



**KAMBRYA**  
COLLEGE

# Course Handbook

**Year 10 2023**



# Contents Page

<u>Welcome and Key Contacts</u> .....	3
<u>Year 10 Academic Program</u> .....	4
<u>English Domain</u> .....	5
<u>Mathematics Domain</u> .....	7
<u>Arts Domain (Performing)</u> .....	9
<u>Arts Domain (Visual)</u> .....	10
<u>Health and Physical Education Domain</u> .....	11
<u>Humanities Domain</u> .....	12
<u>Languages Domain</u> .....	14
<u>Science Domain</u> .....	15
<u>Technology Domain</u> .....	17
<u>Frequently Asked Questions</u> .....	19
<u>Websites that may provide assistance</u> .....	19

# Welcome to Senior School

Kambrya College, in partnership with parents, guardians and the wider community, aims to provide an environment conducive to learning, in which all students can attain knowledge, skills and attitudes that demonstrate high levels of achievement enabling them to be lifelong learners and effective, successful, active and happy participants in the international community. As students enter their senior years (Years 10-12) at Kambrya College, they have the opportunity to select the course they want to study within the guidelines of the VCAA.

For many students, the senior school course selection process is exciting but for some, it can be a daunting process. Students are asked to consider what they may like to do following secondary school completion and make course selections that align with their pathway goals. It is important that students make personal and informed choices based on their own research and planning when selecting subjects. Students who are undecided about desired post secondary school pathways are advised to keep as many post-secondary pathway options available to them as possible.

This handbook contains information about the structure of the year 10 academic program and a description of all of the year 10 elective subjects on offer. Students are strongly encouraged to read this handbook carefully before making course selection decisions as there will be limited opportunity for students to change their subjects once they have been allocated and any change will be subject to class availability.

Kind regards,

Kelly Kinsella  
Assistant Principal - Senior School

## Senior School Contacts

<b>Assistant Principal</b>	Kelly Kinsella	<a href="mailto:kelly.kinsella@education.vic.gov.au">kelly.kinsella@education.vic.gov.au</a>
<b>Curriculum Leader</b>	Kate Bevis	<a href="mailto:kate.bevis@education.vic.gov.au">kate.bevis@education.vic.gov.au</a>
<b>Year 10 Student Engagement Leader</b>	Mark Artin	<a href="mailto:mark.artin@education.vic.gov.au">mark.artin@education.vic.gov.au</a>
<b>Careers Practitioner</b>	Amanda Cristobal	<a href="mailto:amanda.cristobal@education.vic.gov.au">amanda.cristobal@education.vic.gov.au</a>
<b>VET Coordinator</b>	Patricia Jagusch	<a href="mailto:patricia.jagusch@education.vic.gov.au">patricia.jagusch@education.vic.gov.au</a>

# Year 10 Academic Program

## Year 10 Course Structure

Students have a wide variety of subjects to choose from in year 10. Elective subjects will only run if there are sufficient numbers as determined by the Principal. Where a subject does not have sufficient numbers to run, students will be allocated into one of their reserve preferences. Whilst every attempt is made to allocate students to their first preferences, due to timetabling constraints, this may not be possible. Students will be required to include reserve selections when submitting their course preferences.

Please note the following guidelines for year 10 course selection.

- **English:** Students must study two semesters of English. There are several English subjects available to select from. Note that students who select Literacy will be committing to a VCE Vocational Major in 2024.
- **Mathematics:** Students must study one Mathematics subject for the whole year.
- **Humanities:** Students must study at least one semester of Humanities.
- **Science:** Students must study at least one semester of Science.
- **BRICKS:** Students must undertake one semester of BRICKS.
- **Free-choice electives:** Students will study up to five free choice electives. Music, Language, VET and VCE subjects are year-long and will take up two free choice elective spaces.

## VCE/VET Acceleration

Students who have demonstrated strong work ethic, maturity and high academic results in year 9 may wish to apply to accelerate into a VCE or VET study as part of their year 10 program. Successful completion of a VCE/VET Units 1 & 2 study in year 10 will enable a student to complete Units 3 and 4 of that study in Year 11, giving them a total of six subjects contributing towards their ATAR (instead of the typical 5).

We recommend that students accelerate in one subject only and that they do not accelerate in the subjects they require as pre-requisites for tertiary study. Additional time to develop maturity and deeper conceptual understanding is the best preparation for students who need specific studies for tertiary pre-requisites.

Students should note that acceptance into a VCE/VET acceleration study is at the discretion of the Senior School Leadership Team. Priority for places in VCE/VET classes must be given to Year 11 students. Any remaining places will be offered to interested year 10 students based on their year 9 performance and recommendations of classroom teachers.

Students are unable to accelerate into VCE English, VCE Mathematical Methods, VCE Specialist Mathematics, VCE German, VCE Japanese second language, VCE Chemistry or VCE Physics due to the level of pre-requisite knowledge required from year 10 to be successful at year 11 level.

Students who wish to apply to accelerate into a VCE/VET subject should read the VCE Course Handbook carefully before selecting a subject to apply for.

## Overview

All year 10 students must undertake a full year of English. They must select two semester-based English subjects from the list below, or Literacy which is a year-long subject. The two Elemental English subjects are designed for students who have found Year 9 English to be challenging and have consistently been assessed as Working Towards or Below Level in Year 9 English. These two subjects will focus on teaching the same skills as the standard Year 10 English electives, but will be highly scaffolded with an adjusted pace, as well as teaching the skills through differentiated texts.

It is strongly recommended that students discuss their 2023 English pathway options with their current year 9 English teacher.

## English Language (semester long)

English Language provides students with the opportunity to explore the mechanics of language as well as building their understanding of how the English Language has changed and developed over time. Throughout this subject, students will learn how different elements of language combine to make meaning, how language influences the way we think, our identity, our attitudes, and our ability to participate in society.

English Language builds on students' previous learning about the conventions and codes used by speakers and writers of English. Students will understand how language is informed by the discipline of linguistics, where students will learn the metalinguistic tools to understand and analyse language use, variation and change. The study of English Language enables students to understand the structures, features and discourses of written and spoken texts through the systematic and objective deconstruction of language in use. Key areas of study will include morphology and syntax, where students will learn to use metalanguage behind language structures and subsystems, and how relationships between the individual modes of language are influenced by, and influence, situational and cultural contexts.

*English Language will prepare students for VCE English Language*

## Argument and Analysis (semester long)

In the Argument and Analysis elective, students consider the way arguments are developed and delivered in many forms of media. Students read, view, and listen to a range of texts and analyse the persuasive devices and their intended effects on the audience. Students apply their knowledge of argument to create a persuasive oral presentation on a current media issue. Additionally, students read and analyse the ideas, concerns, and tensions in Harper Lee's *To Kill a Mockingbird*. They study aspects of the text including structures, language features and conventions, and how they work together to create meaning. They consider the text's historical context and social and cultural values to develop and produce an analytical response.

*Argument and Analysis will prepare students for both VCE English and VCE English Additional Language*

## Exploring and Crafting (semester long)

In the Exploring and Crafting elective, students engage in reading and viewing texts with a focus on personal connections with the stories. Students explore William Shakespeare's play *'Macbeth'* and Anthony Minghella's film *'The Talented Mr. Ripley'* with a focus on the cultural, social and historical values within these texts and draw parallels with their own values. Students draw on personal experience and understanding of the ideas, concerns, and tensions presented in the above texts. Students explore and revisit the mentor texts as inspiration for developing their own writing processes, for generation of ideas, and as models for effective writing. Students craft an original text, as well as develop and produce personal and analytical responses to the set texts.

*Exploring and Crafting will prepare students for both VCE English and VCE English Additional Language.*

## Elemental English: Argument and Analysis (semester long)

In the Argument and Analysis elective, students consider the way arguments are developed and delivered in many forms of media. Students read, view, and listen to a range of texts and analyse the persuasive devices and their intended effects on the audience. Students apply their knowledge of argument to create a persuasive oral presentation on a current media issue. Additionally, students read and analyse the ideas, concerns, and tensions in a fictional text. They study aspects of the text including structures, language features and conventions, and how they work together to create meaning. They consider the text's historical context and social and cultural values to develop and produce an analytical response. This course has a focus on developing students' academic writing skills through the exploration of texts. It aims to build confidence in developing and presenting arguments and responses.

*Elemental English: Argument and Analysis will prepare students for both VCE English and VCE English Additional Language*

## Elemental English: Exploring and Crafting (semester long)

In the Exploring and Crafting elective, students engage in reading and viewing texts with a focus on identifying and developing personal connections with the stories. Students explore texts with a focus on the cultural, social and historical values within these texts and draw parallels with their own values. Students draw on personal experience and understanding of the ideas, concerns, and tensions presented in the texts. Students explore and revisit the mentor texts as inspiration for developing their own writing processes, for generation of ideas, and as models for effective writing. Students craft an original text, as well as develop and produce personal and analytical responses to the set texts. This course has a focus on developing students' academic writing skills through the exploration of texts. It aims to build confidence in developing and crafting original texts.

*Elemental English: Exploring and Crafting will prepare students for both VCE English and VCE English Additional Language*

## Literacy (year-long subject)

The purpose of this unit is to enable students to develop the knowledge, skills and attributes to read and write simple or short texts. Texts deal mainly with personal and familiar topics, as well as including some unfamiliar aspects. At this level students, often with support, use the writing process with an awareness of the purpose and audience of the text. In reading, students are able to identify the main point of the text, some key details and express an opinion about the text as a whole as well as some of the details. At the end of the Foundation Reading and Writing unit, students should be able to read and comprehend a range of simple short texts and write a range of short texts in a number of contexts which may be interrelated.

*Literacy will prepare students for VCE Literacy*

**Note: Students who undertake Literacy in year 10 are committing to undertaking a VCE - Vocational Major in Year 11 as they will be unable to take VCE English or VCE English Language.**

## Overview

All year 10 students must undertake a full year of mathematics. When considering which mathematics to study in year 10, students should consider their current academic level in mathematics and potential VCE Mathematics pathways. It is strongly recommended that students discuss their 2023 mathematics pathway options with their current year 9 mathematics teacher.

## Advanced Mathematical Methods (2022 SEAL students only)

Year 9 SEAL students will have completed a significant amount of the Year 10 Methods course in 2022. Therefore, it is recommended, that SEAL students who wish to continue with Mathematical Methods, complete Advanced Mathematical Methods.

The Advanced Mathematical Methods course provides an introductory study of simple elementary functions of a single real variable, algebra, probability and their applications in a variety of practical and theoretical contexts. It is designed as preparation for Mathematical Methods Unit 1 and 2 and contains assumed knowledge and skills for these units.

The focus of Advanced Mathematical Methods is to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and algebraic manipulation, equations and graphs with and without the use of technology. It is to help them recognise the role of logical argument and proof in establishing mathematical propositions. In this course students apply mental, written and technology-assisted forms of computation as appropriate, and routinely use estimation to validate or provide bounds for their answers.

**\* Students undertaking Advanced Mathematical Methods will be expected to purchase a TI-Nspire CX CAS Calculator.**

*Advanced Mathematical Methods will prepare students for both VCE Mathematical Methods and Specialist Mathematics.*

## Mathematical Methods

This subject is designed for students who exhibit mathematical knowledge and understanding above the expected standard at Year 9. Assessment structure is modelled after VCE Mathematical Methods and will include examinations and SAC-type projects.

Semester One areas of study include: algebraic techniques; functions and relations; equations; quadratic functions and curve sketching.

Semester Two areas of study include: statistics; trigonometry; circular functions; discrete and continuous probability. Assessment will include SAC-like assessment tasks including topic tests, application tasks and analysis tasks.

**\* Students undertaking Mathematical Methods will be expected to purchase a TI-Nspire CX CAS Calculator.**

*Mathematical Methods will prepare students for both VCE Mathematical Methods and Specialist Mathematics.*

# Mathematics Domain

## General Mathematics

This subject is designed for students who demonstrate good mathematical knowledge and understanding at the expected standard during Year 9 and are intending to continue to VCE General Mathematics.

Semester One areas of study include: algebraic techniques; financial mathematics; linear functions and relations; solution of equations; quadratic functions and graphing; networks and matrices.

Semester Two areas of study include: measurement; trigonometry; statistics and number patterns. Assessment will include a range of topic tests, problem-solving projects, application tasks and ICT-based assessment.

*General Mathematics will prepare students for VCE General Mathematics.*

## Numeracy

The purpose of this subject is to enable students to develop the confidence and skills to perform simple and familiar numeracy tasks, and develop the ability to make sense of mathematics in their daily personal lives. The mathematics involved includes numbers and data, financial literacy, time and location, measurement and design, and the use of software tools and devices. On completion of this unit, students are able to perform everyday mathematical tasks that involve a single mathematical step or process. Students are able to communicate mathematical ideas using highly familiar contexts and common everyday language and mathematical notation.

*Numeracy will prepare students for VCE Numeracy. Students who select Numeracy **will not** be eligible to study VCE General Mathematics, Mathematical Methods or Specialist Mathematics in VCE.*

# Arts Domain (Performing)

## Dance (semester elective)

Year 10 Dance extends students' choreographic abilities and movement possibilities with the use of choreographic devices and form. Students will explore improvisation and choreographic devices to expand their movement vocabulary and create dance phrases and works. Students will choreograph, learn, rehearse and perform group works as well as a solo, developing and refining technical and expressive skills and applying production elements. Students will learn about safe dance practices, including dance anatomy, warm up and cool down processes, injury prevention and injury treatment. Students will watch and analyse dance works to develop their own dance perspectives and influence their own works. This will include viewing a professional dance performance. It is recommended that students enrolling in Year 10 Dance have some prior experience or are taking part in dance tuition outside of school, although this is not essential.

*This elective will prepare students for undertaking VCE Dance.*

## Drama (semester elective)

The study of Drama focuses on the creation and performance of characters and stories, which may be taken from students own experiences, figures in history, or pure imagination. In this subject, students develop their play-making techniques, expressive skills and performance skills, to create and perform devised work, including ensemble and solo performance. They will develop their understanding of non-naturalism and some of the devices used to create non-naturalistic performance through exploration of different theatre styles. Students will take part in the Malthouse Theatre 'Suitcase Series', an innovative program which empowers young people to tackle world issues through theatre. They will develop and expand their theatre-making skills, working to devise their own works in response to a specially commissioned script, before viewing Malthouse Theatre's full professional production of the play. Additionally, students will analyse the development of their own work and performances by other drama practitioners. This subject centres around the creation and understanding of performance work, including a combination of fun, hands-on tasks and varying opportunities for students to express their creativity and expand their abilities as play-makers and performers.

*This elective will prepare students for undertaking VCE Drama.*

## Music (year-long elective)

This elective builds and expands on the musical skills that students have developed in Year 9 Music. An instrument specific practical/performance-based course, Year 10 Music identifies and touches on the key skills and knowledge that appear in Units 1 and 2. CATs are similarly designed and applied, as are performance criteria, effectively creating a pre-VCE course. Students are required to perform in one recital performance per semester (three solo pieces in semester 1 and two solo pieces in semester 2) during the year as part of their assessment. Group performance is also a focus. Students present technical work related to recital repertoire and further develop their abilities in aural recognition and music theory; skills which are designed to make them better musicians overall.

*This elective will prepare students for undertaking VCE Music Performance.*

It is recommended that students enrolling in this subject have completed Music electives at Year 7, 8 and/or 9, although this is not essential if students have some previous musical background. Students who do not know how to play an instrument in some way are not advised to undertake Year 10 music due to the specialisation and focus on playing an instrument. Vocal students may have different circumstances. In addition to some experience on their instrument/voice, students should have a positive attitude towards musical performance and a willingness to perform in front of others. It is strongly expected that students enrolling in this subject be taking instrumental music lessons and have access to an appropriate instrument and practice space out of school. The College can provide highly affordable access to tutors (instrumental tuition is compulsory in VCE Music). It is a requirement that students will regularly practise their instrument/voice at home as part of their ongoing musical development. A challenging but fun and rewarding subject, Year 10 music enables students to express themselves as a musician whilst honing their musicianship skills.

## **Art Making and Exhibiting (semester elective)**

This unit aims to provide students with a wide variety of exposure and experiences to Art Making and Exhibiting by exploring a range of media such as painting, drawing, ceramics, and alternative materials. Students develop a personal visual art journal of two-dimensional and three-dimensional work through observational and conceptual drawings. Students will discover contemporary and historical art movements and styles. These are studied through a research assignment and creation of artworks inspired by this exploration.

*This elective prepares students for undertaking VCE Art Making and Exhibiting.*

## **Media (semester elective)**

In this elective, students explore media advertising, looking at different approaches and different media outlets. Students will evaluate, analyse and produce advertising material based on the theories discussed. Throughout this semester, students will gain a stronger understanding of themselves as consumers and the 'power' of the media to market audiences based on demographics. Students explore the power struggle between Pepsi and Coca-Cola to understand how advertising has shaped the world. Students work on creating media products; both in a team environment and individually.

*This elective prepares students for undertaking VCE Media.*

## **Visual Communication Design (semester elective)**

This unit aims to build on the fundamental knowledge and skills for industrial and architectural design. Students use technical, freehand, and computer-generated drawing and other two-dimensional and three-dimensional work. Students learn about the development of designing, promoting, or enhancing products through the use of a brief. This is done through the process of researching, designing, interpreting, and analysing historical and contemporary design. Students use computer design programs such as Adobe Illustrator to further enhance their design skills.

*This elective prepares students for undertaking VCE Visual Communication Design.*

# Health & Physical Education Domain

## **Exercise Science (semester elective)**

This elective provides students with the opportunity to develop an understanding of the theoretical and practical aspects of Exercise and Sports Science. Students will investigate acute responses and chronic adaptations that occur during exercise while developing their understanding of the fuels and energy systems that contribute to the body's ability to perform. The unit will introduce students to biomechanical principles that allow them to analyse movement patterns and improve performance in physical activity. Students will have the opportunity to apply their knowledge mainly through theoretical sessions supported by a number of practical laboratory sessions.

*This elective is also falls under the Science Electives and will prepare students for undertaking VCE Physical Education.*

## **Health Development and Promotion (semester elective)**

This elective will explore the dimensions of health and wellbeing and apply them to various case studies and population groups. The promotion of health and wellbeing through healthy eating is explored, as well as the impacts of poor nutrition on health. The unit will investigate Respectful Relationships and how to promote and model respect, positive attitudes and behaviours. Students will research a youth health issue and evaluate the effectiveness of Australia's health promotion programs. The concepts learnt in 'Promoting Health and Wellbeing' will increase students' health literacy.

*This elective will prepare students for undertaking VCE Health and Human Development.*

## **Sport Development and Coaching (semester elective)**

This elective provides students with the opportunity to develop an understanding of injury management including causes of sports injuries, ways to prevent injuries, immediate injury management procedures and the role of health professionals. Students will gain an understanding of how to enhance their performance through nutrition, training and rehabilitation methods. They will also investigate principles of coaching, whilst developing their abilities as a coach. Students will develop their teamwork and organisational skills whilst assisting in planning and implementing a range of recreational events. They will gain an understanding of Work Health and Safety and Organisational policies and procedures that apply to the industry. All theoretical concepts are supported via practical activities.

*This elective will prepare students for undertaking VCE Physical Education and VET Sport and Recreation.*

**Students must undertake a minimum of one Humanities subject from the list below.**

## **Business of Making Money (semester elective)**

In this course, students will learn about the day-to-day operations of a small business. Students will be exposed to the areas of operations management, marketing and finance. The subject will be split into three areas of study: business management, investing and accounting.

In the Business Management area of study, students will learn about the context for which businesses operate in Australia. This includes a focus on different types of businesses including for-profit and not-for-profit organisations and the distinction between business sizes and the impact size has on business operations. Students will develop specific skills relating to the use of management terms, acquiring and exchanging business information and ideas and applying business knowledge to practical examples.

In the Investing area of study, students will develop their understanding of different types of investments, investors and providing financial advice. There is an emphasis on practical skills such as creating an investment portfolio and investing in different stocks, shares, property and other forms of investments.

In the Accounting unit, students will study the management of cash flow, sources of finance, choosing appropriate suppliers, developing and analysing business budgets, calculating break-even point and profit. Students will develop skills in financial decision-making and problem solving. In addition to providing practical understanding of how to effectively manage personal and business finances.

*This elective will prepare students for undertaking VCE Business Management and VCE Accounting.*

## **Flashpoints in History (semester elective)**

*“History never repeats itself but it rhymes” (Mark Twain)*

History is full of flashpoints, movements where people died, nations fell and the world moved on, forever changed. In this elective we explore some of the key flashpoints that have shaped the world we live in today. Flashpoints covered include - the American Revolution, the enduring impact of the British East India Company, the upheaval of the 1960's, and culminating with the 9/11 terrorist attacks.

*This elective will prepare students for undertaking VCE History.*

## **General Humanities: History and Geography (semester elective)**

In this elective we explore modern Australian history covering historical events from post-World War I (1918) through to historical issues that create debate and discussion in modern day Australia. Studies focus on World War II and rights and freedoms of Indigenous Australians. Students will explore perspectives, causality and engage with sources both primary and secondary.

The Geography component examines the natural and human processes driving climate change, through to the human and natural impacts of climate change. Geography is explored examining the social, environmental, and economic impacts that underpin decisions and change in our world.

*This elective will prepare students for undertaking VCE History and VCE Geography.*

## Law and Order (semester elective)

In this unit students will develop knowledge of the origins and nature of Australia's legal system. Students will gain an overview of how laws are made, including how Parliament is formed and political parties can form Government.

Students will explore the roles and responsibilities of courts at state and federal levels in enforcing and apply laws including the key aspects of civil and criminal law, and the impact that current legal issues have on decision-making. The course includes study of contemporary representations of legal principles through case studies, exploring how the principles of justice are upheld.

This elective will prepare students for undertaking VCE Legal Studies but is also useful for those wanting to obtain some good general civic knowledge as well as learn transferrable skills that could help across all Humanities subjects at VCE.

*This elective will prepare students for undertaking VCE Legal Studies*

## Pop Culture and Philosophy (semester elective)

The purpose of this unit is to examine key philosophical ideas and concepts through the medium of popular culture. The students will investigate two areas of Philosophy: Ethics; including an analysis of the different ethical theories that relate to superheroes such as Batman, Captain America and Wonder Woman, and The Nature of Reality; including investigations into whether we can believe in the reality of our world and the possibility that reality may not be what we think it is. These ideas will be investigated through sources such as 'The Matrix', 'Buffy the Vampire Slayer' and 'The Truman Show'.

*This elective will prepare students for undertaking VCE Philosophy.*

## World of Drugs (semester elective)

In this course, we will be investigating the effects that drugs and cartels have on the developing world. Students will develop skills in sociological report writing, investigative abilities and inquiry to develop critical thinking skills.

Students will explore the impact that illicit drugs and crime have had, through a case study on the people of Mexico, in both positive and negative ways due to the influence of a globalising world. Students will learn to assess and evaluate public issues using theoretical lenses. Beginning with the understanding of how public issues impact the individual and how the individual exacerbates the issue, students will critically analyse how the demand for drug production has affected South America, focusing on its impact to culture, social contexts, and the technological and economic advancements. Students will focus on the geography of the continent to understand how this may impact drug and human trafficking on a global context, focusing particularly on the interconnection between climate, landscape and supply and demand. Students will focus on the socio-political context and discuss how governments influence these public issues, using data and research to develop these understandings.

*This elective will prepare students for undertaking VCE Sociology.*

**Students choosing a language do so as a year-long elective. This means it counts as two elective choices. Year 10 German and Japanese are compulsory pre-requisites for VCE study in the respective languages.**

## **German (year-long elective)**

The aim of Year 10 German language study course is to consolidate knowledge of the German language and skills students have gained in their junior years and as a preparatory course for the VCE second language study. Through the exploration of German culture students build their reading, writing, speaking, viewing and listening skills through a range of topics related to students' everyday worlds and broaden their knowledge with the goal of improving their communicative and comprehension abilities.

*This elective will prepare students for undertaking VCE German*

## **Japanese (year-long elective)**

The aim of Year 10 Japanese language study course is to consolidate knowledge of the Japanese language and skills students have gained in their junior years and as a preparatory course for the VCE second language study. Through the exploration of Japanese culture students build their reading, writing, speaking, viewing and listening skills through a range of topics related to students' everyday worlds and broaden their knowledge with the goal of improving their communicative and comprehension abilities.

*This elective will prepare students for undertaking VCE Japanese Second Language*

**Students must undertake a minimum of one Science subject from the list below.**

## **Biology (semester elective)**

In the study of Biology, students will focus on the structure and function of cells. This includes biochemical processes such as photosynthesis and cellular respiration. Students will also study DNA, genes and chromosomes. They will explore the cell cycle and patterns of inheritance. They will also investigate evolutionary changes to a population over time. Students will develop experimental design and scientific research skills through the creation of a scientific poster. Students will model cellular processes and have access to a range of practical components and activities.

*This elective will prepare students for undertaking VCE Biology.*

## **Chemistry (semester elective)**

Ever wondered why you need to add butter to a cake mix or why soft drink fizzes when you open the lid? In the Chemistry elective, students will explore the atomic model and the nature of the nucleus, chemical bonding, the nature of acids and bases and some of the most widely used chemical reactions. Chemistry will open your eyes to hidden dangers and marvellous opportunities that are only known to the elite science geeks.

This elective will require students to have mathematical problem-solving skills, critical thinking and organisational skills. As part of the assessment for the elective, students will be required to design and conduct their own investigation and present their findings in a VCE-style scientific poster.

*This elective will be a prerequisite for undertaking VCE Units 1 and 2 Chemistry.*

## **Environment of the Earth (semester elective)**

In this elective, students will explore the interactions and interconnectedness between humans and their environments and analyse the functions of both living and non-living elements that sustain Earth Systems. Students will investigate and execute a school Biodiversity Audit. Climate change modelling will also be explored at school and via an excursion. Students will examine the structure of the Earth, its biogeological cycles and the dynamic processes that shape our planet.

*This unit will prepare students for undertaking VCE Environmental Science.*

## **Exercise Science (semester elective)**

This elective provides students with the opportunity to develop an understanding of the theoretical and practical aspects of Exercise and Sports Science. Students will investigate acute responses and chronic adaptations that occur during exercise while developing their understanding of the fuels and energy systems that contribute to the body's ability to perform. The unit will introduce students to biomechanical principles that allow them to analyse movement patterns and improve performance in physical activity. Students will have the opportunity to apply their knowledge mainly through theoretical sessions supported by a number of practical laboratory sessions.

*This elective will prepare students for undertaking VCE Physical Education.*

**Students must undertake a minimum of one Science subject from the list below.**

## **Physics (semester elective)**

In this elective, students will be studying units of Motion & Electromagnetism. Students will explore the effects of forces on the motion of objects and analyse mathematical models to make predictions during practical experiments. In the study of Electromagnetism, they will investigate the effects of magnetic and electric forces and their application in electric motors and generators. They will design and conduct a practical investigation based on their own individual research question. As Neil DeGrasse Tyson says "A little-known secret is that a Physicist is one of the most employable people in the marketplace. A Physicist is a trained problem solver."

*This elective will be a prerequisite for undertaking VCE Units 1 and 2 Physics.*

## **Psychology (semester elective)**

This elective introduces students to scientific research methods, report writing and psychological principles. The course will include units on the structure and function of the brain, sports psychology, mental health and forensic psychology. Research methods will be explicitly taught and used throughout the course as it is assessed in each unit of VCE Psychology.

*This elective will prepare students for undertaking VCE Psychology.*

## **STEAM (semester elective)**

Students who undertake STEAM as an elective will expect to combine aspects of Science, Technology, Engineering, Arts and Mathematics in various projects throughout the semester. These include designing and building a pressure propelled rocket using Computer Aided Design (CAD) and investigating sustainable and renewable energy in model homes and in everyday life. Students will further investigate and monitor the growth of crops and how to increase properties such as nutrients and size. Finally, students will conduct a report on these major projects to reflect on their findings and form conclusions on their build efficiency and future improvements.

*This elective will prepare students for undertaking VCE Mathematics and Science subjects.*

## **Computing (semester elective)**

This elective will look at the function and application of the Microsoft Office packages, with a special focus on Database Management using Microsoft Access. They take into account privacy and security requirements when selecting and validating data and use digital systems to analyse, visualise, and model data. Students will also explore Networks, looking at how they function and design network solutions to fit a design brief. This subject introduces the students to programming with a choice of coding platforms such as Scratch using scripts, to an object-oriented programming language such as Visual Basic to enable them to write codes, and Unreal Engine.

*This elective will prepare students for undertaking VCE Computing and VET Information Communications Technology.*

## **Food Technology - Café Culture (semester elective)**

This elective will provide opportunities for students to study and experience Melbourne's café culture. Students will have the opportunity to produce a variety of café foods including breakfasts, light meals, cakes and coffees. Course outcomes will be achieved through a series of design briefs allowing students to investigate, design, produce and evaluate food and drink products. A range of complex equipment and ingredients will be utilised during the semester. Café Culture allows students to pursue interests in various hospitality vocations including pastry work, café style and baristas, giving each student the grounding, which could lead to an apprenticeship, or further studies in VCE.

*This elective will prepare students for undertaking VCE Food Studies and VET Hospitality.*

## **Food Technology - World of Food (semester elective)**

This elective will provide opportunities for students to study Australian and global food perspectives, and to study food patterns and customs around the world. The students develop skills through the use of key foods and cooking techniques associated with selected ingredients. Students have the opportunity to explore different cultures through the investigation and production of a variety of dishes. Course outcomes are achieved through a series of design briefs allowing students to investigate, design, produce and evaluate food products. A range of complex ingredients and equipment are utilised during practical classes and students need to demonstrate their use safely and hygienically.

*This elective will prepare students for undertaking VCE Food Studies and VET Hospitality.*

## **Robotics (semester elective)**

This program focuses on a hands-on approach to engineering and robotic fundamentals as the basis of understanding concepts, principles and components that operate in mechanical and electronic systems. The students will be given an opportunity to develop skills in understanding systems design, manufacturing, identifying and describing different types of complex systems, mechanisms and applications. Students will also be given the opportunity to use mathematical calculations and applied physics to explain real world physical characteristics.

Students will further develop programming skills through the use of the Arduino programming platform and learn about basic electronics and circuitry through the introduction of embedded systems and robotics. Students will have the opportunity to build a beginner friendly, Arduino robot, which will enable them to experiment with custom circuits. Students will experience more complex autonomous programming of their robots using touch, light and infrared sensor circuits, allowing the Shield-Bot to navigate on its own on a robotics challenge mat.

*This elective will prepare students for undertaking VCE Systems Engineering.*

## **Wood Technology - (semester elective)**

This subject will be a skill based woodwork class, with a focus on the skills and techniques required to complete a furniture piece, as well as highlighting the importance of following the design process. In this unit, students will either work individually or collaboratively to produce a piece/pieces of work that utilise the skills of woodcraft. Students will also learn to produce, work to and manage timelines for production, as well as creating a folio for presentation.

*This elective will prepare students for undertaking VET Building and Construction.*

# Frequently Asked Questions

## Can I change subjects and if so when?

There are set periods during each academic year where students are permitted to request changes to their subject lists. No changes can be made outside of these periods. Changes can be requested during:

- The first two weeks of commencement
- A set period prior to the start of Semester 2. Dates of this subject change period will be published via MS Teams.

Students requesting a subject change will be required to complete a subject change form and submit this to the Careers office by the published date. Every attempt will be made to accommodate student requests within the constraints of the timetable and existing class sizes.

## Can I study a language outside of school?

Students are able to apply directly to a language school to study a language subject that Kambrya College does not offer. Year 10 students who opt to study a language outside of school do so as an additional subject to their full year 10 academic program at Kambrya. Students can find out further information about the Victorian School of Languages via their website <https://www.vsl.vic.edu.au>

## Websites that may provide assistance

<b>VCAA: Study designs</b>	Pages - VCE Study Designs ( <a href="http://vcaa.vic.edu.au">vcaa.vic.edu.au</a> )
<b>VTAC:</b>	<a href="http://www.vtac.edu.au">www.vtac.edu.au</a>
<b>My Future Careers Site</b>	<a href="http://www.myfuture.edu.au">www.myfuture.edu.au</a>
<b>Youth Central</b>	<a href="http://www.youthcentral.vic.gov.au">www.youthcentral.vic.gov.au</a>
<b>Victorian Skills Gateway</b>	<a href="http://www.skills.vic.gov.au">www.skills.vic.gov.au</a>
<b>The Good Universities Guide</b>	<a href="http://www.gooduniversitiesguide.com.au">www.gooduniversitiesguide.com.au</a>
<b>Labour market insights</b>	<a href="https://labourmarketinsights.gov.au/">https://labourmarketinsights.gov.au/</a>

\* Individual university websites can also provide information about courses and future study options.



68 Bemersyde Dr, Berwick VIC 3806

Phone: 9707 7600

Fax: 9702 6277

Email: [kambrya.co@education.vic.gov.au](mailto:kambrya.co@education.vic.gov.au)

Website: <https://www.kambryacollege.vic.edu.au/>