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Mount Clear College Later Years Pathways

VCE Program Overview

The Victorian Certificate of Education (VCE) comprises a range of studies or subjects. Most studies are made up of four units. A unit usually lasts for one semester (half a year). Units one and two are usually attempted in Year 11 and can be undertaken as single units. Units 3 and 4 are normally attempted in Year 12 and must be undertaken as a two-semester sequence.

What must be studied over two years?
Over the two VCE years most students will complete a total of 22 units from a range of different studies.

The following units are compulsory - each student must study 4 units of English study selected from the following units. They must include at least English or Foundation Units 1 and 2 and at least one Unit 3 and 4 sequence:
- English Units 1 through to 4
- Foundation English Units 1 and 2
- English Language Units 1 through to 4
- Literature Units 1 through to 4
- A minimum of four Unit 3/4 sequences (including your English units)

Satisfactory Completion
To obtain your VCE you must satisfactorily complete a minimum of 16 units including:
- 3 units of English taken from the above list of English subjects, including a Unit 3/4 sequence
- 3 other unit 3 & 4 sequences (6 units in all)

Mount Clear College offers studies which cater for a wide diversity of expectations and pathways. The VCE program of the College is aimed at meeting the different needs of students, whether their chosen post-secondary direction is a University or TAFE College course of study or employment.

The College provides students and parents with extensive assistance with course selection. This is to ensure that the VCE program developed for each student is the most appropriate program that will enable individual needs to be met. The Year 11 and 12 Year Level Coordinators, the senior school Leading Teacher and the Careers Coordinator are always available for extra advice.
**Program Flexibility**

Some very capable students may wish to undertake Unit 3 & 4 studies in their first year of VCE. This is possible as there are no prerequisites in many Unit 3 & 4 sequences. However, Unit 3 & 4 studies require greater maturity and language skills than Unit 1 & 2. Your previous work and discussions with your teachers will determine if you are such a student. Table 1 on page 9 shows which Unit 3 & 4 studies you may attempt. Students entering Year 11 who have not completed Unit 1/2 and wish to undertake a Unit 3/4 sequence must complete an application form available from the Senior School Leading Teacher.

**“Non Scored” Year 12**

There is the opportunity for some students in Year 12 to undertake what is known as a “Non scored Program”. This means that students qualify for their VCE but are not required to complete examinations. They will be required to satisfactorily complete assessment tasks for all studies but they will not receive a score or mark for each task.

These students will not receive an Australian Tertiary Admission Rank (ATAR) score upon completion of Year 12, and so will not be eligible for entry to many tertiary courses. Non scored students may have a different English class to other students if there are sufficient numbers.

**Access to University Subjects**

**Enhancement Studies**

Enhancement studies are conducted by some Victorian Universities in conjunction with secondary colleges, including Mount Clear College, throughout the state. They provide students with the opportunity to study a first year university level subject whilst in Year 12. The subjects count toward a student’s ATAR ranking.

To be eligible students must have completed Units 3 and 4 of the study whilst in Year 11 and have obtained a study score of 41 or better. A score of 41 is a very significant achievement. In some circumstances students may complete the enhancement study and the preparatory (3 and 4) study in the same year, that is in Year 12.

Universities decide who is allowed to attempt an enhancement study. There are different methods of undertaking an enhancement study. How a study is offered to students depends on the number of interested students and where they live. Distance education is another method of course delivery.

There are significant costs associated with enhancement studies. Occasional travel to Melbourne may also be necessary.

The following Enhancement Studies subjects are likely to be available in 2020:

- Accounting
- Australian History and Politics
- Business Studies
- Chemistry
- Communications and Media Studies
- Economics
- Geography
- Information Technology
- Japanese
- Mathematics
- Philosophy

Applications close late 2019.
See the Leading Teacher Senior School for more detailed information on the courses listed above.
What is VCAL?
The Victorian Certificate of Applied Learning (VCAL) is a senior secondary certificate program aimed at students in Years 11 and 12 who are interested in taking up a traineeship, apprenticeship, TAFE studies or employment after completing Year 12. VCAL aims to help students develop knowledge and employability skills that will prepare them for work and for participation in civic society. It is not suited to students who are seeking direct entry to university courses or many professional occupations.

What is Applied Learning?
VCAL provides a ‘hands-on’ learning experience that allows students to demonstrate the achievement of key competencies through project based work and practical applications both at school and within industry settings. VCAL provides students with opportunities to undertake practical work-related experience and to develop literacy, numeracy and personal skills that are directly relevant to work and civic life. Where possible, the development of knowledge and skills is targeted for each student to facilitate pathways to specific industry sectors and/or to further vocational learning.

VCAL Program Structure
Students typically complete a VCAL certificate within one year. To be awarded a certificate, students must complete a minimum of ten units. Students who enrol in VCAL at Mount Clear College will typically complete the following combination of units:

- Literacy
- Numeracy
- Personal Development Skills
- Work Related Skills
- Industry Specific Skills (minimum of 90 nominal hours of accredited VET Modules – see VET & VCAL sections below)
- An opportunity exists for students to access VCE subjects that suit their chosen pathway

Students typically complete these units over 3 contact days per week and spend the remaining 2 days outside the classroom on work placement and/or completing VET modules at school or off-campus at TAFE (the number of contact days is currently under review).

Levels of Award
Students will be awarded a VCAL certificate at one of the following three levels based on their individual learning needs and abilities:

- **Foundation** – students learn under close supervision with a strong emphasis on preparatory literacy and numeracy skills
- **Intermediate** – students begin to work independently and to develop key employability skills
- **Senior** – students work independently and begin to demonstrate decision-making and leadership capabilities (the Senior Level course is typically suited to students in Year 12)

Vocational Education and Training (VET) and VCAL
Students are required to complete a minimum of 90 hours of Vocational Education and Training (VET) studies or a School Based Apprenticeship (SBA) as part of their VCAL certificate. Students can select from the VET modules and certificates offered at Mount Clear College or outside Registered Training Organisations (RTOs).

For more details, please refer to the VET section of the Subject Selection Handbook.
Work Placements and VCAL

It is a Mount Clear College expectation that VCAL students will use at least one of their non-contact days off campus to complete a practical work placement with an external employer. Students are expected to arrange work placements in businesses or industries that will support their personal career goals.

Assessment

There are no written tests or exams in VCAL. Since the VCAL curriculum is competency based and underpinned by hands-on learning, students are assessed using a variety of practical methods and must present a Folio of Evidence.

Who is suited to VCAL?

- Students who have a vocational pathway in mind or are committed to exploring their options through a combination of VET training and practical work placements
- Students who are employable (punctual, organised, hard-working, team players, etc.)
- At a Senior level, students who are capable of developing project management and leadership capabilities

VCAL Prerequisites

1. Entry to VCAL
   Students who enter VCAL other than via Pre-CAL must receive an assessment of “Usually” for all of their Work Habits in their most recent report in order to be enrolled above a Foundation level.

2. Progress between VCAL levels – Foundation to Intermediate and Intermediate to Senior
   As a minimum, students must receive a pass mark for the following core VCAL subjects at their current enrolment level (or their VCE equivalent) before they can progress to the next level of award:
   - Literacy Skills Reading & Writing
   - Literacy Skills Oral Communication
   - Personal Development Skills

Vocational Education and Training (VET)

VET in the VCE or VCAL allows students to include vocational studies within their senior secondary certificate. Students undertake nationally recognised training that contributes to their VCE or VCAL.

VET may contribute to the VCE at the Units 1 and 2 or Units 3 and 4 level, and may also contribute to the Australian Tertiary Admission Rank (ATAR).

VET contributes to the VCAL through satisfying the requirements of the Industry Specific Skills or Work Related Skills strands. Each completed 90-hour block of VET equals one VCAL unit.

Mount Clear College is a Registered Training Organisation (RTO). RTOs are registered to deliver quality-assured and nationally recognised training and qualifications. Mount Clear College (No. 21741) is registered under the Victorian Registration and Qualifications Authority.

Certificates and Statements of Attainment

The RTO is responsible for ensuring students are enrolled in an accredited state or nationally recognised VET course. Most courses are based on Training Packages that are nationally agreed units of competency and qualifications.

Students deemed competent in all units of a training qualification will receive a nationally recognised Certificate. Students deemed competent in some units will receive a nationally recognised Statement of Attainment.

Third Party arrangements

Students will be notified of any training provided by a Third Party.
Group 1: Mount Clear College VET programs
Given sufficient enrolment, the following programs may be offered internally at Mount Clear College and will be blocked as part of the normal timetable. Students need to complete the Subject Selection Form to apply for:

- Building and Construction ($300)*
- Chinese ($30)*
- Hospitality ($300)*
- Music (Performance) ($150)*

Group 2: Mount Clear College Highlands LLEN cluster VET programs
Given sufficient enrolment, the following programs may be offered at Mount Clear College as part of the Ballarat cluster of secondary schools. Students need to apply online and attend an interview for:

- Dance ($210)*
- Music (Sound Production) ($180)*

Group 3: Highlands LLEN cluster VET programs
Given sufficient enrolment, the following are an indication of programs that may be offered at various Ballarat locations as part of the Ballarat cluster of secondary schools. Students need to apply online and attend an interview for:

- Agriculture ($10)*
- Allied Health ($0)*
- Animal Studies ($130)*
- Bricklaying (TBC)
- Automotive ($56)*
- Community Services ($100)*
- Early Childhood Education & Care ($200)*
- Electrotechnology ($180)*
- Engineering ($148)*
- Equine ($200)*
- Fashion Design ($360)*
- Health Services ($150)*
- Horticulture (TBC)
- Information, Digital Media & Technology ($115)*
- Laboratory Skills ($160)*
- Painting & Decorating (TBC)
- Plumbing ($240)*
- Retail Cosmetics ($310)*
- Salon Assistant ($315)*
- Screen & Media ($125)*
- Visual Arts (Photography) (TBC)

Note
As Group 2 and 3 programs may clash with regular VCE and VCAL classes, students need to catch up any missed work.

Work placement, and additional classes, are a compulsory component of some VET programs and may need to be undertaken during school holidays.

Costs
Students are required to pay for the cost of materials but not the cost of tuition. A non-refundable, maximum payment of $70 towards the cost of materials is required by the end of the current school year to secure enrolment.

*2020 material costs for 1st year
Access to VCE Subjects in 2020

Pre-requisites for Units 1 & 2
The following subjects have pre-requisites for entry:

<table>
<thead>
<tr>
<th>Unit 1/2 Subjects</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOTE Japanese</td>
<td>Year 10 LOTE Japanese</td>
</tr>
<tr>
<td>Literature</td>
<td>“Above level” in Year 10 Core English or “At level” in Year 10 Advanced English</td>
</tr>
<tr>
<td>Maths Methods</td>
<td>‘Above level’ in Analytical Maths</td>
</tr>
<tr>
<td>Specialist Maths</td>
<td>‘Above level’ in Analytical Maths</td>
</tr>
</tbody>
</table>

Pre-requisites for Units 3 & 4
The following subjects have pre-requisites for entry:

<table>
<thead>
<tr>
<th>Units 3/4 Subjects</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>Accounting 2</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemistry 2</td>
</tr>
<tr>
<td>Dance</td>
<td>Dance 1&amp;2</td>
</tr>
<tr>
<td>Further Mathematics</td>
<td>General Maths 1&amp;2/ Maths Methods 1&amp;2</td>
</tr>
<tr>
<td>IT – IT Applications</td>
<td>Information Technology 1&amp;2</td>
</tr>
<tr>
<td>IT – Software Development</td>
<td>Information Technology 1&amp;2</td>
</tr>
<tr>
<td>Literature</td>
<td>Literature 2</td>
</tr>
<tr>
<td>LOTE Japanese</td>
<td>LOTE Japanese 1&amp;2</td>
</tr>
<tr>
<td>Maths Methods (CAS)</td>
<td>Maths Methods (CAS) 1 &amp; 2 (required)</td>
</tr>
<tr>
<td>Music Performance</td>
<td>Music Performance 1 &amp; 2</td>
</tr>
<tr>
<td>Physics</td>
<td>Physics 1 &amp; 2</td>
</tr>
<tr>
<td>Specialist Maths</td>
<td>Specialist Maths 1 &amp; 2</td>
</tr>
</tbody>
</table>

Additional costs for some subjects
It is crucial that students and their parents understand some subjects have costs over and above normal textbook, paper, excursions costs etc. If students enrol for any of the following subjects they may incur costs as indicated.

Art/Studio Arts and Visual Communication and Design - students are required to attend Top Arts and/or Top Designs exhibitions in Melbourne and make trips to the Ballarat Fine Art Gallery.

Dance - proper dance footwear and potential dance production attendance are an expectation of the study outcomes - this may involve trips to Melbourne with associated transport and ticketing costs for commercial productions.

Drama - theatre production attendance is part of the study outcomes required for satisfactory completion – this involves trips to Melbourne with associated transport and ticketing costs for commercial productions.

Music - the cost of weekly lessons as well as ticketing costs for commercial music production attendance are an expectation of the study outcomes. Students completing solo VCE may need to pay an accompanist for their performance/s.

Outdoor Education - approximately $260 - $500 per semester for camps, excursions, etc., depending on the unit studied and subject to School Council approval.

Technology Studies - in most technology subjects, because of the complexity and cost of the models required at VCE, the students are generally required to pay some of the cost of the model. This may range from $10 to $90 per semester depending upon the subject and the model(s). All charges are subject to School Council approval.
**VET in VCE Studies** - costs will vary from program to program. All VET Cluster students will be expected to pay a non-refundable enrolment deposit of $70 and a logbook fee of about $30. In addition, any costs associated with the hire of equipment, protective clothing/uniforms, transport costs to and from venues and specialised textbooks will need to be met. VET studies such as Building and Construction studies or Hospitality undertaken at the College also have significant costs associated with them. The costs associated with all VET programs will be provided later in the year. VET programs offered by other schools to our students have considerable costs associated with them. The VET Coordinator, Ms Brisbane, is able to provide approximate costs for each program. All charges are subject to School Council approval.

### School Based Apprenticeships

**What are Part-Time School Based Apprenticeships?**

School Based Apprenticeships (SBAs) have been an option for Mount Clear College students for over five years. It is a fulltime program that integrates education, training and employment and is an opportunity for students to study at school whilst at the same time undertaking government approved and accredited training qualifications as a paid employee. The student enrolls in the Victorian Certificate of Education (VCE) or the Victorian Certificate in Applied Learning (VCAL), undertakes paid employment and completes on-and/or off-the-job training.

SBAs are suited to students who:
- are thinking of obtaining an apprenticeship or traineeship upon completion of secondary school;
- would like to gain an industry qualification as well as their VCE or VCAL;
- want to keep their options open – broadens pathway choices after completing Year 12;
- want to combine paid work, learning (VCE/VCAL) and training in a specific industry (Vocational Education & Training Certificate Program) at the same time;
- want the opportunity to gain two separate nationally recognised certificates at the same time: their industry certificate and VCE or VCAL.

**How long does it take?**

There are a number of options for the student:
- working or completing training two days per week and attending school three days per week;
- working one day per week, one day each weekend and attending school four days per week;
- completing over two years with an average of 15 hours work and training per week. (This is averaged over the term including weekends, school holidays and after school.)

**Sample Program:**

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Term Schedule</strong></td>
<td>VCE / VCAL at school</td>
<td>Paid work and on-the-job training</td>
<td>VCE / VCAL at school</td>
<td>VCE / VCAL at school</td>
</tr>
<tr>
<td><strong>School Holiday Schedule</strong></td>
<td>On holiday</td>
<td>Paid work and on-the-job training</td>
<td>On holiday</td>
<td>On holiday</td>
</tr>
</tbody>
</table>

Steps involved in the Program are:
- the student gains employment as an apprentice or trainee in his/her chosen industry;
- employment and training contracts are signed and registered with an Australian Apprenticeship Centre;
- a Training Plan is developed for the student which incorporates industry training, school and work commitments;
- the program and results of the student’s industry training are entered on the VCAA database;
- the units of competence completed during training are credited to the student’s VCE or VCAL Certificate.
In the Creative & Performing Arts our students are encouraged to be innovative, creative and select units of study which will complement their intended creative career options and add balance to their VCE course of study. The range of studies offered is extensive and allows for a clear, defined pathway from VCE to TAFE and University courses.

In ‘Performing Arts’ our College has continued to develop individual creativity and expression through movement in Dance, Drama and Music. In the ‘Visual Arts’ of Media, Visual Communication and Design, Art and Studio Art the students are exposed to a highly motivating program that develops personal confidence and skills in visual expression through a varied range of media, methods and concepts.

It is important to remember that most TAFE and University courses in this area have special requirements - eg. an interview, folios, etc. Ensure you check out any special requirements with the Careers Teacher before selecting a VCE course of study to ensure you are fully prepared for admission to these courses.

The difference between Art and Studio
The practice of Studio Art is more prescribed, as a statement of intention/exploration proposal. This statement forms the direction for the study from the onset. A design process is set and then adhered to. The exploration proposal requires students to state ideas, directions and working methods. Through an intensive investigation, students are also required to provide written and visual documentation. The student must demonstrate a thorough understanding of the nature of one selected art form to create final art works. In this study students must produce what has been stated. The theory component is aimed at interpretation of art practices historically and culturally throughout time, as well as art industry issues and professional art practices.

Whereas: Art is more an artistic journey of discovery. Students are required to nominate a starting point or idea for investigation and then begin to record all thinking and working practices as they continue to work progressively and sequentially through exploration, development and refinement of a variety of methods that eventually builds into a body of work that has multiple starting points. The theory component is aimed at the interpretation of artworks using selected Analytical Frameworks such as Formal, Personal, Cultural and Contemporary.

Pathways you can follow after VCE

<table>
<thead>
<tr>
<th>TAFE</th>
<th>University</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificates &amp; Diplomas in Visual Arts Graphic Design Photography Performing Arts etc.</td>
<td>Bachelor Degrees in Performing Arts Drama Arts/Media Visual Arts Graphic Design</td>
<td>Limited opportunities exist for all students directly from VCE. See the Careers Teacher about Traineeships and Apprenticeships.</td>
</tr>
</tbody>
</table>
Overview:
Art is a fundamental part of people’s lives. It continues to be a potent and dynamic means through which to communicate in contemporary society. In the study of VCE Art, theory and investigation of artists from past and contemporary times informs art making. Through the study of artworks and the role of artists in society, students develop their own artistic practice, expression and communication of ideas using a range of processes, materials and techniques. This study provides students with a sound foundation that supports an awareness of art as a tool for personal and cultural communication and expression.

Units 1 & 2
In Unit 1 and 2 Art, students explore a broad range of materials and techniques with a focus on finding a way to express personal interests and ideas. They will learn to analyse and interpret artworks from past and present using Analytical Frameworks in short and extended writing responses. Students will learn to use visual language to document artistic practice in a visual diary and they will produce final artworks using the art process. This study is both teacher directed and student led with increasing independence through the year.

Assessment activities:
• Analysis and interpretation of various artworks using the Structural, Personal, Cultural and Contemporary Frameworks
• Documentation of all artistic practice in a visual diary
• Production of final artworks

Units 3 & 4
In Unit 3 and 4 Art, students apply imagination and creativity to develop their ideas through the art process with independence. They use a visual diary to document ongoing exploration, experimentation, reflection, analysis and evaluation as they progressively develop and refine their ideas. The Analytical Frameworks are used to analyse and reflect on their own practise and in the study of a range of artists work from different cultural and historical backgrounds. Students produce final artworks in Unit 3 and in Unit 4.

Assessment activities:
• Interpreting Art
• Art process and final artworks (50% of study score)
• Discussing Art
• End of year examination (30% of study score)

Selection advice:
This subject is best suited to those that have a strong interest in the visual arts, art history and self-expression. There is a balance between the practical component and the theoretical component.

Unit 1 or 2 Art are recommended for entry into Unit 3/4 Art. Students must successfully complete Unit 3 prior to undertaking Unit 4.

If a student plans to do more than one folio subject, consultation must occur with the subject Teachers, Year Level Coordinators and Assistant Principal.

Links to further pathways:
This subject can lead to further study in VCE Art, and other related tertiary courses, or the following occupations: Arts Administrator, Artist, Jeweller, Museum Technician, Painter & Decorator, Sign Writer, Stage Designer, Industrial Designer. Students may also enrol in this subject to build their artistic skills and knowledge as an area of personal interest.
Overview:
VCE Studio Arts introduces students to the role and practices of artists in society. Students develop an understanding of the way artists work in a range of cultures and periods of time, the artists’ perceptions, beliefs and actions and their relationship with the viewer. Student research focuses on critical, reflective and creative thinking, the visual analysis of artworks and the investigation of how artists have interpreted sources of inspiration and influences in their art making. Students examine how artists develop their practice and have used materials, techniques and processes to create aesthetic qualities in artworks. They study how artists have developed style and explored their cultural identity in their artwork. Students use this knowledge to inform their own studio practice and to support art making.

Visiting a variety of art exhibition spaces is integral to the student’s artistic and creative development. Students also consider the ways in which artists work to develop and resolve artworks, including their use of inspiration and their creative process. The role of artists in society includes their relationships with others in the art industry and the presentation and exhibition of artworks in art galleries and exhibition spaces. Students research aspects of the art industry including the presentation, conservation and marketing of artworks.

Units 1 & 2
Assessment activities:
- Researching and recording ideas
- Studio practice
- Interpreting art ideas and use of materials and techniques
- Exploration of studio practice and development of artworks
- Ideas and styles in artworks

Units 3 & 4
Assessment activities:
- Exploration proposal
- Studio process
- Artists and studio practices
- Production and presentation of artworks
- Evaluation
- Art industry contexts

Selection advice:
This subject is best suited to those that have a strong interest in the Visual Arts. There is a balance between the practical component and the theoretical component.

Unit 1 or 2 Studio Arts are recommended for entry into Unit 3/4 Studio Arts.

If a student plans to do more than one folio subject, consultation must occur with the subject Teachers, Year Level Coordinators and Assistant Principal.

Links to further pathways:
This subject can lead to further study Visual Arts, Fine Arts and Graphic Design at a tertiary level, or the following occupations: Arts Administrator, Artist, Jeweller, Museum Technician, Painter & Decorator, Sign Writer, Stage Designer, Industrial Designer. Students may also enrol in this subject to build their artistic skills and knowledge as an area of personal interest.
Dance

Overview:
Dance is the language of movement. It is the realisation of the body’s potential as an instrument of expression. Throughout history and in different cultures, people have explored the dancer’s ability to communicate and give expression to social and personal experience. The study of dance provides the opportunity to explore the potential of movement as a medium of creative expression through practical and theoretical approaches.

Unit 1
In this unit students explore the potential of the body as an instrument of expression. They learn about and develop physical skills. Students discover the diversity of expressive movement by exploring body actions and commence the process of developing a personal movement vocabulary. They also begin to develop skills in documenting and analysing movement and develop understanding of how choreographers use these processes.

Unit 2
This unit focuses on expanding students’ personal movement vocabulary and choreographic skills through the exploration of the elements of movement: time, space and energy and the study of form. Students apply their understanding of form and the expressive capacity of the elements of movement to the dance-making and performing processes involved in choreographing and performing their own dance works and dance works created by others. Students are also introduced to dance traditions, styles and works.

Unit 3
This unit focuses on choreography, rehearsal and performance of a solo dance work and involves the execution of a diverse range of body actions and use of performance skills. Students also learn a group dance work created by another choreographer. Students analyse the dance design and use of movement vocabulary of selected works, as well as consider influences on the choreographers’ choice of expressive intention, and production aspects of the dance works. These dance works are selected from the Prescribed list of solo works Units 3.

Unit 4
This unit focuses on choreography, rehearsal and performance of a unified solo dance work. When rehearsing and performing this work, students focus on expressive and accurate execution of choreographic variations of spatial organisation and demonstration of artistry in performance.

Students’ understanding of choreographic skills is also developed and refined through an analysis of ways in which the choreographers’ intention can be expressed through the manipulation of different types of group structures. These dance works are selected from the Prescribed list of group works Units 4.

Assessment activities:
- Analysis of choreography
- Choreograph and perform solo/group dance works
- Describe and demonstrate safe dance moves and dancers’ physiology
- Written/oral reports

Selection advice:
This subject would suit students who enjoy dance as well as choreographing dance routines. Students will need to work independently on solo work as well as be effective team members in group work.

Links to Further Pathways:
VCE Dance could lead to tertiary pathways in Performing Arts and is also a great way to build dance and choreography skills for students who have a personal interest in this subject area.
Media

Overview:
Media and mass communication plays a significant part in the way people spend their time, help shape the way they perceive themselves and others, and plays a crucial role in the creation of personal, social, cultural and national identity. The study of Media includes the following forms of audio-visual media, print-based media and digital media technologies.

Units 1 & 2
In Unit 1 and 2 Media, students explore codes and conventions and representations in film, TV, advertisements and posters. They will produce two media productions that go through the five stages of production development. Students will also explore and analyse the effect of different forms of media on society.

Assessment activities:
- Exploration and analysis of representations
- Exploration and analysis of codes and conventions
- Media productions
- Exploration and analysis of media practitioners

Units 3 & 4
In Unit 3 and 4 Media, students explore codes and conventions of narrative and ideology. They will produce a media production design plan that will be realised in Unit 4. Students will also explore the media industry and its influence upon audience and society.

Assessment activities:
- Exploration and analysis of narrative and ideology (10% of study score)
- Media production development, design, plan, product (40% of study score)
- Agency and control in the media (10% of study score)
- End of year examination (40% of study score)

Selection advice:
This subject is best suited to students who have a strong interest in the consumption and production of media such as films, television, news and social media. There is a balance between the practical component and the theoretical component.

Unit 1 or 2 Media are recommended for entry into Unit 3/4 Media. If a student plans to do more than one folio subject, consultation must occur with the subject Teachers, Year Level Coordinators and Assistant Principal.

Links to further pathways:
This subject can lead to further study in Media Arts, Journalism or Digital Media at a tertiary level.

Music Performance

Overview:
This study develops intellectual, aesthetic and cultural understanding of the value and importance of music in solo and group settings. As soloists and members of ensembles, students develop skills in preparing short programs of musical works, apply theory and aural elements of music, and utilise their interpretation and analysis skills to create great works of art.

Students wishing to complete any unit of VCE Music Performance are required to undertake ongoing instrumental or voice lessons. Students are unlikely to achieve success in the subject without them.
Unit 1
This unit focuses on students having the necessary practical and theoretical skills to create a short musical program. Students present solo and group works, demonstrate the technical skills required to play their instruments, demonstrate good practice and musical exercise routines, demonstrate a sound understanding of Music Theory and develop their aural skills.

Unit 2
This unit continues to focus on the topics covered in Unit 1 with more emphasis being placed on composition. Students will compose songs for a specific age group of children and will then perform these works for the same demographic. A short musical program, analysis, theory and aural tasks are also included.

Unit 3
This unit focuses on students preparing good performance skills in anticipation of their final recital. Students will further their knowledge of music theory with greater emphasis on aural skills. Analysis of a range of musical genres will also drive the students' work.

Unit 4
This unit continues to focus on the students' final recital which is externally assessed and composes 50% of their final mark for the subject. Students continue to refine their aural and analysis skills in anticipation of the final written exam which equates to 30% of their final mark. Effective practice skills and techniques are also looked at by the students.

Assessment activities:
- Prepare and perform a program of group and solo works
- Demonstrate and discuss techniques relevant to performance
- Identify, re-create, extend and notate music language components and short phrases, and describe ways elements of music may be interpreted
- Devise a composition or an improvisation that uses music language
- End-of-year performance examination and an end-of-year aural and written examination

Selection advice:
It is strongly suggested that students have successfully completed Year 10 Music or equivalent before embarking on any Unit of VCE Music Performance. Please note that the performance examination is a key component of assessment for this course.

Links to further pathways:
VCE Music Performance provides an excellent foundation for tertiary pathways in Performing Arts and would also be suitable for students who simply have a keen interest in this subject area.

Certificate III in Music Performance

See VET programs

Drama

Overview
This study focuses on the creation and performance of characters, narratives and stories. Students analyse the development of their performances and explore the actor–audience relationship. They view and analyse performances by professional theatre companies.

The study of drama provides students with pathways to further studies in fields such as acting, direction, playwriting, production design, production management and studies in drama criticism.
Unit 1: Dramatic Storytelling
This unit focuses on creating, presenting and analysing a devised performance. Students manipulate expressive skills in the creation and presentation of characters. They develop awareness and understanding of how characters are portrayed in naturalistic and non-naturalistic performance styles. This unit also involves analysis of a student’s own performance work and analysis of a performance by a professional theatre group.

Unit 2: Creating Australian Drama
This unit focuses on the differing perspectives and interpretations that drama can give to play scripts and stimulus material from a range of cultures. It explores the application of dramatic elements and stagecraft and the development of expressive skills in the student’s own work.

Unit 3: Ensemble Performance
Non-naturalistic performance styles and associated theatrical conventions are explored in the development of an ensemble performance. Students are assessed on this performance and their evaluation of the processes undertaken throughout the creation and performance. A professional performance will be analysed.

Unit 4: Solo Performance
A prescribed stimulus is used to create and develop character/s within two solo performances, one of which is examined externally. The processes used in this development are analysed and evaluated externally.

Assessment activities:
- Devise and document solo and/or ensemble drama works
- Perform devised drama works to an audience
- Analyse drama works
- Written analyses, oral presentations and short answer questions
- End of year performance examination

Selection advice:
This subject would suit students who enjoy drama as well as devising drama works and developing characters. Students will need to work independently on solo work as well as be effective team members in group work.

Links to further pathways:
VCE Drama could lead to tertiary pathways in Performing Arts and is also a great way to build acting and improvisation skills for students who have a personal interest in this subject area.

Visual Communication and Design
Overview:
The Visual Communication Design study examines the way visual language can be used to convey ideas, information and messages in the fields of communication, environmental and industrial design. Designers create and communicate through visual means to influence everyday life for individuals, communities and societies. Visual communication design relies on drawing as the primary component of visual language to support the conception and visualisation of ideas. Consequently, the study emphasises the importance of developing a variety of drawing skills to visualise thinking and to present potential solutions.

Units 1 & 2
In Unit 1, students are introduced to four stages of the design process: research, generation of ideas, the development of concepts and refinement of visual communications. Unit 2 focuses on the application of visual communication design knowledge, design thinking and drawing methods to create visual communications to meet specific purposes in designated design fields.
Assessment activities:
- Drawing as a means of communication
- Exploration of design elements and design principles
- Visual communications in context – Analysis task
- Digital and manual drawing methods.

Units 3 & 4
In Unit 3 students gain an understanding of the process designers employ to structure their thinking and communicate ideas with clients, target audiences, other designers and specialists. Through practical investigation and analysis of existing visual communications, students gain insight into how the selection of methods, media and materials, and the application of design elements and design principles, can create effective visual communications for specific audiences and purposes. They investigate and experiment with the use of manual and digital methods, media and materials to make informed decisions when selecting suitable approaches for the development of their own design ideas and concepts.

In Unit 4 the focus of this unit is on the development of design concepts and two final presentations of visual communications to meet the requirements of the brief. This involves applying the design process twice to meet each of the stated communication needs.

Assessment activities:
- Analysis and practice in context
- Design Industry Practice
- Design Brief, development, refinement and evaluation, design, final presentations
- End of year examination

Selection advice:
This subject is best suited to those that have a strong interest in design, advertising, logo and poster design, architecture, interior design, product design, digital and manual drawing.

Unit 1 or 2 Visual Communication are recommended for entry in to Unit 3/4 Visual Communication. If a student plans to do more than one folio subject, consultation must occur with the subject Teachers, Year Level Coordinators and Assistant Principal.
Business Studies

Subjects offered at Mount Clear College include Accounting, Business Management and Legal Studies.

In these subjects, students:

- investigate relevant content - eg current economic issues
- develop management and enterprise knowledge and skills - eg students manage a school based enterprise
- develop essential life-skills - eg financial management skills
- focus on contemporary issues - eg employment
- apply decision-making strategies and business procedures and practices
- provide a very useful background for a wide variety of careers
- develop the skills considered to be essential for entry into the working world and tertiary courses
- collect, analyse and organise information
- communicate ideas and information
- plan and organise activities
- work with others and in teams
- use mathematical ideas and techniques
- solve problems
- use technology
- undertake legal studies

There are many tertiary courses which draw on knowledge of the legal system. For example: commerce, business administration, nursing, science and computer courses all include subjects which focus on aspects of law. VCE Legal Studies is not just for students who are looking for a career in law. Knowledge and skills developed can be applied to many areas. Legal Studies develops your knowledge of basic legal rights and obligations and focuses on the development of justice and the responsibility of citizens.

Accounting

Overview:
This subject focuses on the procedures of accounting and finance and the way in which these may be used. The study examines the processes of recording and reporting financial information to provide users with appropriate information for planning, control and effective decision-making.

Units 1 & 2
Unit 1: Role of accounting in business (AC011)
This unit focuses on the establishment of a small business, including various available sources of finance as well as determining the success or failure of a business. It also examines the recording of financial data and the reporting and analysing of financial information from owners, managers, accountants as well as other various users. The focus of unit one is cash accounting.

Unit 2: Accounting and decision-making for a trading business (AC022)
This unit continues to focus on developing the students understanding of the accounting process associated with operating a business. They examine stock (inventory), accounts receivable and payable as well as non-current assets. Students also analyse and evaluate businesses from these standpoints.

Assessment activities:
- Small business study
- Recording and reporting of financial data
- Recording and reporting, bank reconciliations and cash budgeting
- Evaluation of business performance
- ICT in Accounting
- Recording and reporting of financial data
- End of unit exams
Selection advice:
Students need to be competent from both a Literacy and Numeracy standpoint as there is a significant amount of key vocabulary and knowledge that needs to be understood. Skills in areas like fractions and percentages are prevalent throughout the recording and reporting parts of the unit as well. Students must also be prepared to utilise ICT to support their learning. For example, have some understanding of Microsoft Excel.

Links to Further Pathways:
Accounting provides an excellent background for employment in a range of business and management positions. It can also be useful for students who are likely to run their own small business. Accounting can provide the basis for a career in some of the high growth areas of employment including finance, property, business services, recreational and personal services.

Accounting Units 3 & 4
Unit 3: Financial accounting for a trading business
Unit 3 and 4 are designed to be completed as a sequence. Unit 3 focuses on financial accounting for a trading business. By the end of this unit, students can use a double entry accounting system to record and report financial information under the accrual basis of accounting. Students develop their understanding of the accounting processes and consider the effect of decisions made on the performance of the business.

Unit 4: Recording, reporting, budgeting and decision-making
In Unit 4, students extend their understanding of the recording and reporting process with the inclusion of balance day adjustments. They can analyse and interpret accounting information to prepare budgets, to help decision-makings and to evaluate the performance of a business.

Unit 3 and 4 Assessment
School-assessed coursework and examination
Unit 3 school-assessed coursework (25%):
- Structured questions (manual and ICT based): record data using a double entry system in General Journal, General Ledger and Inventory Cards, including ethical considerations.
- A case study (manual and ICT based): record transactions and prepare, interpret and analyse accounting reports for a trading business.

Unit 4 school-assessed coursework (25%):
- Folio of exercises (manual and ICT based): record financial data and balance day adjustments using a double entry system, report accounting information using an accrual-based system.
- Structured questions (manual and ICT based): prepare budgeted accounting reports and variance reports for a trading business.

End of year examination (50%)

Links to Further Pathways
This course will provide access to most tertiary commerce courses. This allows students to follow many career paths including, but not limited to:
- Corporation and taxation accountant
- teaching
- National business
- International business
**Business Management**

**Business Management Units 1 & 2**

**Unit 1 - Planning a Business**
Students investigate how business ideas are created and how conditions can be fostered for new business ideas to emerge. What makes a successful business owner? How do businesses become successful? What motivates people to enter into business? How are businesses affected by technological development and globalisation? How do customers and competitors influence the decisions made by businesses?

**Unit 2 - Establishing a Business**
Students investigate the establishment phase of a business’s life. What legal requirements must businesses abide by? How can one effectively market their business? What is the best way to manage the finances of the business? What methods can be used to recruit highly effective staff?

**Assessment activities:**
Throughout the year students will research businesses of their choice, interview business owners and respond to a series of structured questions. Tasks are designed to prepare students with the knowledge and understanding to succeed in Units 3 and 4.

**Selection advice:**
This subject is suited for students who are interested in reading, discussing and learning about the operations of business.

**Links to further pathways:**
This subject enables students to undertake a variety of tertiary courses. For those not wanting to pursue further studies it allows them to improve their awareness and understanding of how business’ work from various points of view – manager, employee, customer, community member.

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**Business Management Units 3 & 4**

**Unit 3 - Corporate Management:**
Students will examine large and small businesses and how managers may use different styles and skills to manage their staff. Do businesses behave responsibly? Do managers always do the right thing by their staff and customers? What happens when workers go on strike? How do businesses set up to provide high quality goods and services?

**Unit 4 - Managing People and Change:**
Students look at how managers and employees cope when change is introduced to their business. How are Australian businesses affected by globalisation and the need to be socially and environmentally responsible?

**Assessment activities:**
A series of short tasks of structured questions conducted throughout the year. Tasks are based on the types of questions students will face in the end of year exam.

**Selection advice:**
This subject suits students who are interested in reading about and discussing business (small and large). Entering the workforce as a business owner or employee will require some understanding of the various types of business and what it takes to be successful. You will learn how to develop good relationships with staff, employees and customers. Investigation of the importance of behaving ethically with regard to how you treat people and the environment is also examined. Therefore students will need sound literacy skills.

**Links to further pathways:**
This subject enables students to undertake a variety of tertiary courses. For those not wanting to pursue further studies it allows them to improve their awareness and understanding of how business’ work from various points of view – manager, employee, customer, community member.
Legal Studies

Legal Studies Units 1 & 2
Unit 1 - Guilt and Liability
Students develop the knowledge of Criminal and Civil Law and apply this to hypothetical and real cases presented to them. Also covered is the developing of an understanding of legal foundations, such as the different types and sources of law and the existence of a court hierarchy in Victoria. Students will also develop an appreciation of the way in which legal principles and information are used in making reasoned judgments and conclusions about the culpability of an accused, and the liability of a party in a civil dispute.

Unit 2 - Sanctions, Remedies and Rights
This unit focuses on the enforcement of criminal law and civil law, the methods and institutions that may be used to determine a criminal case or resolve a civil dispute, and the purposes and types of sanctions and remedies and their effectiveness.

Assessment activities:
Assessment is in the form of tests and case studies.

Selection advice:
This subject suits students interested in reading about and discussing everyday issues such as dealing with the police and courts, how to solve consumer complaints with traders, victim’s rights and whether you should sue to get compensation when problems occur. It also involves investigating how politicians are elected and how they are able to make new laws on our behalf. Reading and discussing media reports on a variety of criminal and civil cases is an important aspect of this subject.

Links to further pathways:
This subject enables students to undertake a variety of tertiary courses. For those not wanting to pursue further studies it allows students to improve their awareness and understanding of what is happening in our community with regard to legal and political issues i.e things that affect us on a daily basis.

Legal Studies Units 3 & 4
Unit 3 - Rights and Justice
In this unit students will examine criminal and civil law processes and procedures, the courts, VCAT, people’s rights, victims, bail and juries. They will discuss contemporary cases and make judgements as to whether people are treated fairly and equally. They examine the system to see if all members of the community are able to get their legal problems resolved. Reforms to make our legal system better are investigated.

Unit 4 - People and the Law
In this unit students study parliament, the courts, the Victorian Law Reform Commission, referenda and the Australian Constitution. They examine how Australians are protected by the law and how we can be involved in changing the law to meet our changing needs.

Assessment activities:
A series of short tasks of structured questions conducted throughout the year. Tasks are based on the types of questions students will face in the end of year exam.

Selection advice:
This subject suits students interested in reading about and discussing everyday issues such as dealing with the police and courts, how to solve consumer complaints with traders, victim’s rights and whether you should sue to get compensation when problems occur. It also involves investigating how politicians are elected and how they are able to make new laws on our behalf. Reading and discussing media reports on a variety of criminal and civil cases is an important aspect of this subject.
Links to further pathways:
This subject enables students to undertake a variety of tertiary courses. For those not wanting to pursue further studies. It allows students to improve their awareness and understanding of what is happening in our community with regard to legal and political issues, i.e. things that affect us on a daily basis.
The study of English promotes effective participation in Australian society through understanding the various uses of the English language and to employ them effectively for a range of purposes. It focuses on the enjoyment and appreciation of reading that arises from discussion, debate and the challenge of exploring the meanings of literary texts. Students reflect on their interpretations and those of others. The study of English sees language as central to human life. Learning about language helps us to understand ourselves and the world in which we live.

English is a compulsory subject for all students at VCE level and forms part of the ‘top four’ subjects that make up the majority of an ATAR score for selection into a tertiary institution.

To ensure our students build effective communication skills, particularly writing skills, across all subject areas, Units 1 and 2 English are compulsory studies prior to undertaking a 3/4 sequence in the English group (ie. English, English Language or Literature). Students who have an interest in this area are encouraged to undertake more than one VCE English group subject.

Most common Year 10 English into VCE pathways

Year 10

Year 10 English

Year 11

VCAL Literacy
See the VCAL section for more details.

Unit 1 & 2
Foundation English

Unit 1 & 2 English
This is Compulsory

Unit 1 & 2 Literature
If you achieved above level or higher in Core English you may also choose to complete Units 1/2 English Literature.

Unit 1 and 2 Language
You may also choose to complete Unit 1 and 2 English Language.

Year 12

VCAL Literacy

Unit 3 and 4 English

Unit 3 and 4 English

Unit 3 & 4 Literature
Prerequisite: Unit 2 Literature

Unit 3 and 4 Language
It is recommended that students have complete Unit 1 and 2 of Language first.
Overview:
This subject focuses on developing a student’s literacy skills and builds on the key communication skills and knowledge addressed in Years 7 to 10. Students will develop their creative and analytical skills in writing, speaking and reading. The areas of study covered include text response, creative writing, language analysis, persuasive writing and oral presentations. Many of these skills will transfer to other VCE subject areas.

English Unit 1
This unit focuses on reading and creating texts and analysing and presenting arguments. Students will read and analyse two set texts. They will draw on characters, voice, style, settings, events, themes and/or ideas from a text in their own creative writing, as well as explore these elements in an analytical manner. Students will identify how arguments and language can be used to position an audience to respond in a particular way to an issue and then plan, write and present a persuasive speech to an audience.

English Unit 2
This unit focuses on developing student’s ability to compare and analyse argument, language and texts. Students will analyse and compare two set texts. They will also compare how written and visual language and arguments are used to position an audience and write about their own point of view on a current issue in the media.

Assessment Activities:
- Coursework-based assignment on each of the Areas of Study
- Text response essays
- Language analysis essays
- Creative writing
- Persuasive writing
- Oral presentation
- Written exams

English Unit 3
In Unit 3 students will read two set texts and complete a creative writing and an analytical essay. Students also utilise their skills at comparative analysis to complete an analysis essay that looks at how language and argument are used, in two or more texts, to position an audience. At the end of Unit 3 students complete a 2-hour exam and will receive feedback from external assessors.

English Unit 4
This unit focuses on comparative text analysis and presenting a point of view. Students spend majority of Unit 4 reading, discussing, analysing and comparing two set texts. In 2020 these will be the novel ‘The Year of Wonders’ and Arthur Miller’s play, ‘The Crucible’. Students will also research, plan, write and present a persuasive oral presentation on their chosen topic. This will be presented to a moderating panel that includes at least two senior English teachers. All students will complete a 3-hour practice exam during the Term 3 holidays and receive feedback from external assessors on their exam.

Assessment activities:
Unit 3
- Creative piece of writing drawing on ideas from a selected text
- Text response essay on a selected text
- Comparative language analysis essay on two or more texts

Unit 4
- Comparative text response essay on two selected texts
- Point of view oral presentation
- Three-hour exam (50% of the overall study score)
Selection advice:
Students require competent literacy skills as there is a considerable amount of reading, writing and knowledge that needs to be understood. They will need to be able to independently read texts such as novels, plays and news articles as well as complete extended pieces of writing, such as essays. Skills in areas like notetaking, marking of texts, independent research and planning and editing work are essential. Students will be expected to participate in class discussion and activities, complete knowledge tests for all set texts, annotate set texts and complete coursework-based assignments for each Area of Study. Students must be able utilise ICT to support their learning.

To ensure our students build effective communication skills, particularly writing skills, across all subject areas, Units 1 and 2 English are compulsory studies prior to undertaking a 3/4 sequence in the English group (ie. English, English Language or Literature).

Links to further pathways:
The skills and knowledge in VCE English carry over to the other VCE subject areas. They develop students’ ability to critically analyse and communicate ideas and opinions effectively in the workplace, at a tertiary level and as members of society.

English Language
Overview:
This study aims to combine learning about the nature of language in human thought and communication, with learning how to use English more effectively and creatively. It is informed by the discipline of linguistics and integrates a systematic exploration of the nature of the English Language. Students develop skills in the description and analysis of a diverse range of spoken and written English texts.

English Language Units 1 & 2
Unit 1: What language is and how children learn language.
Unit 2: The history of English and English varieties around the world.

Assessment activities:
• Grammar test and essay on how human language is unique
• PowerPoint presentation on how children learn language
• Timeline of the major events that influenced the development of English
• Folio of texts introducing an English variety
• Essay on language variation around the world
• Unit exams

English Language Units 3 & 4
Unit 3: Informal and formal language features.
Unit 4: How language variation reflects individual and group identity.

Assessment activities:
• Analysis of informal features in a written or spoken text
• Analysis of formal features in a written or spoken text and an essay on how language can influence attitudes
• Investigative report on ethnolects
• Folio of annotated texts showing how language and identity are related
• End of unit examinations

Selection advice:
This is a specialised English subject that would complement the skills taught in the core English course. Students who have a particular interest in the workings of the English language would enjoy this study.
Students need to be competent in identifying grammatical terms, writing language analyses and essays. Skills in areas like English for expression and analysis are useful. Students must also be prepared to read widely and take note of current trends in language in society.

**Links to further pathways:**
English Language would provide an introduction to a possible Linguistics or language studies at a tertiary level.

### Foundation English

**Overview**
This subject is an opportunity for students to develop their literacy skills before proceeding to Unit 3 and 4. The course allows students to improve their skills in comprehending and responding to a variety of texts, and to enhance their communication skills. Foundation English may also be suited to students who need additional time and assistance to strengthen and refine their literacy skills to support their study in VCE English.

**Selection Advice for Unit 1 and 2 English**
Students who have experienced difficulty with the literacy components of Year 10 English may consider completing Foundation English. The pathways once Unit 1 and 2 Foundation English are completed are
- Unit 1 and 2 English
- Unit 3 and 4 English
- VCAL Literacy at Intermediate or Senior level.

Students need to be competent from a Literacy standpoint as there is a considerable amount of reading, writing and knowledge that needs to be understood. Students need to demonstrate some ability to independently read texts such as novels, plays and news articles as well as complete extended pieces of writing. Skills in areas like notetaking, marking of texts, independent research and planning and editing work will be developed. Students will be expected to participate in class discussion and activities, read set texts and complete coursework-based assignments for each Area of Study. Students must be able utilise ICT to support their learning.

#### Unit 1:
In this unit, students focus on developing language and communication skills, primarily through the study of a variety of texts. They develop communication skills in order to listen, speak, read and write effectively in academic, workplace and social contexts. Students utilise a range of reading and viewing strategies to encourage the understanding and appreciation of both literary and non-literary texts.

**Assessment**
Students are expected to complete a coursework-based assignment on each of the Areas of Study. Assessments may include:
- a written response to the ideas and issues raised within a text
- summaries of specific elements of a text
- a piece of informative writing
- a point of view oral presentation
- a Unit exam

#### Unit 2:
In this unit students develop a range of literacy skills and learning strategies. They extend the understandings and processes required to read and write effectively. Students employ learning strategies designed to enhance their achievement in and enjoyment of the English language.

**Assessment**
Students are expected to complete a coursework-based assignment on each of the Areas of Study. Assessments may include:
Written comparative analysis on two selected texts
- Creative response to a literary text
- A piece of argumentative writing
- Oral presentation on a selected local, national or global issue
- Unit Exam

NOTE: There are no Unit 3 + 4 Foundation English classes offered as part of VCE. However, students who study Foundation English may choose to do a Non-Scored Year 12 course in the following year.

**Literature**

**Overview:**
In VCE Literature students will read deeply, widely and critically, respond analytically and creatively, and appreciate the aesthetic merit of texts. The texts selected for study are drawn from the past through to the present, and vary in form and social and cultural contexts.

**Literature Unit 1**
Approaches to literature – students analyse the features and conventions of texts and respond critically, creatively and reflectively to the ideas and concerns of texts, gaining insights into texts as representations of human experience.

**Literature Unit 2**
Context and connections – 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.

**Literature Unit 3**
Form and transformation - Students consider how the form of a text affects meaning and how writers construct their texts. They investigate ways writers adapt and transform texts and how meaning is affected as texts are adapted and transformed.

**Literature Unit 4**
Interpreting texts -Students develop critical and analytic responses to texts. They consider the context of their responses to texts as well as the ideas explored in the texts, the style of the language and points of view. They investigate literary criticism informing both the reading and writing of texts.

**Assessment activities:**
- Close analysis of texts
- Analysis and comparison of passages from texts (passage responses)
- Creative responses
- Oral presentations
- Comparative essays
- Written interpretations drawing on literary criticism

**Selection advice:**
This is a specialised English subject that would complement the skills taught in the core English course. Students who have a particular interest in a variety of forms and genres of English literature would enjoy this study. It is recommended to students who have a high level of literacy and enjoy reading, discussing and writing about literature. It would suit students who enjoy both analytical and creative tasks.

Please note that an achievement of “Above level” in Year 10 core English, or an “At level” in Year 10 Advanced English, are pre-requisites for entry into VCE Literature.

Furthermore, Units 1 & 2 Literature are pre-requisites for Units 3 & 4 Literature.
Links to further pathways:
Literature provides a foundation for tertiary level literary studies. It may lead to career pathways such as writing, editing, publishing, journalism or librarianship. It would also suit students who have a personal interest in this area and would like to share their ideas and expand on them in discussion with others.
Head in the right direction and do a subject that opens up opportunities and gives you more flexibility in the future.

The skills of Humanities are highly regarded in the workplace and in further study. These include:

- research skills
- analysis
- written and oral presentation skills
- inter-personal skills
- report writing skills
- judgement of sources
- problem solving
- teamwork

**Why you should consider Humanities units in your VCE:**
Prepare yourself for the 21st century. Look for a broader education. People will work in a number of occupations during their lifetime and you need to be prepared to be flexible. Specific job skills quickly become obsolete. Acquire skills that are transferable to a number of jobs and training courses. Humanities subjects promote flexible and adaptable habits of thinking and learning. The capacity to acquire new skills, to change direction and to exercise critical, independent judgement - these are the capacities that will be required in the 21st century.

Employers consistently place communication and general thinking skills as high priorities in their selection criteria for new staff.

Humanities are an important part of your general education. The problems we face in the world relate to our inability to accept differences, learn from history and have a more humanitarian approach to life. A Humanities subject helps to provide skills and information for you to understand and participate in the world you live in.

**Geography**

**Overview:**
This study focuses on the geography of place and change. Geographers investigate the changing patterns of place using a range of geographical resources and skills. They observe, describe, explain and analyse patterns of phenomena that affect places at or near the surface of the Earth.

**Unit 1: Hazards and disasters**
In this unit students undertake an overview of hazards before investigating two contrasting types of hazards and the responses to them by people.

**Unit 2: Tourism**
In this unit students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed, and continues to change, and its impacts on people, places and environment.

**Unit 3: Changing the land**
This unit focuses on two investigations of geographical change: change to land cover and change to land use. Land cover includes biomes such as forest, grassland, tundra and wetlands, as well as land covered by ice and water.

**Unit 4: Human population – trends and issues**
In this unit students investigate the geography of human populations. They explore the patterns of population change, movement and distribution, and how governments, organisations and individuals have responded to those changes in different parts of the world.
Selection advice:
Geography would suit students who are interested in learning about the world around them and their place in it. Students who are keen to build their general knowledge, critical thinking and research skills would benefit from this subject.

Links to further pathways:
Humanities students have specific career paths. Studies at the tertiary level leads to careers in tourism, hospitality, television, public relations, business management and community relations.

### History

**Overview:**
This subject involves investigating some of the most interesting events from the 20th Century.

**Unit 1**
You will study the fallout of WWI, the rise of dictators in Europe including Adolf Hitler in Germany as well as the causes of World War II. You will investigate economic, social and cultural changes in the United States and Germany. A key feature of the interwar years was the boom in consumer goods in the Roaring 1920s and the devastating Great Depression. You will study the rise of Jazz music, flapper fashion and a variety of artistic movements. This unit also covers racial segregation in the United States and the widespread discrimination against Jewish people in Europe leading up to the Holocaust.

**Unit 2**
You will examine the key events of the Cold War, including the situations which almost led to nuclear catastrophe. Key events studied in this unit of work include the construction of the Berlin Wall, the Cuban Missile Crisis and the Vietnam War. You will investigate the rapid decline of the U.S.S.R. and debate whether a new Cold War is now underway. Another key feature of Unit 2 is an investigation into the fight for civil rights in the segregated parts of the United States and in Apartheid South Africa. You will investigate the importance of leaders including Rosa Parks, Martin Luther King Jr and Nelson Mandela.

**Assessment activities:**
- Primary and secondary source analysis tasks
- Historical essay writing
- Inquiry tasks

**Selection advice:**
This subject suits students who enjoys delving into the past and debating the actions of important historical leaders. Students who study history enjoy reading and analysing both written and visual sources of evidence.

**Links to further pathways:**
These units link directly to Units 3 and 4 History as offered at Mount Clear College. They indirectly link to all other humanities subjects through the development of key skills.

### Australian History

**Unit 3**
In this unit of study students look at the colonisation and the rapid pastoral expansion of the Port Phillip District, later to become known as Victoria. We explore the impact the arrival of Europeans had on the Aboriginal communities, including the rapid decline in their population through disease and massacres. We investigate the immigration flood due to the Gold Rush and how this impacts on the vision for Victoria as well as changes to the social, economic and political climate.

Students develop an understanding of the development of our national identity and the vision of a unified and white nation through the establishment of Federation and the “White Australia Policy”. This vision and
identity was challenged or strengthened with the outbreak of World War I, and students determine which of these actually occurs.

**Unit 4**
This unit requires students to choose to study either the Depression or World War Two in Area of study One. Both of these events were crises that challenged Australia and Australians and the causes, responses and extent to which these events threatened the cohesion of the nation are closely explored.

In Area of Study Two the students again choose, through a democratic vote, the two areas of study to be focused on. The options are: Australia’s involvement in the Vietnam War, New Patterns of Immigration, Aboriginal Land Rights, Equality for Women or A global Economy. As all of these events occur in the latter part of the twentieth century it is a fascinating look at the changing world we live in, especially when we analyse why there was strong demand for change associated with each of these topics.

**Assessment activities:**
All SAC’s align with the exam in their style and consist of a written and visual analysis; essay; historical inquiry and an analysis of historical interpretation.

**Selection advice:**
This subject would suit students with an interest in history who like to research information to broaden their knowledge and understanding of Australian history.

**Links to further pathways:**
The study of these units equips students with the required skills and knowledge to make a smooth transition into tertiary education. A solid understanding of Australia’s history will support students in their everyday life beyond their school life.

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**Philosophy**

**Overview:**
The term "philosophy" literally means "love of wisdom." In a broad sense, philosophy is an activity people undertake when they seek to understand fundamental truths about themselves, the world in which they live, and their relationships to the world and to each other. As an academic discipline, philosophy is primarily engaged in the study of:
- **Metaphysics** – the study of the nature of reality, of what exists in the world, what it is like, and how it is ordered.
- **Epistemology** – the study of knowledge, of what we can know about the world and how we can know it.
- **Ethics** – the study of what we ought to do and what it would be best to do.
- **Logic** – the study of the nature and structure of arguments and the reasons people give in response to metaphysical, epistemological and ethical questions.

**Assessment activities:**
- Short Answer Responses
- Essays
- Presentations (Oral, Multimedia)
- Dialogues (Oral, Written)

**Selection advice:**
Students suited to this subject would enjoy:
- Active discussion and debate
- Asking questions
- Listening and reading
- Precise use of language

To be successful in this subject, students will need to demonstrate high level:
- Literacy skills (reading comprehension and writing)
- Critical reasoning skills (constructing concise arguments)
- Analytical thinking skills (analysing and evaluating arguments)
- Applied reasoning skills (applying theoretical ideas to real world issues and debates)

Links to further pathways:
Undergraduate and Postgraduate studies in Philosophy.

### Extended Investigation Studies

#### Overview:
The VCE Extended Investigation allows students to carry out an independent research project on a topic of their choosing. In this subject, students develop critical thinking and research skills in order to undertake a research project. The chosen topic can relate to students other VCE subjects or another area of interest. Students will be supported through this subject by both a teacher and also a University mentor.

#### Unit 3: Designing an Extended Investigation
In this unit, students develop skills in question construction and design, explore the nature and purpose of research, and identify a specific research question. Students use their Extended Investigation Journal to record the progressive refinement of a selected area of interest distilled into an individual research question.

#### Unit 4: Presenting an Extended Investigation
This unit is comprised of two parts that together constitute the student’s completion of their Extended Investigation. The results of the Extended Investigation are presented in a final written report and in an oral presentation to a non-specialist panel. The final written report is submitted and includes the student’s evaluation of the research methods and findings, and provides their response to the research question. Students also present their investigation as an oral presentation to a non-specialist panel and defend their findings, responding to questions and challenges from the panel.

#### Assessment activities:
- School-assessed coursework (30 per cent of score)
- Critical Thinking Test (10 per cent of score)
- Externally-assessed task (60 per cent of score consisting of an oral presentation to a non-specialist panel and a 4000 word written report)

#### Common Student Questions and Answers

**What sort of topics can I choose from?**
There are a broad range of topics that are suitable, in most cases topics will come from disciplines such as Science, Humanities, and Information Technology. However, students are not limited to these areas. The project must culminate in a written report and oral presentation.

**What if I don’t have a question I want to investigate?**
It is very normal at this stage to not have a clear question. Part of the course will be to help develop students’ ideas further. All that is required is an area of interest, a passion or a subject area that students enjoy or are good at.

**Are there prerequisites or a Unit 1 and 2 sequences?**
No, VCE Extended Investigation is offered in Unit 3 and 4 only. However, you are required to complete extensive reading and writing activities throughout the subject.

**Where and when will classes take place?**
VCE Extended Investigation will be offered on a Thursday afternoon based at the Earth Ed Centre. Classes will operate outside of the normal school day and students should be prepared for this. Because classes will only be once a week it is important that they self-manage their time and communication during the week with their teacher and mentor.
Links to further pathways:
VCE Extended Investigation provides an excellent foundation for any future tertiary study or occupations that require 21st century skills, such as critical and analytical thinking.
Both Japanese and Chinese have been identified as priority languages from the Asia-Pacific region to be taught in Australian schools. This recognises the close economic and cultural ties between the two countries. The study of a language other than English contributes to the overall education of students, most particularly in the area of communication, but also the areas of cross-cultural understanding, cognitive development, literacy and general knowledge. Another very tangible advantage is wider employment opportunities. Many businesses and government agencies prefer employees who speak a second language.

We offer VCE Japanese, VCE Chinese as a First Language (for native speakers), and VET Chinese (for English speaking students).

## Languages – Japanese

### Unit 1
The areas of study comprise themes and topics, grammar text types, vocabulary and kinds of writing. This unit should allow the student to establish and maintain a spoken or written exchange, listen to, read and obtain information from written and spoken texts and produce a personal response to a text focusing on real or imaginary experience.

### Unit 2
The areas of study comprise themes and topics, grammar text types, vocabulary and kinds of writing. This unit will allow the student to participate in a spoken or written exchange, listen to, read and extract and use information and ideas from spoken and written texts and give expression to real or imaginary experience in written or spoken form.

### Units 3 & 4
The areas of study comprise themes and topics, grammar text types, vocabulary and kinds of writing. Students should be able to express ideas through the production of original texts, analyse and use information from spoken and written texts and exchange information, opinions and experiences. They should also be able to respond critically to spoken and written texts which reflect aspects of the language and culture of Japanese-speaking communities.

**Assessment activities:**
Students complete a variety of reading, writing, listening and speaking tasks.

**Selection advice:**
Students must have completed Year 10 Japanese.

**Links to further pathways:**
This course will provide access to tertiary language courses. It also provides students with a certification to add to their resumes. Having a second language allows students to follow many career paths including, but not limited to:
- trade & foreign affairs
- translation & interpreting
- teaching
- tourism
- business

## Certificate III Applied Languages (Chinese)

See VET Programs
Year 11 or 12
In Year 11 or 12, students complete Units 3 & 4, which focus on listening, reading, writing and speaking (detailed study).

By the end of Unit 3, students should be able to:
- Respond critically to two text types, such as imaginative writing and evaluative writing
- Answer questions based on spoken texts, which reflect aspects of the language and culture of Chinese

By the end of Unit 4, students should be able to:
- Analyse and use information from varieties of resources to express their opinions and experiences through the production of persuasive writing
- Conduct a face-to-face interview with interviewers

Assessment:
School-assessed coursework and one end-of-year examination.
Unit 3 school-assessed coursework (25%):
- Imaginative Writing: 500-600 words imaginative essay
- Listening responding: Answer questions according given spoken texts
- Oral presentation: 4-5 minutes oral presentation.

Unit 4 school-assessed coursework (25%):
- Reading comprehension: analyse and use information from two texts to produce a persuasive writing
- Persuasive writing: 500-600 words persuasive essay
- Face-to-face interview: a 4-5 minutes face-to-face interview based on previous persuasive writing task.

End of year examination (50%): listening, reading, writing and speaking.

Further Pathways:
This course will provide access to most tertiary language courses. This allows students to follow many career paths including, but not limited to:
- trade & foreign affairs
- translation & interpreting
- teaching
- tourism
- business

Selection Advice:
Students must be native speakers.

VCE 中文第一语言
11或12 年级
学习VCE中文第一语言的同学们需要完成第3 和第4单元的基础内容，其中包括听力，阅读，写作和口语重点研究。
在第3单元中，同学们需要掌握以下内容：
- 了解想象文和评估文的结构模式，并且能够完成一篇完整的想象文或评估文。
- 根据听力材料所反映的是有关中国的民俗文化知识来回答问题。
在第4单元中，同学们需要掌握以下内容：
- 通过分析文学艺术作品来阐述你的观点
- 能够用演讲的形式来完成一个面对面的访谈

考试模式：
单元测试和年终统考：
第3单元测试（25%）：
- 想象文写作：规定时间内完成一篇500-600字的想象文
- 听力：根据听力材料回答相关问题
- 演讲：完成一个4-5分钟的演讲。

第4单元测试（25%）：
- 阅读理解：根据所给材料内容完成一篇说服文
- 说服文写作：完成一篇500-600字的说服文
- 面对面访谈：根据之前所写的说服文，完成一场4-5分钟的面对面访谈。

年终统考（50%）：其中包括听力，阅读，写作和口语重点研究的综合考试。

未来发展方向：
通过学习这个科目可以帮助同学们在大学中更好的学习相关课程。与此同时，熟练的掌握中文也可以有助于同学们拓展将来的职业规划，例如：
- 各国网易往来
- 翻译（笔译及口译）
- 教师
- 旅游业相关工作
- 商业活动

选择建议：
该课程只面对中文是第一语言的同学们。
Mathematics

What is VCE Mathematics About?
Mathematics is the study of patterns in number and space. It provides us with a means of communication that is international, logical and concise. In VCE Mathematics you will engage in worthwhile and challenging mathematical activities. You will learn, practise and apply mathematical routines and techniques to find solutions to standard problems. You will use mathematics to model real-life situations and solve problems set in unfamiliar situations. Most courses involve the use of computers and graphics calculators.

Mount Clear College offers a wide range of combinations to suit different abilities and career paths, but it is essential that you choose your Unit 1 & 2 Maths subjects very carefully, as this will affect your choice of maths at the Unit 3 & 4 level. Read the following pathway options carefully, and discuss these with your parents, your careers adviser and your current Maths teacher. Consider your past performance in this subject and how well you have done in Year 10. Where possible, try to keep your options open by attempting the highest level of Maths of which you are capable.

What Mathematics Subjects Do We Offer?
The following Mathematics Units are offered at Mount Clear College:

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<td>Foundation Mathematics</td>
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Mathematical Methods and Tertiary Entrance Requirements:
As Mathematical Methods is an entry requirement for many tertiary courses, we strongly recommend students check the requirements for any tertiary courses they are considering for future study.

Calculators:
All students enrolled in any General Mathematics, Mathematical Methods, Further Mathematics, or Specialist Mathematics subject need an approved Graphics Calculator. Students enrolled in Foundation Mathematics should have an approved Scientific Calculator. Approved calculators will be listed with the booklist.

Prerequisites for University Studies:
Check with Careers for which Mathematics subject you require for your desired University course.
**Which Pathway should I choose?**  
*Selecting your Units 1 and 2*

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<tr>
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<td><strong>General Maths 1 &amp; 2</strong></td>
<td><strong>Maths Methods 1 &amp; 2</strong></td>
<td><strong>Maths Methods 1 &amp; 2 and Specialist Maths 1 &amp; 2</strong></td>
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<tr>
<td>If you find the study of mathematics very challenging and only intend to complete Year 11 mathematics then Foundation Mathematics may be for you. The Mathematics in this subject will be more practical-based, does not lead onto any Year 12 Mathematics subjects, but will provide you with the opportunity to continue to develop your Maths skills in Year 11.</td>
<td>If you have a good understanding of Mathematics, have satisfactorily completed Year 10, and intend to take only Further Maths at the Unit 3 &amp; 4 level, then this pathway may suit you.</td>
<td>You need a very good understanding of Mathematics and must have achieved ‘At Level’ or ‘Above Level’ in Year 10. This pathway keeps most options open for Units 3 &amp; 4 Maths. Choosing this pathway can lead to completion of Maths Methods 3 &amp; 4, which is a pre-requisite for some tertiary courses.</td>
<td>You need a very good understanding of Maths and demonstrated success in Year 10. This option provides the strongest background for Specialist Maths at Units 3 &amp; 4. Specialist Maths 1 &amp; 2 does some introductory work for Maths Methods and introduces some topics to be studied in Specialist Maths.</td>
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<td>Units 3 &amp; 4</td>
<td>Maths Methods 3 &amp; 4</td>
<td>OR&lt;br&gt;Maths Methods 3 &amp; 4&lt;br&gt;Maths Methods 3 &amp; 4</td>
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**Foundation Mathematics**

**Overview:**
In Foundation Mathematics there is a strong emphasis on using maths in practical contexts relating to everyday life, personal work and study. Some of the topics studied are Finance, Sport, House and Land, Travelling, Car Safety, Water wise and School musical.

**Selection advice:**
Foundation Mathematics Units 1 & 2 are designed for students who are not academically strong in mathematics, but who require some VCE mathematics in preparation for work and/or further study or training.

**Links to further pathways:**
This subject does not have a Unit 3/4 component. However, students who do well in Units 1 & 2 are encouraged to follow a mathematics pathway beyond Year 11.

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**General Mathematics**

**Overview:**
General Mathematics provides courses for diverse groups of students and may be implemented in a number of ways. 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.

**Unit 1**
This unit focuses on six areas of study:
- Algebra and structure
- Arithmetic and number
- Discrete mathematics
- Geometry; measurement and trigonometry
- Graphs of linear and non-linear relations
- Statistics

**Unit 2**
This unit focuses on six areas of study:
- Algebra and structure
- Arithmetic and number
- Discrete mathematics
- Geometry; measurement and trigonometry
- Graphs of linear and non-linear relations
- Statistics
Assessment activities:
- Data modelling; Univariate and Bivariate Data
- Topic tests:
  - Networks and Graph Theory
  - Financial Mathematics
  - Sequences and Series
  - Trigonometry
  - Matrices
  - Measurement
- End of unit exams

Selection advice:
General Mathematics Standard Units 1 & 2 are designed for students who have satisfactorily completed Year 10 Core or Analytical Maths but only wish to study Further Mathematics in Year 12, and not Maths Methods 3 & 4 or Specialist Maths 3 & 4.

Students need to be competent from both a literacy and numeracy standpoint as there is a significant amount of key vocabulary and knowledge that needs to be understood. They must also be prepared to utilise ICT to support their learning. It is a requirement that all students purchase a Ti-Nspire CAS calculator to satisfy the requirements of the course.

Links to further pathways:

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Further Mathematics

Units 3 & 4
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.

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.

Assessment activities:
Unit 3
The Core comprises ‘Data analysis’ and ‘Recursion and financial modelling’
- Data analysis
- Recursion and financial modelling
Unit 4
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’.

- First Module
- Second Module
- End of year examination and final assessment

Selection advice:
Students need to be competent from both a literacy and numeracy standpoint as there is a significant amount of key vocabulary and knowledge that needs to be understood. They must also be prepared to utilise ICT to support their learning. It is a requirement that all students purchase a Ti-Nspire CAS calculator to satisfy the requirements of the course.

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Mathematical Methods

Units 1 & 2
These units are designed in particular as preparation for Mathematical Methods Units 3 & 4. The areas of study for units 1 & 2 are Functions and Graphs, Algebra, Calculus and Probability.

Mathematical Methods Units 1 & 2 are designed for students who are good at Mathematics and/or who wish to pursue a tertiary course which requires Mathematical Methods (sometimes with Specialist Maths) for entry – eg Engineering, Mathematics, many Science and Information Technology courses and some Commerce courses. These units have a fairly strong Algebraic focus aimed at the development of the concepts of Calculus.

Assessment activities:
Topic Assessments:
- Linear equations and coordinate geometry
- Quadratics
- Functions and relations
- Polynomials
- Exponential functions & logarithms
- Circular functions
- Differentiation & anti-differentiation of polynomials
- Probability & counting methods
- End of unit exams

Units 3 & 4
Mathematical Methods 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.
**Assessment activities:**

- **Topic Assessments**
  - Calculus based application task
  - Problem solving task 1: differential & integral calculus
  - Problem solving task 2: probability & statistics
  - Problem solving task 3: probability & statistics

**Selection advice:**

Mathematical Methods Units 3 & 4 can only be attempted after Maths Methods Units 1 & 2 have been completed. The study builds directly on the work completed in Mathematical Methods Units 1 & 2.

**Links to further pathways:**

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**Specialist Mathematics**

*To study Specialist Mathematics Units 1 & 2 and 3 & 4, students must also study Mathematics Methods Units 1 & 2 and 3 & 4.*

**Units 1 & 2**

Specialist Mathematics Units 1 and 2 provide a course of study for students who wish to undertake an in-depth study of mathematics. This study has a focus on 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’.

**Assessment activities:**

- **Topic tests**
  - Number systems and recursion (prescribed topic)
  - Sequences and series
  - Geometry in the plane (prescribed topic)
  - Trigonometry
  - Vectors in the plane
  - Kinematics
  - Circular functions
  - Linear and non-linear graphs
- **End of unit exams**

**Selection advice:**

Students need to be competent in all areas of Mathematics and particularly Algebra. They also need high levels of Literacy as there is a significant amount of key vocabulary and knowledge that needs to be understood. Students need to have a keen interest in Mathematics and a desire to extend their knowledge of the subject. They must also be prepared to utilise ICT to support their learning. It is a requirement that all students purchase a Ti-Nspire CAS calculator to satisfy the requirements of the course.
Units 3 & 4

In undertaking these units, students will 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 numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, is incorporated in all related assessments and throughout each unit.

Assessment activities:
Unit 3
Application task of 4-6 hour duration over a period of 1-2 weeks. A mathematical investigation of a practical or theoretical context involving content from two or more areas of study. (Worth 50% of the School Assessed Coursework mark).

Unit 4
Problem solving and modelling tasks (each worth 25% of the School Assessed Coursework mark). End of year examination and final assessment (the final SAC mark contributes 34% to overall mark for the subject).

Selection advice:
Students should have studied Specialist Mathematics in Year 11 (Units 1 & 2) and need to be competent in all areas of Mathematics, particularly Algebra and Calculus. They also need to be studying Mathematical Methods Units 3 & 4 or have studied them previously.

They also need high levels of Literacy as there is a significant amount of key vocabulary and knowledge that needs to be understood. Students need to have a keen interest in mathematics and a desire to extend their knowledge of the subject. They must also be prepared to utilise ICT to support their learning. It is a requirement that all students purchase a Ti-Nspire CAS calculator to satisfy the requirements of the course.

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<td>Opportunities exist for all students directly from VCE.</td>
</tr>
<tr>
<td>Nursing</td>
<td>Law</td>
<td>See the Careers</td>
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<tr>
<td>Age Care</td>
<td>Medicine</td>
<td>Teacher about</td>
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<tr>
<td>Child Care</td>
<td>Psychology</td>
<td>Traineeships and</td>
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<tr>
<td>Business</td>
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<td>Sport and Recreation</td>
<td>Commerce</td>
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<td>Teaching</td>
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<td>Engineering</td>
<td>Applied Science</td>
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<td>plus many more</td>
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Employment Opportunities exist for all students directly from VCE.

See the Careers Teacher about Traineeships and Apprenticeships.
Health & Human Development
Health and Human Development allows students to examine the influences on personal health and the health of whole communities. This knowledge is valuable for employment or study in the areas of social and health sciences, community health, recreation and welfare.

Outdoor Education
Outdoor Education provides students with the skills and knowledge to participate in a wide range of outdoor activities with a focus on sustainability and minimal impact. This is an excellent subject to help develop self-confidence and leadership skills. The knowledge gained is particularly useful for students with an interest in a career in community health, recreation and environmental management.

Physical Education
The study of Physical Education will develop students understanding of the relationship between physical activity and personal health and fitness. They will learn fundamental biomechanical and physiological principles that are valuable for pursuing further studies or a career in health, medical and physical sciences.

Health & Human Development

Overview:
Health and Human Development provides students with an opportunity to investigate health and wellbeing and human development in local, Australian and global communities. It is based on the belief that health and wellbeing and human development needs to be encouraged at an individual level, and within group and community settings at national and international levels.

Health and Human Development Unit 1 and 2:
In Unit 1 and 2 Health and Human Development students will investigate the physical, social, spiritual, mental and emotional dimensions of health and wellbeing. They will explore how health is measured with a focus on youth in Unit 1 and other lifespan stages in Unit 2. Students look at developmental changes as they progress through the lifespan from conception until death.

Assessment activities:
- Structured Questions
- Case Study
- Research Task
- Written Exam

Health and Human Development Unit 3 and 4:
In Unit 3 and 4 Health and Human Development students will continue to explore the dimensions of health and wellbeing in an Australian and global context. Students investigate the health status differences experienced by people living in low, medium and high income countries and how improvements can be made in health worldwide.

Assessment activities:
- Structured Questions
- Case study
- Written exam

Selection advice:
This course of study does not incur additional fees or involve practical activity lessons.

Links to further pathways:
This subject would be an advantage to students wanting to study or undertake careers in any of the health sciences such as nursing, medicine, physiotherapy or allied health.
Outdoor and Environmental Studies

Overview:
This study explores the relationships humans have with the outdoor environment, which includes natural environments, minimal impact and extensive human interaction. Outdoor recreation activities are undertaken to create learning experiences which enable students to understand how human-nature relationships have been constructed and to make informed decisions on environmental sustainability.

Unit 1 – Exploring Outdoor Experiences
This unit focuses on motivations for and influences on outdoor experiences. It also develops an understanding of nature through practical experiences and investigation of particular outdoor environments. Camp costs for this unit are approximately $300.

Unit 2 – Discovering Outdoor Environments
This unit focuses on the impact of human interaction on nature and nature’s impact on humans. Outdoor recreation provides the major focus for studying this impact, as well as the ecological, social and economic implications of human impact on the environment. Camp costs for this unit are approximately $450.

Unit 3 – Relationships with Outdoor Environments
In this unit concepts related to the ecological, historical and social contexts of the relationships between Australians and the outdoor environment are investigated. A range of impacts on outdoor environments are examined in the context of the changing nature of human relationships with outdoor environments in Australia. Approximate camp costs for Unit 3 are $400.

Unit 4 – 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 relating to the capacity of outdoor environments to support the future needs of the Australian population. Approximate camp costs for Unit 4 are $450.

Assessment activities:
Unit 1 & 2 – Students complete a case study and written report related to exploring and discovering outdoors and the environment, and they complete a journal based on their practical experiences.
Unit 3 & 4 – Students complete a case study and written report related to relationships and sustainable interactions with the outdoor environment. Students will also complete a journal based on their practical experiences for each outcome.

Selection advice:
This subject is open to Year 10 students at Units 1 & 2 and Year 11 students at Units 3 & 4 to ensure minimal disruption to other Year 12 subjects due to the camps. Students will be expected to participate in a camp for each Unit and to be responsible for meeting the associated costs of each camp. Units 1 & 2 will incur an additional cost of $750 (2 camps). Units 3 & 4 will incur an additional cost of $850 (2 camps).

Links to further pathways:
This subject would be an advantage to those students considering completing VCE Environmental Science or a career in the outdoor and recreation industry.
Physical Education

Overview:
Physical Education examines the biology, chemistry, physics and psychology of performance and the social and cultural influences on participation in physical activity. Theory and practice are integrated across this course of study which is approached through both the study of, and participation in, physical activity.

Unit 1: The Human Body in Motion
Students explore how the musculoskeletal and cardio-respiratory systems work together to produce movement.

Unit 2: Physical Activity, Sport and Society
Students will be introduced to types of physical activity and the role participation in physical activity and sedentary behaviour plays in their own health and wellbeing as well as in other people’s lives in different population groups.

Unit 3: Movement Skills and Energy for Physical Activity
Students will study the biomechanical and skill acquisition principles used to analyse human movement skills and energy production from a physiological perspective.

Unit 4: Training to Improve Performance
Students analyse movement skills from a physiological, psychological and sociocultural perspective and apply relevant training principles and methods to improve performance within physical activity at an individual, club and elite level.

Assessment activities:
Unit 1 & 2 – Students complete a number of written tests and reports reflecting on body systems in activity and a multimedia presentation on the promotion of physical activity.
Unit 3 & 4 – Students complete a series of structured question assessments and a lab report focused on personal data collected from practical activities.

Selection advice:
This subject involves a large amount of theory linked to the science of the human body in sport. Students will be expected to participate in practical classes. Students should have completed prior studies from the Year 10 Health & Physical Education electives.

Links to further studies:
This subject would be an advantage to those students considering completing VCE Biology, Psychology & Chemistry or a university pathway into nursing, allied health, physiotherapy, medicine, human movement & sports sciences, PE teaching, or a career in the fitness industry.
VCE science subjects offered at Mount Clear College include Physics, Chemistry, Psychology, Environmental Science and Biology. Studies in the science program area include both theoretical and experimental components. Many of the outcomes have a practical dimension to them, including field trips and excursions.

Choosing one or more science units opens up a wide range of careers and further study options following completion of Year 12. A science program can lead in directions as diverse as forensic science, nursing, town planning and various engineering (amongst many others). These, and a host of other careers, have their foundations in science-orientated courses which list the subjects we offer either as pre-requisites or recommended studies. VTAC information should be carefully checked to identify requirements to keep options open. Many TAFE options indicate that science subjects are helpful when attempting to gain entry.

Selecting science opens many pathways and a number of students select this subject for this reason as well as the enjoyment of the issues studied.

### Biology

**Overview:**

Biology is the study of living organisms. This VCE course incorporates aspects of many branches of biology including biochemistry, genetics, evolutionary biology, cell biology and molecular biology. The study of biology prepares students for further study in the biosciences including environmental, medical and associated biotechnological fields.

**Unit 1: How do living things stay alive?**

In this unit students explore what makes an organism a living thing and how they stay alive. This includes the role of the cell membrane in controlling what enters and exists in the cell and how organisms ensure they have a relatively stable internal environment. They then move on to look at how living systems sustain life. This area of study focuses on the adaptations of individual organisms to a range of different environments and how homeostatic mechanisms in the organism ensure stability of the cells in the face of widely fluctuating environmental conditions. They will also study the biology of populations by looking at the interactions between organisms of different species and those of the same species. All students will complete a self-designed investigation. The investigation requires the student to develop a question, plan a course of action to answer the question, undertake an investigation to collect the appropriate data, organise and interpret the data and reach a conclusion in response to the question.

**Unit 2: How is continuity of life maintained?**

In this unit students explore the importance of reproduction in maintaining life. Its role in both the reproduction of whole organisms to create the next generation and in cells to ensure growth and repair of tissues is studied. In looking at reproduction, students will study the cell cycle and the two main methods of cell reproduction; mitosis and meiosis. Students will then study how reproduction links to inheritance and what characteristics are inheritable. They will study the interaction of genes and the environment in developing the traits of an individual and the epigenetic nature of inheritance. All students will complete an individual investigation of an issue relating to genetics as part of this unit. This might include human cloning, genetic modification of organisms, the use of forensic DNA databanks, assisted reproductive technologies and prenatal and predictive genetic testing - challenging social and ethical norms.

**Assessment activities:**

- Practical investigations
- Written tests
- Extended Practical Investigation
- Ethical research report
- End of Unit Exams
Unit 3: How do cells maintain life?
In this unit students will study the biology of cells. They will further their understanding from Unit 1 of the role of the plasma membrane in maintaining a stable environment. They will also study the key biological molecules, in particular the structure of DNA and how this is used to code for a protein. They will explore the expression of genes including how and why they are switched on and off in response to internal and external stimuli. Students will also study reactions that take place in cells including photosynthesis and respiration and how enzymes are used to control these reactions. They will explain the actions of enzymes and the conditions in which they work well. Students will also study the communication between adjacent and non-adjacent cells. They will look at the nervous, endocrine and immune systems as signalling pathways and explain the disorders that can arise when these signals do not work properly.

Unit 4: How does life change and respond to challenges over time?
In this unit students will study evolution as a mechanism for change in communities. They will look at how existing species are related and the evidence for this which can be structural, genetic or based on the fossil record. Students will also study the impact of human behaviours on natural processes. This includes the action of humans in artificially selecting mates and hunting animals as well as more modern techniques such as DNA manipulation. This Unit focuses on social and ethical implications of biology and how an increase in scientific knowledge can be a challenge for society to address.

Selection advice:
Choose this subject if you enjoy learning about how life developed, exploring the living world on the microscopic and whole organism level and using theory to explain things we see in everyday life.

Links to further pathways:
VCE Biology provides for continuing study pathways within the discipline and leads to a range of careers. Branches of biology include botany, genetics, immunology, microbiology, pharmacology and zoology. In addition, biology is applied in many fields of endeavour including biotechnology, dentistry, ecology, education, food science, forestry, health care, horticulture, medicine, optometry, physiotherapy and veterinary science. Biologists also work in cross-disciplinary areas such as bushfire research, environmental management and conservation, forensic science, geology, medical research and sports science.

Chemistry

Overview:
Chemistry is the study of the matter that is all around us. In this course we examine the properties of matter on the atomic and molecular level and explore the different types of bonding that influence the properties of materials. Students will also learn the chemistry behind different types of reactions and how we can analyse these reactions. Chemistry is used in a wide range of industries where it is a useful tool in analysing the content of compounds and mixtures. The manipulation of large molecules in living systems and in industry to make medicinal drugs and other useful compounds is also explored. Students will also gain an insight into how changing physical conditions can alter the speed and yield of important chemical reactions.

Unit 1: How can knowledge of chemistry explain the properties of matter?
Unit 1 focuses on the key underlying ideas in chemistry, starting with the study of the main reference material, the periodic table. This exploration includes examining how students can use the periodic table to predict the properties of an element. Measuring quantities in chemistry is an important factor in ensuring scientists have the correct amounts of substances to react safely and efficiently. In this unit students explore ‘The mole’ the counting unit of chemistry and how this can be used to determine the formula of compounds. The properties of substances vary considerably depending on the bonding within them. Students will explore the bonding in metals and ionic bonded substances. They will also explore the range of materials that can be made from non-metallic elements and how these can be combined in simple molecules, lattices, and complex organic molecules and polymers.

Unit 2: What makes water such a unique chemical?
Unit 2 focuses on chemistry within the natural environment and the effect of the chemical industry on the environment. Students will study the properties of water in many contexts within this topic. The solvent
properties of water and its ability to create aqueous solutions that can readily react is a particular focus. Students will look at a range of reactions that take place in aqueous environments, including acid/base reactions and redox reactions. They will explore how the quantities of reactants influence the quantities of the products made and how chemists can predict this. Students will also explore how to analyse the quantities of substances contained within an aqueous environment by UV-Visible and Atomic Absorption Spectroscopy.

Assessment activities:
- A report of a practical activity or investigation
- Annotations of a practical work folio of activities or investigations
- A test comprising multiple choice and/or short answer and/or extended response
- Laboratory Report on Precipitation Reactions - A laboratory report on an experiment
- Summary Report on Water Analysis - A summary report of a series of experiments analysing water
- Practical Investigation - Students design a practical investigation based on substances dissolved in water systems
- End of Unit Exams

Unit 3: How can chemical processes be designed to optimise efficiency?
In unit 3 students investigate fuel choices with consideration of the energy content of a range of different fuels and their renewability and environmental impact. They also explore industrial production of chemicals and the energy changes associated with chemical reactions. Features that affect chemical reactions such as the rate and yield or equilibrium position are investigated. Students explore how an understanding of these features is used to obtain optimum conditions in the industrial production of a selected chemical. New ways of producing energy using Galvanic cells and Fuel cells are studied and students explore the advantages and disadvantages of these new technologies. Students also explore the operation of electrolytic cells in industry and laboratory work and explain the energy conversions that take place. Students will also look at how electrical energy can be used to force reactions to occur via electrolysis and how this can be used to reverse reactions in rechargeable batteries.

Unit 4: How are organic compounds categorised, analysed and used?
In unit 4 students investigate organic reactions and the chemistry of particular organic molecules. A detailed knowledge of the structure and bonding of organic chemicals is important to the work of the synthetic organic chemist. Students also explore the range of organic molecules in living things including DNA, proteins, lipids and carbohydrates. A range of methods to analyse and identify organic molecules are utilised to discover various information about the structure of these complex molecules. Students will also study the chemistry of food, looking at how the different component of food can be built up in living things and broken down in the human digestive system. The role of enzymes in this digestion is explored as well as how we can determine the energy content of foods.

Selection advice:
Studying Chemistry can enrich students’ lives through the development of particular knowledge, skills and attitudes, and enable them to become scientifically capable members of society. It will also provide a window on what it means to be a scientific researcher, working as a member of a community of practice, including insight into how new ideas are developed and investigated, and how evidence or data collected is used to expand knowledge and understanding of chemistry.

Choose this subject if you enjoy learning about how matter behaves, explaining the properties of materials you see, doing practical work and explaining the theory behind the results and manipulating data to apply your knowledge numerically.

Links to further pathways:
Many people develop an ‘applied’ knowledge of chemistry through their careers and day-to-day pursuits. Chemistry permeates numerous fields of endeavour, including agriculture, art, biochemistry, dietetics, engineering, environmental studies, food, forensic science, forestry, horticulture, law, medicine, oceanography, pharmacy, sports science and winemaking.
The chemistry undertaken in this study is representative of the discipline and the major ideas of chemistry. Some students will develop a passion for chemistry and be inspired to pursue further studies. All students, however, must become more informed, responsible decision-making citizens, able to use chemical knowledge and scientific arguments in their everyday lives and to evaluate and debate important contemporary issues such as the future of our environment and its management.

Environmental Science

Overview:
Environmental science is an interdisciplinary science, involving aspects of biology, chemistry and physics, that explores the interactions and interconnectedness between humans and their environments and analyses the functions of both living and non-living elements that sustain earth systems. In VCE Environmental Science, Earth is understood as a set of four interdependent systems: the atmosphere, biosphere, hydrosphere and lithosphere. The study explores how the relationships between these systems produce environmental change over a variety of time scales. Students investigate the extent to which humans modify their environments and the consequences of these changes in local and global contexts with a focus on pollution, biodiversity, energy use and climate change; they explore the conceptual, behavioural, ethical and technological responses to these changes. Students develop a range of inquiry skills involving practical experimentation and research, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary issues related to environmental science, and communicate their views from an informed position.

Unit 1: How are Earth systems connected?
This unit focuses on the four major inputs that life on earth is dependent on; energy, nutrients, air and water. Students examine the processes and interactions occurring within and between the Earth’s four systems. Students will also explore changes in systems over different time scales (short term, medium term and long term). Natural and human impacts on these systems are also explored during the unit. Students will also be expected to design and conduct a practical investigation that monitors changes within an ecosystem.

Unit 2: How can pollution be managed?
This unit focuses on biotic and abiotic indicators of pollutants that result in bioaccumulation, and air and water pollutants. Students investigate three pollutants of national or global concern. They will examine how pollutants move through, and affect, the atmosphere, biosphere, hydrosphere and lithosphere. Students will also compare different treatment and management options for each pollutant. Students will also investigate a case study involving the management of a selected pollutant of local interest.

Assessment activities:
- Log book of practical activities
- Report of practical activities
- Media analysis report
- Problem solving task on pollutants that make management complex
- Written comparison of three selected pollutants
- Management of a pollutant report
- End of unit exams

Unit 3: How can biodiversity and development be sustained?
Students will examine the categories of biodiversity and the role of biodiversity in sustaining ecosystems. Students will understand how to sustain ecosystems and how biodiversity can be maintained in the short and long term. Students explore definitions of sustainability and consider how these may be interpreted and applied in different environmental issues. Students will select a case study and research in detail any associated environmental impacts and risks to this ecosystem.

Unit 4: How can the impacts of human energy use be reduced?
Students will examine the concepts associated with different forms of energy by human society. They will focus on local sources of energy to examine the global impacts of these uses (including short and long term consequences). Students will investigate the astronomical, solar and earth systems and human-based factors that have altered important relationships between the energy, water and nutrient cycles that have resulted in enhanced greenhouse effect and climate change. At the end of the unit students will design an investigation related to biodiversity or energy use from an environmental management perspective.
Selection advice:
Choose this subject if you enjoy working in the environment and want to be influential in the expanding field of environmental management and science and undertaking the challenge of securing effective biodiversity management and a sustainable future and have a passion for science.

Please note that Environmental Science is a subject that requires investigations of habitat and ecosystems more diverse than those found in the immediate Ballarat area. As a result it can be necessary to travel further afield for periods of time on excursion.

Links to further pathways:
VCE Environmental Science provides for many continuing study pathways and leads to a range of careers. Diverse areas of employment range from design, including landscape or building architecture, engineering and urban planning, environmental consultancy and advocacy, which may involve employment in air, water and/or soil quality monitoring and control, agriculture, construction, mining and property management and water quality engineering. Environmental scientists also work in cross-disciplinary areas such as bushfire research, environmental management and conservation, geology and oceanography.

Physics

Overview:
Physics contributes to our understanding of everything from the minute building blocks of matter to the energies of the unimaginably vast expanses of the universe. This study is designed to enhance students’ scientific literacy in physics, which will enable them to engage in debates about the nature of evidence, theories and models, and appreciate the value of physics in society. They can describe and use theories and models, propose and investigate hypotheses, collect data, analyse the limitations of that data, draw conclusions, make recommendations, and select and use a range of appropriate technologies and mathematical techniques.

Unit 1: What ideas explain the physical world?
In Thermodynamics, students investigate the principles relating to heating processes; including concepts of temperature and energy, the environmental impact of earth’s thermal systems, and debates related to climate science. In Electricity students analyse DC electrical circuits including the mathematical relationships linking charge, current, voltage, resistance, energy and power. They investigate household electric circuits and hazards.

In the study of Matter students investigate the origins of atoms, time and space, explain radioactivity and subatomic forces and particles, nuclear transformations, anti-matter, nuclear fission and fusion, energy generation and the production of light. Students perform practical work using suitable materials, apparatus and measurement procedures to collect relevant data and draw reliable conclusions.

Unit 2: What do experiments reveal about the physical world?
In Unit 2 students investigate the ways in which forces are involved both in moving objects and in keeping objects stationary. In studying Motion students explore the effects of balanced and unbalanced forces. They investigate, analyse and mathematically model the motion of objects and study energy, momentum, gravitational and spring energies and power. In their major practical investigation students design and undertake an investigation of a physics question related to the scientific inquiry processes of data collection and analysis, and draw conclusions based on evidence from their collected data.

Assessment activities:
• Thermodynamics test
• Electrical circuits extended practical report
• Nuclear radiation report
• Motion investigation
• Practical Investigation
• End of unit exams
Unit 3: How do fields explain motion and electricity?
Unit 3 consists of two core areas of study; Motion in one and two dimensions, and Electronics and Photonics. A detailed study is to be chosen in either Unit 3 or Unit 4 from one of six detailed studies; Einstein's special relativity, materials and their use in structures, further electronics, synchrotron and its applications of photonics, and sound. Motion in one and two dimensions includes the study of circular motion, both horizontal and vertical, the parabolic motion of projectiles, gravitational fields, forces and energies, and the orbital motion of satellites. In studying Electronics and Photonics, students investigate electronic circuits comprising diodes, resistors, thermistors and photonic transducers including light dependent resistors, photodiodes and light emitting diodes, and their use in domestic and industrial systems. In the detailed study, students carry out a series of theoretical and practical investigations into the topic selected from the set of six listed above.

Unit 4: How can two contradictory models explain both light and matter?
Unit 4 consists of two core areas of study: Electric Power and Interactions of Light and Matter, plus the ongoing detailed study which began in Unit 3. In studying Electric Power, students will investigate magnetic fields and forces related to current-carrying wires, magnetic flux in coils, and the operation of AC and DC motors and generators, as well as the operation of transformers in electricity distribution. Interactions of Light and Matter includes the investigation of wave diffraction and the photo-electric effect, and its implications for the nature of light and the wave behaviour of matter, including absorption and emission spectra from atomic energy levels.

In both Units 3 and 4, students develop conceptual understanding by investigating practical activities and demonstrations. They record raw data and present an accurate and reliably processed analysis of their results, identifying sources of error and uncertainty. They apply safe and responsible practices when completing independent and collaborative investigations.

Selection advice:
Choose this subject if you enjoy learning about the Universe, doing practical experiments and finding out how things work.

Links to further pathways:
VCE Physics provides for many continuing study pathways and leads to a range of careers. Diverse areas of employment range from architect, civil engineering, medical radiographer, astronomer, electronics specialists and avionics. Physicists also work in cross-disciplinary areas such as solar farm engineering, road engineering and the mining industry.

Psychology
Overview:
Psychology is a broad discipline that incorporates both the scientific study of human behaviour through biological, psychological and social perspectives and the systematic application of this knowledge to personal and social circumstances in everyday life. In the VCE study of Psychology, students explore complex human behaviours and thought processes. They develop an understanding of mental health issues in modern society and are encouraged to adopt an empathetic and educated approach towards individuals with mental health issues. Students are given the opportunity to apply psychological principles to everyday situations such as school, employment and their everyday social interactions.

Psychology provides students with a sophisticated framework for understanding the complex interactions between the biological, behavioural, cognitive and socio-cultural factors that influence our thoughts, emotions and behaviour. The study assists students to further develop effective language skills for communication, and numeracy skills for research, data analysis and other applications. In addition, students develop a range of broader skills including those of problem solving, critical evaluation and the application of processes of scientific inquiry.
Unit 1: How are behaviour and mental processes shaped?
This unit focuses on Human Development involving changes in thoughts, feelings and behaviours. 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. Students examine the contribution that classical and contemporary studies have made to an understanding of the human brain and its functions, and to the development of different psychological models and theories used to predict and explain the development of thoughts, feelings and behaviours. A student-directed research investigation related to brain function and/or development is undertaken in this unit. The research investigation draws on content from Area of Study 1 and/or Area of Study 2.

Unit 2: How do external factors influence behaviour and mental processes?
This unit focuses on how a person’s thoughts, feelings and behaviours 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 behaviour of an individual and groups.

They examine the contribution that classical and contemporary research has made to the understanding of human perception and why individuals and groups behave in specific ways. A student practical investigation related to internal and external influences on behaviour is undertaken in this unit. The investigation draws on content from Area of Study 1 and/or Area of Study 2.

Assessment activities:
- Class test on key knowledge
- Research and create a mental disorder fact sheet
- Report exploring brain function and development
- Poster explaining consciousness as a continuum
- Test focussing on mental health and mental illness
- Formulate and test a research hypothesis and present these findings as an Empirical Research Activity
- End of unit exams

Unit 3: The conscious self
This unit focuses on the relationship between the brain and the mind through examining the concepts of consciousness, behaviour, cognition and memory. Students study the structure and functioning of the human brain and nervous system, as well as a range of disorders and phenomena that may occur as a result of localised brain damage. They also explore the nature of both normal and altered states of consciousness including sleep, daydreaming and the mind-altering effects of alcohol and illicit substances. Students then 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 and discover methods for both improving and manipulating human memory. Students conduct their own experimental research on a key theory of memory formation and learn how to present their findings and conclusions in accordance with the Australian Psychological Society’s reporting guidelines.

Unit 4: Brain, behaviour and experience
This unit focuses on the interrelationship between learning, behaviour, the brain and its response to experiences. Students investigate learning as a mental process that leads to the acquisition of knowledge, development of new capacities and changed behaviours. They also discover the brain’s adaptive ‘plastic’ ability to physically change in response to different experiences and understand how the mechanisms of learning may be applied to assist them in everyday functioning. Students then build on their conceptual understanding of learning to consider it as one of several important facets involved in the analysis of mental health and illness. They consider different concepts of normality, and learn to differentiate between normal stress responses and clinical disorders. Students use a biopsychosocial framework 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.

Selection advice:
Choose this subject if you enjoy understanding why people behave in different ways and learning how your brain works and how it can be tricked or trained.

Links to further pathways:
The study of Psychology leads to opportunities in a range of careers that involve working with children, adults, families and communities in a variety of settings. These include roles in academic and research institutions, management and human resources, and government, corporate and private enterprises. Fields of applied psychology include educational, environmental, forensic, health, sport and organisational psychology. Specialist fields of psychology include counselling and clinical contexts, as well as neuropsychology, social psychology and developmental psychology.
Technology units within the VCE are an extension of the Year 7-10 programs and are organised under the study headings of:

- Product, Design and Technology
- Food Technology
- Information Technology
- Systems Engineering

Students may only select one unit of either Product, Design & Technology per semester (either Metals or Wood).

There are some common expectations of students undertaking all VCE Technology units. These include:

- Carrying out investigations in relation to the product being produced and the subject area
- Producing design/work plans applicable to the product
- Keeping a record of work done – e.g. a folio of working drawings and layouts
- Meeting time-lines set out by the subject teacher and the Victorian Curriculum & Assessment Authority

### Information Technology

**Overview:**

<table>
<thead>
<tr>
<th>Information Technology (Units 1 &amp; 2)</th>
<th>IT – IT Applications (Units 3 &amp; 4)</th>
<th>IT – Software Development (Units 3 &amp; 4)</th>
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<tbody>
<tr>
<td>An introduction to the use of Information Technologies to process or produce information.</td>
<td>Examines how and why organisations use technology to produce and manage information.</td>
<td>Examines the functions, purpose and operations of the systems that underpin the production of information.</td>
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**Unit 1: Computing**

In this unit students focus on how data, information and networked digital systems can be used to meet a range of users’ current and future needs. In Area of Study 1 students collect primary data when investigating an issue, practice or event and create a digital solution that graphically presents the findings of the investigation. In Area of Study 2 students examine the technical underpinnings of wireless and mobile networks, and security controls to protect stored and transmitted data, to design a network solution that meets an identified need or opportunity. They predict the impact on users if the network solution were implemented. In Area of Study 3 students acquire and apply their knowledge of information architecture and user interfaces, together with web authoring skills, when creating a website to present different viewpoints on a contemporary issue.

**Unit 2: Computing**

In this unit students focus on data and how the application of computational, design and systems thinking skills support the creation of solutions that automate the processing of data. In Area of Study 1 students develop their computational thinking skills when using a programming or scripting language to create solutions. They engage in the design and development stages of the problem-solving methodology. In Area of Study 2 students develop a sound understanding of data and how a range of software tools can be used to extract data from large repositories and manipulate it to create visualisations that are clear, usable and attractive, and reduce the complexity of data. In Area of Study 3 students apply all stages of the problem-solving methodology to create a solution using database management software and explain how they are personally affected by their interactions with a database system.
Unit 3: Informatics
In Informatics Units 3 and 4 students focus on data, information and information systems. In Unit 3 students consider data and how it is acquired, managed, manipulated and interpreted to meet a range of needs. In Area of Study 1 students investigate the way organisations acquire data using interactive online solutions, such as websites and applications (apps), and consider how users interact with these solutions when conducting online transactions.

They examine how relational database management systems (RDBMS) store and manipulate data typically acquired this way. Students use software to create user flow diagrams that depict how users interact with online solutions and acquire and apply knowledge and skills in the use of an RDBMS to create a solution. Students develop an understanding of the power and risks of using complex data as a basis for decision making.

In Area of Study 2 students complete the first part of a project. They frame a hypothesis and then select, acquire and organise data from multiple data sets to confirm or refute this hypothesis. This data is manipulated using tools such as spreadsheets or databases to help analyse and interpret it so that students can form a conclusion regarding their hypothesis. Students take an organised approach to problem solving by preparing project plans and monitoring the progress of the project. The second part of the project is completed in Unit 4.

Unit 4: Informatics
In this unit students focus on strategies and techniques for manipulating, managing and securing data and information to meet a range of needs. In Area of Study 1 students draw on the analysis and conclusion of their hypothesis determined in Unit 3, Outcome 2, and then design, develop and evaluate a multimodal, online solution that effectively communicates the conclusion and findings. The evaluation focuses on the effectiveness of the solution in communicating the conclusion and the reasonableness of the findings. Students use their project plan to monitor their progress and assess the effectiveness of their plan and adjustments in managing the project.

In Area of Study 2, students explore how different organisations manage the storage and disposal of data and information to minimise threats to the integrity and security of data and information and to optimise the handling of information.

Assessment activities:
• Interpret data and develop graphic solutions
• Design a network with wireless capability
• Design and develop a website with others
• Use a programming or scripting language to develop working modules

Links to further pathways:
This subject would be useful for all 21st century tertiary pathways and occupations.

Product, Design and Technology
Overview:
This study engages students in technological tasks that call on their knowledge and understanding of materials and production processes to design and make products suitable for their intended purpose.

<table>
<thead>
<tr>
<th>Metals</th>
<th>Wood</th>
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<tr>
<td>(Units 1, 2, 3 &amp; 4)</td>
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<td>These units build on work done in Years 7-10 and require a student to produce a practical product using the design process. This process requires students to develop a work plan that includes understanding the purpose of the product, selecting the best design option and materials, producing the product and evaluating the completed article.</td>
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Unit 1: Design Modification and Production
Design often involves the refinement and improvement of existing products. This unit focuses on the analysis, modification and improvement of a product design. It provides a structured approach towards the design process, looks at examples of design practice used by a designer and analysis and evaluation of a design.

Unit 2: Collaborative Design
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. This mirrors professional design practice where designers often work within a multidisciplinary team to develop solutions to design problems.

Unit 3: Design, Technological Innovation and Manufacture
In this unit students investigate a client or end-use’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.

Unit 4: Product Development, Evaluation and Promotion
Students continue to develop and manufacture the product designed in Unit 3 and record the production processes and modifications to the work plan and product. They evaluate the effectiveness and efficiency of techniques they used and the quality of their product with reference to evaluation criteria.

Assessment activities:
- Research and planning folios
- Individual production tasks
- Collaborative production tasks
- In-class written tests
- Student designed production task
- Written exam

Selection advice:
Students may only select one unit of either Product, Design & Technology per semester (either Metals or Wood).

Links to further pathways:
VCE Product Design & Technology provides for many continuing study pathways and leads to a range of careers. Diverse areas of employment range from trade-based areas like cabinet/furniture maker, kitchen joiner, carpenter and building industry to the higher education areas like product design, industrial design, architecture and interior design, and related fields.

Systems Engineering
Overview:
Students will gain appreciation, knowledge, understanding and practical application of technological systems. This study promotes innovative thinking and problem-solving skills through a project-based learning approach. It provides opportunities for students to learn about and engage with systems from a practical and purposeful perspective. The study emphasises integration of basic engineering and physics theory with practical tasks.

<table>
<thead>
<tr>
<th>Units 1/2</th>
<th>Units 3/4</th>
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<tr>
<td>Unit 1 Mechanical Engineering Fundamentals</td>
<td>Unit 3 Systems Engineering &amp; Energy</td>
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<tr>
<td>Unit 2 Electrotechnology Engineering Fundamentals</td>
<td>Unit 4 Integrated and Control Systems Engineering</td>
</tr>
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</table>
Unit 1: Introduction to Mechanical Systems
In this unit students study fundamental mechanical engineering principles, including the representation of mechanical devices, the motions performed, the elementary applied physics and the mathematical calculations that can be applied in order to define and explain physical characteristics. The unit allows for a ‘hand on’ approach as students apply their knowledge and construct functional systems. These systems can be purely mechanical or have some integration of electrotechnology systems.

Unit 2: Introduction to Electrotechnology Systems
In this unit students study fundamental electrotechnology principles included applied electrical theory, representation of electrical components and devices, elementary applied physics in electrical circuits and mathematical calculations that can be applied in order to define and explain electrical characteristics of circuits. This unit offers opportunities for students to apply their knowledge in the construction of a functional system.

Unit 3: Integrated Systems Engineering and Energy
This unit focuses on how mechanical and electrotechnology systems combine to form a controlled integrated technological system. This includes knowledge of sources and types of energy that enable engineered technological systems to function.

Unit 4: Systems Control and New and Emerging Technologies
These units involve a study of the principles associated with integrated systems. The focus is on the functional integration of a mechanical subsystem with an electrotechnology subsystem and the design factors to be considered. One substantial production task is to be undertaken across both Units 3 and 4.

Assessment activities:
• Research and planning folios
• Mechanical practical tasks
• Electronic practical tasks
• Written assignments
• Short topic tests (mechanical/electrotechnology principles)
• Student-designed production task
• Written exams

Selection advice:
Choose this subject if you are interested in how things work mechanically and electrically with a hands on approach to learning, experiencing and designing systems from the ground up, with an emphasis on problem solving by doing.

Links to further pathways:
VCE Systems Engineering provides for many continuing study pathways and leads to a range of careers. Diverse areas of employment range from trade-based areas like electrician, automotive mechanic/electrician, repair services industry, systems and security industry, engineering and fabrication industries to the higher education areas of civil, mechanical and electrical engineering, robotics, mechatronics, computer science, information technology fields or industrial design.
Food Studies

Overview:
This study is designed to build the capacities of students to make informed food choices. Students develop their understanding of food while acquiring skills that enable them to take greater ownership of their food decisions and eating patterns. In Food Studies Units 1,2,3 & 4 the preparation and production of food, on both a small (home) and a commercial scale, is the main focus.

Unit 1: Food origins
In this unit of study students explore the origins and cultural roles of food, from early civilisations through to today’s industrialised and global world. Through an overview of the earliest food production regions and systems, students gain an understanding of the natural resources, climatic influences and social circumstances that have led to global variety in food commodities, cuisines and cultures with a focus on one selected region other than Australia. Students also focus on the history and culture of food in Australia. They look at indigenous food prior to European settlement and the attempts of the first non-indigenous settlers to establish a secure and sustainable food supply.

Students consider the development of food production, processing and manufacturing industries and conduct a critical inquiry into how Australian food producers and consumers today have been influenced by immigration and other cultural factors. Students conduct research into foods and food preparation techniques introduced by immigrants over time and consider the resurgence in interest in indigenous food practices, while reflecting on whether Australia has developed a distinctive cuisine of its own.

The practical components explore the use of ingredients available today that were used in earlier cultures, as well as providing opportunities for students to extend and share their research into the world’s earliest food-producing regions. Students are also given the opportunity to extend and share their research into a selected cuisine brought by migrants.

Unit 2: Food makers
In this unit of study students focus on commercial food production in Australia, encompassing primary production and food processing and manufacturing, and the retail and food service sectors. Students apply an inquiry approach, with emphasis on the ever-changing and dynamic nature of our food industries and their ongoing importance to Australia’s economy. Students investigate the characteristics of the various food industries and identify current and future challenges and opportunities. They consider the influences on food industries, and in turn how they influence people. Students investigate new food product development and innovation, and the processes in place to ensure a safe food supply.

Students undertake a practical component, creating new food products using design briefs, and applying commercial principles such as research, design, product testing, production, evaluation and marketing. Students also further explore food production, focusing on domestic and small-scale food production. Students compare similar products prepared in different settings and evaluate them using a range of measures. They consider the influences on the effective provision and preparation of food in the home. Their practical skills are extended through designing and adapting recipes, encompassing a range of dietary requirements commonly encountered by the food service sector and within families. Students propose and test ideas for applying their food skills to entrepreneurial projects that potentially may move their products from a domestic or small-scale setting to a commercial context.

Unit 3: Food in daily life
In this unit of study students focus on the science of food. They investigate the physiology of eating and microbiology of digesting, and the absorption and utilisation of macronutrients. They investigate food allergies, food intolerances and the microbiology of food contamination. By identifying evidence-based principles, students develop their capacity to analyse advice on food choices. Students learn and apply food science terminology relating to chemical changes that occur during food preparation and cooking, and undertake hands-on experimentation to demonstrate techniques and effects. Students also focus on patterns of eating in Australia and the influences on the food we eat.
Students look at relationships between social factors and food access and choice, as well as the social and emotional roles of food in shaping and expressing identity and how food may link to psychological factors. They inquire into the role of media, technology and advertising as influences on the formation of food habits and beliefs, and investigate the principles of encouraging healthy food patterns in children. The practical component of this unit is the development of a repertoire of healthy meals suitable for children and families.

Unit 4: Food issues, challenges and futures
In this unit of study students address debates concerning Australian and global food systems, relating to issues on the environment, ethics, technologies, food access, food safety, and the use of agricultural resources. Students conduct a critical inquiry into a range of debates through identifying issues involved, forming an understanding of current situations and considering possible futures. They research one selected debate in depth, seeking clarity on disparate points of view, considering proposed solutions and analysing work undertaken to solve problems and support sustainable futures.

Students will consider environmental and ethical issues relating to the selected debate and apply their responses in practical ways. Students also focus on food information and misinformation and the development of food knowledge, skills and habits. Students learn to assess information and draw evidence-based conclusions to navigate contemporary food fads, trends and diets. They investigate a selected food fad, trend or diet and assess its credibility and the reliability of its claims, taking into consideration the evidenced-based recommendations of the Australian Dietary Guidelines and the Australian Guide to Healthy Eating. Students practise and improve their food selection skills by interpreting food labels and interrogating the marketing terms on food packaging. The practical component of this unit of study provides opportunities for students to extend their food production repertoire by creating recipes that reflect the Australian Dietary Guidelines.

Assessment activities:
- Oral presentation on an individually selected region
- Research tasks
- Written report
- Media analysis
- A range of practical activities with practical records
- Sensory evaluations of food

Selection advice:
Subject to School Council approval, all Food Studies units incur a food cost of approximately $50 per semester.

Links to further pathways:
This study complements and supports further training and employment opportunities in the fields of home economics, food technology, food manufacturing and hospitality.
VET Programs

**22338VIC: Certificate II Building and Construction (Partial)**

**Overview:**
This qualification aims to provide the skills and ability to enhance employment and further training prospects within the Building and Construction industry. Students who complete this training will be able to work safely under routine supervision including framing, demolition, scaffolding, levelling, use of carpentry hand and power tools as well as basic plans and calculations.

**Program length:** 2 year program

**Outcomes:**
On completion of this program students will have completed Certificate II in Building & Construction and receive a Statement of Attainment for the following units:

**Assessment activities:**
Units of competency covered:
- Workplace safety and industry induction
- Workplace procedures for environmental sustainability
- Basic first aid
- Building Structures
- Calculations for the Building Industry
- Safe handling of plant and power tools
- Workplace documents and plans
- Carpentry hand tools
- Introduction to demolition
- Basic setting out
- Introduction to scaffolding
- Levelling
- Quality Principals for the Building Industry
- Wall framing
- Roof framing
- Sub floor framing
- External Cladding
- Work safely in the construction industry

**Links to further pathways:**
- Carpentry apprenticeship
- Building Engineering
- Building Surveying & Quality Surveying
- Architecture
- Interior Design
- Civil/Electrical/Electronics
- Mechanical Engineering

**SIT20316: Certificate II in Hospitality**

**Overview:**
This qualification provides students with training and skills that enhance their employment prospects within a broad range of hospitality settings, with a training credit towards the apprenticeship training plan.
Program Length: 2 years

Outcomes:
Satisfactory completion of the program entitles the student to Certificate II in hospitality and modules from Certificate III.

Assessment activities:
Units of competency covered:
- Work effectively with others
- Prepare and present simple dishes
- Use hygienic practices for food safety
- Participate in safe work practices
- Clean kitchen premises and equipment
- Use food preparation equipment
- Prepare and present sandwiches
- Use hospitality skills effectively
- Interact with customers
- Prepare and service non-alcoholic beverages
- Prepare and serve espresso coffee
- Serve food and beverages
- Provide advice on food
- Process financial transactions
- Show social and cultural diversity
- Source and use information on the hospitality industry

Links to further pathways:
This qualification would be excellent preparation for the following occupations: Food and Beverage Attendant, Café Manager/Owner, Kitchen Assistant, Hospitality Manager.

**IO66INAT Certificate III in Applied Languages (Chinese)**

Overview:
This certificate focuses on the practical use of Chinese language in social and workplace settings within an Australian context. Students will complete 4 units of competency over two years. The aim of the course is to be able to communicate in Chinese and have positive interactions in both social and workplace settings.

Students who complete this course will have credit towards two units of Unit 3 and one of Unit 4, as a block credit. This means that students will receive the equivalent of 10% of the mark for their fourth subject added to their ATAR.

First year
Students will complete Units 1 & 3, which focus on being able to function in a social setting, namely being able to interact with international students at our school and on social outings in Ballarat. By the end of these two units, students will be able to:
- strike up a conversation with a newly arrived international student
- be able to help a newly arrived international student find various places at school
- exchange contact details and continue conversations via online communication
- discuss differences between Australian and Chinese students’ lifestyles
- write various tasks relevant to the above topics

Second year
In Year 12, students complete Units of Competency 2 & 4, which have a workplace focus. The chosen workplaces are the Mount Clear College Language Centre and Sovereign Hill. By the end of these two units, students will be able to:
• assist Chinese tourists with a welcome greeting, map reading, and basic information tasks at Sovereign Hill
• ask visitors to Sovereign Hill to complete a survey
• read those survey responses and translate them
• create a resume in Chinese
• complete an application form to study Chinese at a university in China
• apply and be interviewed for a traineeship at the Language Centre (imagined)

Assessment activities:
This certificate requires students to complete speaking, reading and writing **non-scored, competency based assessments** during the course. There is no end of year examination at either Year 11 or 12.

Selection advice:
Students must have completed Certificate II in Applied Language or can prove equivalent standards.

Links to further pathways:
This course will provide access to most tertiary language courses. It also provides students with a certification to add to their resumes. Having a second language allows students to follow many career paths including, but not limited to:
• trade & foreign affairs
• translation & interpreting
• teaching
• tourism
• business

**CUA30915 Certificate III in Music Industry**

Overview:
In this subject, students will extend their music skills to enhance their employment prospects within the Music Industry. Students who complete this program will obtain the expertise to compose and record their own music, work in a group and solo, improvisation, work at a music event, explore career options and understand copyright.

Program Length
The course runs for two years.

Assessment activities:
Satisfactory completion of the program entitles the student to a Certificate III in Music (Performance).

Units of Competency Covered:
First Year:
• Implement copyright arrangements
• Contribute to health and safety of self and others
• Work effectively in the music industry
• Apply knowledge of style and genre to music industry practice
• Compose simple songs or musical pieces
• Develop ensemble skills for playing or singing music

Second Year:
• Develop technical skills in performance
• Prepare for performances
• Develop Improvisation skills
• Develop and maintain stage craft skills
• Perform music as part of a group as a soloist
Links to further pathways:
On completion of this course, you will have the opportunity to pursue an occupation in such areas as musician, music teacher, singer, songwriter or jingle writer, stage producer, music technician, stage manager, director or music editor, broadcaster, and disc jockey.

Contact: Scott Mangos
Two year course, VCE accredited, aimed at Years 10/11/12.
Course Planning

Over the two VCE years, most students will complete a total of 22 units from a range of different studies.

Requirements of VCE
The following units are compulsory - each student must study:

- Four units of English study (including English or Foundation Units 1 and 2) selected from these units with at least a Unit 3 and 4 sequence:
  - English Units 1 through 4;
  - Foundation English Units 1 and 2;
  - English Language Units 1 through 4;
  - Literature Units 1 through 4.
- A minimum of four Unit 3/4 sequences in total (including your English units).

Students intending to complete a Non-Scored VCE should tick box □

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<th>Year 10 Semester 1</th>
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