VCE/VCAL Studies 2016

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The selection of units is very important.

Entry to tertiary courses and to the job market has become increasingly competitive. Therefore students need to select units which give them the maximum chance of utilising the skills and abilities they have, therefore maximising the VCE score they receive.

Students expecting to complete or start their VCE in 2015 will be required to satisfactorily complete the equivalent of 16 units, including 3 units from the English group and three pairs of units at a 3 & 4 levels other than English. These 16 units may include an unlimited number of units found in Vocational Educational Training.

Students should select a list of units which best suits their needs.

Students should consider the following:

* Prerequisite studies for any courses they may be interested in doing.
* Additional studies which would be valuable for those courses.
* Those studies which suit their interests - studies they enjoy.
* Those studies which are strengths for them. It is important to seek Teachers’ advice in this regard. Year 11 students should not take on Studies at a 3/4 level without teacher recommendation.

Students will participate in a careers’ advice session prior to selecting their subjects and they will be counselled about their selections. Parents are encouraged to attend the interview.

Students must guard against selecting studies simply because someone else has said they would like that study. They should read the following outlines carefully and find out as much as they can from the teachers in charge of those subjects. Their decision should then be based on the content and type of work that unit of study offers and how that relates to their individual needs and skills. It must be an individual decision and not one based on what older brothers or sisters may have liked or studied.

**Enhancement Studies:** Available for students who have studied a unit 3/4 sequence in Year 11. These studies are undertaken off campus from a University such as Monash.
VCE ASSESSMENT

Outcomes: The skills that you must demonstrate and achieve to pass.

School Assessed Coursework: An assessment that is reported as a grade for a Unit 3 and 4 sequence.

School Assessment Task: A school-based assessment for a VCE Unit 3 and 4 sequences set by VCAA and assessed by teachers.

External Exams: In Units 3 and 4 in November.

GAT – General Assessment Task: A test of knowledge and skills in writing, Mathematics, science and technology, humanities, and social science and the arts.

ATAR: Australian Tertiary Admission Rank (formerly known as the ENTER)

• Each study has 2 to 4 outcomes

• Assessment tasks are set to check whether students have achieved these outcomes.

• In Units 1 and 2 all of the assessment is internal. Satisfactory achievement of the outcomes will be shown by S or N. Students will gain grades from the school which will appear on their school report, but the VCAA certificate will only indicate which outcomes were achieved.

• In Units 3 and 4 some of the assessment will be internal, and some of it will be external such as exams. Grades will be given for all assessment at this level as well as the S or N for outcomes.
VCAL - VICTORIAN CERTIFICATE OF APPLIED LEARNING

In 2002 the Victorian Government introduced a new qualification called the Victorian Certificate of Applied Learning (VCAL) to improve the pathways for young people from secondary school into work or further education and training. Students completing this course gain a lot of experience that is useful in work and a recognized qualification. We are hoping to offer the VCAL Intermediate and Senior Certificates at Terang College next year.

The Certificate will be of benefit to those students wishing to develop skills to prepare themselves for employment, apprenticeships, traineeships or TAFE courses. The program is not suitable for those wishing to go on to a university course.

A student will be able to gain a VCAL certificate on the successful completion of one full year of study. There are three levels to the VCAL Certificate – Foundation, Intermediate and Senior.

There are four strands to the VCAL Certificate – Literacy and Numeracy, Industry Specific Skills, Work Related Skills and Personal Development Skills. This year students doing VCAL studied Math’s, English and Product Design and Technology a VET subject at TAFE or a School Based Apprenticeship and VCAL Units. The VCAL Projects are selected each year after a considerable amount of discussion with the VCAL teachers and the students.

It is expected that students will be out in the workplace or at TAFE every Thursday afternoon and Friday. For Intermediate and Senior Certificates, a TAFE training or minimum of 100 hours of VET accredited training is required.

VCAL is an excellent course for many students. It is not easier than the VCE as it requires a high level of commitment and active participation at school and in the workplace. Students need to consider this program carefully and make sure that it is the best choice for them. Entry into the course will be based on a number of factors. It is not automatic. The subjects for VCAL Intermediate students (Year 11) are likely to be:

1. Foundation / Intermediate English and Literacy
2. Foundation / Intermediate Maths and Numeracy
3. Product Technology – Wood / Metal or Food
4. VET / ASBA Work Placement
5. Oral Communication
6. PDS – Personal Development Skills includes individual and group projects.
7. WRS – Work Related Skills

The subjects for VCAL Senior students (Year 12) are likely to be:

1. Senior Literacy
2. Senior Numeracy
3. Technology – Wood / Metal or Food
4. VET / ASBA Work Placement
5. Oral Communication
6. WRS – Work Related Skills
7. Skills – Further Study
8. PDS – Personal Development Skills: includes hands-on activities and personal development units.

On Thursday afternoons and Fridays VCAL students will not attend school, but will be on work placement or attending TAFE. All Yr 11 students complete a week of work experience in Melbourne during Term Three.

**VETiS AND SCHOOL BASED APPRENTICESHIPS**

**VETiS Courses:** These courses allow students to study for TAFE certificates while they are still at school. They are attractive to students who would like more ‘hands on’ learning in their VCE program. These courses usually run for 2 years and are suitable not only for students who are thinking of TAFE or apprenticeships, but also for some of those going on to university. VET courses contribute to the student’s Year 11 results and their ENTER at the end of Year 12. Please note there has been a major change in the funding of these programs for 2015 and beyond. This means that the cost to the individual to study a particular area will increase markedly.

In 2015 the following VET programs that could be available:

- Agriculture
- Automotive
- Business Administration
- Building
- Community Services
- Conservation & Land Management
- Engineering
- Equine
- Fashion
- Furnishing
- Hairdressing
- Hospitality
- Information Technology
- Landscaping
- Make Up
- Media
- Music
- Retail
- Sport and Recreation

The programs that available are dependent upon the number of students interested right across the region. Fees are charged for VET programs.
**Australian School Based Apprenticeships:** These involve working one day per week under a training agreement with an employer. As well as learning practical work skills students also complete written units of work. Programs can be counted as a 5th or 6th study for the ATAR. Students are paid for the hours they work in this program. The difficulty, at times, is finding an employer who is able to take the student on under this arrangement.

SCHOOL APPRENTICESHIP programs in 2015 that could be available:
- Agriculture
- Retail
- Automotive
- Building
- Bricklaying
- Plumbing
- Business
- Food Processing
- Engineering
- Horticulture
- Info & Technology
- Community Services
- Seafood
- Sport & Recreation

*Note that entry to these programs is not automatic. VET programs depend on what is being offered by the South West Institute of TAFE or other training organisations. Willing employers must be found to begin a School Based Apprenticeship. Students may elect VET or ASBA as a preference, but they must also select an alternative VCE subject.*
ENGLISH

Scope of study

VCE English focuses on how English language is used to create meaning in written, spoken and multimodal texts of varying complexity.

Literary texts selected for study are drawn from the past and present, from Australia and from other cultures. Other texts are selected for analysis and presentation of argument.

The study is intended to meet the needs of students with a wide range of expectations and aspirations, including those for whom English is an additional language.

Rationale

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

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

This study will build on the learning established through AusVELS English in the key discipline concepts of language, literature and literacy, and the language modes of listening, speaking, reading, viewing and writing.

Structure

The study is made up of four units.

Each unit contains between two and three areas of study.

Entry

There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education.
EAL

For Units 1 and 2, provision for English as an Additional Language (EAL) students is a matter for school decision. For Units 3 and 4, EAL students need to meet the VCAA criteria for enrolment in VCE EAL. Schools should refer to the current year’s VCE and VCAL Administrative Handbook for advice about student eligibility for EAL in Units 3 and 4. EAL students should undertake the study as outlined in this study design. Schools should note where different requirements for EAL students are indicated.

Text selection

Units 1 and 2

In Units 1 and 2, text selection is a school-based decision, and must be made in accordance with the instructions provided on page 9 of the VCE English/EAL Study Design.

Units 3 and 4

In Units 3 and 4, text selection must be made in accordance with the instructions provided on page 17 of the VCE English/EAL Study Design.

Unit 1

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

Students develop their skills in creating written, spoken and multimodal texts.

Unit 2

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

Students develop their skills in creating written, spoken and multimodal texts.

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

Students develop their skills in creating written, spoken and multimodal texts.
Unit 3 (Yr. 12 2016)
The focus of this unit is on reading and responding both orally and in writing to a range of texts. Students analyse how the authors of texts create meaning and the different ways in which texts can be interpreted. They develop competence in creating written texts by exploring ideas suggested by their reading within the chosen Context, and the ability to explain choices they have made as authors.

Unit 4 (Yr. 12 2016)
The focus of this unit is on reading and responding in writing to a range of texts in order to analyse their construction and provide an interpretation. Students create written or multimodal texts suggested by their reading within the chosen Context and explain creative choices they have made as authors in relation to form, purpose, language, audience and context.

ENGLISH LITERATURE

Scope of study

In VCE Literature students undertake close reading of texts and analyse how language and literary elements and techniques function within a text. Emphasis is placed on recognition of a text’s complexity and meaning, and on consideration of how that meaning is embodied in its literary form. The study provides opportunities for reading deeply, widely and critically, responding analytically and creatively, and appreciating the aesthetic merit of texts.

VCE Literature enables students to examine the historical and cultural contexts within which both readers and texts are situated. It investigates the assumptions, views and values which both writer and reader bring to the texts and it encourages students to contemplate how we read as well as what we read. It considers how literary criticism informs the readings of texts and the ways texts relate to their contexts and to each other.

Rationale

VCE Literature provides opportunities for students to develop their awareness of other people, places and cultures and explore the way texts represent the complexity of human experience. Students examine the evolving and dialogic nature of texts, the changing contexts in which they were produced and notions of value. They develop an understanding and appreciation of literature, and an ability to reflect critically on the aesthetic and intellectual aspects of texts.
The study of Literature enables students to consider the power and complexity of language, the ways literary features and techniques contribute to meaning and the significance of form and structure.

**Structure**

The study is made up of four units.

Each unit contains two areas of study.

**Entry**

There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education.

**Text selection**

**Units 1 and 2**

In Units 1 and 2, text selection is a school-based decision, and made in accordance with the instructions provided on page 8 of the VCE Literature Study Design.

**Units 3 and 4**

In Units 3 and 4, text selection and made in accordance with the instructions provided on page 15 of the VCE Literature Study Design.

**Unit 1: Approaches to literature**

In this unit students focus on the ways the interaction between text and reader creates meaning. Students’ analyses of the features and conventions of texts help them develop responses to a range of literary forms and styles. They develop an awareness of how the views and values that readers hold may influence the reading of a text.

**Unit 2: Context and connections**

In this unit students explore the ways literary texts connect with each other and with the world. They deepen their examination of the ways their own culture and the cultures represented in texts can influence their interpretations and shape different meanings. Students consider the relationships between authors, audiences and contexts and analyse the similarities and differences across texts and establish connections between
them. They engage in close reading of texts and create analytical responses that are evidence-based.

Units 3 & 4 (Yr. 12 2016)
The study of Literature is a means of exploring and making sense of human experience. The process of making meaning involves asking questions such as: Whose experience and what experience is being given voice in the texts? What seem to be the main ideas and preoccupations of the texts? How are they created through the texts' use of language and literary devices? In what ways, if any, does the text appear to be shaped by the cultural context in which it was produced?

These units examine such questions and involve students in analysing a range of texts, developing skills in reading closely and critically discussing and debating various ways of interpreting and evaluating texts.

Unit 3
Areas of Study:
1. Adaptations and Transformations: Students will focus on the ways in which various forms of literature are constructed and the way in which meaning is changed when the form is changed.

2. Views, values and contexts in literature: This involves consideration of the ways in which texts represent and comment on human experience and ideas, the views and values expressed through texts and the relationship between texts and the social, historical and cultural contexts in which they were produced and in which they are read.

3. Considering alternative viewpoints: Students will focus on how various interpretations and judgements about a text can contribute to the student's own understanding and reading of a text.

Unit 4
Areas of Study:
1. Creative response to texts: This area of study focuses on the imaginative techniques used for creating and re-creating a literary work. In composing their own responses, students demonstrate how writers craft their work.

2. Close analysis: This area of study focuses on detailed analysis of the style, concerns and construction of a text.

FOUNDATION ENGLISH

Units 1 & 2 (Yr 11)
The Foundation English course is designed for students who may require a more vocationally orientated approach to English or may be aiming to directly enter the workforce upon completing their post-compulsory secondary studies. It is also suited to
students who need additional time and assistance to strengthen and refine their literacy skills.

The Foundation English course is designed around one compulsory area of study, Essentials of English, and five optional areas of study.

- Communication in the workplace
- Technology and communication
- The study of texts
- The analysis and construction of argument
- Information literacy.

ACCOUNTING

Accounting is strongly recommended for students who intend on studying business studies/commerce or accounting at tertiary level. Business courses at tertiary level open up many different career options such as tourism, management and marketing. VCE Accounting focuses on the financial recording, reporting and decision-making processes of a sole proprietor small business. Students study both theoretical and practical aspects of accounting. Financial data will be collected and recorded, and accounting information reported, using both manual and information and communications technology (ICT) methods. The preparation and presentation of financial statements is governed by Australian Accounting Standards and guided by the Framework for the Preparation and Presentation of Financial Statements (AASB Framework).

**Unit 1 (Yr 11): Establishing and operating a service business**

This unit focuses on the establishment of a small business and the accounting and financial management of the business. Students are introduced to the processes of gathering and recording financial data and the reporting and analysing of accounting information by internal and external users. The cash basis of recording and reporting is used throughout this unit. Using single entry recording of financial data and analysis of accounting information, students examine the role of accounting in the decision-making process for a sole proprietor of a service business. Where appropriate, the accounting procedures developed in each area of study should incorporate the application of accounting principles and the qualitative characteristics of accounting information.

**Unit 2 (Yr11): Accounting for a trading business**

This unit extends the accounting process from a service business and focuses on accounting for a sole proprietor of a single activity trading business. Students use a single entry recording system for cash and credit transactions and the accrual method for determining profit. They analyse and evaluate the performance of the business using financial and non-financial information. Using these evaluations, students suggest strategies to the owner on how to improve the performance of the business. Students develop their understanding of the importance of ICT in the accounting process by using a commercial accounting software package to establish a set of accounts, record financial transactions and generate accounting reports.
**Unit 3 (Yr12): Recording and reporting for a trading business**

This unit focuses on financial accounting for a single activity trading business as operated by a sole trader and emphasises the role of accounting as an information system. Students use the double entry system of recording financial data and prepare reports using the accrual basis of accounting. The perpetual method of stock recording with the First In, First Out (FIFO) method is also used.

**Unit 4 (Yr 12): Control and analysis of business performance**

This unit provides an extension of the recording and reporting processes from Unit 3 and the use of financial and non-financial information in assisting management in the decision-making process. The unit is based on the double entry accounting system and the accrual method of reporting for a single activity trading business using the perpetual inventory recording system. Students investigate the role and importance of budgeting for the business and undertake the practical completion of budgets for cash, profit and financial position. Students interpret accounting information from accounting reports and graphical representations, and analyse the results to suggest strategies to the owner on how to improve the performance of the business.

In Accounting the student’s level of achievement will be determined by school-assessed coursework, and an end-of-year examination. Percentage contributions to the study score in Accounting are as follows:

### BIOLOGY

**Units 1&2 (Yr. 11)**

**How do living things stay alive?**

Unit 1 looks at living things and how they live in their environments. We learn the needs of cells and look at the effects a changing environment has on chances of survival and examine the functional and structural characteristics of organisms. Particular areas studied include the balancing required within a multicellular body and the physiological processes that maintain optimal functioning and the importance of biodiversity in maintain life in an ecosystem.

**How is continuity of life maintained?**

Unit 2 looks at the passing of biological information through generations including cell reproduction as well as stem cell technology in replacing damaged tissue. It also looks at models for the inheritance of different genetic characteristics.

**Units 3 & 4 (Yr. 12)**

**How do cells maintain life?**

Unit 3 looks at the biochemistry of cells in living things and the important factors that impact on them functioning effectively. It then investigates how plants and animals have
special features to help them respond to and survive in different conditions including the invasion by microorganisms.

**How does life change and respond to challenges over time?**
Unit 4 looks at the functioning of DNA in cells, how it controls the way in which organisms develop, and how modern technology has developed a variety of techniques to manipulate it to our benefit. It also investigates the fossil record and theories of evolution to interpret genetic changes in living things throughout the history of the Earth and how humans have impacted on that evolution.

**BUSINESS MANAGEMENT**

Business management examines the ways people at different levels within an organisation manage resources to achieve the objectives of the organisation. In particular it looks at the importance of ‘people skills’ in the successful running of any organisation. It is strongly recommended for students who wish to work in business in any capacity including administration, finance, engineering, marketing, research and development or run their own business. In studying Business Management, students develop knowledge and skills that enhance their confidence and ability to participate effectively both in business and social settings.

**Structure**
The study is made up of four units:
Unit 1: Small business management
Unit 2: Communication and management
Unit 3: Corporate management
Unit 4: Managing people and change

**Units 1 & 2 (Yr 11)**
Small rather than large businesses make up the vast majority of all businesses in the Australian economy. This unit provides students with the opportunity to explore the operations of a small business and its likelihood of success.

Unit 1 examines the importance of small businesses in Australia. The course covers the different types of businesses, starting up a business and basic financial requirements of a business. The major requirement of this unit is for students to establish, operate and evaluate their own small business.

The focus of Unit 2 is the importance of effective communication in achieving business objectives. Students develop knowledge of fundamental aspects of business communication and are introduced to skills related to its effective use in different contexts. Students study and evaluate the different forms of communication within a business. Marketing and public relations are also covered as a form of communication with external stakeholders.
Assessment – Units 1 and 2
Individual school decision on levels of achievement.

Units 3 & 4 (Yr 12)
The focus of Unit 3 is Corporate Management and covers the operations of large-scale organisations. Students examine the context and environments in which management conduct business including the important function of operations management. Students develop an understanding of the complexity and challenges of large organisations and have the opportunity to compare theoretical perspectives with practical applications.

Unit 4 commences with a focus on the human resource management function. It then progresses to the analysis of the management of change. Students learn about key change management processes and strategies and are provided with the opportunity to apply these to a contemporary issue of significance.

Assessment – Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Business Management the student’s level of achievement will be determined by School-assessed Coursework and an end-of-year examination. Percentage contributions to the study score in Business Management are as follows:

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<tr>
<td>School-assessed Coursework</td>
<td>60%</td>
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<tr>
<td>End-of-year examination</td>
<td>40%</td>
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CHEMISTRY
Chemistry is the study of substances, their composition, their effects on one another and our interactions with them. A thematic approach to chemistry has been adopted, and throughout the study the contexts have been provided for the teaching of chemistry. Students will have the opportunity to investigate, explore and solve qualitative and quantitative problems and discuss chemical concepts and issues.

All areas of study involve the design and performance of experiments, including the generation, collection and evaluation of data.

Unit 1 (Yr 11): The Big Ideas of Chemistry
The unit maintains its focus on the structure and function of materials and includes a study of the Periodic Table. The application of surface chemistry and nanotechnology is included. Area of Study 1 - The Periodic Table.

Area of Study 2 – Materials.

Unit 2 (Yr 11): Environmental Chemistry
The unit continues to focus on environmental chemistry with emphasis on green chemistry, desalination processes, and protocols related to greenhouse gases. There is also an emphasis on chemical reactions and processes that help to sustain life.

Area of Study 1 – Water.
Area of Study 2 – The Atmosphere.

***Unit 3 (Yr. 12): Chemical Pathways***  
This unit looks at chemical analysis and the work of an analytical chemist. The techniques and instruments that can be used in this area will be studied. The unit will also study organic chemicals including structure, bonding and properties. Examples of cutting-edge biochemical advances will also be introduced.

***Unit 4 (Yr 12): Chemistry at Work***  
In this unit students will investigate the industrial production of chemicals and the energy changes associated with chemical processes. The use of chemical reactions to produce energy and the use of electricity to produce chemical reactions will be studied. The language and symbols used in chemistry will be learnt.

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**PRODUCT DESIGN & TECHNOLOGY – WOOD, METAL or TEXTILES**

Product design is part of people’s responses to changing needs to improve quality of life by designing and creating artifacts. Product design is enhanced through knowledge of social, technological, economic, historic, ethical, legal, environmental and cultural factors. These factors affect the aesthetics, form and function of products developed in the past and those yet to be developed. Integral to VCE Product Design and Technology are three cross study specifications applicable to Units 1 to 4. These specifications comprise: the Product design process; the Product design factors; and the materials categories.

***Unit 1 (Yr 11): Product re-design and sustainability***  
This unit focuses on the analysis, modification and improvement of a product design with consideration of the materials used and issues of sustainability. Finite resources and the proliferation of waste require sustainable product design thinking. Many products in use today have been redesigned to suit the changing needs and demands of users but with little consideration of their sustainability. Knowledge of material use and suitability for particular products is essential in product design. Additionally, knowledge of the source, origin and processing of materials is central to sustainable practices.

***Unit 2 (Yr 11): Collaborative design***  
In this unit students work in teams to design and develop an item in a product range or contribute to the design, planning and production of a group product. They focus on factors including: human needs and wants; function, purpose and context for product design; aesthetics; materials and sustainability; and the impact of these factors on a design solution. Teamwork encourages communication between students and mirrors professional design practice where designers often work within a multi-disciplinary team.
to develop solutions to design problems. Students also examine the use of ICT to facilitate teams that work collaboratively but are spread across the globe.

**Unit 3 (Yr 12): Applying the Product design process**

In this unit students are engaged in the design and development of a product that meets the needs and expectations of a client and/or an end-user, developed through a design process and influenced by a range of complex factors. These factors include the purpose, function and context of the product; human centered design factors; innovation and creativity; visual, tactile and aesthetic factors; sustainability concerns; economic limitations; legal responsibilities; material characteristics and properties; and technology. Design and product development and manufacture occur in a range of settings. An industrial setting provides a marked contrast to that of a ‘one-off situation’ in a small ‘cottage’ industry or a school setting. Although a product design process may differ in complexity or order, it is central to all of these situations regardless of the scale or context. This unit examines different settings and takes students through the Product design process as they design for others.

**Unit 4 (Yr 12): Product development and Evaluation**

In this unit students learn that evaluations are made at various points of product design, development and production. In the role of designer, students judge the suitability and viability of design ideas and options referring to the design brief and evaluation criteria in collaboration with a client and/or an end-user. Comparisons between similar products help to judge the success of a product in relation to a range of Product design factors. The environmental, economic and social impact of products throughout their life cycle can be analysed and evaluated with reference to the Product design factors.

**FOOD & TECHNOLOGY**

Through this study students develop knowledge of the physical, chemical, sensory and functional properties of food and are able to apply this knowledge when using food in a practical situation. They develop and apply the knowledge and skills to prepare food safely and hygienically. Students use the design process, critical thinking and problem-solving skills to develop food products to suit specific situations or to meet the needs of individual consumers and their lifestyles. In this process, they also develop independent and cooperative learning skills. The study may provide a foundation for pathways to food science and technology, consumer science, home economics, child care and education, community services and aged care, the hospitality and food manufacturing industries, and nutrition and health studies.

The study is made up of four units:

- Unit 1: Food safety and properties of food
- Unit 2: Planning and preparation of food
- Unit 3: Food preparation, processing and food controls
- Unit 4: Food product development and emerging trends
Unit 1 (Yr 11): Food Safety and Properties of Food
In this unit students study safe and hygienic food handling and storage practices to prevent food spoilage and food poisoning, and apply these practices in the preparation of food. They consider food preparation practices suitable for use in a small-scale food operation, such as in the home, a school setting or in a small food business. Students consider the selection and use of a range of tools and equipment suitable for use in food preparation. Students examine the links between classification of foods and their properties, and examine changes in properties of food when different preparation and processing techniques are used. Students apply this knowledge when preparing food. They investigate quality and ethical considerations in food selection. Students use the design process to meet the requirements of design briefs to maximise the qualities of key foods.

Unit 2 (Yr 11): Planning and Preparation of Food
In this unit students investigate the most appropriate tools and equipment to produce optimum results, including the latest developments in food technology. Students research, analyse and apply the most suitable food preparation, processing and cooking techniques to optimise the physical, sensory and chemical properties of food. Students work both independently and as members of a team to research and implement solutions to a design brief. They use the design process to respond to challenges of preparing food safely and hygienically for a range of contexts and consumers, taking into account nutritional considerations, social and cultural influences, and resource access and availability. Students also explore environmental considerations when planning and preparing meals.

Unit 3 (Yr 12): Food Preparation, Processing and Food Controls
In this unit students develop an understanding of food safety in Australia and the relevant national, state and local authorities and their regulations, including the Hazard Analysis and Critical Control Points (HACCP) system. They investigate the causes of food spoilage and food poisoning and apply safe work practices while preparing food. Students demonstrate understanding of key foods, analyse the functions of the natural components of key foods and apply this information in the preparation of foods. They investigate cooking techniques and justify the use of the techniques they select when preparing key foods. Students develop an understanding of the primary and secondary processes that are applied to key foods, including food processing techniques to prevent spoilage. They also preserve food using these techniques. Students devise a design brief from which they develop a detailed design plan. Evaluation criteria are developed from the design brief specifications. In preparing their design plan, students conduct research and incorporate their knowledge about key foods, properties of food, tools, equipment, safety and hygiene, preparation, cooking and preservation techniques. They make decisions related to the specifications of the brief. In developing the design plan, students establish an overall production timeline to complete the set of food items (the product) to meet the requirements of the brief for implementation in Unit 4.

Unit 4 (Yr 12): Food Product Development and Emerging Trends
In this unit students develop individual production plans for the proposed four to six food items and implement the design plan they established in Unit 3. In completing this task, students apply safe and hygienic work practices using a range of preparation and production processes, including some which are complex. They use appropriate tools and equipment and evaluate their planning, processes and product. Students examine food product development, and research and analyse driving forces that have contributed to product development. They investigate issues underpinning the emerging trends in product development, including social pressures, consumer demand, technological developments, and environmental considerations. Students also investigate food packaging, packaging systems and marketing.

**Hospitality (Operations): A possible VET unit in 2015.**

VET in the VCE

HOSPITALITY (OPERATIONS)

VCE VET Units 1–2

The aim of this course is to

- Provide access to a range of potential career paths within the hospitality industry including part-time work while completing tertiary studies
- Provide training and skill development for the achievement of competence in areas such as commercial cookery and food and beverage service

**Areas of study will include:**


A cost will be involved. This cost will include hire of knife kit $30–40, kitchen uniform including leather shoes, black pants and chef jacket.

Some competences will be taught at Terang College and some will be taught at South West TAFE at a time to be negotiated.

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**GEOGRAPHY**

**Unit 1 (Yr 11): Natural Environments**

This unit investigates the geographic characteristics of natural environments and landforms and the natural processes that shape and change the Earth’s surface. The world’s physical environments are composed of four natural systems: atmosphere, biosphere, lithosphere, hydrosphere, which are fundamental to the operation of all interactions within the environment. There are few places in the world where only natural processes operate. Human activities interact with natural processes, each affecting the
other. The nature of change caused by the interaction between natural processes and human activities varies at a range of scales, over space and over time. Students must investigate at least two natural environments in each area of study. The natural environments selected for investigation may be the same in each area of study. Each environment selected for investigation must focus on physical geography at two different scales.

**Unit 2 (Yr 11): Human Environments**
This unit investigates the characteristics of rural and urban environments which are developed by human activities and their interactions with natural environments. Rural environments are those produced by human activities such as farming, forestry, tourism, mining, fishing and rural settlements. Rural and urban environments are dynamic. They can be changed in the long or short term by advances in technology, individual and organisational decisions, as well as by natural and human processes and events. Students must investigate at least two human environments in each area of study. The environments selected for investigation may be the same in each area of study, but one of the environments must be a rural environment and one an urban environment; one must be from Australia and one must be from another country. Each environment selected for investigation must focus on human geography at two different scales.

**Unit 3 (Yr 12): Regional resources**
This unit investigates the characteristics of resources and the concept of region. A resource is anything which occurs naturally or is created by humans provided that people use it to satisfy a need or want. Resources found within regions mean different things to different people over place and time. Regions are areas of various scales that have characteristics and features that distinguish them from other areas according to the elements used to define them. The use and management of resources is dynamic and changes spatially over time in response to the interactions between human activities, natural processes and the legislative processes put into place by humans. Governments and other organisations often use the concept of region for planning purposes when determining allocation of resources and development of policies. The availability and utilisation of water resources influences settlement patterns, infrastructure development and decision making in many Australian regions. Students must investigate a regional resource and a local resource in Australia.

**Unit 4 (Yr 12): Global perspectives**
This unit investigates the geographic characteristics of global phenomena and responses to them. Global phenomena are major natural or human events, processes or activities. Human population studies are significant to understanding the challenges facing our globalised world. Governments, organisations, groups and individuals respond to global phenomena in different ways. Policy developed to deal with a global phenomenon and its effects results in the formation of a global perspective. This unit investigates the distribution patterns of selected global phenomena. Students must investigate two global phenomena in each area of study, one of which must be human population.
HEALTH & HUMAN DEVELOPMENT

The central focus of the Health and Human Development study is to examine the factors that promote wellbeing in individuals, families and communities. The study aims to develop an understanding of the relationship between health and human development.

Units 1&2 (Yr 11)
In Unit one student are introduced to the concepts of health and individual human development. This unit focuses on the health and individual human development of Australia’s youth. For the purposes of this study, ‘youth’ is defined as twelve to eighteen years of age; however, it should be acknowledged that some agencies may use differing age classifications for the stage of youth. Unit two focuses on the health and individual human development for the lifespan stages of prenatal, childhood and adulthood. The prenatal stage is characterised as the most rapid time of growth and physical development during the human lifespan. During this stage the health and development of the embryo/foetus is shaped by a range of determinants, which in turn can have an impact on future health and development.

Units 3 & 4 (Yr 12)
Australians generally enjoy good health and are among the healthiest people in the world. The health status of Australians can be measured in many ways, such as consideration of burden of disease, health adjusted life expectancy, and disability adjusted life years (DALYs), life expectancy, under-five mortality rate, mortality and morbidity rates, incidence and prevalence of disease. Despite Australia’s good health status, there is still potential for improvements. The National Health Priority Areas (NHPAs) initiative provides a national approach that aims to improve health status in the areas that contribute most of the burden of disease in Australia. Regardless of how health is measured, health is not shared equally by all Australians. Different levels of health are experienced by different groups, which can be attributed to the determinants of health, including the physical environment, biological, behavioural and social. Funding for the Australian health system involves a combination of both government and nongovernment sources. Both government and non-government organisations play an important role in the implementation of a range of initiatives designed to promote health in Australia.

Unit 4 takes a global perspective on achieving sustainable improvements in health and human development. In the context of this unit human development is about creating an environment in which people can develop to their full potential and lead productive, creative lives in accord with their needs and interests. It is about expanding people’s choices and enhancing capabilities (the range of things people can be and do), having access to knowledge, health and a decent standard of living, and participating in the life of their community and decisions affecting their lives (adapted from the United Nations Development Programme, 1990). Sustainability ‘implies meeting the needs of the present without compromising the ability of future generations to meet their own needs’ (96th
plenary meeting of the UN, December 1987). The United Nations (UN) human development work is encapsulated in the Millennium Development Goals, where the world’s countries have agreed to a set of measurable goals and targets for combatting poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women. A significant focus of the Millennium Development Goals is reducing the inequalities that result in human poverty and lead to inequalities in health status and human development.

**There are no prerequisites for entry into Units 1, 2 & 3. Students must undertake Unit 3 prior to undertaking Unit 4**

### HISTORY

#### Unit 1 and 2 (Yr 11): 20th Century History

Learn about some of the greatest events and most interesting people of the last century:

- World War 1 and The Anzacs
- Hitler and the Nazis
- Australia in World War 11
- Protest movements of the 20th Century, Women’s Liberation, Civil Rights in America or Gay Liberation, Greenpeace
- Music and Popular Culture as an expression of the times

If there is one VCE subject you could do for the sheer enjoyment of learning about the past – this is it! Students choose the topics they wish to study as a group.

#### Unit 3 and 4 (Yr 12): Revolutions

Revolutions share the common aim of breaking with the past by destroying regimes and societies that endanger who and embarking on a program of political and social transformation. Revolutions have a profound impact on a country in which they occur as well as important international repercussions. During the year students study both the French and Russian revolutions.

### LEGAL STUDIES

#### Unit 1 (Yr 11): Criminal law in action

In this unit students examine the need for law in society. They investigate the key features of criminal law, how it is enforced and adjudicated and possible outcomes and impacts of crime. Students learn about different types of crimes and explore rights and responsibilities under criminal law. Students also consider the role of parliament and subordinate authorities in law-making, as well as the impact of the Victorian Charter of Rights and Responsibilities on law enforcement and adjudication in Victoria. There is
also an investigation into the processes and procedures followed by the courts in hearing and resolving criminal cases; as well as looking at how criminal courts operate and their effectiveness in achieving justice.

**Unit 2 (Yr 11): Issues in Civil Law**
Students examine the rights that are protected by civil law, as well as obligations that laws impose. They investigate different types of civil laws and related cases and issues, and develop an appreciation of the role of civil law in society and how it affects the individual. This unit also focuses on the resolution of civil disputes through judicial determination and alternative methods in courts, tribunals and independent bodies. Students examine the methods used by these bodies and evaluate their effectiveness. Students will focus on cases that have had an impact on the legal system and on the rights of individuals.

**Unit 3 (Yr 12): Law – Making**
In this unit there is a focus on understanding the institutions that determine our laws, and their law-making powers and processes. Students undertake an informed evaluation of the effectiveness of law-making bodies and examine the need for the law to keep up to date with changes in society. Students develop an appreciation of the complex nature of law-making by investigating the key features and operation of parliament, and influences on law-making, with a focus on the role of the individual. There is a focus on the role of the Commonwealth Constitution and its importance within society. Students also focus on the role of the High Court and how it interprets and enforces the Constitution; ensuring that parliaments do not act outside of their areas of power. Students also investigate the nature and importance of courts as law-makers and undertake an evaluation of their effectiveness as law-making bodies. They also investigate the relationships that exist between parliaments and courts.

**Unit 4 (Yr 12): Resolution and Justice**
This unit examines institutions that adjudicate criminal and civil disputes and the methods of dispute resolution that can be used as an alternative to civil litigation. Students investigate the processes and procedures followed in courtrooms and develop an understanding of the adversary system of trial and the jury system. They also look at pre-trial and post-trial procedures that operate in the Victorian legal system. Using the elements of an effective legal system, students consider which court processes and procedures contribute to the effective operation of the legal system. They also consider reforms or changes that could further improve its effective operation.

**LOTE – FRENCH**

**LOTE – French 1&2 (Yr 11)**
The study of French focuses on further language development in conjunction with increased awareness of cultural aspects of the French people, including social and environmental issues.
Units 1&2
Across units 1 and 2 students’ language learning will enable them to establish and maintain a spoken and written exchange related to personal areas of experience.

Review past and present tense of verbs and introduce the future and conditional tenses. Use a range of questions and answers. Communicate in a range of text types, such as by letter, fax, e-mail, telephone.
- Vary both written and spoken language according to audience.
- Read a variety of French materials including magazines, books and journals.
- Write personal and imaginative essays.
- Explore issues concerning France, such as cultural diversity, youth and environment. Assessment will be through a variety of reading comprehension exercises, writing, speaking and listening tasks within class culminating in an end-of-year oral and written examination.

LOTE – French 3&4 (Yr 12)
The study of French focuses on developing written and spoken language in conjunction with increased knowledge of France during World War 2.

Units 3&4
Across units 3 and 4 students learning French will develop the skills they attained in units 1 & 2 to enable them to analyse texts, express ideas and exchange opinions in both written and oral work. They will also undertake a detailed study involving film and spoken and written texts to do with France during the Second World War. The curriculum will follow the Distance Education units and classes will run with both a classroom teacher and Distance Education assistance.
- Practise spoken French on a regular basis
- Write in and analyse a variety of written forms, informal and formal, such as, letters, prose, newspaper articles and excerpts from novels
- Watch and report on a French film as part on the detailed study
- Read and write on a selection of French materials as part of the Detailed Study
- Write personal and imaginative essays.

Assessment will be through a variety of reading comprehension exercises, writing, speaking and listening tasks within class culminating in an end of year external oral and written examination

MATHEMATICS

The range of options in mathematics has been designed to provide access to worthwhile and challenging mathematical learning in a way that takes into account the wide range of needs of the student. To decide which units of mathematics to undertake at VCE students require a good understanding of their own capabilities and also some idea of the direction they intend to take after completing their school career.
It is strongly advised that all students’ complete mathematics at year 11 and 12 as this proves to be a great asset and often a requirement if they intend on leaving school after year 11, take up an apprenticeship/traineeship or study further at TAFE or University.

**Sequences: possible pathways for Maths are outlined below.**

**Year 10**
- General Maths
- Maths Methods

**Year 11**
- Foundation Maths
  - Unit 1 & 2
- General Maths
  - Unit 1 & 2
- Maths Methods
  - Unit 1 & 2
- Specialist Maths
  - Unit 1 & 2

**Year 12**
- General Maths
  - Units 1 & 2
- Further Maths
  - Unit 3 & 4
- Maths Methods
  - Unit 3 & 4
- Specialist Maths
  - Unit 3 & 4

**NOTES ON SELECTION**

- Students may complete Further Maths in conjunction with Maths Methods (1 & 2)
- Students may complete Further Maths in conjunction with Maths Methods (3 & 4)
- Students may complete Maths Methods (3 & 4), Further Maths (3 & 4) and Specialist Maths (3 & 4) all in year 12
- Students studying Specialist Maths must have studied Maths Methods (3 & 4) or study the two subjects’ simultaneously in year 12.
- With consultation with relevant staff students have the option of studying Specialist Maths in year 10 through the Distance Education program.

*All students should consult a senior mathematics teacher to ensure they make an informed decision about the mathematics they choose to study in VCE / VCAL.*
Units 1 & 2 (Yr 11): Foundation Mathematics
Foundation Mathematics provides for the continuing mathematical development of students entering VCE and who do not necessarily intend to undertake Unit 3 and 4 studies in VCE Mathematics in the following year. This course is designed to complement General Mathematics and Mathematical Methods. Students completing this course would need to undertake additional targeted mathematical study in order to attempt Further Mathematics Units 3 and 4.

In Foundation Mathematics there is a strong emphasis on the use of mathematics in practical contexts encountered in everyday life in the community, at work and at study. The areas of study for Units 1 and 2 of Foundation Mathematics are ‘Space, shape and design’, ‘Patterns and number’, ‘Data’ and ‘Measurement’.

All four areas of study are completed over the two units. The content is developed using contexts present in students’ other studies, work and personal or other familiar situations.

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

Students undertaking VCAL studies are encouraged to enroll in Foundation Mathematics.

Unit 1 & 2 (Yr 11): General Mathematics

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

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations and graphs with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation. The use of technology for learning mathematics for numerical, graphical, geometric, symbolic and statistical functionality, for working mathematically, and in related assessment, is incorporated throughout each unit as applicable.
Unit 1 & 2 (Yr 11): Mathematical Methods (CAS)

Mathematical Methods Units 1 and 2 provide an introductory study of simple elementary functions of a single real variable, algebra, calculus, probability and statistics and their applications in a variety of practical and theoretical contexts. They are designed as preparation for Mathematical Methods Units 3 and 4.

The focus of Unit 1 is the study of simple algebraic functions, and the areas of study are ‘Functions and graphs’, ‘Algebra’, ‘Calculus’ and ‘Probability and statistics’. In Unit 2 students focus on the study of simple transcendental functions and the calculus of simple algebraic functions. The areas of study are ‘Functions and graphs’, ‘Algebra’, ‘Calculus’, and ‘Probability and statistics’.

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

Unit 1 & 2 (Yr. 11); Specialist Maths

Specialist Mathematics Units 1 and 2 provide a course of study for students who wish to undertake an in-depth study of mathematics, with an emphasis on concepts, skills and processes related to mathematical structure, modelling, problem solving and reasoning. This study has a focus on interest in the discipline of mathematics in its own right and investigation of a broad range of applications, as well as development of a sound background for further studies in mathematics and mathematics related fields.

Mathematical Methods Units 1 and 2 and Specialist Mathematics Units 1 and 2, taken in conjunction, provide a comprehensive preparation for Specialist Mathematics Units 3 and 4. The areas of study for Units 1 and 2 of Specialist Mathematics are ‘Algebra and structure’, ‘Arithmetic and number’, ‘Discrete mathematics’, ‘Geometry, measurement and trigonometry’, ‘Graphs of linear and non-linear relations’ and ‘Statistics’.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational, real and complex arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations and graphs with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation the use of technology for learning mathematics for numerical, graphical, geometric, symbolic and statistical functionality, for working mathematically, and in related assessment, is incorporated throughout each unit as applicable.
Specialist Mathematics is only offered through Distance Education and requires significant skills in time management and self-regulation. Students wishing to undertake Specialist Mathematics need discuss this option further with their senior mathematics teachers and VCE coordinator.

Unit 3 & 4 (Year 12): Further Mathematics

Further Mathematics consists of two areas of study, a compulsory Core area of study to be completed in Unit 3 and an Applications area of study to be completed in Unit 4. The Core comprises ‘Data analyses’ and ‘Recursion and financial modelling’. The Applications comprises two modules to be completed in their entirety, from a selection of four possible modules: ‘Matrices’, ‘Networks and decision mathematics’, ‘Geometry and measurement’ and ‘Graphs and relations’. ‘Data analysis’ comprises 40 per cent of the content to be covered, ‘Recursion and financial modelling’ comprises 20 per cent of the content to be covered, and each selected module comprises 20 per cent of the content to be covered.

Assumed knowledge and skills for the Core are contained in the General Mathematics Units 1 and 2 topics: ‘Computation and practical arithmetic’, ‘Investigating and comparing data distributions’, ‘Investigating relationships between two numerical variables’, ‘Linear graphs and modelling’, ‘linear relations and equations’, and ‘Number patterns and recursion’. For each module there are related topics in General Mathematics Units 1 and 2.

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

Year 11 students who are strong in mathematics will be encouraged to undertake Further Mathematics alongside Year 11 Mathematics Methods. This may also be in the best interest of students wishing to study Specialist Mathematics in year 12.

Unit 3 & 4 (Year 12): Mathematical Methods (CAS)

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

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

In order to complete Mathematical Methods units 3 and 4, students must have successfully completed units 1 and 2.

Unit 3 & 4 (Year 12): Specialist Mathematics


Specialist Mathematics Units 3 and 4 assumes familiarity with the key knowledge and skills from Mathematical Methods Units 1 and 2, the key knowledge and skills from Specialist Mathematics Units 1 and 2 and concurrent or previous study of Mathematical Methods Units 3 and 4. Together these cover the assumed knowledge and skills for Specialist Mathematics, which is drawn on as applicable.

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

Students must be studying (or have previously studied) Mathematical Methods units 3 and 4 in order to complete Specialist Mathematics units 3 and 4.
MUSIC PERFORMANCE

VCE Music Performance: Solo

It is strongly recommended that students have the equivalent of AMEB or ANZCA 5th Grade standard on their solo instrument.

Unit 1 (Yr11): Music Performance
This unit focuses on building performance and musicianship skills. Students present performances of selected group and solo music works using one or more instruments. They study the work of other performers and explore strategies to optimise their own approach to performance. They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and practise technical work to address these challenges. They also develop skills in performing previously unseen music. Students study aural, theory and analysis concepts to develop their musicianship skills and apply this knowledge when preparing and presenting performances.

Unit 2 (Yr 11): Music Performance
In this unit students build their performance and musicianship skills. They present performances of selected group and solo music works using one or more instruments. Students study the work of other performers through listening and analysis and use specific strategies to optimise their own approach to performance. They also study strategies for developing technical and expressive performance skills. They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and practise related technical work. They develop skills in performing previously unseen music and study specific concepts to build their musicianship knowledge and skills. Students also devise an original composition or improvisation.

Unit 3 (Yr12): Music Performance
This unit prepares students to present convincing performances of group and solo works. In this unit students select a program of group and solo works representing a range of styles and diversity of character for performance. They develop instrumental techniques that enable them to interpret the works and expressively shape their performances. They also develop an understanding of performance conventions they can use to enhance their performances. Students develop skills in unprepared performance, aural perception and comprehension, transcription, music theory and analysis.

Unit 4 (Yr 12): Music Performance
In this unit students refine their ability to present convincing performances of group and solo works. Students select group and solo works that complement works selected in Unit 3. They further develop and refine instrumental and performance techniques that enable them to expressively shape their performance and communicate their understanding of the music style of each work. Students continue to develop skills in aural perception and comprehension, transcription, theory, analysis and unprepared performance. Students continue to study ways in which Australian performers interpret works that have been created since 1910 by Australian composers/songwriters.
OUTDOOR & ENVIRONMENTAL STUDIES

VCE Outdoor and Environmental Studies is concerned with the ways humans interact with and relate to outdoor environments. ‘Outdoor environments’ include environments that have minimum influence from humans, as well as those environments that have been subject to different levels of human intervention. The study enables students to make critically informed comment on questions of environmental sustainability and to understand the importance of environmental health, particularly in local contexts.

Unit 1 (Yr 11): Exploring outdoor experiences
This unit examines some of the ways in which humans understand and relate to nature through experiences of outdoor environments. The focus is on individuals and their personal responses to and experiences of outdoor environments. Students are provided with the opportunity to explore the many ways in which nature is understood and perceived. Students develop a clear understanding of the range of motivations for interacting with outdoor environments and the factors that affect an individual’s access to outdoor experiences and relationships with outdoor environments. Through outdoor experiences, students develop practical skills and knowledge to help them live sustainably in outdoor environments.

Unit 2 (Yr 11): Discovering outdoor environments
This unit focuses on the characteristics of outdoor environments and different ways of understanding them, as well as the human impacts on outdoor environments. In this unit students study nature’s impact on humans, as well as the ecological, social and economic implications of human impact on outdoor environments. Students develop a clear understanding of the impact of technologies and changing human lifestyles on outdoor environments. Students examine a number of case studies of specific outdoor environments, including areas where there is evidence of human intervention. They develop the practical skills required to minimise human impact on outdoor environments.

Unit 3 (Yr. 12): Relationships with outdoor environments
The focus of this unit is the ecological, historical and social contexts of relationships between humans and outdoor environments in Australia. Case studies of impacts on outdoor environments are examined in the context of the changing nature of human relationships with outdoor environments in Australia. Students consider a number of factors that influence contemporary relationships with outdoor environments. They also examine the dynamic nature of relationships between humans and their environment. Students are involved in one or more experiences in outdoor environments, including in areas where there is evidence of human interaction. Through these practical experiences students are provided with the basis for comparison and reflection, and opportunities to develop theoretical knowledge and skills about specific natural environments.

Unit 4 (Yr 12): Sustainable outdoor relationships
In this unit students explore the sustainable use and management of outdoor environments. They examine the contemporary state of environments in Australia,
consider the importance of healthy outdoor environments, and examine the issues in relation to the capacity of outdoor environments to support the future needs of the Australian population. Students examine the importance of developing a balance between human needs and the conservation of outdoor environments and consider the skills needed to be environmentally responsible citizens. They investigate current agreements and environmental legislation, as well as management strategies and policies for achieving and maintaining healthy and sustainable environments in contemporary Australian society. Students engage in one or more related experiences in outdoor environments.

**PHYSICAL EDUCATION**

**Unit 1 (Yr 11): Bodies in motion**
In this unit students explore how the body systems work together to produce movement and analyses this motion using biomechanical principles. Through practical activities students explore the relationships between the body systems and physical activity. They are introduced to the aerobic and anaerobic pathways utilised to provide the muscles with the energy required for movement and the basic characteristics of each pathway. Students apply biomechanical principles to improve and refine movement. They use practical activities to demonstrate biomechanical principles and how the correct application of biomechanics can lead to improved performance in sport and physical activity.

**Unit 2 (Yr 11): Sports coaching and physically active lifestyles**
This unit explores a range of coaching practices and their contribution to effective coaching and improved performance of an athlete. The way in which a coach influences an athlete can have a significant effect on performance. The approach a coach uses, the methods applied and the skills used will **have an impact on the degree of improvement experienced by an athlete**. By studying various approaches and applying this knowledge to a practical session, students gain a practical insight into coaching. Students are introduced to physical activity and the role it plays in the health and wellbeing of the population. Through a series of practical activities, students gain an appreciation of the level of physical activity required for health benefits and investigate how participation in physical activity varies across the lifespan. They explore a range of factors that influence participation in regular physical activity, and collect data to identify perceived barriers and the ways in which these barriers can be overcome.

**Unit 3 (Yr 12): Physical activity participation and physiological performance**
This unit introduces students to an understanding of physical activity and sedentary behaviour from a participatory and physiological perspective. Students apply various methods to assess physical activity and sedentary levels, and analyse the data in relation to adherence to the Australia’s Physical Activity and Sedentary behavior Guidelines. Students study and apply the social-ecological model to identify a range of Australian strategies that are effective in promoting participation in some form of regular activity.
Students investigate the contribution of energy systems to performance in physical activity. In particular, they investigate the characteristics of each system and the interplay of the systems during physical activity. Students explore the multi-factorial causes of fatigue and consider different strategies used to delay and manage fatigue and to promote recovery.

**Unit 4 (Yr 12): Enhancing performance**

Improvements in performance, in particular fitness, depend on the ability of the individual or coach to gain, apply and evaluate knowledge and understanding of training. Students undertake an activity analysis. Using the results of the analysis, they then investigate the required fitness components and participate in a training program designed to improve or maintain selected components. Athletes and coaches aim to continually improve and use nutritional, physiological and psychological strategies to gain advantage over the competition. Students learn to critically evaluate different techniques and practices that can be used to enhance performance, and look at the rationale for the banning or inclusion of various practices from sporting competition.

**PHYSICS**

Physics seeks to understand and explain the physical world. It examines models and ideas used to make sense of the world and which are sometimes challenged as new knowledge develops. By looking at the way matter and energy interact through observations, measurements and experiments, physicists gain a better understanding of the underlying laws of nature.

VCE Physics provides students with opportunities to explore questions related to the natural and constructed world. The study provides a contextual approach to exploring selected areas within the discipline including atomic physics, electricity, fields, mechanics, thermodynamics, quantum physics and waves. Students also have options for study related to astrophysics, bioelectricity, biomechanics, electronics, flight, medical physics, nuclear energy, nuclear physics, optics, and sound and sports science. Students examine classical and contemporary research, models and theories to understand how knowledge in physics has evolved, and continues to evolve, in response to new evidence and discoveries. An understanding of the complexities and diversity of physics leads students to appreciate the interconnectedness of the content areas both within physics, and across physics and the other sciences.

**Unit 1 (Yr 11)**

Ideas in physics are dynamic. As physicists explore concepts, theories evolve. Often this requires the detection, description and explanation of things that cannot be seen. In this unit students explore how physics explains phenomena, at various scales, which are not always visible to the unaided human eye. They examine some of the fundamental ideas and models used by physicists in an attempt to understand and explain the world.
Students consider thermal concepts by investigating heat, probe common analogies used to explain electricity and consider the origins and formation of matter.

Students use thermodynamic principles to explain phenomena related to changes in thermal energy. They apply thermal laws when investigating energy transfers within and between systems, and assess the impact of human use of energy on the environment.

Students examine the motion of electrons and explain how it can be manipulated and utilised. They explore current scientifically accepted theories that explain how matter and energy have changed since the origins of the Universe.

Unit 2 (Yr 11)
Modelling is a useful tool in developing concepts that explain physical phenomena that cannot be directly observed. In this area of study students develop conceptual models to analyze electrical phenomena and undertake practical investigations of circuit components. Concepts of electrical safety are developed through the study of safety mechanisms and the effect of current on humans. Students apply and critically assess mathematical models during experimental investigations of DC circuits.

Unit 3 (Yr 12)
In this unit students explore the importance of energy in explaining and describing the physical world. They examine the production of electricity and its delivery to homes. Students consider the field model as a construct that has enabled an understanding of why objects move when they are not apparently in contact with other objects. Applications of concepts related to fields include the transmission of electricity over large distances and the design and operation of particle accelerators. They explore the interactions, effects and applications of gravitational, electric and magnetic fields. Students use Newton’s laws to investigate motion in one and two dimensions, and are introduced to Einstein’s theories to explain the motion of very fast objects. They consider how developing technologies can challenge existing explanations of the physical world, requiring a review of conceptual models and theories. Students design and undertake investigations involving at least two continuous independent variables.

Unit 4 (Yr 12)
A complex interplay exists between theory and experiment in generating models to explain natural phenomena including light. Wave theory has classically been used to explain phenomena related to light; however, continued exploration of light and matter has revealed the particle-like properties of light. On very small scales, light and matter – which initially seem to be quite different – have been observed as having similar properties.

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

**PSYCHOLOGY**

Psychology is the scientific study of mental processes and behavior in humans. Biological, behavioral, cognitive and socio-cultural perspectives inform the way psychologists approach their research into the human condition.

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

The Accreditation period for the revised study design for Units 1 and 2 begins in 2016. Units 3 and 4 in 2016 are the current study design and the revised study design begins in 2017. For this handbook, the outline for psychology reflects what is offered in 2016.

Unit 1: **How are behavioural and mental processes shaped?**

In this unit students investigate the structure and functioning of the human brain and the role it plays in the overall functioning of the human nervous system. Students explore brain plasticity and the influence that brain damage may have on a person’s psychological functioning. They consider the complex nature of psychological development, including situations where psychological development may not occur as expected.

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

A person’s thoughts, feelings and behaviors are influenced by a variety of biological, psychological and social factors. In this unit students investigate how perception of stimuli enables a person to interact with the world around them and how their perception of stimuli can be distorted. They evaluate the role social cognition plays in a person’s attitudes, perception of themselves and relationships with others. Students explore a variety of factors and contexts that can influence the behavior of an individual and groups.

Please note the current study design for Units 3 and 4 outlined below is for 2016 only.

Unit 3: **The conscious self**

This unit focuses on the study of the relationship between the brain and the mind through examining the basis of consciousness, behaviour, cognition and memory.

Advances in brain research methods have opened new ways to understanding the relationship between mind, brain and behaviour. Students study the structure and functioning of the human
brain and nervous system, and explore the nature of consciousness and altered states of consciousness including sleep.

The brain continually receives and processes vast amounts of information from its internal and external environment. Memory involves the selective retention and retrieval of this information and it plays an important role in determining behaviour. Students consider the function of the nervous system in memory and investigate the ways in which information is processed, stored and utilised. They apply different theories of memory and forgetting to their everyday learning experiences.

Students analyse research methodologies associated with classic and contemporary theories, studies and models, consider ethical issues associated with the conduct of research and the use of the findings, and apply appropriate research methods when undertaking their own investigations. The specific research methodologies and ethical principles considered in this unit and in Unit 4 are described in detail in the introduction to Unit 3 in the study design.

**Unit 4: Brain, behaviour and experience**

This unit focuses on the interrelationship between learning, the brain and its response to experiences, and behaviour. The overall quality of functioning of the brain depends on experience, and its plasticity means that different kinds of experience change and configure the brain in different ways. Students investigate learning as a mental process that leads to the acquisition of knowledge, development of new capacities and changed behaviours. Understanding the mechanisms of learning, the cognitive processes that affect readiness for learning and how people learn informs both personal and social issues.

Students build on their conceptual understanding of learning to consider it as one of several important facets involved in a biopsychosocial approach to the analysis of mental health and illness. They consider different concepts of normality, and learn to differentiate between normal responses such as stress to external stimuli, and mental disorders. Students use a biopsychosocial framework – a conceptual model which includes psychological and social factors in addition to biological factors in understanding a person’s mental state – to explore the nature of stress and a selected mental disorder. The intent of the study is not that of diagnosis and treatment but to explore causes of mental illness, avenues of assistance and factors that promote mental wellbeing. Students analyse research methodologies associated with classic and contemporary theories, studies and models, consider ethical issues associated with the conduct of research and the use of findings, and apply appropriate research methods when undertaking their own investigations.

**STUDIO ARTS**

**Unit 1 (Yr 11): Artistic Inspiration and Techniques**

This unit focuses on using sources of inspiration and individual ideas as the basis for developing artworks and exploring a wide range of materials and techniques as tools for communicating ideas, observations and experiences through artmaking. Students also explore and research the ways in which artists from different times and cultures have interpreted and expressed ideas, sourced inspiration and used materials and techniques in the production of artworks.
Unit 2 (Yr 11): Design Exploration and Concepts
This unit focuses on students establishing and using a design process to produce artworks. The design process includes the formulation and use of an individual approach to locating sources of inspiration, experimentation with materials and techniques, and the development of aesthetic qualities, directions and solutions prior to the production of artworks. Students also develop skills in the visual analysis of artworks. Artworks made by artists from different times and cultures are analysed to understand the artists’ ideas and how they have created aesthetic qualities and identifiable styles.

Unit 3 (Yr 12): Studio Production and Professional Art Practices
This unit focuses on the implementation of an individual design process leading to the production of a range of potential directions and solutions. Students develop and use an exploration proposal to define an area of creative exploration. They plan and apply a design process to explore and develop their individual ideas. Analysis of these explorations and the development of the potential directions is an intrinsic part of the design process to support the making of finished artworks in Unit 4.

The study of artists and their work practices and processes may provide inspiration for students’ own approaches to artmaking. Students investigate and analyse the response of artists to a wide range of stimuli, and examine their use of materials and techniques. They explore professional art practices of artists in relation to particular artworks and art form/s and identify the development of styles in artworks. Throughout their study of art processes, students also consider the issues that may arise from the use of other artists’ work in the making of new artworks. Students are expected to visit at least two different exhibition spaces in the current year study.

Unit 4 (Yr 12): Studio Production and Art Industry Contexts
This unit focuses on the production of a cohesive folio of finished artworks. To support the creation of the folio, students present visual and written documentation explaining how selected potential directions generated in Unit 3 were used to produce the cohesive folio of finished artworks. These artworks should reflect the skilful application of materials and techniques, and the resolution of ideas and aesthetic qualities.

This unit also investigates aspects of artists’ involvement in the art industry, focusing on a variety of exhibition spaces and the methods and considerations involved in the preparation, presentation and conservation of artworks. Students examine a range of environments for the presentation of artworks exhibited in contemporary settings.

VISUAL COMMUNICATION AND DESIGN (GRAPHICS)

GRAPHICS is the visual language of presenting information, concepts and ideas. It involves the use and manipulation of images to carry a message to a selected audience. Career prospects in graphics are diverse. See the list below. The visual communication production process is an important aspect of the course and the function of design in everyday communication is studied and put into practice. The use of a variety of drawing techniques (including computer-aided drawing), systems and graphic are used.
In each unit a folio of work is produced that covers the main areas of graphic communication, with a different emphasis on each folio.

**Unit 1 (Yr 11):** Emphasises technical and freehand drawing from observation.

**Unit 2 (Yr 11):** Covers the development of practical skills through the generation and manipulation of images.

**Unit 3 (Yr 12):** Is the application of the visual communication production process to satisfy specific needs. Professional practice is studied and examples of existing communications are analysed.

**Unit 4 (Yr 12):** Is to prepare and work to a design brief and produce two final presentations based on that brief.

The use of computers in Graphics at VCE is compulsory.

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<th>Careers that are open to <strong>GRAPHICS</strong> students include –</th>
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Graphics can also be of assistance in –

| Architecture, Architectural Engineering, Drafting, Engineering, Public Relations, Hospitality. |