

# 2025

# YEAR 10 CURRICULUM GUIDE

Hume Anglican Grammar  
Mt Ridley Campus

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Anglican Grammar  
**Hume**

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**Aim High, Be Proud**

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## Contents

Subject Selection Process .....	3
Core Subject Information .....	6
English.....	6
Humanities .....	7
Mathematics.....	8
Physical Education.....	11
Ethics.....	12
Science .....	13
Elective Subject Information .....	14
.....	14
Applied Biology .....	15
Applied Chemistry .....	16
Applied Mathematics (trigonometry and calculus).....	17
Applied Physics .....	18
Applied Psychology .....	19
Art: Making and Exhibiting.....	20
Commerce .....	21
Dance .....	22
Digital Music Production .....	23
Digital Technology.....	24
Drama.....	25
Electronics .....	26
Global and Domestic Law and Order .....	28
Health and Human Development.....	29
History .....	30
Italian.....	31
Media.....	32
Music Performance .....	33
Outdoor Education.....	34
Robotronics .....	35
Sports Science .....	36
Visual Communication Design: Architectural Design.....	37
Visual Communication Design: Graphic Design and Advertising .....	38
Contacts.....	39

## 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:

Semester 1	English	Mathematics	Science*	Humanities*	Elective 1	Elective 2
Semester 2	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 programs which will be delivered during Homeroom sessions, Chapels and Assemblies.

## Subject Selection Process

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

Date	Action
<b>Term 3</b>	
Week 1 – Week 3 Tuesday, 11 July – Monday, 24 July	Year 10 students have individual meetings with selected members of staff to discuss 2024 VCE.
Thursday, 13 July	Curriculum Guides 2024 emailed to students and parents.
Week 2 Wednesday, 19 July	Subject Selection Expo and Information Evening 6pm – 8pm.
Week 4 Monday, 31 July	<b>Web preferences open</b> for students Years 8 – 11 for subject selection.
Week 5 Friday, 11 August	<b>Web preferences close.</b>

## Year 10 2024 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 are offered the opportunity 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 benefit most from acceleration by meeting both the academic and social/emotional demands of their acceleration subject and the rest of their Year 10 program.

Students will be offered the opportunity 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. Student achievement across all subjects is of a high standard. (Graded Assessments are over 85% on average).
3. Student has demonstrated a superb attitude and aptitude towards their studies in all subjects (based on their previous school reports and no concerns raised throughout the year).
4. Student attendance rate is at or above 90%.

Only students who meet all criteria will be invited 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.

### 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 available for acceleration with any additional prerequisites are listed below:

Subject	Prerequisites
Australian and Global Politics	Have exceptionally high results in Humanities (above 85% or higher).
Accounting	Must be enrolled in Year 9 Advanced Mathematics in 2024 and continuing into Year 10 Advanced Mathematics in 2025.
Art Making & Exhibiting	Letter of recommendation by the Subject Coordinator – Visual Arts.
Biology	Graded assessments in Core Science to be significantly higher than 85%.
Business Management	Completed Young Entrepreneurs with exceptionally high (above 85%) results.
Environmental Science	Graded assessments in Core Science with exceptionally very good results (average 80% or higher).
Geography	Have exceptionally high results in Humanities (above 85% or higher).
Health and Human Development	Completed Year 9 Health and Human Development with exceptionally high (above 85%) results for theory components.
History	Have exceptionally high results in Humanities (above 85% or higher).
Legal Studies	Have exceptionally high results in Humanities (above 85% or higher).
Physical Education	Completed Year 9 core PE with exceptionally high (above 85%) results for theory and practical components.
Psychology	Graded assessments in Core Science with exceptionally very good results (average 80% or higher).
Religion and Society	Have exceptionally high results in Humanities and RAVE (above 85% or higher).
Systems Engineering	Completed Electronics with exceptionally high (above 85%) results.

## 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

Students learn to:

- 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 and that this meaning 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 a range of assessment tasks over the semester. These may 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 a range of 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

By the end of Year 10 students should be able to:

- 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

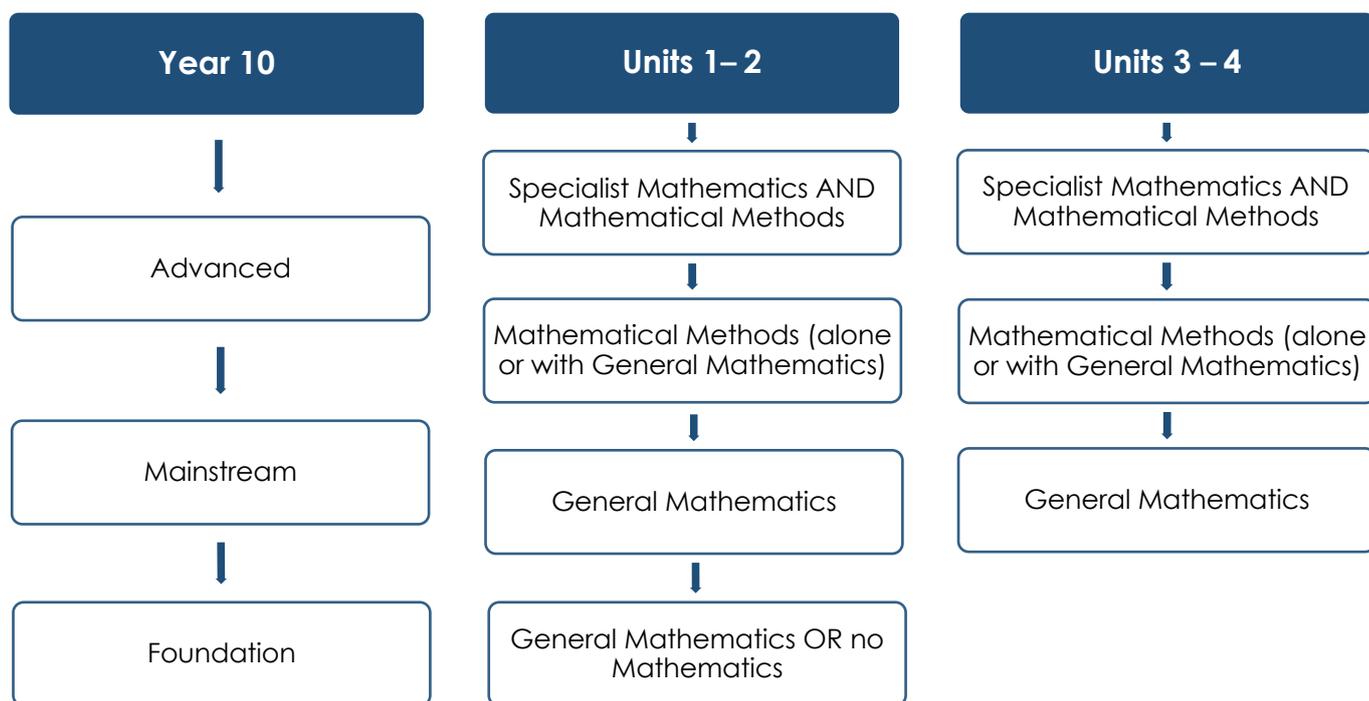
Students will complete several assessment tasks over the semester. These may include:

- 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.

## VCE Course Pathways continued



### 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 2024. These will be based largely on students' test scores and examination results from Semester 1 using the following criteria.

Recommendation	Criteria
No Mathematics at VCE	Test Average and Examination below 25%
General Mathematics Unit 1 and 2	Test Average and Examination above 25%
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 into General Mathematics Unit 3 and 4	Test Average and Examination above 80% Students need to have demonstrated strong commitment to their studies. Applications will be considered individually.

Please note each student is considered individually and recommendations are made at the teacher's discretion in consultation with the Head of Faculty – Mathematics.

## 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 interventions to improve fitness and physical activity levels in their communities
- Apply and transfer movement concepts and strategies to new and challenging movement situations
- 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 personal performance through fitness testing & training programs
- Body systems
- Coaching and Instruction
- Above topics applied via several sports including Volleyball, Lacrosse, Softball etc

### Methods of Assessment

Students will complete a range of assessment tasks during the Semester. These may include:

- Skills assessments
- Fitness testing
- Project work
- Tests
- Practical laboratory reports
- 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

- 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-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
- 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 may 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

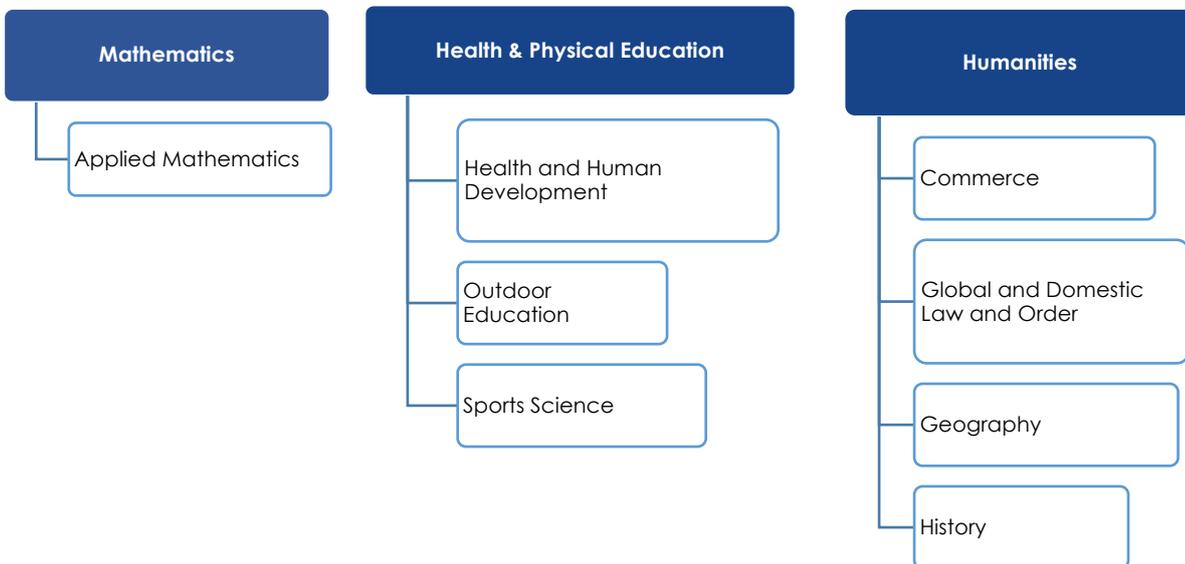
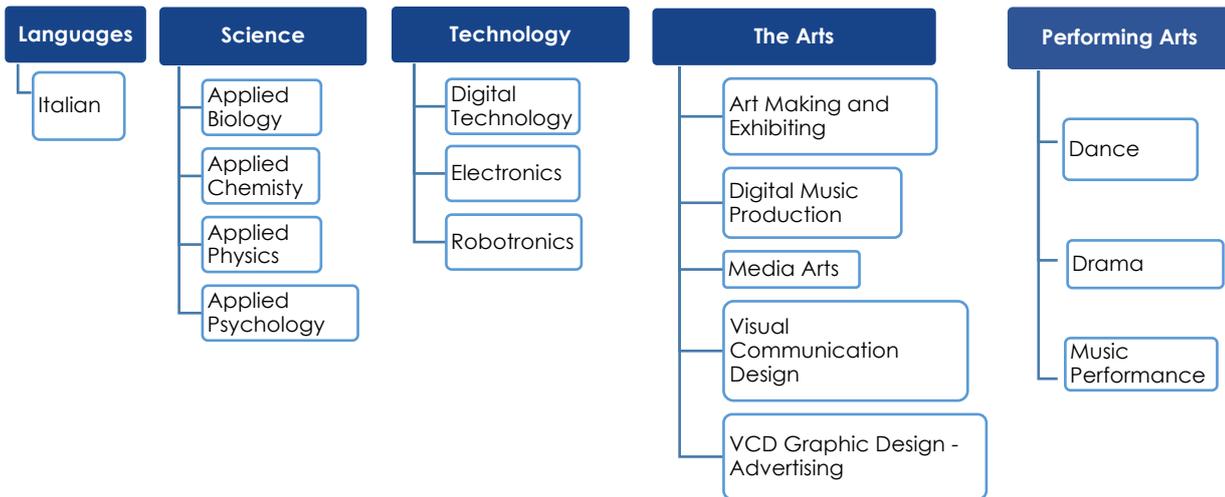
### VCE Course Pathways

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 choice 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 may 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 may 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 (trigonometry and calculus)

### Overview

The Year 10 Applied Mathematics curriculum is specifically designed to establish strong mathematical foundations in trigonometry and calculus by providing an introductory study of simple elementary trigonometric functions and algebra, as well as differential and integration. The subject will also examine their applications in a variety of practical and theoretical contexts. The semester-based subject is designed as an introductory course to allow students to experience aspects of Mathematical Methods at VCE level. The course is intended for students who wish to explore mathematical concepts 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 the Unit circle
- Review basic algebraic and trigonometric concepts
- Functions and graph sketching
- Fundamentals and calculations of rates of change in the physical world
- Applications to real life situations

### Methods of Assessment

Students will complete several assessment tasks over the semester. These may 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 may 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 may 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 form of their choice. They focus on photography, drawing, painting, sculpture, textiles, installation, 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, MAC lab, and 2D and 3D printing methods. In this semester-based unit, students study International Artists. They learn about the role of the artist, craftsman and designer and their contribution to society, and the significance of the creative industries. Students make and exhibit their artworks. They examine how artists develop their practice and have used materials, techniques and processes.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Understanding and application of materials, techniques and processes of own choice artform (2D, 3D and 4D)
- Understanding and application of the studio process to successfully communicate, challenge and express their own ideas
- 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

- Own choice art form: Photography, Drawing, Painting, Printmaking, Sculpture, Animation, Video, Textiles, Installation, Mixed Media.
- Studio Process
- Appropriation
- International Art and Current Exhibitions
- Contemporary Art
- Exhibitions

### Methods of Assessment

- Finished artworks
- Visual Arts journal
- 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 ATSIIC 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

Dance is the language of movement. It is the realisation of the body's potential as an instrument of expression. The study of Dance in Year 10 provides students with the opportunity to explore the potential of movement as a medium of creative expression through diverse approaches. Students will develop a broad understanding and appreciation of dance through the integration of practical and theoretical aspects of learning in the context of composition and performance. Students will learn to release creative potential, develop physical skill and build awareness of dance as a method of self-expression and communication. Dance benefits students naturally, as it lends itself to developing the potential of their physical selves. Dance provides opportunities to build confidence through performance. Students develop communication, and problem-solving skills through choreographic group work. They are also required to demonstrate the ability to appreciate and evaluate their own work in addition to that of their peers, emphasising the reflective nature of the course.

### 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 a dance composition.

### Topics of Study

- Safe dance practice
- Deconstructing the elements of movement
- The technical and expressive nature of dance
- Introduction to contemporary dance
- Choreographing solo, duo and group dances using choreographic devices
- Identifying, describing and explaining features of professional dance works and showing appreciation

### Methods of Assessment

Making:

- Group performance,
- Individual choreography
- Technical skills and artistry

Responding:

- Explore, respond and interpret different dance works
- Evaluate their own and others success in expressing the choreographer's intentions
- End-of-semester examination.
- Analysis and realisation process of a dance composition including planning, research, choreography, rehearsal and performance.

### 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 builds on the Year 9 elective but does not require students to have taken the year 9 course. A practical course developing skills in performance, stage production and composition. In composition, students will use MIDI, audio recordings, and sampling techniques to develop their understanding of the elements of music and the properties of sound. In performance, students will perform a range of works in both solo and group work using electronic instruments and also using traditional instruments, focusing on using technology to enhance performance. For Stage Production, students will use sound and lighting equipment, including mixing desks and lighting consoles to create live performance environments. They will further their experience in live sound engineering, the programming of stage lighting and stage-managing performance events.

### Duration

This subject runs for ONE semester

### Educational Objectives

- Set-up and manage a PA for a musical performance, including appropriate mixing and sound control
- Perform live music using technology to enhance performance.
- Design and program lighting for stage shows.
- Students are familiar with a variety of music software, being able to sample, manipulate and create musical compositions through this format.
- Explore the history and function of a variety of musical technologies.
- Use digital music equipment, including Launch Pads, Drum Machines and DJ consoles.

### Topics of Study

- Technical skills assessment
- Aspects of technology impact and history.
- Written assessment
- Stage Lighting
- Live Sound
- Composition
- Live Group Performance

### Methods of Assessment

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

- Composition tasks using music technology software
- Written essay
- Weekly topics covering music and technology (history, function and impact)
- Live practical tasks
- End-of-semester 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 of how to design and create a website. 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
- Application of website design principles
- Programming in HTML/CSS
- Programming in Sphero block code
- Designing and developing solutions to navigate a robot around a physical 'maze'
- Programming in Sphero JavaScript

### Topics of Study

- Databases
- Website Design
- 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

Drama involves manipulating elements of theatre composition and conventions to express ideas, considering specific audiences and specific purposes, through dramatic action based on real or imagined events. In Year 10 Drama students will fully realise work to be performed in front of a live audience. Throughout this course all students will have the opportunity to make their way through each of the playmaking steps: Research, Brainstorming, Improvisation, Scripting, Editing, Rehearsing and Refining. Workshops will be dynamic and interactive and fully equip students with the necessary skills to successfully tell a dramatic story. This course is designed for students who wish to develop confidence, self-discipline, creativity, team-work skills and cultural and social awareness. Its emphasis on personal development makes it of value to all students.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Communication skills (voice, movement, gesture) to assist in storytelling.
- Performance skills including role play, improvisation, scripted drama, characterization, rehearsal skills and storytelling through the elements of theatre convention.
- Group dynamics – decision making, responsibility, discussion skills, teamwork, negotiation and inclusivity
- Scriptwriting, directing, and other playmaking strategies including researching techniques
- Character exploration and analysis

### Topics of Study

- Workshops covering key understandings of theatrical conventions and elements of theatre composition.
- Analysis of performance styles and associated conventions including Eclectic and Epic Theatre
- Exploration of social issues including Australia and the world
- Workshops on expressive skills and performance skills
- Production areas including lighting, sound, costumes, sets, makeup and direction
- Analysis of a live, professional drama performance

### Methods of Assessment

- Developing characters and showcasing scene-work and design concepts
- Presenting work to an audience
- Developing drama techniques including expressive skills and performance skills
- Keeping of a drama journal, evaluation class activities, recording design elements and evaluating personal progression
- Analysing and reviewing a live performance
- Research and analysis of dramatic rituals and the development of theatre practice
- 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.

## Electronics

### Overview

Electronics aims to enable students to develop an understanding of the function of basic electronic components and microprocessors and their relationship to each other, whilst working with tools in a safe manner and environment. Students develop an appreciation and understanding of the importance of electronic design. Students will analyse the appropriate use of particular components, including new materials and for specific purposes relating to electronic devices. They will design and produce an electronic project and learn to problem solve and fault find.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Safe working practices
- Identification of components and values
- Working individually or as part of a group
- Problem-solving and communication
- Design and reading of circuit diagrams
- Material fabrication
- Soldering and tinning where needed
- Basic coding of digital inputs and outputs

### Topics of Study

- Occupational Health and Safety in the workplace
- Electronic components and what they do
- Safe and correct use of a variety of hand and power tools
- Microprocessors (Arduino)

### Methods of Assessment

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

- Workbook assessments
- Design Folio
- Theory assessments
- **Microprocessors practical coding test**
- Design and production projects
- End-of-semester examination

### VCE Course Pathways

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

- 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, select and evaluate a range of questions to investigate 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 plus 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

- 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 range of skills and knowledge they require to maintain healthy lifestyles as they move into adulthood. In Year 10, students consider the impact of mental wellbeing, relationships and identity on the health of young Australians. They will also consider the important role that nutrition plays in promoting the health of Australians. Students will learn to read health data and use this skill to analyse health information. Students will also learn about the writing conventions used in Health and Human Development studies.

### Duration

This subject runs for ONE semester.

### Educational Objectives

- Understand mental health and various strategies and services that can be used to enhance mental wellbeing
- Understand features of healthy relationships and behaviours that enhance the wellbeing of young people in relationships
- Understand and be able to explain the role of several common nutrients
- Recognise a variety of common food models
- Decision making and assertiveness skills
- Analysing simple health data
- Health writing skills

### Topics of Study

- Understanding Identity
- Mental Health
- Nutrition
- Understanding and developing healthy relationships
- Sustainable Development Goals

### Methods of Assessment

Students will complete a range of assessment tasks over the semester, these may include:

- Topic tests
- Written reports
- 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

### Topics of Study

- Causes of World War II
- Australia at War
- Life on the Homefront
- Changing political relationships – USA and Australia

### Methods of Assessment

- 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, to access and exchange information, to express feelings and opinions, to participate in imaginative and creative experiences, and to 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.

### Educational Objectives

- Exchange and compare ideas, experiences, opinions and feelings through spoken and written transactions
- Convey and organise information 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 a range of 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.

## Media

### Overview

The Media course is designed to give students an understanding of the relationship between media and its audiences. This is done through the exploration and application of media tools in the analysis and construction of representations. Students study the way in which they are not only consumers, but producers of media, and analyse representation and genre through theoretical and practical lessons. The aim is to expose students to a wide variety of media, problem solving skills and creative stimuli, providing enough experience for students to make an informed choice about the possibility of pursuing this pathway for VCE. Most importantly, students learn about the role of the media in our society and their role in being both critical and creative when working with the 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 (and genre study)
- Photojournalism and the power of the image

### Methods of Assessment

- Research
- Planning
- Practical completion
- Evaluation
- 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.

## 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.

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.

### Educational Objectives

- Perform and rehearse as part of an ensemble on a chosen instrument or instruments.
- Perform and rehearse as a soloist on a chosen instrument or instruments.
- Analyse and evaluate selected influences on performance works and approaches that can be used to create expressive outcomes
- Recognise and write scales, intervals, chords and transcribe rhythms and melodies using conventional and contemporary music notation
- Undertake a range of composition, arranging and practical tasks to further develop musical understanding.

### Topics of Study

- Performance skill development
- Solo and group performance
- Analysis of musical works
- Musicianship through written and aural means
- Composition and arranging
- Basic instrumental skills.

### Methods of Assessment

Students will complete a range of 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
- Scientific understanding of outdoor environments

### Topics of Study

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

### Methods of Assessment

Students will complete a range of assessment tasks during the semester. These may 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 of \$250 to cover expenses related to camps and subject-specific excursions.

## Robotronics

### Overview

Young Engineers: Robotronics is a project-based elective that aims to enable students to further develop their understanding of and skills in coding, physical computing, software engineering and design technology. They develop a broader understanding of 21<sup>st</sup> century and interpersonal STEM skills of project management, communication, teamwork (collaboration) 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 systems engineering and applied computing processes apply the problem-solving methodology
- 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
- Apply project management techniques
- Develop critical and creative thinking, communication and collaboration, 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

- Folio
- Production work
- Practical demonstrations
- 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 Electronics/Digital Technology electives.

## 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 methods that can be used to enhance sporting performance
- The anatomical names of the large skeletal muscles in the body
- The correct terminology used to identify bones, joints and types of joint actions
- The cardiorespiratory system

### Topics of Study

- Acute responses to exercise
- Body systems
- Introduction to energy systems
- Enhancing sports performance – nutrition, hydration, training methods
- Skill analysis

### Methods of Assessment

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

- Project work
- Written report
- Topic tests
- Oral presentations
- 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

Visual Communication Design enables students to develop their skills and confidence in two-dimensional and three-dimensional drawing. In this semester-based unit, students will study the environmental and communication design fields with a focus on architectural design. 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 planometric 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

These may 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 and Advertising

### Overview

Visual Communication Design: Graphic Design and Advertising enables students to use design thinking and the design process to convey ideas and messages visually. In this semester-based unit, students will study the communication design field. There will be a strong focus on graphic design including logo and 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 Communication 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

### Methods of Assessment

These may 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.

<b>FOR ALL ENQUIRIES</b>		
Head of Teaching and Learning – Secondary	Mr Aaron Carassiti	<a href="mailto:carassitia@humegrammar.vic.edu.au">carassitia@humegrammar.vic.edu.au</a>
<b>FOR CAREER/POST-SCHOOLING PATHWAYS ADVICE</b>		
Careers Counsellor	Mrs Rochelle Rosendale	<a href="mailto:rosendaler@humegrammar.vic.edu.au">rosendaler@humegrammar.vic.edu.au</a>
<b>FOR SUBJECT SPECIFIC INFORMATION</b>		
Subject Coordinator – Visual Arts	Ms Sarah Lang	<a href="mailto:langs@humegrammar.vic.edu.au">langs@humegrammar.vic.edu.au</a>
Head of Faculty - English	Mr Clive Parkin	<a href="mailto:parkinc@humegrammar.vic.edu.au">parkinc@humegrammar.vic.edu.au</a>
Head of Faculty – Health and Physical Education	Mr Iain Dickson	<a href="mailto:dicksoni@humegrammar.vic.edu.au">dicksoni@humegrammar.vic.edu.au</a>
Head of Humanities and RAVE	Ms Kaye Elvin	<a href="mailto:elvink@humegrammar.vic.edu.au">elvink@humegrammar.vic.edu.au</a>
Subject Coordinator – Languages	Ms Laura Venditti	<a href="mailto:vendittil@humegrammar.vic.edu.au">vendittil@humegrammar.vic.edu.au</a>
Head of Faculty – Mathematics	Ms Kerry McKiterick	<a href="mailto:mckiterickk@humegrammar.vic.edu.au">mckiterickk@humegrammar.vic.edu.au</a>
Head of Faculty – Science	Mr Navneet Sharma	<a href="mailto:sharmas@humegrammar.vic.edu.au">sharmas@humegrammar.vic.edu.au</a>
Subject Coordinator – Technology	Mr Hajar Hussein	<a href="mailto:husseinh@humegrammar.vic.edu.au">husseinh@humegrammar.vic.edu.au</a>
Subject Coordinator – Performing Arts	Mr Michael Smith	<a href="mailto:smithm@humegrammar.vic.edu.au">smithm@humegrammar.vic.edu.au</a>