This document is designed to be an introductory guide to the VCE years. Additional information can be found on the Internet at www.vtac.edu.au and www.vcaa.edu.au. The VTAC website has guides such as ‘Where to now?’, while the VCAA website has detailed subject descriptions of each VCE subject, along with a wealth of other information relating to the VCE.

Students should also be investigating careers at websites such as www.myfuture.edu.au

It is very important that students discuss their options with their parents, teachers, house mentors, Careers Co-ordinator (Mr Croucher), VCE Co-ordinator (Mrs Good), VASS Co-ordinator (Mr Bell) and Principal (Mr Good). We look forward to assisting in whatever way we can to help plan your child’s pathway from secondary education to a career!

Mortlake College: 55992204

Website: www.mortlakep12.vic.edu.au
INTRODUCTION TO THE VCE

The units of study offered to students in Years 11 and 12 are fully in line with the VCE course offered at all schools throughout Victoria. All studies are broken down into units. A unit of study will occupy one semester (or about sixteen weeks) of a school year.

English is the only compulsory subject and one unit must be taken each semester.

Within the VCE there are certain requirements regarding the types of units selected. Briefly, the requirements over the two years are that students must include:

- At least 3 units of English

More information about these requirements will be found in “Where to now?” that is published by the Victorian Curriculum and Assessment Authority of Studies (VCAA) and distributed to Year 9 and 10 students at the start of Term 3 each year.

Year 11 Subjects: Units 1 and 2
Year 12 Subjects: Units 3 and 4 (Must be done as a sequence)

Parents and students should read carefully the information given about any unit 3 & 4 requirements and the general benefits of that particular subject. They should then make their choice according to student interests, abilities and/or requirements for future studies or employment.

To be awarded the VCE, students must satisfactorily complete:

- At least 16 units.

These units must include:

- At least 3 units from the English Group
- At least three sequences of Units 3 & 4 subjects other than English.

It is recommended that current Year 10 students plan their intended full two-year course at this stage. This will not mean that changes will not be possible to a planned course. Changes will be possible at the start of each semester over the two years, however each course must fit the VCAA guidelines.

The school’s timetable will be constructed to allow access to Unit 3/4 subjects by Year 11 students, and access to Unit 1/2 subjects by Year 10 students.

Students in Year 11 will study the equivalent of 6 units during each semester. Because Unit 3 & 4 studies also involve "School Assessed Coursework", students in Year 12 will study the equivalent of 5 units during each semester.

Students considering tertiary education may limit their choices by not doing Mathematics at VCE level. The VCE Mathematics units enable all students to select mathematics relevant to their interests and abilities.

In addition to the subjects actually taught at Mortlake, it may also be possible to study subjects via teleconferencing with other schools.

All students (with parents if they wish) will be counseled before final selection of units by students. We must stress, however, that the final choice of subjects will depend on student demand for units, as well as time-tabling considerations and staff availability for 2014.
VCE ASSESSMENT

There are two ways in which the VCE units will be assessed:

- By satisfactory completion of a unit in line with the outcomes for each subject.
- By levels of performance in each unit.

1. Satisfactory completion of a unit

"S" or "N" will be awarded for each unit depending on whether students satisfactorily complete all the outcomes for that unit.

To be awarded the VCE, students must satisfactorily complete the outcomes for at least 16 units according to the requirements regarding study areas set out on the previous page. Completion of each unit of study will be reported on the statement of results by VCAA (Victorian Curriculum and Assessment Authority) as S (Satisfactory) or N (Not Satisfactory).

Therefore the outcomes are very important. Students must satisfactorily complete all the outcomes in a unit. Failure to complete even one outcome means a student will not be deemed to have satisfactorily completed the unit.

If, for any valid reason, a student is unable to complete an outcome by the date set, he or she may apply (in writing) to the VCE Coordinator for an extension of time, provided that the application is submitted one week before the due date. (See Redemption policy.)

NB: Dates for completion of work are set by the school, in compliance with VCAA regulations, and are binding.

2. Level of performance

Gaining an "S" will not tell students or parents how well students have completed the unit.

Therefore students will also receive a detailed descriptive assessment of each outcome and general comments about their performance overall via reports at the end of each semester. Such comments will enable students to assess their ability to continue with that study.
Pathways for VCE and VCAL Students

VCE = Victorian Certificate of Education (2 year certificate)
VCAL = Victorian Certificate of Applied Learning (1 year certificate)

Year 10 Student: Year 10 Studies
Optional: VCE Studies/VET/SBA/VCAL

Year 11 Student VCE
Mostly Unit 1/2 Studies
One or two Unit 3/4 Studies
Optional: VET
Optional: SBA

Year 11 Student VCAL Intermediate Level
Some VCAL Units 1/2, some VCE Units 1/2, VET and/or SBA

Year 11 Student VCAL Foundation Level
Some VCAL Units 1/2
Some VCE Units 1/2

Year 11 Student VCE
Mostly Unit 1/2 Studies
One or two Unit 3/4 Studies
Optional: VET
Optional: SBA

Year 12 Student VCE
Mostly Unit 3/4 Studies
Optional: VET/SBA

Year 12 Student VCAL Senior Level
Some VCAL Units 1/2
Some VCE Units 3/4
Some VCE Units 1/2

Year 12 Student VCAL Intermediate Level
Some VCAL Units 1/2
Some VCE Units 1/2
VET and/or SBA

Year 12 Student VCAL
Senior Level
Some VCAL Units 1/2
Some VCE Units 3/4
Some VCE Units 1/2

Year 12 Student VCAL
Senior Level
Some VCAL Units 1/2
Some VCE Units 3/4
Some VCE Units 1/2

Leave School
University
TAFE
Apprenticeship

Leave School
TAFE
Apprenticeship

Note: A VCAL Senior Level Student can go onto University provided that they do enough VCE Unit 3/4 subjects to receive an ENTER score.

Denotes transfer between the two certificates
**VOCA TIONAL EDUCATION AND TRAINING (VET) CERTIFICATES and SCHOOL BASED APPRENTICESHIPS (SBA)**

Not all students intend on going on to universities and other tertiary colleges. Some students aim to pursue a career in areas such as automotive, retail, hospitality, agriculture, office and clerical administration, etc.

To cater for these students, both the VCE and VCAL Certificates offer arrangements that allow students to complete Vocational Education and Training (VET) qualification within a two year VCE program. They allow the student to complete a School Based Apprenticeship (SBA) or VET Certificate that also count towards both the VCE and VCAL Certificate. The end result is that students not only get their VCE or VCAL Certificate at the end of Year 12, they also receive a VET Certificate.

**The advantages of doing a VET Certificate or SBA Certificate:**

1. Students who have a VET Certificate or School Based Apprenticeship Certificate may be more attractive to potential employers. This is because students have an Industry Recognised Certificate. Students have to demonstrate competency in a range of tasks specified by the industry. As part of their certificate, students also have to undertake work experience in the area of their certificate. These two factors can help students gain employment.

2. Students who have a VET Certificate or School Based Apprenticeship Certificate can reduce the amount of time that they have to spend at TAFE (Technical and Further Education) Colleges if they happen to gain a full-time apprenticeship or trainee-ship. This is because they have already completed some of the TAFE modules of study as part of their VET or SBA certificate.

3. Students who cannot get all of their chosen VCE subjects at Mortlake College may find doing a VET Certificate or SBA a more attractive proposition.

**What is the difference between a School Based Apprenticeship and VET?**

**School Based Apprenticeships (SBA)**

- Students sign a training agreement and are paid a wage.
- Usually involves working one school day a week. This means students are expected to catch up on any school work they miss out on the day they are at work.
- Usually takes two years to complete but it can be done in more or less time.
- Students who complete a SBA usually gain between 2 or 4 units of VCE/VCAL credit and it usually counts towards their ATAR score.
- Most of the training takes place in the workplace. However some training may take place at a TAFE College which can attract a charge.
- The most difficult part of a SBA is finding an employer. Mortlake College cannot guarantee to find you an employer. All we can do is get help from professionals such as Westvic and Western District Employment Access (WDEA) to try and help you get an employer. If the student can find their own employer, then a SBA is almost guaranteed. You can be employed by your immediate family. Students must be prepared to write resume, door-knock or send letters to try and find an employer.
- Students need to organise their own transport to and from their work placement.
- There are government subsidies available for the student to cover training fees, uniform and tools.
- There are also very attractive government subsidies for an employer to take on a student as a school based apprentice.

We can organize a representative from Westvic Group Training or another Apprentice Centre to speak to any student or parent who wishes to know more about School Based Apprenticeships.
VET (Vocational Education and Training) Certificates

- Students are not paid a training wage.
- Usually involve attending TAFE one school day a week (usually Thursday afternoon). This means students have to catch up on any schoolwork they miss out on the day they are at work. Some VET courses may require students to attend classes during the school holidays.
- Usually takes two years to complete but it can be done in more or less time.
- Students who complete a VET certificate gain either 2 or 4 units of VCE/VCAL credit depending on the length of the course and it usually counts towards their ATAR score.
- There is no need to find an employer as the program is usually conducted entirely at a TAFE institution. However, relevant work experience is highly recommended to match the VET Certificate.
- There is no tuition charge for any VET program conducted at Mortlake College (Equine Studies) or at South West TAFE. A VET Certificate at any other training organisation may incur a charge.
- Students may have to purchase manuals, special clothing or tools as part of their training. The college may be prepared to purchase the tools and loan the equipment to any student if there is a genuine financial hardship involved.
- Transport to and from South West TAFE on Thursday should not be considered a barrier to students undertaking a VET Certificate. In 2014, Mortlake College is considering organising transport for students wishing to attend TAFE. The means of transport will be determined once we have established how many students are genuinely interested in attending TAFE. Any transport organised by Mortlake College will incur a charge to the student.
- The cost to the school to send a student to TAFE is quite considerable and TAFE is an adult education environment. Therefore, we only want students to attend TAFE if they are prepared to behave as adults and stick it out for the entire year.

Parents wanting to know more about VET Courses should contact Mr. Croucher.
PATHWAY PLANNING

CHECKLIST:

1) CAREER RESEARCH
   - Use time during House Meetings to talk to mentors and classmates about careers you might be interested in
   - See Mr Croucher (Careers Co-ordinator) to see if he has any information on career areas that are of interest to you
   - Look at relevant websites such as www.myfuture.edu.au
   - Collect course handbooks and pamphlets
   - Talk to people who work in areas that might be of interest, especially family and friends
   - Look at www.vtac.edu.au for courses and prerequisites
   - Look at the Student Public folder for resources placed there by Mr Bell relevant to courses and careers
   - Attend University and TAFE Open Days

2) Attend the VCE Information Evening which will immediately follow Parent/Teacher Interviews in Term 3. Bring along this booklet with the Course Planning Sheet filled out.

3) Submit the Subject Selection Sheet for 2014 in the week following Parent/Teacher Interviews, having discussed your final selection with both parents and teachers.
<table>
<thead>
<tr>
<th>KEY LEARNING AREAS</th>
<th>SUBJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGLISH</td>
<td>ENGLISH</td>
</tr>
<tr>
<td></td>
<td>LITERATURE</td>
</tr>
<tr>
<td>MATHEMATICS</td>
<td>GENERAL MATHEMATICS (UNITS 1 AND 2)</td>
</tr>
<tr>
<td></td>
<td>FURTHER MATHEMATICS (UNITS 3 AND 4)</td>
</tr>
<tr>
<td></td>
<td>MATHEMATICAL METHODS (UNITS 1-4)</td>
</tr>
<tr>
<td></td>
<td>SPECIALIST MATHEMATICS (UNITS 3 AND 4)</td>
</tr>
<tr>
<td>SCIENCE</td>
<td>AGRICULTURAL AND HORTICULTURAL STUDIES</td>
</tr>
<tr>
<td></td>
<td>BIOLOGY</td>
</tr>
<tr>
<td></td>
<td>CHEMISTRY</td>
</tr>
<tr>
<td></td>
<td>ENVIRONMENTAL SCIENCE</td>
</tr>
<tr>
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<td>PHYSICS</td>
</tr>
<tr>
<td></td>
<td>PSYCHOLOGY</td>
</tr>
<tr>
<td>COMMERCE AND HUMANITIES</td>
<td>ACCOUNTING</td>
</tr>
<tr>
<td></td>
<td>BUSINESS MANAGEMENT</td>
</tr>
<tr>
<td></td>
<td>LEGAL STUDIES</td>
</tr>
<tr>
<td></td>
<td>HISTORY</td>
</tr>
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<td>GEOGRAPHY</td>
</tr>
<tr>
<td>HEALTH AND PHYSICAL EDUCATION</td>
<td>HEALTH AND HUMAN DEVELOPMENT</td>
</tr>
<tr>
<td></td>
<td>PHYSICAL EDUCATION</td>
</tr>
<tr>
<td>TECHNOLOGY</td>
<td>PRODUCT DESIGN AND TECHNOLOGY</td>
</tr>
<tr>
<td></td>
<td>FOOD TECHNOLOGY</td>
</tr>
<tr>
<td></td>
<td>SYSTEMS AND TECHNOLOGY</td>
</tr>
<tr>
<td></td>
<td>INFORMATION TECHNOLOGY</td>
</tr>
<tr>
<td>THE ARTS</td>
<td>ART</td>
</tr>
<tr>
<td></td>
<td>DRAMA</td>
</tr>
<tr>
<td></td>
<td>THEATRE STUDIES</td>
</tr>
<tr>
<td>EQUINE STUDIES (VET)</td>
<td></td>
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ACCOUNTING

Units 1 & 2: This study aims to enable students to acquire knowledge and skills to record and report financial data and information in a manner that is appropriate for the needs of the user. Students develop an understanding of the role of accounting in the management and operation of a small business. They also develop skills in the use of information and communication technology in an accounting system and the capacity to identify, analyse and interpret financial data and information.

Unit 1 - Establishing and operating a service business: The focus of this unit is on the establishment of a small business and the accounting and financial management of the business. Students are introduced to the process of gathering, recording, reporting and analysing financial data and information used by internal and external users. The role of accounting in decision-making process using single entry recording of financial data and information for the owner of a service business.

Unit 2 - Accounting for a trading business: The focus of this unit is on accounting for a single activity sole trader. Using the accrual approach, students use a single entry recording system for the recording and reporting of cash and credit transactions. Students evaluate the performance of a business using financial and nonfinancial information and make recommendations 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.

Units 3 & 4: This study aims to enable students to acquire knowledge and skills to record and report financial data and information in a manner that is appropriate for the needs of the user. Students develop an understanding of the role of accounting in the management and operation of a small business. They also develop skills in the use of information and communication technology in an accounting system and the capacity to identify, analyse and interpret financial data and information.

Unit 3 - Recording and reporting for a trading business: The focus of this unit is on financial accounting for a single activity trading business as operated by a sole trader and emphasis the role of accounting as an information system. Students are introduced to the double entry system of recording using the accrual basis of accounting. The perpetual method of stock recording with the First in First out (FIFO) method is used.

Unit 4 - Control and analysis of business performance: The focus of this unit is 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. Students learn about the role and importance of budgeting for the business and undertake the practical completion of budgets for cash, financial performance and financial position. Students evaluate prepared information and analyse the results in order to suggest strategies to the owner.
AGRICULTURAL AND HORTICULTURAL STUDIES

Australia is reliant on its primary industries. The sustainable management of Australia’s finite land and water resources is vital for the continued production and supply of food and fibre to local, national and global markets.

Work in the Agriculture and Horticulture sectors does not only involve farming but also many support roles such as agronomy, scientific research and marketing.

VCE Agricultural and Horticultural Studies is designed to develop students’ understanding of the operations and practices involved with sustainable agricultural and horticultural systems within an economic, social and environmental context. An understanding of agribusiness operations involves a broad familiarity with interdisciplinary skills and knowledge of technology, science, economics and business management, marketing, geography and information and communications technology.

The study is made up of four units:
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4.

All four units include the planning, management and evaluation of a business project involving the care and monitoring of living plants or animals.

**Unit 1: Agricultural and horticultural operations**
Focus: Developing an understanding of how the biological and physical components of the environment and human resources influence the type of agribusinesses undertaken at particular locations. Topics include classification, photosynthesis, soils and climate.

**Unit 2: Production**
Focus: Building basic knowledge of the nutritive and reproductive processes of plants and animals, and specific biological and environmental factors that influence production systems. Topics include digestion, genetics and production systems.

**Unit 3: Technology, innovation and business practices.**
Focus: Students study the management of soil & growing media, water, weeds and pests & diseases of plants and animals. They investigate new and emerging technologies.

**Unit 4: Sustainable management**
Focus: Students develop an understanding of the importance of identification, rectification and prevention of environmental degradation for the sustainability of agribusinesses. They consider the effects of climate change and how business responds to these effects. Students consider strategies for economic, social and environmentally sustainable resource management within agriculture and horticulture.

**Assessment:**
**Satisfactory Completion:** Demonstrated achievement of the set of outcomes specified for each unit.

**Levels of Achievement**
**Unit 1 and 2:** Graded assessment tasks (A to E) for each outcome.
**Unit 3 and 4:** School-assessed coursework and an end-of-year examination
- Units 3 & 4 school-assessed coursework: 33 per cent each
- Examination: 34 per cent.
“Art washes away from the soul the dust of everyday life” Picasso

VCE Prac: Students work on self-chosen themes

Art involves pursuit of a practical areas of personal interest, be it drawing, painting, printmaking, collage, photography, film-making, ceramics, sculpture or mixed media. Students develop ideas and themes and record this development in a Visual Diary. In Units 3 and 4 this book forms a folio of practical work. All Art units involve theory study and practical work.

UNIT 1
- Artmaking and personal meaning (Practical)
- Art and Meaning (Theory)

UNIT 2
- Artmaking and cultural expression (Practical)
- Art and culture (Theory)

UNITS 3 and 4
- Investigating & resolving personal ideas through artmaking (Practical)
- Interpreting, discussing and debating Art (Theory)

There are no prerequisites for Units 1, 2 and 3. Students must undertake Unit 3 prior to Unit 4.

Assessment comprises tasks of school-assessed coursework (10%) in Units 3 and 4, school-assessed tasks in Units 3 and 4 equaling 50%, and an examination worth 30% of the total score.
BIOLOGY

Biology is the study of the dynamic relationships between living things, their interdependence, their interactions with the non-living environment, and the processes that maintain life and ensure its continuity.

The study prepares students for careers involving: medical, veterinarian, agricultural, environmental, research, genetics, biotechnologies and psychology. It provides valuable knowledge and skills for life and a respect for the environment, both living and non-living.

ENTRY: There are no prerequisites for entry to Units 1, 2 and 3. It is an advantage to complete Units 1 and 2 before Unit 3. Students must undertake Unit 3 prior to Unit 4.

UNIT 1: Unity and Diversity

This unit examines the cell as the structural and functional unit of the whole organism. It introduces a diverse range of living things and how they face the challenges of obtaining nutrients, water, a source of energy, disposing of wastes and reproducing themselves.

Areas covered include: cell structure and function; movement through membranes; cell chemistry; cellular processes – respiration and photosynthesis; enzymes; human systems; plant structure and function, mitosis and meiosis; and the scientific method.

UNIT 2: Organisms and Their Environment

This unit examines the relationships between living things and their environment. Students investigate how environmental factors influence where different kinds of organisms can live and how features possessed by organisms affect their fitness and reproductive success. The effects of changes in the environment, both natural and human-induced are looked at in terms of conservation and sustainability.

Areas covered include: environmental influences; adaptations for survival; tolerance ranges; nervous control, hormonal control, plant growth responses and animal behaviours. ASSESSMENT: Unit 1 and 2

Each unit will have three graded assessment tasks (A to E). Assessment tasks will be selected from practical experiments, student designed investigations, posters, field trip reports, research projects, tests and exams.

UNIT 3: Signatures of Life

This unit is the study of molecules and biochemical processes that are indicators of life and focuses on the structure of DNA, genes and the code for production of proteins. Students investigate cell communication and immune responses.

Areas covered include: structure of bio-macromolecules – lipids, carbohydrates, proteins and nucleic acids; cell membranes and organelles; biochemical processes – respiration and photosynthesis; enzymes; nervous and hormonal co-ordination; and immunity.

UNIT 4: Continuity and Change

This unit examines evidence for the molecular basis of heredity and patterns of inheritance. It focuses on the evidence for evolutionary change and evolutionary relationships as well as the effect of human intervention on evolutionary processes.

Areas covered include: cell reproduction; gene expression and regulation; DNA tools and techniques; inheritance; natural selection; the fossil record; evolutionary relationships; speciation and extinction; and human evolution.

ASSESSMENT: Unit 3 and 4

School assessed coursework, and an end of year examination.

Unit 3 School assessed Coursework: 20%
Unit 4 School assessed Coursework: 20%
End of year examination: 60%
BUSINESS MANAGEMENT

Business Management Units 1 & 2: This study aims to enable students to understand and apply business concepts, principles and terminology and to understand the purpose and significance of business within local contexts. Students develop an understanding of the complex and changing environment that businesses operate within and the nature of relationships between key stakeholders within that environment, and of the ways in which small to medium-scale businesses are managed effectively for commercial success across a range of contexts.

Unit 1 - Small business management: Students examine the characteristics of a range of businesses and their internal and external environments, and develop an understanding of the nature of business in Australia. Business ethics and socially responsible management are also important considerations for businesses and will have an impact on the various stakeholders of all businesses. In investigating these business characteristics, students gain an understanding of the interrelationships that affect business activity.

Unit 2 - Communication and management: This unit focuses on the importance of effective communication in achieving business objectives. Students investigate communication both internal and external to the business. They develop knowledge of aspects of business communication and are introduced to skills related to its effective use in different contexts. The vital functions of marketing and public relations are considered, with students developing an understanding of the important role these functions play in the ultimate success of a business.

Business Management Units 3 & 4: This study aims to enable students to understand and apply business concepts, principles and terminology and to understand the purpose and significance of large-scale business within national and global contexts. Students develop an understanding of the complex and changing environment that businesses operate within and the nature of relationships between key stakeholders within that environment, and of the ways in which large-scale businesses are managed effectively for commercial success across a range of contexts. Students develop skills to analyse effective management practices for commercial success in the context of business ethics and social responsibility.

Unit 3 - Corporate management: The focus of this unit is on how large-scale organisations operate. Students examine the environment (both internal and external) in which large-scale organisations conduct their business, and then focus on aspects of individual business’ internal environment and how the operations of the business are managed. Students develop an understanding of the complexity and challenge of managing large-scale organisations and have the opportunity to compare theoretical perspectives with practical applications.

Unit 4 - Managing people and change: This unit continues the examination of corporate management. It commences with a focus on the human resource management function. Students learn about the key aspects of this function and strategies used to most effectively manage human resources. The Unit concludes with 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.
CERTIFICATE II IN EQUINE (HORSE) STUDIES (VET)

The aims of the VCE VET Equine Studies program are to:
- Provide participants with the knowledge and skills to achieve competencies that will enhance their employment prospects in the equine or related industries
- Enable participants to gain a nationally recognized credential and to make a more informed choice of vocation or career paths.

The Certificate II in Equine Industry has practical and theory components. Practical sessions are held at accredited venues, with EFA accredited instructors. The theory component of the course is flexibly delivered in a classroom, using up to date CD-ROM programs, Internet and study guides / workbooks and logbooks.

Successful completion of units 3 & 4, which includes an end of year examination as for all VCE subjects, will attract a VCE Study Score.

Students must complete Units 1 & 2 before attempting Units 3 & 4, as the foundation knowledge and skills to function effectively in the workplace are often acquired in the early stages of the training program and are necessary for the achievement of competence in other areas of the program.

VCE VET UNITS 1 & 2 (1st Year)

COMPULSORY UNITS
- Provide basic emergency life support
- Work effectively in the industry
- Work in an equine organization
- Provide daily care for horses
- Identify and develop a career path in the equine industry
- Handle horses safely

ELECTIVE UNITS
- Assist in the preparation of a horse for a competition
- Horse Riding or Driving 1

VCE VET UNITS 3 & 4 (2nd Year)

COMPULSORY UNITS
- Equine Anatomy and physiology
- Relate equine form & function
- Respond to equine injury & disease
- Carry out regular horse observation
- Determine nutritional requirements for horses

There is a compulsory 3 day camp at Echuca. Practical sessions are held at Cherie Edmonds’ yard.
Do you get the joke?

If not, you need to study VCE Chemistry.

(You must have studied Super Science first, though.)

Unit 1: The Big Ideas of Chemistry
1. The Periodic Table – what are atoms really?
2. Materials – what is a polymer?

Unit 2: Environmental Chemistry
1. Water – why is ice denser than water?
2. The Atmosphere – it’s a gas! (sort of)

In Year 12 it gets even better:

Unit 3: Chemical Pathways
1. Chemical Analysis – how can colours be used to accurately identify a substance?
2. Organic Chemistry – what is DNA anyway?

Unit 4: Chemistry at Work
1. Industrial Chemistry: Rates and Equilibrium
2. Thermochemistry – what the heck is a fuel cell?

Year 11 Learning Activities and Assessments Tasks
1. Quality instruction in the VCAA Chemistry Curriculum
2. Regular practical activities

Year 12 Learning Activities and Assessment Tasks
1. Regular practical activities
2. Assessment includes 6 SACs (prac reports, tests and assignments) and one end-of-year examination.

Possible Pathways
Learning about Chemistry makes life more interesting for everyone, because we are learning about how the world works. However, studying Chemistry will be helpful for those considering any of the following careers: Medicine, veterinary medicine, nursing, pharmaceutics, cosmetics, environmental management / science, forensics, chemical analysis, food science, materials science, science teaching, and a heap more.

Please refer to the VCAA Study Design (Chemistry) or see your local Chemistry teacher for more detailed information.
VCE - DRAMA

UNIT 1 and 2: DRAMATIC STORYTELLING and CREATING AUSTRALIAN DRAMA

Students examine storytelling through the creation of ensemble performances and develop expressive skills to present their characters. Students develop an understanding of naturalistic and non-naturalistic performance styles. They investigate a range of stimulus material and learn about stagecraft, theatrical conventions and performance styles. Students also analyse their own performance and are involved in the analysis of other professional performers. Students use a range of stimulus material to create a performance based on a person, an event, an issue, a place, an art work, a text and/or an icon from a contemporary or historical context. Students present their performances to a live audience of their devised drama on an historical context. Students also focus on reflecting and articulating the work processes involved and continue to develop their use of drama terminology.

ASSESSMENT: There are a range of assessment tasks ranging from performance examples, folios and recording of processes used to essay style questions. There is also a mid year exam.

Unit 3 and 4 – Ensemble and Solo Performance.

Ensemble - In Unit 3 we will focus on non-naturalistic drama from a range of contemporary and cultural performance traditions. Students explore non-naturalistic styles and conventions in the creation, development and presentation of an ensemble performance. They use and manipulate dramatic elements, expressive skills and performance styles to enhance their performance and document and evaluate the stages in the development and presentation of the ensemble performance. Students explore non-naturalistic dramatic form through the creation of an ensemble performance. Non-naturalistic drama uses performance styles that are not dependent on life-like representations. Students describe, reflect upon, interpret, analyse and evaluate the construction and performance of an ensemble performance using the language of drama to discuss their own work. Students analyse ways characters are represented in the performance through the use of expressive skills. They also consider the manipulation of dramatic elements, theatrical conventions and stagecraft.

Solo Performance – In Unit 4 we focus on the use of stimulus material and resources from variety of sources to create and develop character/s in a solo performance. Students create and perform a short solo performance based on stimulus material, and evaluate the processes used.

Performance examination
Students create, develop and perform a character or characters within a solo performance in response to a prescribed structure. Students draw on their understanding of traditions of performance from a range of historical, cultural and social contexts.

Written Examination
One and a half hours involving a series of questions requiring short and extended responses. It will require students to develop ideas from stimulus material including dramatic elements, performance styles and theatrical conventions.
ENGLISH UNITS 1-4

Areas of Study:
1. Reading and responding.
This area of study includes an analysis of the ways in which structures and features are used by the authors of narrative texts to construct meaning. The term ‘text’ encompasses print, visual and oral materials.

2. Creating and presenting.
In this area of study students develop their understanding of form, purpose, audience and context through reading a range of texts. Students then draw on their knowledge of a particular context such as ‘Encountering Conflict’ to create their own writing.

3. Using language to persuade.
This area of study is focused on the use of language in the presentation of a point of view. Students read a variety of print and non-print texts intended to persuade and identify and discuss how language is used to position the audience in certain ways.

ASSESSMENT:
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set outcomes specified for the unit. The decision will be based on the teacher’s assessment of the student’s overall performance on assessment tasks designated for the unit.

All the work you do for both Years 11 and 12 is built around these three areas of study. In Year 12 school assessed coursework is worth 50% of your final mark. The final exam is also worth 50%. Assessment tasks are completed in class and within a limited time frame.

Units 3 and 4 Exam:
Each section is worth a third of the marks.

Section A-Text response
You are required to write one extended response to a text studied for this part of the course.

Section B- Writing in Context- “Encountering conflict”
You are required to write an extended piece for a specified audience & purpose, exploring ideas and using detail from at least one text. You will be required to base your writing on unseen stimulus material or prompts associated with the ideas and/or arguments suggested by the texts set for the context.

Section C-Analysis of language use
You are required to write an extended piece of prose, analyzing the use of written language and visual features in unseen texts

PRIOR READING
For both the Year 11 and Year 12 course students will be required to purchase and read set texts. The names of these texts will be given to students at the end of 2013 so that they are able to read them prior to the start of the 2014 school year. It is very important that students pre-read these texts in order to participate and achieve their best in classes next year!
ENVIRONMENTAL SCIENCE

Environmental Science provides the opportunity for students to understand the structure, function and diversity of natural ecosystems on this planet and evaluate the impacts of human activities on them. While undertaking this study, students will develop skills in practical scientific investigations, environmental fieldwork techniques, report writing, research and analysis.

Entry: There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4.

Unit 1: The environment
This unit focuses on the environment and its components. The function of ecosystems and the interactions in and between the ecological components will be investigated. The unit presents opportunities to consider the effects of natural and human-induced changes in ecosystems.

Outcomes:
• Identify and describe the components and natural processes within the environment.
• Analyse one human-induced environmental change and options for remediation.
• Explain the flow of energy, nutrient exchange and environmental changes in ecosystems.

Unit 2: Monitoring the environment
This unit focuses on the characteristics of environmental indicators and their use in monitoring programs.

Outcomes:
• Explain the nature of environmental indicators for pollution and ecological health of ecosystems.
• Investigate and report on a local example of environmental degradation or environmental issue, using an appropriate monitoring program.
• Analyse the scientific basis and use of standards for environmental indicators for pollution control and ecological health of ecosystems.

Unit 3: Ecological Issues: Energy and Biodiversity
This unit focuses on two major ecological issues which provide challenges for the present and the future. The consequences on the atmosphere of natural and enhanced greenhouse effects, and issues of biodiversity and its significance in sustaining ecological integrity, will be examined.

Outcomes:
• Describe the principles of energy, and relate them to the contribution of one fossil and one non-fossil energy source to the enhanced greenhouse effect.
• Describe the characteristics of biodiversity, and evaluate strategies to reduce the effects of threatening processes on one selected endangered animal.
• Explain how scientific data is applied to the assessment of environmental risk in ensuring biodiversity.

Unit 4: Ecological Sustainability
This unit focuses on pollution and its relationship to the health of humans and the environment. It advances further understanding of managing the environment to ensure development meets human needs while maintaining ecological integrity of the environment.

Outcomes:
• Describe the characteristics of pollutants, and evaluate management options for reducing the risk of a pollutant affecting the health of the environment and humans.
• Use the principles of ecologically sustainable development and environmental management to evaluate a selected environmental science project.
FOOD AND TECHNOLOGY

Students will develop skills in planning, preparation and evaluation of food products. Practical work will be an important component of this subject, as will the creation of a design plan folio. Students will also consider environmental issues in food production, and the ways in which technology has impacted on food. Students may complete Units 3 and 4 without having completed Units 1 and 2. Students interested in pursuing careers in the hospitality/science/health industries may particularly enjoy this subject.

UNIT 1 AND 2: In these units students will apply safe and hygienic work practices in the preparation, processing, cooking and presentation of key foods. In teams and individually students will use the design process to plan, prepare and evaluate meals. They will use a range of tools and equipment, and learn presentation techniques to optimize sensory properties.

Learning Activities: Develop brochures on the principles of safe food handling and technological advances in equipment; investigate and present information on special nutritional considerations; design, plan and prepare food as part of the implementation of the design process; complete food preparation activities using key foods.

Key Skills required: Research skills, food preparation skills, ability to use the design process, ability to use tools and equipment safely, skills in evaluating food products.

Assessed Tasks: Practical class participation, practical reports, tests, multimedia presentations, and an end of semester written examination.

UNITS 3 AND 4: In these units students will explore food safety in Australia; preparation, processing and preserving of key foods; and develop and implement a design plan. They will also analyse food product development.

Learning Activities: Prepare food using safe and hygienic practices; write a design brief to meet the specific needs of a client, then implement the design plan and evaluate the product; research food product ideas and innovations in food product development such as microencapsulation.

Key Skills required: Research skills, ability to prepare and evaluate food according to sensory properties, ability to develop individual production plans, ability to develop a design plan.

Assessed Tasks: Participation in practical sessions, tests, execution of the design process, multimedia presentations.

VCAA ASSESSMENT: The overall study score will consist of School Assessed Coursework (30%), School Assessed Task (40%), written examination in November (30%).
GEOGRAPHY

UNIT 1: NATURAL ENVIRONMENTS
Students must study two natural environments at two different scales, and how interactions between natural processes and human activities can change natural environments eg. How has housing development impacted on the Port Fairy coastline?
There are two areas of study and two outcomes, one of which is a fieldwork report.

UNIT 2: HUMAN ENVIRONMENTS
Students must study two human environments in each area of study, one of which must be a rural environment and one of which must be an urban environment. One environment must be located in Australia, (for example country towns or the changing nature of farming), and one from another country (for example the changing nature of an international city).
There are two areas of study and two outcomes in this unit, and one of them must be a fieldwork report.

UNIT 3: REGIONAL RESOURCES
This unit considers the characteristics of resources. The design focus is on the concept of a regional perspective.
Area of Study 1: Students must study the use and management of an Australian water resource - the Murray Darling Basin region. It enables students to gain a regional perspective in determining the availability, utilisation and sustainability of water in this region.
Area of Study 2: Students will study the use and management of a resource in their local area and within the region. (For example Tea-Tree Lake precinct, the aquaculture industry). They will justify a policy for the future use and management of the resource with an emphasis on its sustainability.
Fieldwork is an essential part of this area of study.

UNIT 4: GLOBAL PERSPECTIVES
This unit focuses on the geographic characteristics of global phenomena and responses to them. (For example: the movement of refugees and displaced people, the global spread of diseases, tectonic plates, global warming or land degradation.)

Students may undertake Units 3 and 4 without having completed Units 1 and 2.
Students are assessed using a variety of School Assessed Coursework tasks for Units 1 to 3.

Units 1 and 2
Both units will have graded assessment tasks (A to E). Each assessment task may be an entire outcome or part of an outcome.

Units 3 and 4
Unit 3 School-assessed Coursework: 25 per cent
Unit 4 School-assessed Coursework: 25 per cent
End-of-year examination: 50 per cent.
HEALTH AND HUMAN DEVELOPMENT

VCE Health and Human Development provide students with the skills and knowledge to make informed decisions about their own health and to recognise the importance of health in society. In undertaking this study, they will be able to actively participate in making appropriate choices that allow for good health and be able to seek appropriate advice. Students will also be able to evaluate the health and development of the individual across the lifespan in the context of both Australia’s and global health and human development.

VCE Health and Human Development offers students a range of pathways and caters to those who wish to pursue further formal study in areas such as health promotion, community health research and policy development, humanitarian aid work, allied health practices, education, and the health profession.

UNITS 1 AND 2

In these units students identify issues that have an impact on the health and individual human development of Australia’s mothers and babies, children, youth and adults. Students investigate one health issue in detail for each lifespan stage and analyse personal, community and government strategies or programs that affect health and individual human development.

Learning Activities: Health issue assignments & presentations, Diet analysis, Interactive baby, Kindergarten visit, Home safety audit and film reviews.

Key Skills required: Research skills, communication skills, ability to work as an independent learner.

Assessed Tasks: Class participation, research assignments / reports, tests, multimedia presentations, case study and data analysis and an end of semester written examination.

UNITS 3 AND 4

In these units students will look at a range of issues and topics surrounding Australia’s health status and global health. Students will explore population groups within Australia and compare and explain the variations in health status. They will also analyse Australia’s health system and the different roles of government and non-government organisations in promoting health. Finally, the factors contributing to variations in health status between Australia and developing countries will also be explored in detail.

Learning Activities: Assignments & multimedia presentations, film / documentary reviews.

Key Skills required: Research skills, communication skills, ability to work as an independent learner.

Assessed Tasks: Class participation, research assignments / reports, tests, multimedia presentations, case study and data analysis and an end of semester written examination.

VCAA ASSESSMENT: The overall study score will consist of School Assessed School Assessed Task (50%), written examination in November (50%).
HISTORY

TWENTIETH CENTURY HISTORY

UNIT 1: 1900-1945
The first half of the twentieth century was a period marked by significant change. This unit considers the way in which different societies responded to these changes, how they affected people’s lives and the development of domestic and international crises.

Areas of study:
- Crisis and conflict: Changing political boundaries from World War I & II; the rise of Hitler and Fascism.
- Social life: Changes in social life during times of war, such as the Jews under Nazi Germany.
- Cultural expression: Propaganda during wartime, literature and films of the time.

UNIT 2: 1945-2000
In this post-war history we investigate one or more major events following World War 2.

Areas of study:
- Ideas and Political Power: the struggle between democratic America and communist Soviet Union during the Cold War, and the conflicts that arose such as the Vietnam War.
- Movements of the People: particularly during the 1950’s and 60’s with the Civil Rights, anti-war and women’s movements.
- Issues for the Millennium: this study examines events such as the fall of the Berlin Wall, the Indonesian occupation of East Timor, the Taliban in Afghanistan.

UNIT 3 AND 4 HISTORY: REVOLUTIONS

Revolutions are the great moments of change in modern history that embarks countries on a program of political and social transformation. Revolutions unleash civil war and counter-revolution, and can instigate policies of terror and repression.

Areas of Study:
Each unit studies one revolution. Both Areas of Study are completed for both revolutions. There is a choice of two revolutions from the three listed below:

- The American Revolution: 1763 - 1789
- The French Revolution: 1781 – 1795
- The Russian Revolution: 1905 - 1924

Area of Study 1:
- Revolutionary ideas, movements, leaders and events: the events that contributed to the revolution; ideas that were used in the struggle and the role of individuals, groups and parties in bringing about radical changes.

Area of Study 2:
- Creating a new society: the contribution of individuals and groups to the creation of the new society; the cause of difficulties or crises of the revolution and the response of the revolutionary parties; the compromise of revolutionary ideals; the changes and continuities that the revolution brought about.
INFORMATION TECHNOLOGY

All students should aim to further develop their skills in Information Technology and this is a very good and interesting way to do it. Studying Information Technology may provide pathways to further studies in IT and to careers in ICT-based areas. It may also prepare students for a vast range of careers that require efficient and effective use of ICT.

UNIT 1: I.T. IN ACTION
This is a very practical unit where most of time class time is used to develop skills in a number of software programs. This unit focuses on how individuals and organisations use, and can be affected by, information and communications technology in their daily lives.

1. Turning data into information
2. Understanding Computer Networks
3. Group Project on an ICT Issue of the groups own choice

UNIT 2: I.T. PATHWAYS
Again, this is a very practical unit where most of time class time is used to further develop skills in a number of software programs. This unit focuses on how individuals and organisations use ICT to meet a range of purposes. Students apply a range of knowledge and skills to create solutions, including those that have been produced using a programming or scripting language, to meet users’ needs.

1. Data analysis and visualisation
2. Computer Programming & Career Pathways in I.T
3. Group Project: Solving an information problem

There are two different Information Technology subjects at the Unit 3/4 level.

UNITS 3 AND 4: I.T. APPLICATIONS
In Unit 3, students use web authoring and database management software to solve information problems. In Unit 4, they use web authoring or multimedia authoring software as well as spreadsheet or database software to solve information problems. Additional software can be used to support the development of solutions and information products, for example, image editing software, such as Macromedia Flash and Adobe PhotoShop.

UNIT 3:
1. Online Communities
2. Organisations and Data Management

UNIT 4:
1. Organisations and information needs
2. Information Management

UNITS 3 AND 4: SOFTWARE DEVELOPMENT
This stand of Information Technology is suited to students who enjoy or want to learn the art of computer programming. The programming language used is Visual Basic Net.

UNIT 3:
1. Analysing information problems
2. Design and development of a solution to an information problem

UNIT 4:
- Purpose-designed solutions to an information problem
- Evaluating purpose-designed solutions
LEGAL STUDIES

Units 1 & 2

This study explores the distinction between criminal and civil law, and the need for laws in society. Students investigate the process of making laws and changing laws and the role of parliament and subordinate authorities in law-making. Students examine the rights and responsibilities under criminal and civil law and the associated outcomes.

Unit 1 Criminal law in action

This Unit focuses on the key features of criminal law, how it is enforced and adjudicated and possible outcomes and impacts of crime. Students learn the different types of crime and explore rights and responsibilities under criminal law. Students consider the role of parliament and subordinate authorities in law-making. Students investigate the processes and procedures followed by courts.

Unit 2 Issues in civil law

This Unit focuses on the rights that are protected by civil law, as well as obligations that laws impose. Students investigate types of civil laws and related cases and issues and develop an appreciation of the role of civil law in society. Students examine methods of dispute resolution and evaluate their effectiveness.

Units 3 & 4

This study aims to provide students with an understanding of the institutions that determine our laws and their law-making powers and processes. Students evaluate the effectiveness of lawmaking bodies and examine the need for the law to keep up with changes in society. Students investigate methods of dispute resolution that can be used as an alternative to civil litigation. Both criminal and civil trial processes are examined, including the adversary system. Students evaluate the effective operation of the Victorian legal system, including recommendations for reform.

Unit 3 Law-making

This Unit explores an understanding of the institutions that determine our laws and their lawmaking powers and processes. Students evaluate the overall effectiveness of law-making bodies and examine the need for the law to keep up to date with changes in society.

Unit 4 Resolution and justice

This Unit explores the means and processes that enable the resolution of legal disputes, including the jurisdiction of the courts, tribunals and alternative avenues of dispute resolution. Students develop an understanding of the processes and procedures followed in courtrooms and develop an understanding of the adversary system of trial and jury system, as well as pre-trial and post-trial procedures that operate in the Victorian legal system. In this Unit students evaluate the effective operation of the Victorian legal system and consider reforms or changes that could further improve its effective operation.
LITERATURE
The study of Literature focuses on the enjoyment and appreciation of reading that arises from discussion, debate and the challenge of exploring the meanings of literary texts. Literature is made up of four units:

Assessment Tasks for Literature include:
- journal entries;
- role plays;
- close analysis of selected passages;
- creative responses, such as short stories and poems;
- essays (comparative, interpretive, analytical or discursive);
- debates;
- visual representations (diagrams, concept maps, character webs, charts);
- multimedia presentation;
- participation in an online discussion;
- performance and commentary;
- oral or written review;
- podcasts.

Unit 1: This unit focuses on developing personal responses to a variety of different types of texts, including novels, short stories, plays, film, television, radio, poetry and song lyrics. Students will respond to texts both critically and creatively.
Areas of Study: Readers and their responses
               Ideas and concerns in Texts
               Interpreting non-print texts

Unit 2: During this unit students will study a particular text from a past era and then respond creatively, for example, writing from the viewpoint of a different character or constructing a different ending. They will also compare two texts in terms of their ideas and concerns as well as their form and context.
Areas of Study: The text, the reader and their contexts
               Comparing texts

Unit 3: In this unit students focus on how meaning changes when the form of a text changes, for example, a novel and a film. Students also examine one text in order to discover what views and values are expressed and what beliefs are endorsed or challenged, and analyse the viewpoints of others on a particular text such as those of a film reviewer, making a comparison to their own views.
Areas of Study: Adaptations & Transformations
               Views, values and contexts
               Considering alternative viewpoints

Unit 4: Students will study one text closely and then produce a creative response that reflects that close study during Unit 4. This involves understanding the style and form of the text and being able to adapt the tone and style of the original text to your own writing. Students also prepare for the end of year exam, which involves close analysis of a passage or passages from a text studied.
Areas of Study: Creative responses to texts
               Close Analysis
**MATHEMATICS**

This study is designed to provide access to worthwhile and challenging mathematical learning in a way that takes into account the needs and aspirations of a wide range of students. It is also designed to promote students' awareness of the importance of mathematics in everyday life in an increasingly technological society, and confidence in making effective use of mathematical ideas, techniques and processes.

All students in all the mathematical units offered would apply knowledge and skills, model, investigate and solve problems, and use technology to support learning mathematics and its application in different contexts.

The choice of the Mathematics subjects to be studied by any individual student is critical. Whilst it is not a requirement that students study Mathematics to gain the V.C.E., once a student has chosen to study Mathematics, the units to be tackled must be considered very carefully. As a result, it is vital that students discuss their selections with some or all of the following: Potential Employers, Parents, Mathematics Teachers, Year 11/12 Coordinators and the Careers Coordinator.

**This study is designed to enable students to:**

1. Develop mathematical knowledge and skills.
2. Apply mathematical knowledge to analyse, investigate and solve problems in a variety of situations, ranging from well defined and familiar situations to unfamiliar and open ended situations.

**Structure**

The study is made up of the following units:

- Foundation Mathematics 1 and 2
- General Mathematics Units 1 and 2
- Mathematical Methods (CAS) Units 1 and 2
- Further Mathematics Units 3 and 4
- Mathematical Methods (CAS) Units 3 and 4
- Specialist Methods Unit 3 and 4.

**Units 1 and 2: Foundation Mathematics**

Foundation Mathematics provides for the continuing mathematical development of students entering VCE or VCAL needing mathematical skills to support their other subjects including VET and VCAL studies. Students who study Foundation Mathematics do not intend to undertake Unit 3 and 4 studies in VCE Mathematics in the following year. There is a strong emphasis on using mathematics in practical contexts relating to everyday life, personal work or study. The course aims to give students a good understanding of mathematics that is in common use in everyday life. Students are encouraged to use appropriate technology in all areas of their study.

**Units 1 and 2: General Mathematics**

General mathematics provides for the continuing mathematical development of students entering VCE needing mathematical skills to support their other VCE subjects, including VET studies and for those students considering continuing mathematical studies at Year 12 level in either Further Mathematics or Specialist Mathematics. In General Mathematics there is a strong emphasis on using mathematics in practical contexts relating to everyday life, personal work and study. Students are encouraged to use appropriate technology in all areas of their study.

General Mathematics provides courses for diverse groups of students and may be implemented in a number of ways. The areas of study are ‘Data Analysis and Statistics’, ‘Arithmetic’, ‘Graphs of Linear non Linear Relations’, ‘Decisions and Business Mathematics’, ‘Algebra’, and ‘Geometry and Trigonometry’.

Unit 1 and 2: Mathematical Methods (CAS)
These units are designed in particular as preparation for Mathematical Methods (CAS) Units 3 and 4. The areas of study for Unit 1 and 2 are 'Functions and Graphs', 'Algebra', 'Rates of Change and Calculus' and 'Probability'. There is also a strong emphasis placed on the use of graphic calculators and computer software. Computer algebra system (CAS) technology is incorporated throughout the unit.

Units 3 and 4: Further Mathematics
Further Mathematics consists of a compulsory area of study 'Data analysis' and then a selection of three from six modules in the 'Applications' area of study.
• Number patterns and applications
• Geometry and trigonometry
• Graphs and relations
• Business related mathematics
• Networks and decision mathematics
• Matrices

Unit 3 and 4: Mathematical Methods (CAS)
Mathematical Methods (CAS) Unit 3 and 4 consists of the following areas of study: ‘Functions and Graphs’, 'Calculus', 'Algebra' and 'Probability' which must be covered in a progression from Unit 3 to Unit 4 with an appropriate selection of content for each of Unit 3 and Unit 4. There is also a strong emphasis on the use of technology, particularly in the use of graphic calculators and computer software.
Maths Methods (CAS) 3 and 4 may be taken alone or in conjunction with Specialist Maths or Further Maths 3 and 4, and is intended to provide an appropriate background for further studying, for example, science, economics or medicine.

Unit 3 and 4: Specialist Mathematics
Specialist Mathematics consists of the following areas of study: 'Functions, Relations and Graphs', 'Algebra', 'Calculus', 'Vectors' and 'Mechanics'. The development of course content should highlight mathematical structure and proof. All of this material must be covered in a progression from Unit 3 to Unit 4, with an appropriate selection of content for each of Unit 3 and Unit 4. The appropriate use of technology to support and develop the teaching and learning of mathematics is to be incorporated throughout each unit and course. This will include the use of some of the following technologies for various areas of study or topics: graphics calculators, spreadsheets, graphing packages, dynamic geometry systems, statistical analysis systems, and computer algebra systems. In particular, students are encouraged to use graphics calculators, spreadsheets or statistical software for probability and statistics related areas of study, and graphics calculators, dynamic geometry systems, graphing packages or computer algebra systems in the remaining areas of study systems both in the learning of new material and the application of this material in a variety of different contexts.

Entry (Prerequisites)
• There are no prerequisites for entry to Foundation Mathematics Units 1 and 2, General Mathematics Units 1 and 2 or Mathematical Methods (CAS) Units 1 and 2. Units 3 and 4 of a study are designed to be taken as a sequence. Students must undertake Unit 3 of a study before entering Unit 4 of that study.
• Enrolment in Specialist Mathematics Units 3 and 4 assumes a current enrolment in, or previous completion of Mathematical Methods Unit 3 and 4.
• General Mathematics 1/2 may be taken alone or with Mathematical Methods (CAS) 1/2. Studied alone it leads on to Further Mathematics 3/4 and with Mathematical Methods (CAS) 1/2 can lead on to Mathematical Methods (CAS) 3/4 and Specialist Mathematics 3/4.
Flowchart showing pathways of study in Mathematics:

Foundation Mathematics 1/2 (No further mathematics program at the 3/4 level)

General Mathematics 1/2 - Advisable -> Further Mathematics 3/4

General Mathematics 2 - Highly Advisable -> Specialist Mathematics 3/4

Mathematical Methods (CAS) 1/2 - Prerequisite -> Mathematical Methods (CAS) 3/4

Mathematical Methods (CAS) 1/2 - Prerequisite -> Specialist Mathematics 3/4

Assessment

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for each unit.

Levels of Achievement

Unit 1 and 2
Both units will have three graded assessment tasks (A to E). Each Assessment Task may be an entire outcome or part of an outcome.

Units 3 and 4
The Victorian Curriculum and Assessment Association (VCAA) will supervise the assessment of all students undertaking Units 3 and 4. The student's level of achievement will be assessed through school-assessed coursework and examination as follows:

Further Mathematics
Unit 3 school-assessed coursework: An Application Task and an Analysis Task: 20 per cent
Unit 4 school-assessed coursework: Two Analysis Tasks: 14 per cent
Unit 3 and 4 examination (Facts, skills and applications): 33 per cent
Unit 3 and 4 examination (Analysis task): 33 per cent

Mathematical Methods (CAS)
Unit 3 school-assessed coursework: An Application Task and Two Tests: 20 per cent
Unit 4 school-assessed coursework: Two Analysis Tasks: 14 per cent
Unit 3 and 4 examination (Short answer and some extended answer questions): 22 per cent. No Calculators or notes. Formula sheet provided. One hour.
Unit 3 and 4 examination (Multiple Choice and extended answer questions): 44 per cent. Approved CAS calculator and bound reference notes are permitted. Two hours.

Specialist Mathematics
Unit 3 school-assessed coursework: 14 per cent
Unit 4 school-assessed coursework: 20 per cent
Unit 3 and 4 examination (Short answer and some extended answer questions): 22 per cent. No Calculators or notes. Formula sheet provided. One hour.
Unit 3 and 4 examination (Multiple Choice and extended answer questions): 44 per cent. Approved CAS calculator and bound reference notes are permitted. Two hours.
PHYSICAL EDUCATION
Physical Education examines the biological, physiological, psychological, biomechanical, social and cultural influences on performance and participation in physical activity. The study prepares students for such fields as the health sciences, exercise science and education, as well as providing valuable knowledge and skills for their own participation.

ENTRY: There are no prerequisites for entry into Units 1, 2 and 3. It is an advantage to complete Units 1 and 2 before Unit 3. Students must undertake Unit 3 before Unit 4.

UNIT 1: Bodies In Motion
This unit explores 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, energy pathways and physical activity. Areas covered include: human systems – muscular, skeletal, articular, cardiovascular and respiratory; energy systems; biomechanics principles - Newton’s laws of motion, levers, transfer of momentum, projectile motion, angular motion, balance and stability.

UNIT 2: 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. By studying various approaches and applying this knowledge to a practical session, students gain a practical insight into coaching. Students are also introduced to physical activity and the role it plays in health and wellbeing. Areas covered include: types of skill; stages of learning; skill learning principles; roles and responsibilities of coaches; codes of conduct; coaching methods and techniques; benefits of physical activity; health risks associated with inactivity; National Physical Activity Guidelines; factors facilitating participation; and barriers to participation.

ASSESSMENT: Unit 1 and 2
Each unit will have three graded assessment tasks (A to E). Assessment tasks include practical laboratory reports, exams, research reports, data analysis, written reports, and multi-media tasks and peer-teaching.

UNIT 3: Physical Activity and Physiological Performance
This unit introduces students to an understanding of physical activity and sedentary behaviour from a participatory and physiological perspective. Students investigate the characteristics of energy systems and the interplay of the systems during physical activity. Areas covered include: methods to assess activity; organisations promoting adherence to the NPAG, strategies to influence physical activity, acute responses to exercise, characteristics and interplay of energy systems, fuels, and fatigue and recovery methods.

UNIT 4: Enhancing Performance
In this unit students undertake an activity analysis to establish fitness components. They participate in a training program to improve selected components. Students critically evaluate different techniques and practices that can be used to enhance performance. Areas covered include: fitness components, activity analysis, assessment of fitness, training principles, training methods and chronic adaptations to training, nutritional strategies, hydration techniques, recovery strategies, psychological strategies and legal and illegal substances and methods that enhance performance.

ASSESSMENT: Unit 3 and 4
School-assessed coursework and an end-of-year examination
- Unit 3 school-assessed coursework: 25 per cent (three assessment tasks)
- Unit 4 school-assessed coursework: 25 per cent (three assessment tasks)
- Units 3 and 4 examination: 50 per cent
The study of physics is intended to be both interesting and challenging for students with a wide range of expectations. For those who want to know the how and whys, Physics is the subject to study.

UNIT 1: MOVEMENT, NUCLEAR & RADIOACTIVITY PHYSICS
1. Nuclear and radioactivity physics: Students investigate the uses and effects of nuclear reactions and radioactivity in industry, the environment and the general community.
2. Electricity: Students apply basic circuit models to simple battery operated devices, car and household electrical systems.
3. Detailed study: Students undertake a detailed study from one of the following six options:
   - Investigations: Flight (study of the science governing flight)
   - Medical Physics (use of Physics in medical diagnosis and treatment)
   - Astronomy (including the study of the motion of stars and planets)
   - Investigations: Sustainable energy sources (wind or solar energy)
   - Energy from the nucleus (nuclear reactors and nuclear bombs)
   - Astrophysics (study of stars, galaxies and their evolution)

UNIT 2: WAVELIGHT PROPERTIES OF LIGHT AND ELECTRICITY
1. Movement: Students gain an understanding of the science of the movement of particles and bodies.
2. Wave-like properties of light: Students investigate the wave model of energy transfer and apply it to the many properties and practical applications of light.
3. Detailed study: Students undertake another detailed study from one of the six detailed study options listed in Unit 1 above.

PHYSICS UNIT 3: MOTION AND ELECTRONICS
1. Motion in one and two dimensions:
   Students use the Newtonian model in one and two dimensions to describe and explain transport motion and related aspects of safety, and motion in space.
2. Electronics and photonics:
   Students investigate the operation of electronic and photonic devices and analyse their use in domestic and industrial systems.

PHYSICS UNIT 4: LIGHT & MATTER AND ELECTRIC POWER
1. Electric Power:
   Students investigate the operation of electric motors and generators and alternators and the generation, transmission, distribution and use of electric power.
2. Interactions of Light and Matter:
   Students use the wave and photon models to explain interactions of light and matter and the quantised energy levels of atoms.
3. Detailed study: Students undertake a detailed study from one of the following six options:
   - Synchrotron and applications
   - Photonics
   - Sound
   - Einstein’s relativity
   - Materials and their use in structures
   - Further Electronics

Entry
Students are advised to do at least Units 1 & 2 Physics if they intend to study Unit 3 and 4 Physics.
PSYCHOLOGY

Psychology is the systematic study of thoughts, feelings and behaviour. As a science, Psychology aims to describe, explain and predict behaviour; in doing so, it relies on empirical procedures rather than intuition. The application of research methods in Psychology allows students to develop useful skills in analytical and critical thinking and in making inferences. Possible career pathways include counseling, social work and sport/forensic/clinical psychologist.

UNITS 1 AND 2

In these units students are introduced to the development of psychology from its philosophical beginnings to a scientific study of the human mind and behaviour. Students study the attitudes of individuals and how behaviours of groups can inform and contribute to explanations of individual aggression or altruism, the positive and negative power of peer pressure and responses to group behaviour.

Assessed Tasks:
Assessment tasks for these units are criteria based and consist of:
- Essay, annotated poster, multi-media presentation, empirical research activity (ERA), tests—short answer and extended response.

UNITS 3 AND 4

These units focus on the study of the relationship between the brain and the mind through examining the basis of consciousness, behaviour, cognition and memory. Students discover the mechanisms of learning and the cognitive processes that affect readiness for learning. Students also learn to explore the causes of mental illness, avenues of assistance and factors that promote mental wellbeing.

Assessed Tasks:
Assessment tasks for these units are criteria based and consist of any one, or a combination, of the following:
- Empirical Research Activity (ERA), annotated poster, multi-media presentation, summary and evaluation of data from previous research, tests (multiple choice, short answer and extended response) and folio of research activities.

Unit 3 SAC scores contribute 20%
Unit 4 SAC scores contribute 20%

VCAA ASSESSMENT:
All outcomes in Units 3&4 are examined in an end of year exam. This is worth 60%
SYSTEMS ENGINEERING

Systems Engineering can provide a sound basis for entry into a broad range of tertiary technology courses such as engineering and applied sciences, skilled trades and vocational training, in the electro-technology and automotive sectors or lead to employment in technological enterprises.

UNIT ONE: INTRODUCTION TO MECHANICAL SYSTEMS
The areas of study in this unit include:
1. Fundamentals of mechanical systems
2. Construction of a system that has mechanical components

UNIT TWO: ELECTRO-TECHNOLOGY ENGINEERING FUNDAMENTALS
The areas of study in this unit include:
1. Fundamentals of electrical/electronic systems
2. Construction of a system that includes electrical/electronic components

UNITS 3 AND 4 (INTEGRATED SYSTEMS)
These units involve a study of the principles associated with integrated systems. The focus is on the integration of a mechanical subsystem with an electro-technology subsystem and the design factors to be considered.

One substantial production is to be undertaken across both Units 3 and 4. (50% of the study score)

UNIT 3: INTEGRATED SYSTEMS ENGINEERING AND ENERGY
1. Controlled integrated systems engineering design
2. Clean energy technologies
   (Students also start planning for the construction of their integrated project in Unit 4.)

UNIT 4: SYSTEMS CONTROL AND NEW AND EMERGING TECHNOLOGIES
1. Producing, testing and evaluating an integrated technological system
2. New and emerging technologies

Important Message to all students thinking about undertaking Systems Engineering

A significant part of all Systems Engineering units involves the construction of projects. Students must pay for the components for their project out of their own pocket.

Entry
Students are advised to do at least Units 1 & 2 Systems Engineering if they intend to study Unit 3 and 4 Systems Engineering.
THEATRE STUDIES

UNIT 3: PRODUCTION DEVELOPMENT

This unit focuses on an interpretation of a playscript through the four designated stages of production: planning, production development, production season and production evaluation. Students will focus on two areas of stagecraft.

**Stagecraft includes:** acting, costume, direction, dramaturgy, lighting, make-up, multimedia, properties, promotion (including publicity), set, sound and stage management. Students research and apply acting and other stagecraft to interpret playscripts.

**Areas of Study 1:**

- **Production process:** This area of study focuses on the development of skills which contribute to the interpretation of a playscript. Students develop an understanding of, and refine the skills necessary to contribute to the stages of the theatre production process. Examples include contribution to the production, working in collaboration with others, time management, organization, production management, scheduling and planning.

**Area of Study 2:**

- **Stagecraft influence:** This area of study focuses on the analysis of the use of stagecraft in the playscript developed for production.

**Area of Study 3:**

- **Analysing a play in performance:** This area of study focuses on an analysis of a professional performance of a playscript in a production from the prescribed Theatre Studies Unit 3 Playlist.

UNIT 4: PERFORMANCE INTERPRETATION

In this unit students study a scene and associated monologue from the Theatre Studies performance examination monologue list.

**Stagecraft in this unit includes:** acting, costume, direction, dramaturgy, make-up, multimedia, properties, set and sound.

Note, in this unit stagecraft does not include lighting, stage management or promotion (including publicity).

**Area of Study 1:**

- **Monologue interpretation:** Students interpret a monologue from a playscript selected from the monologue list through the application of acting, stagecraft and other theatrical styles.

**Area of Study 2:**

- **Scene interpretation:** Students prepare a theatrical brief that outlines their interpretation of a scene from the monologue list.

**Area of Study 3:**

- **Performance analysis:** students analyse and evaluate a professional play in performance of a playscript from the prescribed playlist.
PRODUCT DESIGN AND TECHNOLOGY

Students assume the role of a designer-maker. In adopting this role, they acquire and apply knowledge of factors that influence design, address design factors relevant to their own design situation and develop knowledge and the use of resources. These resources include a range of materials, tools, equipment and machines needed to transform these materials in a safe manner into useful three-dimensional functional product, or products, where sustainability is a key component. Central to VCE Product Design and Technology is the Product Design Process which involves the identification of a real need and the development of a Design Folio which includes a design brief, idea generation, research, design option drawings, testing processes and materials, planning and evaluation. Students may complete Units 3&4 without having completed Units 1&2. Students interested in pursuing careers in the building design/construction industries may enjoy this subject.

Unit 1: This unit focuses on the analysis, modification and improvement of a product design. It provides a structured approach towards the design process, and looks at examples of design practice used by a designer, and analysis and evaluation of a design.

Unit 2: In this unit each student works as a member of a team to design and develop a product range or contribute to the design and production of a group product.

Learning Activities: Design, sketch, investigate materials, complete a production book and construct one product per semester.

Key skills required: Research, materials investigation, sketching, drawing, ability to use a range of tools safely, skills in evaluating products.

Assessed tasks: Materials testing, design folio, multimedia presentation, completed quality product and an end of semester examination.

Unit 3 and 4
In these units, students investigate a client or end-user’s needs, prepare a design brief, devise evaluation criteria, carry out research and propose a series of design options. They justify the choice of a preferred design option and develop a work plan, and commence production of the product, which will be completed and evaluated in Unit 4.

Learning Activities: Development of a Design Folio, research, investigating products made in an industrial setting, comparing products, making a quality product and investigation of the consumer market.

Key Skills required: Research skills, ability to use tools and equipment safely, skills in sketching, drawing, exploring ideas.

VCAA Assessment: Product Design and Technology the student’s level of achievement will be determined by school-assessed coursework, a school assessed task and an end-of-year examination. Percentage contributions to the study score in Product Design and Technology are as follows:

- Unit 3 school-assessed coursework: 12 per cent
- Unit 4 school-assessed coursework: 8 per cent.
- School-assessed task: 50 per cent
- End-of-year examination: 30 per cent
# PLANNING MY VCE PROGRAM

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