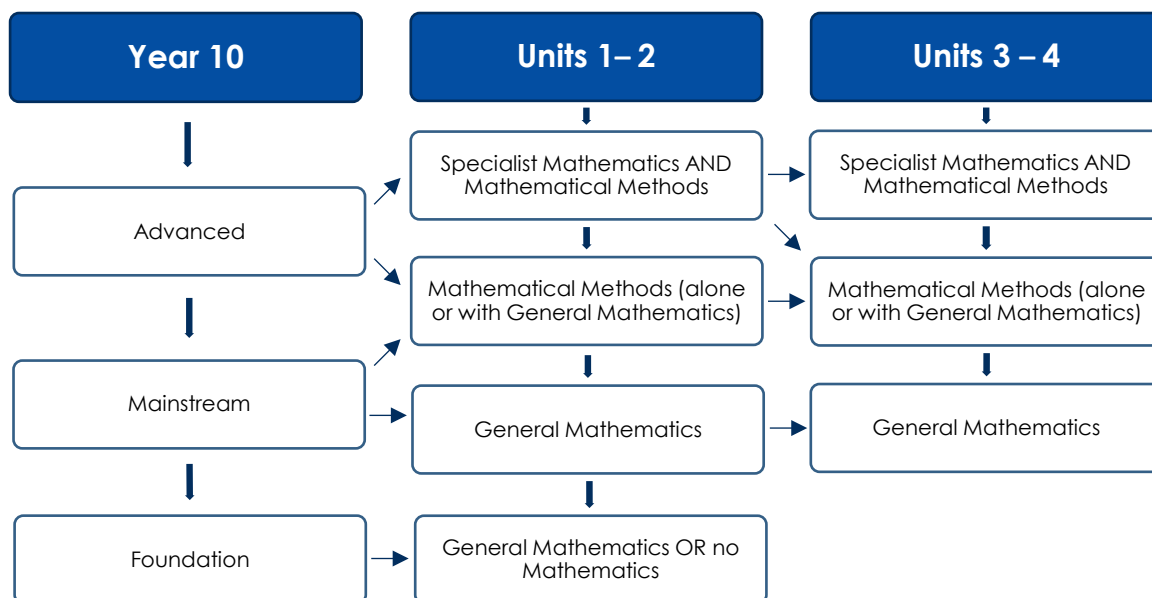
### VCE Course Pathways

Year 10 Mathematics leads into three different courses at VCE level: General Mathematics, Mathematical Methods (CAS) and Specialist Mathematics. General Mathematics focuses on more immediately applicable concepts and processes and provides a general background for many employment-related mathematical skills. Students who perform well in this course may proceed into General Mathematics Units 3 and 4 in Year 12. The material in Mathematical Methods (CAS) Units 1 and 2 in Year 11 is highly abstract, developed in a closely sequential manner and leads directly into Mathematical Methods (CAS) Units 3 and 4 in Year 12. This course is the major mathematics prerequisite for many tertiary courses with a mathematical background. Specialist Mathematics is a high-level course designed for students who are passionate and highly adept in the study of Mathematics. Specialist Mathematics Units 1 and 2 in Year 11 accompanies Mathematical Methods (CAS) Units 1 and 2 for a more comprehensive study of Mathematics and effectively prepares students for the study of Specialist Mathematics Units 3 and 4 in Year 12.

A summary of the possible pathways after Year 10 Mathematics can be seen on the next page.

## Entry Into VCE Mathematics

All students in Year 10 will receive a recommendation in Term 3 for the VCE Unit 1-2 Mathematics subject for which they are most suited in the following year. These will be based largely on students' test scores and examination results from Semester 1 using the following criteria.



For entry into Mathematical Methods Unit 1 and 2 and Specialist Mathematics Unit 1 and 2, please refer to the recommended entry scores below. Each student in Year 10 will be given a recommendation regarding the most suitable Mathematics pathway before the subject selection process into Year 11.

Recommendation for Year 11	Criteria
No Mathematics at VCE	Test Average and Examination less than 50%
General Mathematics Unit 1 and 2	Test Average and Examination above 50%
Mathematical Methods Unit 1 and 2	Test Average and Examination above 70%
Specialist Mathematics Unit 1 and 2	Test Average and Examination above 85%
Acceleration* General Mathematics Unit 3 and 4 in Year 11	Test Average and Examination above 85% for students currently studying Advanced Mathematics in Year 10.  Students need to demonstrate a strong commitment to their studies.  Applications will be considered individually.

**\*Please note:** that each student is considered individually, and recommendations are made at the Faculty's discretion.

## Physical Education

### Overview

The Year 10 curriculum supports students to refine and apply strategies for maintaining a positive outlook and evaluating behavioural expectations in different movement situations. Students learn to apply physical activity information to devise and implement personalised plans for maintaining and improving their own and others' fitness. Students learn to apply more specialised movement skills and complex movement strategies and concepts in different movement environments. They also explore movement concepts and strategies to evaluate and refine their own and others' movement performances.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Propose and evaluate programs to improve fitness and physical activity levels
- Apply and transfer movement concepts and strategies to new and challenging movement situations through sport
- Apply criteria to make judgments about and refine their own and others' specialised movement skills and movement performances
- Work collaboratively to design and apply solutions to movement challenges

### Topics of Study

- Enhancing performance through fitness testing and training methods
- Body systems
- Above topics applied via invasion, net/wall, striking and fielding sports as well as gym exercises.

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Skills assessments
- Fitness testing
- Structured questions tests
- End-of-semester examination

### VCE Course Pathways

This unit will provide excellent grounding for VCE Physical Education.

## **Ethics**

### **Overview**

Ethics is concerned with discovering the perspectives that guide practical moral judgment. Ethics will run as seminar days throughout the year where students study various real-life scenarios and the ethics involved, identifying the arguments and analysing the reasoning, and any other influences behind these perspectives and moral judgments.

The study of Ethics in Year 10 is an important inclusion in the Australian Curriculum.

### **Duration**

This subject will be run during separate workshop sessions in Term 3 and 4.

### **Educational Objectives**

- Questioning the place of an individual in the wider world
- Considering the values needed for positive living and service in the world
- Examining issues of justice

### **Topics of Study**

- Ethical systems
- Ethical concepts
- Ethics in the real world

### **Methods of Assessment**

Students will complete several assessment tasks over the semester. These will include:

- Group reflection task

### **VCE Course Pathways**

This unit will provide excellent grounding for VCE Religion and Society.

## Science

### Overview

The Year 10 CORE Science curriculum is divided into the pure disciplines of Biology, Chemistry and Physics. The structure is designed to provide students with a rigorous introduction to these branches of science and a possible pathway into each in the pursuit of their VCE studies.

Biology includes a study of chromosomes, DNA function, genetics and patterns of inheritance. Chemistry studies focus on atomic structure, the Periodic table, chemical bonds and writing chemical formulae and equations. In Physics students analyse electric circuits and investigate ohmic and non-ohmic devices.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Formulate questions and hypotheses appropriate for first and second-hand investigations
- Plan, design and conduct first-hand investigations
- Evaluate experimental procedures and reliability of data
- Collect, process and record information systematically
- Analyse and synthesise data
- Draw conclusions consistent with the question under investigation and the evidence obtained
- Maintain safe practices
- Work independently and collaboratively as appropriate
- Apply understandings to familiar and new contexts and make connections between
- Analyse and evaluate the reliability of information and opinions in the public domain
- Solve problems, analyse issues and implications relating to scientific and technological developments
- Interpret, transpose and communicate information and ideas effectively

### Topics of Study

- Periodic table, atomic structure and chemical bonding
- Genetic Inheritance and DNA function
- Basic electricity and electrical circuits

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Practical reports or summary reports
- Extended practical investigations
- Analysis of first-hand and/or second-hand data using structured questions
- Assignments
- Unit tests
- End-of-semester examinations

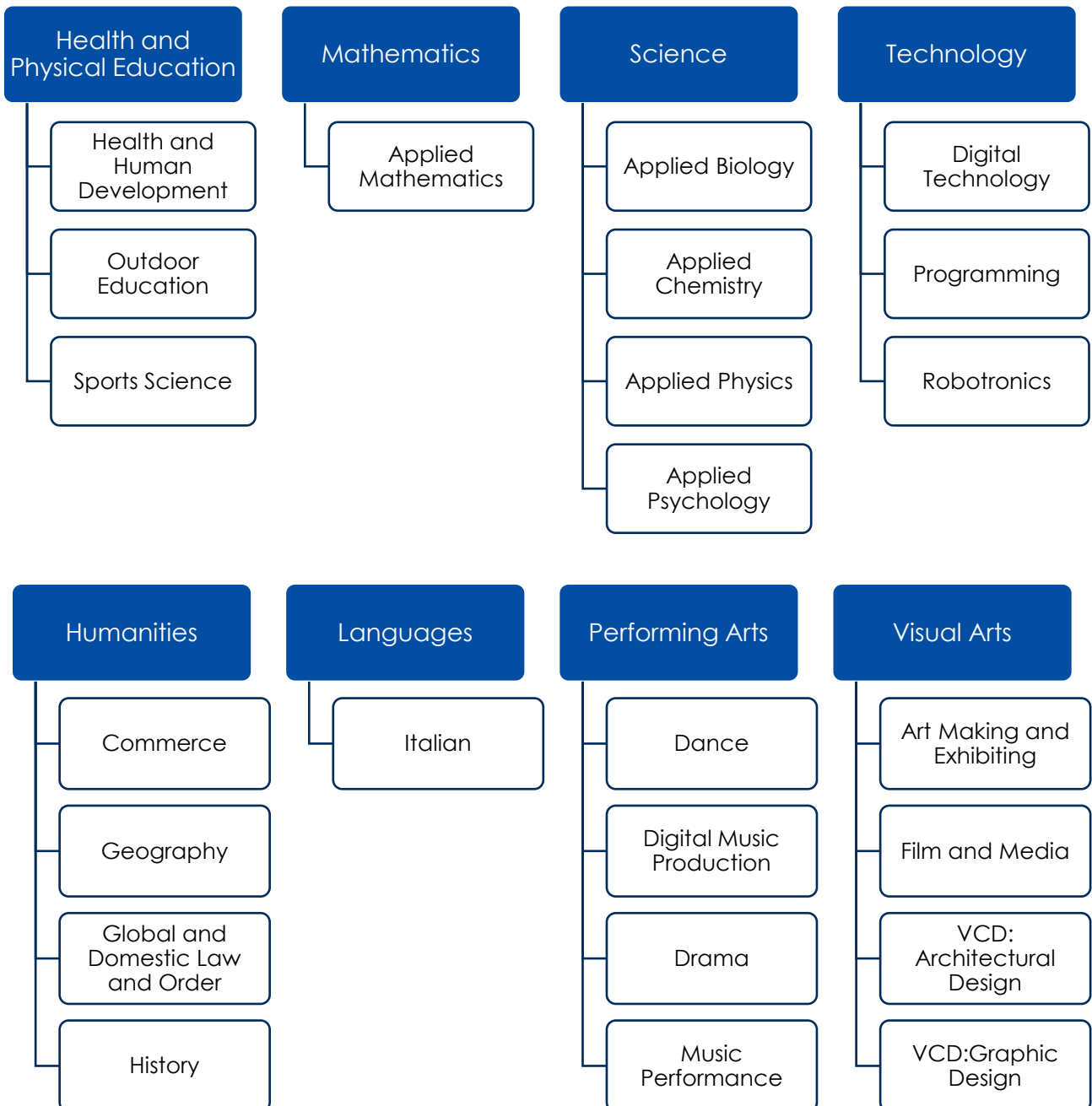
### VCE Course Pathways

This unit will provide excellent grounding for the VCE Science disciplines of Biology, Chemistry, Environmental Science, Physics and Psychology.

## Elective Subject Information

The Year 10 elective program is designed to offer students a wide variety of choices to ensure breadth in their education, as well as an opportunity to try something new or focus on an area of interest. In Year 10, students are encouraged to think about shepherding their pathway toward VCE subject choices. Except for Italian, these electives are not prerequisites for any VCE study.

Students are to choose five. (If choosing Italian, this counts for two electives as does an accelerated Units 1–2 subject.)



## Applied Biology

### Overview

The Year 10 Applied Biology curriculum is specifically designed to establish strong foundations and prepare students with enhanced skills and knowledge to undertake VCE studies in Biology. Students study patterns of inheritance in living organisms with emphasis on human inheritance patterns. Genes, chromosomes, sex determination, inherited diseases, DNA and protein synthesis. In addition, they investigate the application of modern techniques in gene therapy and DNA analysis. Students are introduced to the ethical considerations and genetic counselling that relate to many of the modern techniques and tests performed in medicine today. The topic of genetic engineering in agriculture and farming is investigated in relation to the genetics involved and the benefits and problems resulting from the techniques used. Students study the body's immune response to pathogens, with reference to the use of antibiotics to combat bacteria.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Describe the process of cell specialisation and organisation of multicellular organisms
- Describe the composition of and major functions of prokaryotic and eukaryotic cells
- Outline the plant systems that enable transport of substances throughout the plant
- Discuss how plants respond to external changes
- Describe the animal systems that respond to internal and external challenges and maintain balance
- Outline how genes are decoded
- Demonstrate some common patterns of genetic inheritance including dihybrid crosses
- Outline how DNA technology can be applied in many areas of Biology

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Practical reports or summary reports
- Extended practical investigations
- Analysis of first-hand and/or second-hand data using structured questions
- Assignments and research tasks
- Unit tests
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Biology, will provide excellent grounding for the course.

## Applied Chemistry

### Overview

The Year 10 Applied Chemistry curriculum is specifically designed to establish strong foundations and prepare students with enhanced skills and knowledge to undertake VCE studies in Chemistry. Students study the structure of the atom, the Periodic Table and mathematical relationships involving atoms. Chemical bonding and the structure of substances enable students to understand the properties and applications of the materials. Materials investigated include metals, acids and bases, ionic substances and covalent substances. Students perform a range of practical techniques including volumetric analysis and gravimetric procedures.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Understand the differences between metallic, ionic and covalent bonding
- Recognise the various representations used to model chemical compounds
- Calculate the percentage composition of an element in a compound
- Use mathematical applications in calculating chemical quantities and quality of the yield produced during preparation of materials
- Formulate questions and hypotheses appropriate for first-hand and second-hand investigations
- Plan, design and conduct first-hand investigations
- Evaluate experimental procedures and reliability of data
- Collect, process and record information systematically; analyse and synthesise data

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Practical reports or summary reports
- Extended practical investigations
- Analysis of first-hand and/or second-hand data using structured questions
- Assignments
- Unit tests
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Chemistry, will provide students with excellent grounding for the course.

## Applied Mathematics

### Overview

The Year 10 Applied Mathematics curriculum is specifically designed to establish strong mathematical processes and thinking. This occurs through the study of various subject areas, including trigonometry, geometry, sequences and series, and matrices. Within each of these subject areas, there is an initial focus on learning the techniques, which is followed by an application phase. These applications occur in a variety of practical and theoretical contexts. The semester-based subject is designed as an introductory course to help students learn the techniques required to succeed at Mathematical Methods. These techniques are focussed learning, deep thinking, exposure to non-routine problems, and a willingness to engage with content that requires thought. The course is intended for students who wish to explore mathematical concepts which are both inside and outside of the current curriculum, and who may be considering careers in biomedicine, science, engineering, commerce, agriculture and design.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Understand basic trigonometric concepts, as well as extensions to the cosine rule, sine rule, length of arcs and chords, areas of sectors and segments
- Solve non-routine problems involving area, similar triangles, trigonometry, geometry, and tangent circles
- Undertake geometrical constructions and gain a deeper insight into the foundations of Mathematics
- Solve problems involving arithmetic and geometric sequences and series, Fibonacci series and Pascal's triangle, and continued fractions
- Solve problems and applications of infinite geometric series
- Understand matrix operations and solve equations using matrices
- Applications to real life situations, including cryptography and compound interest.

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Application tasks
- Inquiry tasks
- Assignments & Investigations
- Unit tests
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Mathematical Methods, will provide students with excellent grounding for the course.

## Applied Physics

### Overview

The Year 10 Applied Physics curriculum is specifically designed to establish strong foundations and prepare students with enhanced skills and knowledge to undertake VCE studies in Physics. The key areas of focus are Mechanics and Electromagnetism. Mechanics explores concepts of motion such as displacement, velocity, acceleration, forces, energy, mass and gravity. Electromagnetism models electric, magnetic and electromagnetic effects to explain how electricity is produced and delivered to homes. Students also undertake a range of practical investigations which allows them to obtain and analyse primary and secondary data.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Gather data to analyse everyday applications of kinematic and dynamic motion
- Use and apply Newton's laws of motion
- Investigate and apply field models to electromagnetic phenomena, including shapes and directions of fields produced by bar magnets, current-carrying wires, loops and solenoids
- Understand, analyse and evaluate an electricity generation and distribution system
- Formulate questions and hypotheses appropriate for first-hand and second-hand investigations
- Plan, design and conduct first-hand investigations
- Evaluate experimental procedures and reliability of data
- Collect, process and record information systematically; analyse and synthesise data

### Topics of Study

- Mechanics - kinematic and dynamic analysis of motion
- Electromagnetism – the interactions and effects of electric and magnetic fields

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Practical reports or summary reports
- Extended practical investigations
- Analysis of first-hand and/or second-hand data using structured questions
- Assignments
- Unit tests
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Physics, will provide excellent grounding for the course.

## Applied Psychology

### Overview

Dive into the fascinating world of the human mind with our Year 10 Psychology course! Explore the complexities of behaviour, cognition, and emotion as you embark on a journey through the fundamentals of psychological science. From understanding the intricacies of memory to unravelling the mysteries of the brain and mental health, this course offers a dynamic blend of theory and practical applications. Engage in thought-provoking discussions, hands-on experiments, and real-world case studies as you develop critical thinking skills and gain insights into what makes us tick. Whether you're intrigued by the workings of the brain or curious about the factors that shape human behaviour, Year 10 Psychology will broaden your understanding of yourself and others, laying a solid foundation for future studies in psychology and beyond.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- To understand the role of the different nervous systems that are involved in processing and responding to external stimuli
- To understand how memories are created and ways to increase our capacity of short-term memory
- To introduce various pathways that studying Psychology can offer for example social work, sport psychology, educational and organisational psychologists, etc.
- To understand how stress can challenge one's ability to cope with everyday living and ways to reduce stress and increase one's ability to cope
- Science inquiry skills will be incorporated into the course

### Topics of Study

- Introduction into Psychology
- The Human Nervous System including the brain and brain functioning
- Maximising memory
- Mental Health and Mental Health disorders
- Research Methods

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Practical reports
- Extended practical investigations
- Analysis of first-hand and/or second-hand data using structured questions
- Assignments
- Unit tests
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Psychology, will provide excellent grounding for the course.

## Art: Making and Exhibiting

### Overview

Art: Making and Exhibiting enables students to develop their skills and confidence in an art making. In this semester-based unit, students engage artistic experiments and create an artwork in response to a class set theme. They learn about the role of the artist, craftsperson and designer and their contribution to society, and the significance of the creative industries. They examine how artists develop their practice and have used materials, techniques and processes. Students are encouraged to learn new skills and techniques through a series of art workshops, before moving towards creating an artwork in the artform, subject matter and style of their own choice. Students can explore artforms such as drawing, painting, printmaking, sculpture, textiles, installation, photography, time-based installation works, digital animation and/or video. Students have access to a range of traditional art resources as well as the latest technologies including Creative Cloud software, SLRs cameras, and 2D and 3D printing methods. The aim of the subject is for students make and exhibit their artworks for our class thematic exhibition.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Understanding and application of the studio process to successfully communicate, challenge and express their own ideas
- Understanding and application of materials, techniques and processes
- Understanding and application of critical, reflective and creative thinking strategies
- Curatorial knowledge and skill to exhibit artworks
- Ability to effectively apply OH&S knowledge in the Art Studio

### Topics of Study

- Exploration of art form: Photography, Drawing, Painting, Printmaking, Ceramics, Sculpture.
- Studio Process
- Thematic study
- International Art and Current Exhibitions
- Contemporary Art
- Exhibitions

### Methods of Assessment

- Finished artworks
- Visual Arts journal
- Art analysis assignment
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Art Making and Exhibiting, will provide students with excellent grounding for the course.

## Commerce

### Overview

Commerce provides students the opportunity to develop further their understanding of economics, accounting and business concepts by considering Australia's economic performance and standard of living. Students examine the consequences of decisions and the responses of businesses and consumers to changing economic conditions. Students also examine business processes and how productivity can be improved. Financial literacy is examined through the ATSI Money Smart website and students study real-life scenarios: financial risk, debit/credit and making major purchases. There are two strands: knowledge and understanding and skills. These are interrelated and have been developed to specific local/regional/global contexts and contemporary case studies, issues and events.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Explaining the concept of money and money's use, household and personal income, budgeting, personal finance, payment choices, banking and financial institutions, consumer choice and consumer protection, investments and savings
- Understanding the importance of innovation, attributes of an enterprising person, the government's role in promoting enterprise, starting a business, business ethics, and ecological sustainability
- Analysing business ideas and considering the skills, knowledge and experience required to establish and operate a small business
- Understanding basic accounting terminology: cash transactions, bank reconciliation statements, credit transactions, profit and loss statements, balance sheets, and cash books
- Explaining basic economic concepts such as GDP, inflation and unemployment
- Analysing and explaining how goods and services are produced and how markets work including the influence consumers have
- Explaining the impact of macroeconomic and microeconomic policies on consumers and producers, businesses, government and the economy

### Topics of Study

- Consumer influences
- Business productivity, enterprise and innovation
- Managing financial risk
- Economics influences
- Basic accounting principles

### Methods of Assessment

- Business plans
- Tests
- Case studies
- Oral presentations
- Web quests
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Business Management and VCE Accounting, will provide students with an excellent grounding for these courses.

## Dance

### Overview

In Year 10 Dance, students explore the language of movement as a powerful medium for creative expression and communication. Dance enables students to realise the body's potential as an instrument of expression, fostering technical skill, expressive capability, and physical awareness through systematic training. The course blends practical and theoretical learning, focusing on both teacher-led movement sequences and student-devised choreography, allowing students to release their creative potential and develop confidence through performance. A strong emphasis is placed on collaboration, with students building communication and problem-solving skills through choreographic group work. They also engage in reflective practices by evaluating their own work and that of their peers. In addition, the curriculum deepens students' understanding of contemporary dance by analysing the work of influential choreographers, while also cultivating cultural appreciation through the study of Indigenous Australian artists and movement traditions within historical and contextual frameworks.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Use of actions, dynamics and spatial elements
- Use of choreographic tools including responding to stimuli
- Creating and using dance motifs
- Musicality – including features of music
- Performance of learnt choreography
- Analysing and appreciating their own and others work, including professional performances
- Processes and skills to realising their own dance composition

### Topics of Study

- Safe dance practice and Systematic dance training
- Choreographing solo, duo and group dances using choreographic devices
- Identifying, describing and explaining features of professional dance works and showing appreciation

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Group performance
- Individual choreography performance
- Physical skills and artistry
- Explore, respond and interpret different dance works
- Analysis and realisation process of a dance composition including planning, research, choreography, rehearsal and performance
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Dance, will provide students with excellent grounding for the course and is highly recommended by the subject teacher.

## Digital Music Production

### Overview

This practical course builds on the skills introduced in the Year 9 elective but is open to all students, no prior experience is required.

Students will explore the world of modern music creation, live performance, and stage production. In composition, they will use MIDI sequencing, audio recording, and sampling to experiment with the elements of music and the science of sound. In performance, students will work individually and in groups using both traditional and electronic instruments, focusing on how technology can elevate musical expression. The stage production component develops students' technical skills in operating sound and lighting equipment, including mixing desks, lighting consoles, and live sound engineering. Students will also gain experience in designing and managing live events.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Set up and operate a PA system for live performances, including effective sound mixing and control
- Perform music live using both acoustic and electronic instruments, enhanced by digital technology
- Design and program stage lighting for concerts and performances
- Use professional music software to sample, edit, and create original compositions
- Understand the evolution and impact of music technology
- Operate digital music tools including Launch Pads and Drum Machines

### Topics of Study

- Technical production and stage setup
- Music composition and digital audio production
- Live group and solo performance
- Stage lighting design and DMX programming
- The history and impact of music technology
- Written analysis and critical reflection on music

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Original compositions using music production software
- A written essay on music technology
- Weekly theory and tech-based learning activities
- Live performance and event production tasks
- End of semester written and practical examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Music, will provide students with excellent grounding for Music (unit 1 and 2) and Music Contemporary Performance (unit 3 and 4) and Theatre Studies (Unit 1-4).

## Digital Technology

### Overview

Digital Technology in Year 10 extends students' knowledge of computer programming. Beginning with databases, students learn how companies use databases to help meet their objectives, and how to create a database of their own using Microsoft Access, as well as how to run queries using SQL. Students then develop an understanding communication information clearly through the creation of a dynamic data visualisation. The course concludes with an exploration of how to program robots to interact with and navigate physical environments.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Identify characteristics of a database
- Create and populate a database
- Run queries in a database
- Techniques to work with and analyse data
- Create effective data visualisations
- Designing and developing solutions to navigate a robot around a physical 'maze'
- Programming in Sphero JavaScript

### Topics of Study

- Databases
- Data analysis
- Robotics

### Methods of Assessment

Students will complete a range of assessment tasks over the semester. These may include:

- Topic tests
- Assignments
- Problem solving tasks
- Regular homework tasks
- Projects
- Open-ended student guided tasks
- End-of-semester examination.

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Applied Computing, will provide students with excellent grounding for this course.

## Drama

### Overview

Year 10 Drama builds on the skills and knowledge developed in Year 9 Drama, with students continuing to explore a range of theatre styles and their associated conventions. They consider specific audiences and purposes as they engage in the play-making process to develop fully realised performance works for an audience. Practical workshops are dynamic and interactive, equipping students with the skills to create compelling dramatic stories. Students analyse drama and theatre performances of other dramatists, developing critical thinking and theatrical literacy as a foundation for further study in VCE Theatre Studies.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Explore a range of performance and theatre styles and apply their associated conventions
- Create original drama works in a range of theatre styles, applying relevant conventions and techniques to develop style-specific performances
- Refine their application of the expressive skills of voice, gesture, movement, and facial expression through practical workshops
- Explore and apply play-making techniques when devising their own drama works
- Develop their understanding of and apply the elements of theatre composition to the works of other dramatists
- Engage in a range of production roles
- Analyse and evaluate the work of professional and peer artists to deepen their understanding of dramatic meaning and performance

### Topics of Study

- Theatre styles and conventions
- Expressive skills
- Drama performance analysis
- Production roles

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Participation in practical drama workshops
- Devising, rehearsing, and performing self-devised drama works of various theatre styles
- Analysing and reviewing a live performance
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Theatre Studies, will provide students with excellent grounding for the course.

## Film and Media

### Overview

This course introduces students to the study of moving image media. In Film and Media, students explore how films represent ideas, construct narratives, and engage audiences through cinematic techniques. Students investigate the language of film and will analyse a range of media examples to develop critical thinking skills in understanding how filmmakers create meaning and represent people, places, and ideas. Students will also apply these concepts in practical production tasks, creating their own moving image pieces using the Adobe Create Suite. Students will develop a foundational understanding of film, and then relationships between media creators and audiences. Students will think critically about the media they consume, while also developing confidence as creative media producers. This course supports students in developing both analytical and creative media skills, providing a pathway into VCE Media.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Planning for media products
- Creative problem solving
- Technological skill in media equipment and ICT
- Software knowledge in Adobe creative suite and other third-party software and applications
- Teamwork
- Personal discipline through individually managed projects
- A willingness to analyse society and its influences

### Topics of Study

- Film making
- Narratives and genre
- Media codes and conventions
- Media Forms in Production

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Media production experiments
- Media production
- Responding
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Media, will provide students with excellent grounding for this course.

## Geography

### Overview

This elective focuses on earth sciences and environmental change. Students explore management of the environment and biomes, through deep study of inland waters, the urban environment and the oceans. The students investigate environmental processes that support all life, the major challenges to their sustainability, and the environmental world views – including those of Aboriginal and Torres Strait Islander peoples – that influence how people perceive and respond to these challenges. They apply human-environment systems thinking to understand the causes and consequences of change and geographical concepts and methods to evaluate and select strategies to manage change.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Explain how interactions between geographical processes at different scales change the characteristics of places
- Identify, analyse and explain significant interconnections between people, places and environments and explain changes that result from these interconnections and their consequences
- Predict changes in the characteristics of places and environments over time, across space and at different scales and explain the predicted consequences of change
- Evaluate alternative views on a geographical challenge and alternative strategies to address this challenge using environmental, economic, political and social criteria and draw a reasoned conclusion
- Record and represent multi-variable data in the most appropriate digital and non-digital forms
- Use a range of methods and digital technologies to interpret and analyse maps, data and other information
- Propose action in response to a contemporary geographical challenge, taking account of environmental, economic, political and social considerations.

### Topics of Study

- Deforestation
- Water Scarcity and Conflict
- Are we damaging our oceans? – the scourge of plastic waste

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Fieldwork and case studies
- Research
- Structured questions
- Extended Responses
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Geography, will provide students with an excellent grounding for the course.

## Global and Domestic Law and Order

### Overview

This elective subject aims to develop students' awareness of global and domestic issues pertaining to their civic responsibilities and participation. It also aims to develop students' critical thinking skills, and to think innovatively. Two core values are excellence and integrity, which this course aims to develop through interesting and challenging coursework to build on their curiosity, as well as to develop individuals who have a strong sense of morality and respect alternative views, cultures and systems. Students will become more informed about the world they are living in and better prepared to participate meaningfully in our political and legal systems both on a domestic and global scale. Students will use these critical thinking skills to communicate on a global scale and enable them to understand and engage with international issues. This subject aims to empower students to have their say on both domestic and international issues and engage actively with the world.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Develop evaluate a range of questions investigating Australia's political and legal systems
- Critically evaluate information and ideas from sources in relation to issues of civics and citizenship
- Account for different interpretations and points of view
- Recognise and consider multiple perspectives and use strategies to resolve contentious issues
- Present evidence-based arguments using subject-specific language
- Reflect on their role as a citizen in Australian, regional and global contexts

### Topics of Study

- Theories of International Relations such as Marxism, Green Politics, Liberalism, Realism
- Case Study—non-democratic country
- Globalisation and its effect on politics; how countries protect rights in sovereign nations
- Principles of Justice
- Constitutional democracy—what is it and how does it work?
- Political parties and their agendas
- Rights and their protections in Australia- How well do we protect rights? Express and Implied Rights
- Influencing a change in the law
- Criminal Investigation Process
- Police Powers v Individual Rights: Does one outweigh the other?
- Introduction to civil and criminal law

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Structured Questions
- Extended Responses
- Essays
- Case Studies
- Class Presentations

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Legal Studies or VCE Australian and Global Politics, will provide students with excellent grounding for these courses.

## Health and Human Development

### Overview

Health and Human Development aims to equip students with the skills and knowledge required to maintain healthy lifestyles as they move into adulthood. In Year 10, students will explore global factors that influence health and wellbeing, such as the United Nations' Sustainable Development Goals. They will develop an understanding of both communicable and non-communicable diseases and their impact on individuals, communities, and nations. Students will also examine the ethics of healthy relationships, reproductive health, while developing key skills to interpret health data, learning how to analyse health information accurately.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Understand the United Nations' Sustainable Development Goals and their impact on health and wellbeing
- Recognise features of healthy relationships, including consent, respect, and safety, that enhance the wellbeing of young people
- Identify and differentiate between communicable and non-communicable diseases and their causes
- Develop decision-making and assertiveness skills
- Understand reproductive health, healthcare services, and safe practices
- Analyse basic health data
- Apply key health-related writing skills

### Topics of Study

- Global Health - Sustainable Development Goals
- Understanding Diseases
- Love, Sex and Relationships

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Topic tests – Structured question
- Oral presentations
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Health and Human Development, will provide students with excellent grounding for the course.

## History

### Overview

The Year 10 History course focuses on World War II, examining the causes and the influence of post-World War I treaties and changing political ideologies that eventually paved the way for disaster in 1939. Students will understand the continuity and change of governance and society during the interwar period. They study the separate events leading to the outbreak of WWII and focus on the involvement of Australia in the conflict and impact of the war on our country.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Explain patterns of change and continuity over time
- Analyse the causes and effects of events and developments and explain their relative importance
- Explain the significance of events and developments from a range of perspectives
- Sequence events and developments within a chronological framework, and identify relationships between events across different places and periods of time
- Process, analyse and synthesise information from a range of primary and secondary sources
- Causes of World War II
- Australia at War
- Life on the Homefront
- Changing political relationships – USA and Australia

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Tests
- Structured questions
- Essays
- Case studies
- Research assignments
- Source analysis
- Historical inquiry
- Class presentations
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE History, will provide students with an excellent grounding for the course and other Humanities-based subjects.

## Italian

### Overview

In Year 10, students will bring their prior experience and capabilities of learning Italian to apply to their new learning. The course will expand the range and nature of their learning experiences and of the contexts in which they communicate with others in Italian. Students will expand their vocabulary and grammar, giving them an opportunity to experiment with different forms of communication. They continue to learn to use Italian to communicate and interact with each other, access and exchange information, express feelings and opinions, participate in imaginative and creative experiences, and design, interpret and analyse a range of texts and experiences. Students explore language variation and change, noting how intercultural experiences, technology, media and globalisation influence language use and forms of communication. They also investigate links between the Italian language and cultural representation and expression and learn to analyse and reflect on different viewpoints and experiences, including their own cultural stance, action and responses.

### Duration

This subject runs for TWO semesters and will therefore account for two elective choices.

### Educational Objectives

- Exchange and compare ideas, experiences, opinions and feelings through spoken and written transactions
- Convey, organise and compare diverse perspectives from multiple sources in Italian
- Create and respond to imaginative texts about themes, events and values
- Translate texts for Italian to English and vice versa
- Understand and extend knowledge of more complex features and patterns of Italian grammatical systems
- Analyse the features of a range of spoken, written and multimodal texts
- Reflect on intercultural exchanges and the ways in which language is used to establish relationships, indicate social values and enhance reciprocity

### Topics of Study

- Travelling and the globalised world
- The history of Immigration in the 20th and 21<sup>st</sup> centuries
- The creativity of Italian people
- Passion for Italian fashion
- Future aspirations

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Written assessments
- Reading assessments
- Listening assessments
- Speaking assessments
- End-of-semester examinations

### VCE Course Pathways

This course is a prerequisite and direct pathway into VCE Italian.

## Music Performance

### Overview

This unit develops previously learnt 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 study aural, theory and analysis concepts to develop their musicianship skills and apply this knowledge when preparing and presenting to audiences. They will expand on their percussion knowledge by undertaken a pitched percussion unit.

It is expected that students are technically proficient in their chosen instrument to a basic level and should continue (or begin) their private instrumental and/or vocal music tuition throughout the time of the course.

Students will be involved in performance evenings and other events as part of the assessment for this course.

### Duration

This subject runs for ONE semester.

### Topics of Study

- Music Performance: Ensemble
- Music Performance: Solo
- Fundamentals: Aural
- Music Fundamentals: Theory
- Music Fundamentals: Analysis

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Solo performance
- Group performance
- Practical Tasks
- Written and aural assessment
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Music, will provide students with excellent grounding for this course as many outcomes are based on the VCE study design.

## Outdoor Education

### Overview

Outdoor Education provides students with the skills and knowledge to participate safely 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. Students will be taking part in camps and subject-related excursions throughout the course.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Understand a range of outdoor environments
- Use a compass
- Read basic land maps
- Understand motivations for outdoor experiences
- Understand the principle of 'minimal impact' and the need to behave accordingly
- Understand various risks associated with using outdoor environments
- Understanding personal responses to outdoor environments
- Understand the influence of media on outdoor experiences
- Understanding factors that affect our outdoor experiences
- Understanding to environmental impact of climate change

### Topics of Study

- Understanding outdoor environments
- Navigation and map reading
- Minimal impact
- Risk Management
- Trip preparation

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Project work
- Written report
- Topic tests
- Oral presentations
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Health and Physical Education, will provide students with excellent grounding for the course.

### Additional Cost Involved

Students in this course will need to pay an additional cost to cover expenses related to camps and subject-specific excursions.

## Programming

### Overview

Programming is designed to equip students with a comprehensive understanding of computer programming, computer science, and computational thinking. Through the semester, students are guided to develop a strong foundation in technology, problem-solving, and logical reasoning to create software applications and interactive digital projects. The emphasis is on fostering creativity and logical thinking while honing practical coding skills.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Apply the problem-solving methodology
- Design, code and debug software applications
- Learn various programming languages and concepts
- Approach problems methodically and devise effective solutions using algorithms
- Foster creativity by bringing innovative ideas to life through digital projects

### Topics of Study

- Features of an Object-Oriented Programming Language
- Algorithms and data structures
- Testing and debugging techniques
- Design and translate solutions into algorithms

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Practical coding tasks
- Tests – Structured questions
- Software Solution
- End-of-semester examinations

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Applied Computing and VCE Systems Engineering, will provide excellent grounding for these courses. Students wishing to pursue either of these courses would also benefit from studying at least one of the Year 10 Robotronics/Digital Technology electives.

## Robotronics

### Overview

Robotronics is a project-based elective that aims to enable students to further develop their understanding of and skills in electronic design, microprocessors, coding and design technology. They develop a broader understanding of 21<sup>st</sup> century and interpersonal STEM skills of project management, communication and innovation. Students identify and produce innovative responses to real-world problems using design and computational thinking routines and information systems to analyse, design and develop solutions. The subject strengthens the connections between classroom learning and technology industry pathways. It asks students to be confident, empowered and entrepreneurial producers.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Develop an understanding of the systems engineering process
- Design and reading of circuit diagrams
- Apply digital and design skills and knowledge to solve technological problems
- Develop an understanding of how technologies have transformed people's lives and can be used to solve challenges associated with climate change, efficient energy generation and use, security, health, education and transport
- Develop skills in the safe, efficient and effective use of tools, equipment, materials, machines and processes
- Develop critical and creative thinking, communication and personal, social and ICT skills

### Topics of Study

- Identifying and producing solutions using new technologies
- Design challenge (e.g., climate change, efficient energy generation and use, security, health, education and/or transport)
- Design and computational thinking
- Sustainable practices
- Industry pathways

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Folio
- Production work
- Practical demonstrations
- End-of-semester examinations

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Systems Engineering, will provide students with excellent grounding for the course.

## Sports Science

### Overview

Sports Science provides students with an introduction to the theory components pertaining to the content covered in VCE Physical Education. The elective serves to develop students' understanding in the foundation studies of sport and exercise science. Through various practical activities students explore the scientific principles behind sporting performance. Students are also provided with the opportunity to apply their knowledge by using heart rate and blood pressure monitors, GPS units, Smartphone Apps and other technologies to enhance their learning.

### Duration

This subject runs for ONE semester.

### Educational Objectives

On the completion of this unit, students will have a developed understanding of the theories pertaining to sport and exercise science. Students should be able to demonstrate an understanding of:

- The energy systems used during sporting performance
- A range of legal and illegal methods that can be used to enhance sporting performance
- Causes of fatigue caused by exercise
- How recovery improves future sports performance

### Topics of Study

- Introduction to energy systems
- Enhancing sports performance
- Nutrition
- Hydration
- Legal and illegal strategies
- Psychological strategies
- Fatigue and recovery

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Project work
- Written report
- Topic tests
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Physical Education, will provide students with excellent grounding for the course.

## Visual Communication Design: Architectural Design

### Overview

Architectural Design teaches students the Environmental Visual Communication Design field. Architectural Design enables students to develop their skills and confidence in two-dimensional and three-dimensional drawing. They will develop drawing and rendering skills, and study specific conventions relating to each field. Students will use computer technology in the development and presentation of designs. They will analyse the design process that architects and graphic designers use in developing and producing visual communications. There is also strong emphasis of three-dimensional modelling techniques.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- The use and application of two-dimensional drawing methods such as plans, elevations and orthogonal projections
- The use and application of three-dimensional drawing methods such as perspective, isometric and planimetric views
- Application of the Australian Standards and Conventions to drawings
- The use and application of the design process to solve design problems and create final solutions
- Construction techniques using suitable materials and safe handling practices

### Topics of Study

- Technical drawing in context – two-dimensional and three-dimensional drawing methods to represent form, proportion and scale
- Design industry practice – different roles within the Environmental Design and Industrial Design Industry
- Designing to a brief – designing to a specific need for a 'client' using the design process

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- A folio of completed Visual Communications including models
- Visual diary – the submission of a visual diary containing a collection of resources, ideas, sketches and annotations
- Written responses – including questions in class, homework, and evaluation of completed designs
- Respond and interpret – the analysis and evaluation of visual communication designs for different audiences and purposes in different contexts
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Visual Communication and Design, will provide students with excellent grounding for the course.

## Visual Communication Design: Graphic Design

### Overview

Graphic Design teaches students the Message Visual Communication Design field. It enables students to use design thinking and the design process to convey ideas and messages visually. There will be a strong focus on graphic design including logo, brand identity and print advertising. The students will develop a variety of manual and digital drawing skills, to visualise thinking and to present potential solutions. They will employ specific conventions such as typography, grids and layout relating to this design field. Students will analyse the importance of the design brief and employ a design process that graphic designers use in generating, developing, refining and resolving visual communications. They will use digital technology in the development and presentation of final concept designs.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- To develop and apply drawing skills using a range of techniques
- Develop a range of skills in selecting and applying media, materials and manual and digital methods to support design processes
- Apply a design process to create visual communications
- Apply design thinking while conceiving, communicating and presenting ideas
- Understand how historical, social, cultural, environmental, legal, ethical and contemporary factors influence visual communications

### Topics of Study

- Design industry practice – different roles within the Graphic design field
- Designing to a brief – designing to a specific need for a 'client' using the design process
- The design process
- Techniques employed to attract specific audiences
- Digital methods such as Adobe Illustrator

### Methods of Assessment

Students will complete several assessment tasks over the semester. These will include:

- Visual diary/folio – the submission of a folio demonstrating the design process using manual and digital methods
- Final presentations of visual communications
- Written responses – including questions in class, homework, and evaluation of completed designs
- Respond and interpret the analysis and evaluation of visual communication designs for different audiences and purposes in different contexts
- End-of-semester examination

### VCE Course Pathways

This unit, while **not** a prerequisite for VCE Visual Communication and Design, will provide students with excellent grounding for this course.

## Contacts

Before making decisions about course composition and balance, students and parents may wish to seek advice from relevant staff. Students are not guaranteed entry into any VCE subject of their choosing and selections will be considered according to proven work ethic, learning progress and final results. Class size limits apply and students submitting selections late or not showing appropriate commitment to their subjects may be precluded from certain subjects.

Please contact the following staff should you have any queries.

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