





CONTENTS

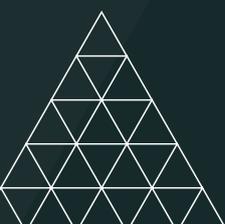
VCE Program Overview	2	Humanities	26
▶ Program Flexibility	2	▶ Modern History	27
▶ Victorian Pathways Certificate (VPC)	2	▶ Australian History	28
Access to University Subjects	3	▶ History Revolutions	29
VCE - Vocational Major (VCE-VM)	4	▶ Extended Investigation Studies	29
victorian Pathways certificate (VPC)	5	▶ Students' Common Questions and Answers	29
Senior Pathways	6	Languages	31
Careers Support	7	▶ Japanese Language	32
Vocational Education and Training	8	▶ Chinese Language – Culture & Society	32
▶ Costs	8	▶ Chinese as a First Language	33
▶ Group 1 - Mount Clear College VET programs	9	Mathematics	34
▶ Group 3 - Highlands LLEN cluster VET programs	9	▶ Foundation Mathematics	35
▶ Group 2 - Onsite Highlands LLEN Cluster VET programs	9	▶ General Mathematics	36
Access to VCE subjects in 2023	10	▶ Further Mathematics	37
▶ Prerequisites for Units 1 and 2	10	▶ Mathematical Methods	38
▶ Prerequisites for Units 3 and 4	10	▶ Specialist Mathematics	39
School Based Apprenticeships	11	Health & Physical Education	40
Visual & Performing Arts	14	▶ Health & Human Development	41
▶ Art Making & Exhibiting	15	▶ Outdoor & Environmental Studies	41
▶ Certificate III in Music Industry	15	▶ Physical Education	42
▶ Dance	16	Science	43
▶ Media	16	▶ Biology	44
▶ Music	17	▶ Chemistry	45
▶ Drama	18	▶ Environmental Science	46
▶ Visual Communication and Design	18	▶ Physics	47
Business Studies	20	▶ Psychology	48
▶ Accounting	21	Technology Studies	49
▶ Business Management	22	▶ Food Studies	50
▶ Legal Studies	22	▶ Product, Design and Technology	51
English	23	▶ Systems Engineering	52
▶ English	24	VET Programs	53
▶ Foundation English	25	▶ Cert II Building and Construction (Partial)	54
▶ Literature	25	▶ Cert II in Hospitality	54
		▶ Cert III in Music Industry (Performance)	55
		▶ Cert III in Music Industry (Sound Production)	55
		Planning for VCE	56
		Planning for VCE-VM	57



At Mount Clear College, we support every student as an individual with their own unique talents and aspirations. Our holistic learning programs and dedicated staff aim to develop our students as:

- ▶ Motivated, confident learners, who are persistent in striving for individual growth.
- ▶ Resilient young people who work with others to overcome challenges.
- ▶ Community members who demonstrate respect, compassion, honesty, acceptance of others and who value diversity.
- ▶ Socially responsible citizens who contribute positively to the local and global community.
- ▶ Successful young people in their transition through schooling to their desired future.

At Years 11 and 12, we build on these foundations by offering studies that cater for a wide diversity of pathways and post-secondary aspirations and guide students to select a program that best suits their goals.





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 1 and 2 are usually undertaken in Year 11 and can be completed 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 four 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 Units 3 and 4 sequence:

- ▶ English Units 1 through to 4
- ▶ Foundation English Units 1 and 2
- ▶ Literature Units 1 through to 4
- ▶ A minimum of four Units 3 and 4 sequences (including your English units)

Satisfactory Completion

To obtain your VCE you must satisfactorily complete a minimum of 16 units including:

- ▶ Three units of English taken from the above list of English subjects, including a Units 3 and 4 sequence
- ▶ Three other Units 3 and 4 sequences (six units in all)

Mount Clear College offers studies which cater for a wide diversity of expectations and pathways. Our VCE program at 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 families with extensive assistance with course selection. This is to ensure that the VCE pathway developed for each student is the most appropriate program for them. 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 Units 3 and 4 studies in their first year of VCE. This is possible as there are no prerequisites in many Units 3 and 4 sequences. However, Units 3 and 4 studies require greater maturity and language skills than Units 1 and 2. Your previous work and discussions with your teachers will determine if this would be suitable for you. Table 1 on page 9 shows which Units 3 and 4 studies you may attempt. Students entering Year 11 who have not completed Units 1 and 2 and wish to undertake a Units 3 and 4 sequence must complete an application form available from the Senior School Leading Teacher.

Victorian Pathways Certificate (VPC)

There is an opportunity for students to complete a 'Vocational Major' (VM) as part of their VCE studies. The VCE-VM pathway is suitable for students who do not wish to go to University but would like to acquire the skills and knowledge that will prepare them for vocational work, an apprenticeship or further studies at TAFE. Students undertaking the VCE-VM will complete a minimum of 180 hours of vocational training as part of their certificate and can negotiate access to regular industry based work experience. VCE-VM students may not receive an Australian Tertiary Admission Rank (ATAR) score upon completion of Year 12, and so may not be eligible for direct entry to many tertiary courses. Please refer to the 'VCE Vocational Major Overview' section of the Year 11 and 12 Course Guide for further details.



ACCESS TO UNIVERSITY SUBJECTS

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 2023:

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

Applications close late 2022.

Please see the Careers & Pathways Coordinator for more detailed information on the courses listed above.



VCE - VOCATIONAL MAJOR (VCE-VM)

What is the VCE Vocational Major (VCE-VM)?

The VCE Vocational Major (VCE-VM) is a pathway within the Victorian Certificate of Education (VCE) 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. It is not suited to students who are seeking direct entry to university courses or many professional occupations.

An Applied Approach to Learning

The VCE-VM is based on principles of applied learning that seek to relate student learning to real life experiences, including workplace, vocational study and community settings. Students are taught skills and knowledge in the context of real-life situations, and are then required to discover how to apply what they have learnt by doing, experiencing, reflecting and relating their acquired skills to the real world.

VCE-VM Structure

VCE-VM students undertake 20 units over a two year period and will typically undertake 4 units each of the following five subjects:

- ▶ Literacy or VCE English
- ▶ Numeracy or VCE Mathematics
- ▶ Work Related Skills (WRS)
- ▶ Personal development Skills (PDS)
- ▶ Vocational Education and Training (VET) or a School Based Apprenticeship (SBA) or Traineeship equivalent to a minimum of 180 hours. 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 Year 11 and 12 Course Guide.

A unit usually lasts for one semester (half a year). Units 1 and 2 are typically undertaken in Year 11 and can be completed as single units. Units 3 and 4 are normally attempted in Year 12 and must be undertaken as a two Semester sequence.

Satisfactory Completion

To be awarded a certificate, students must satisfactorily complete a minimum of 16 units, including:

- ▶ 3 Literacy or VCE English units (that includes a 3-4 sequence)
- ▶ 2 Numeracy or VCE Mathematics units
- ▶ 2 Work Related Skills units
- ▶ 2 Personal Development Skills units
- ▶ 2 VET units

Students must complete a minimum of four Unit 3-4 sequences and can include VCE units in their learning program which may count towards the calculation of an ATAR.

Students will typically complete these units over five contact days per week, but where appropriate can negotiate access to regular industry-based work experience.

Assessment

The VCE-VM curriculum is competency based and there are no written tests or exams. However, VCE-VM students are required to sit the Literacy and Numeracy section of the General Achievement Test (GAT) during their Year 12 studies and their score will appear on their Statement of Results. Students who include VCE subjects as part of their learning program will need to adhere to the assessment

VCE-VM Prerequisites

Students seeking to transition to the VCE-VM from Year 10 are required to have achieved 65%+ VCE approved attendance (as seen in Compass) and to have passed a minimum of eight units, including one English unit and one Maths unit. Students who fail to meet these prerequisites may be required to enrol in the Victorian Pathways Certificate (VPC) until they have demonstrated the capacity to cope with the demands of the VCE-VM. Please refer to the VPC section of the Year 11 and 12 Course Guide for further details.

Many talents. One VCE.



VICTORIAN PATHWAYS CERTIFICATE (VPC)

What is the Victorian Pathways Certificate (VPC)?

The Victorian Pathways Certificate (VPC) is a stand-alone foundation level course offered at Years 11 and 12. Unlike the VCE and the VCE-VM, the VPC is not an accredited senior level certificate. It is designed to provide a pathway to entry level VET and employment for students with additional learning needs and/or who have missed significant periods of schooling and/or at risk of disengaging from education. It is not suited to students who are seeking direct entry to university courses or many professional occupations.

An Applied Approach to Learning

The VPC is based on principles of applied learning that seek to relate student learning to real life experiences, including workplace, vocational study and community settings. Students are taught skills and knowledge in the context of real-life situations, and are then required to discover how to apply what they have learnt by doing, experiencing, reflecting and relating their acquired skills to the real world.

VPC Structure

The VPC program is highly flexible and students are able to enter and exit at times that suit their learning needs. VPC students are expected to complete a minimum of 12 units over the two year period. Most VPC students will typically undertake 16 to 20 units. A unit usually lasts for one semester (half a year). Students will normally undertake 4 units each of the following four subjects:

- ▶ Literacy
- ▶ Numeracy
- ▶ Work Related Skills (WRS)
- ▶ Personal development Skills (PDS)

Students may also include VCE or VET units as part of their program but are not required to do so. For more details, please refer to the VCE and VET sections of the Year 11 and 12 Course Guide.

Students can transfer into the VPC from the VCE or VCE-VM.

Satisfactory Completion

To be awarded a VPC certificate, students must satisfactorily complete a minimum of 12 units, including:

- ▶ 2 Literacy units
- ▶ 2 Numeracy units
- ▶ 2 Work Related Skills units
- ▶ 2 Personal Development Skills units

Students will typically complete these units over 3-5 contact days per week, but where appropriate can negotiate access to regular industry based work experience.

Students who are making satisfactory progress may apply to transfer into the VCE or the VCE-VM. However, successfully completed VPC units cannot be credited towards a VCE or VCE-VM certificate.

Assessment

The VPC curriculum is competency based and there are no written tests or exams.

VPC Prerequisites

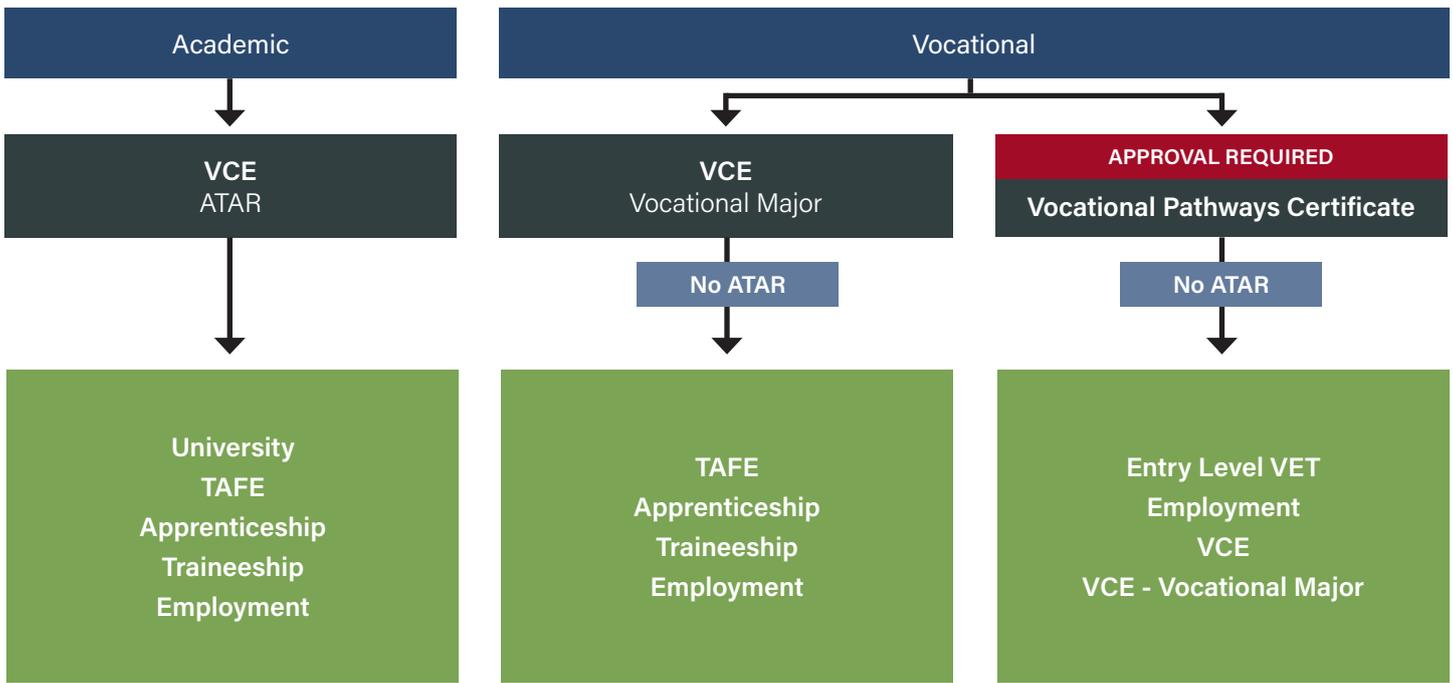
Students seeking admission to the VPC must be able to demonstrate that they have additional learning needs, have missed significant periods of schooling or are at risk of disengaging from education.

or

Mount Clear College recommends students who have not passed eight year 10 Units including one Unit of English and one Unit of Maths and/or do not have a VCE attendance of 65% complete the Victorian pathways Certificate.



SENIOR PATHWAYS





CAREERS SUPPORT

Our Careers support is delivered by qualified Careers Practitioners and provides an accessible resource at Mount Clear College for our students and their families.

Mount Clear College prepares students for a wide range of career opportunities, including pathways into universities, TAFE, apprenticeships and employment.

Students can access personalised help from subject selection to pathway options and explore a diverse range of possibilities. Our careers department stays up to date with everything from scholarship opportunities, to Early Entry Programs, prerequisites for courses and employment opportunities which include apprenticeships. We have developed close relationships with key networks and stakeholders which gives us a strong understanding of the expectations of industry.

As active members of the Ballarat Careers Education Network, we stay up to date with the latest information. Our students and families have easy access to our extensive resources available on our College Careers website www.mountclearcollegecareers.com.au or via the Mount Clear College Careers Facebook page.

Years 7 and 8

Students undertake learning tasks to explore their skills, strengths and attributes and how these contribute to the world of work.

Year 9

All students participate in career planning as part of the Year 9 program, covering everything from offering students the opportunity to complete a Morrisby Profile, resumes and job applications to mock job interviews with local stakeholders and industry guest speakers from business and tertiary sectors.

Year 10

Students receive one-on-one subject selection interviews, course and pathway guidance. Information sessions and the Work Experience Program in Term 3 offer students the opportunity to further investigate future pathways.

Year 11

Students receive one-on-one subject selection interviews, opportunities to participate in guest presentations with further education institutions and Job Seeking. Students and families are able to schedule a one-on-one interview to discuss pathways including completing a Career Action Plan.

Year 12

Every Year 12 student has at least one appointment with one of our qualified Careers Practitioners to develop their future pathway goals and aspirations. Students are supported with the completion of further education requirements including VTAC and Special Access Schemes applications. Assistance with job seeking opportunities and the application processes



VOCATIONAL EDUCATION AND TRAINING

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

VET may contribute to 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 VCE - Vocational Major through satisfying the requirements of the Industry Specific Skills or Work Related Skills strands. 180 hours of VET is a compulsory component of VCE - Vocational Major.

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.

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

As of 2022, government schools no longer request payments from parents for essential learning materials for Vocational Education and Training (VET) studies. These fees are now paid by the Department of Education. This does not include any excursions associated with VET studies.





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
Hospitality
Music Industry (Performance)

Group 2 - Onsite Highlands LLEN Cluster VET programs

Given sufficient enrolment, the following program 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:

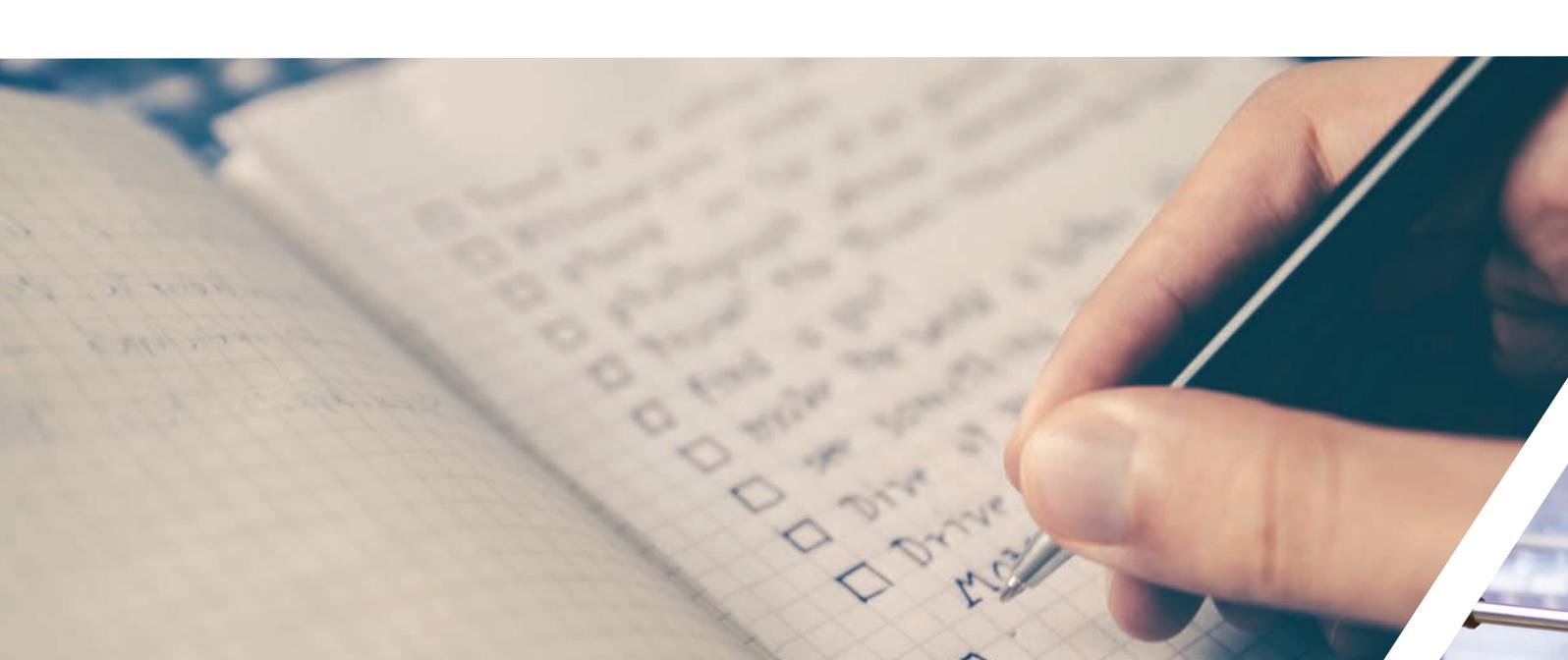
Music Industry (Sound Production)
--

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
Allied Health Assistance
Animal Care
Applied Fashion Design and Technology
Automotive
Building and Construction
Community Services
Dance
Early Childhood Education
Electrotechnology
Engineering

Equine Studies
Furniture Making
Hospitality
Information Technology
Kitchen Operations
Music (Sound Production)
Outdoor Recreation
Plumbing
Retail Cosmetics
Salon Assistant
Screen & Media



ACCESS TO VCE SUBJECTS IN 2023

Prerequisites for Units 1 and 2

Units 1 and 2 Subjects	Prerequisite
Chinese Culture & Society	Year 10 Chinese
LOTE Japanese	Year 10 LOTE Japanese
Literature	'Above level' in Year 10 Core English
Maths Methods	'Above level' in Analytical Maths
Specialist Maths	'Above level' in Analytical Maths

Prerequisites for Units 3 and 4

Units 3 and 4 Subjects	Prerequisite
Accounting	Accounting 2
Chemistry	Chemistry 2
Chinese Culture & Society	Chinese Culture Society 1 and 2
Dance	Dance 1 and 2
Further Mathematics	General Maths 1 and 2 / Maths Methods 1 and 2
Literature	Literature 2
LOTE Japanese	LOTE Japanese 1 and 2
Maths Methods (CAS)	Maths Methods (CAS) 1 and 2 (required)
Music Performance	Music Performance 1 and 2
Physics	Physics 1 and 2
Specialist Maths	Specialist Maths 1 and 2



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;
- ▶ want to keep their options open – broadens pathway choices after completing Year 12;
- ▶ want to combine paid work, learning 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.

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.)

	Term Schedule	School Holiday Schedule
Monday	VCE at school	On holiday
Tuesday	Paid work and on-the-job training	Paid work and on-the-job training
Wednesday	VCE at school	On holiday
Thursday	VCE at school	On holiday
Friday	Paid work and on-the-job training	Paid work and on-the-job training

Steps involved in the Program are:

- ▶ the student gains employment as an apprentice or trainee in their 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 Certificate.



YURI HOASHI

2021 College Dux

ATAR - 98.15

"My motivation was just my own desire to go to university, get a good score and get scholarships. Knowing that motivated me to do even more work."

SUBJECTS: English, Mathematical Methods, Specialist Mathematics, Chemistry, Physics (2020), Japanese Second Language (2020)



ANGUS BIGMORE 2021 VCAL Dux

"The biggest part of getting through the year was the support I received from everyone around me. Knowing what to do and how to get there made the difference"

SUBJECTS: VCAL Literacy, VCAL Numeracy, VCAL Personal Development Skills, VCAL Work Related Skills, VET Building and Construction.

VISUAL & PERFORMING ARTS

In the Visual & 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, and Art Making & Exhibiting, 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 - e.g. an interview, folios, etc. Ensure you check 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.

Pathways you can follow after VCE

TAFE

Certificates & Diplomas in

- ▶ Visual Arts
- ▶ Graphic Design
- ▶ Photography
- ▶ Performing Arts etc.

University

Bachelor Degrees in

- ▶ Performing Arts
- ▶ Drama
- ▶ Arts/Media
- ▶ Visual Arts
- ▶ Graphic Design

Employment

Limited opportunities exist for all students directly from VCE.

See the Careers Teacher about Traineeships and Apprenticeships.



ART MAKING & EXHIBITING

Overview

VCE Art Making and Exhibiting introduces students to the methods used to make artworks and how artworks are presented and exhibited.

Students use inquiry learning to explore, develop and refine the use of materials, techniques and processes and to develop their knowledge and understanding of the ways artworks are made. They learn how art elements and art principles are used to create aesthetic qualities in artworks and how ideas are communicated through the use of visual language. Their knowledge and skills evolve through the experience of making and presenting their own artworks and through the viewing and analysis of artworks by other artists.

Visiting and viewing exhibitions and displays of artwork is a necessary part of this study. It helps students understand how artworks are displayed and exhibitions are curated. It also has an influence on the students' own practice, and encourages them to broaden and develop their own ideas and thinking around their own art making.

A strong focus on the way we respond to artworks in galleries, museums, other exhibition spaces and site-specific spaces is integral to study and research in VCE Art Making and Exhibiting. The way institutions design exhibitions and present artworks, and also how they conserve and promote exhibitions, are key aspects of the study.

Units 1 and 2

Assessment activities:

- ▶ Visual Arts Journal
- ▶ Finished Artworks
- ▶ Information for an Exhibition
- ▶ Thematic Exhibition
- ▶ Experimental Artworks and Documentation
- ▶ Finished Artworks

Units 3 and 4

Assessment activities:

- ▶ Collect information from artists and artworks in specific art forms to develop subject matter and ideas in their own art making.
- ▶ Make artworks in specific art forms, prepare and present a critique, and reflect on feedback.
- ▶ Research and plan an exhibition of the artworks of three artists
- ▶ Refine and resolve at least one finished artwork in a specific art form and document the materials, techniques and processes used in art making.
- ▶ Plan and display at least one finished artwork in a specific art form, and present a critique.

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 Art Making & Exhibiting are recommended for entry in to Units 3 and 4 Art Making & Exhibiting.

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

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

CERTIFICATE III IN MUSIC INDUSTRY

See VET programs

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 choreographer's choice of expressive intention and production aspects of the dance works. These dance works are selected from the prescribed list of solo works for Unit 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 choreographer's 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 for Unit 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, helps to 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 and 2

In Units 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 and 4

In Units 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 Units 3 and 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.

Overview

VCE Music is based on active engagement in all aspects of music. Students develop and refine musicianship skills and knowledge and develop a critical awareness of their relationship with music as listeners, performers, creators and music makers. Students explore, reflect on and respond to the music they listen to, create and perform. They analyse and evaluate live and recorded performances, and learn to incorporate, adapt and interpret musical practices from diverse cultures, times and locations into their own learning about music as both a social and cultural practice.

In this study students are offered a range of pathways that acknowledge and support a variety of student backgrounds and music learning contexts, including formal and informal.

Unit 1: Organisation of Music

In this unit students explore and develop their understanding of how music is organised. By performing, creating, analysing and responding to music works that exhibit different approaches, students explore and develop their understanding of the possibilities of musical organisation.

Unit 2: Effect in Music

In this unit, students focus on the way music can be used to create an intended effect. By performing, analysing and responding to music works/examples that create different effects, students explore and develop their understanding of the possibilities of how effect can be created. Through creating their own music, they reflect this exploration and understanding.

Units 1 and 2 Assessment activities:

- ▶ performances of at least two works, including at least one ensemble/group work
- ▶ a discussion of the challenges presented by these works which may be presented as:
 - ▶ aural, oral, written and practical tasks
 - ▶ composition and/or improvisation exercises and accompanying discussion that demonstrate an understanding of the organisation of music

Units 3 and 4: Music Contemporary Performance

This study offers pathways for students whose performance practice includes embellishment and/or improvisation, uses collaborative and aural practices in learning, often takes recordings as a primary text, and projects a personal voice. Students study the work of other performers and analyse their approaches to interpretation and how personal voice can be developed through reimagining existing music works. They refine selected strategies to enhance their own approach to performance.

Students identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and endeavour to address these challenges. They listen and respond to a wide range of music by a variety of performers in contemporary styles. They also study music language concepts such as scales, harmony and rhythmic materials that relate to contemporary music.

Students may present with any instrument or combination of instruments which will be suitable to convey understanding of the key knowledge and application of key skills for Outcome 1, with styles including (but not limited to) rock, pop, jazz, EDM, country, funk and R&B.

Students prepare a program for assessment in a live performance. They may be assessed as primarily a member of a group or as a solo performer. All performances must include at least one ensemble work with another live musician and an original work created by an Australian artist since 1990. All performances must include a personally reimagined version of an existing work. Original works may also be included in the program.

Students submit a program list along with a Performer's Statement of Intent. Part of the statement should include information about their reimagined piece and explain how the existing work has been manipulated. This must be accompanied by an authentication document. As part of their preparation, students are able to present performances of both ensemble and solo music works and take opportunities to perform in both familiar and unfamiliar venues and spaces.

Across Units 3 and 4 all students select works of their own choice for performance that allow them to meet examination requirements and conditions as described in the performance examination specifications.

Assessment activities:

- ▶ A short written/oral task explaining the choice of the proposed program of works to be performed.
- ▶ A demonstration of an intended approach to reimagining an existing work.
- ▶ A discussion in which the development of techniques and personal voice are explained and demonstrated.
- ▶ Response to structured questions relating to previously unheard music.
- ▶ Identification, recreation (on instrument) and style-appropriate notation of short music examples.
- ▶ A discussion in which materials designed to assist in the development of techniques and interpretation are explained and demonstrated.
- ▶ A demonstration of an approach to reimagining of an existing work.
- ▶ End-of-year aural and written examination.

Units 3&4: Music Repertoire Performance

This study is designed for students whose musical interests are grounded in the recreation and interpretation of notated musical works, and who wish to gain and share knowledge of musical styles and performance practices. Students may present on any instrument for which there is an established repertoire of notated works. They work towards a recital program that demonstrates highly developed technical skills and stylistic refinement as both a soloist and as an ensemble member. They develop the capacity for critical evaluations of their performances and those of others, and an ability to articulate their performance decisions with musical evidence and independence of thought.

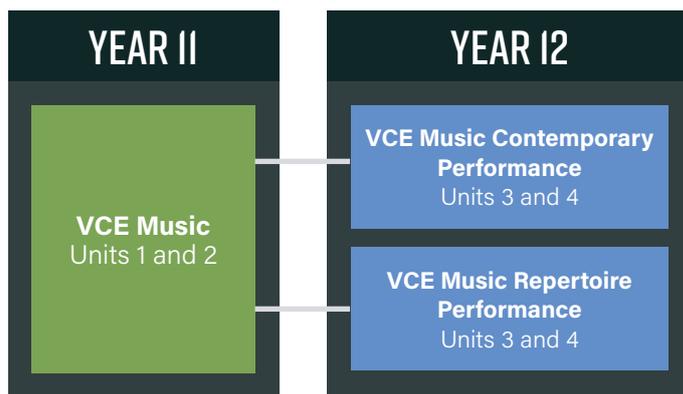
Students identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and endeavour to address these challenges. They listen and respond to a wide range of music by a variety of performers and study music language concepts such as scales, harmony and rhythmic materials.

Assessment activities:

- ▶ A short written/oral task explaining the process used to select a performance program.
- ▶ A discussion in which materials designed to assist in the recreation of notated recital works are explained and demonstrated.
- ▶ Written responses to structured questions and a practical demonstration of music language knowledge and skills.
- ▶ End-of-year aural and written explanation.

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.



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 and 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 and 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

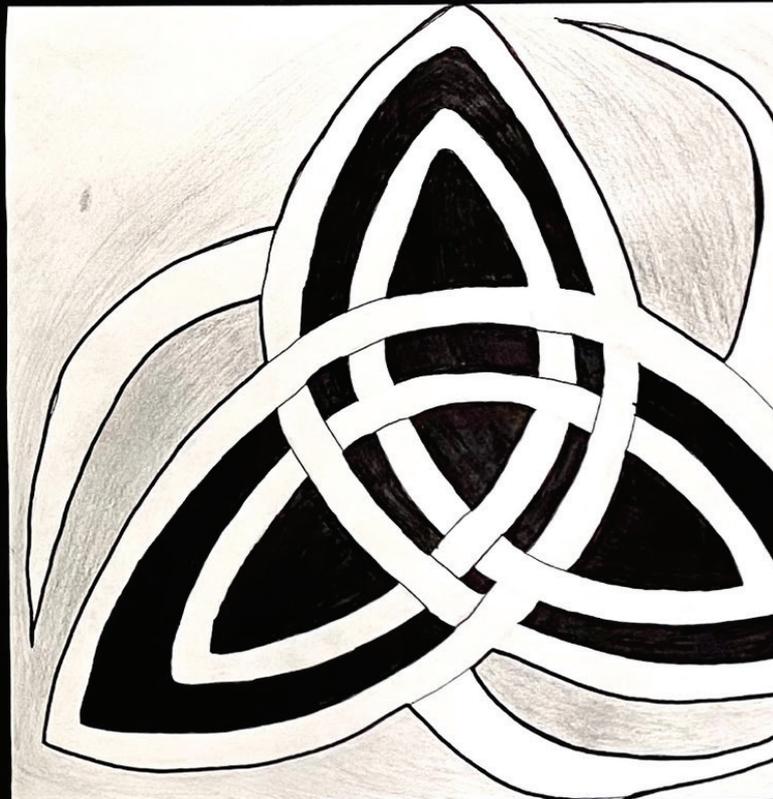
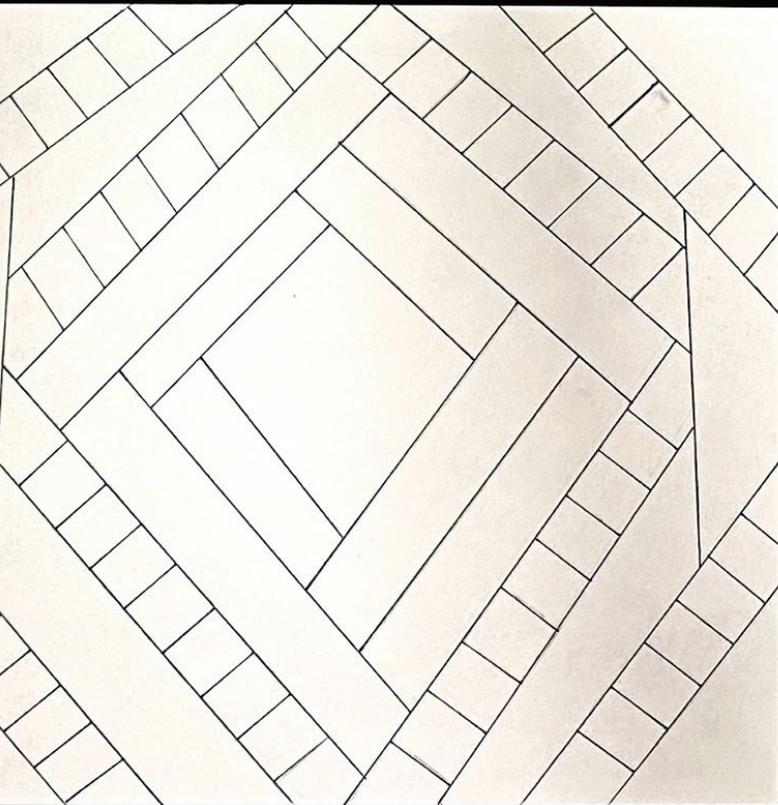
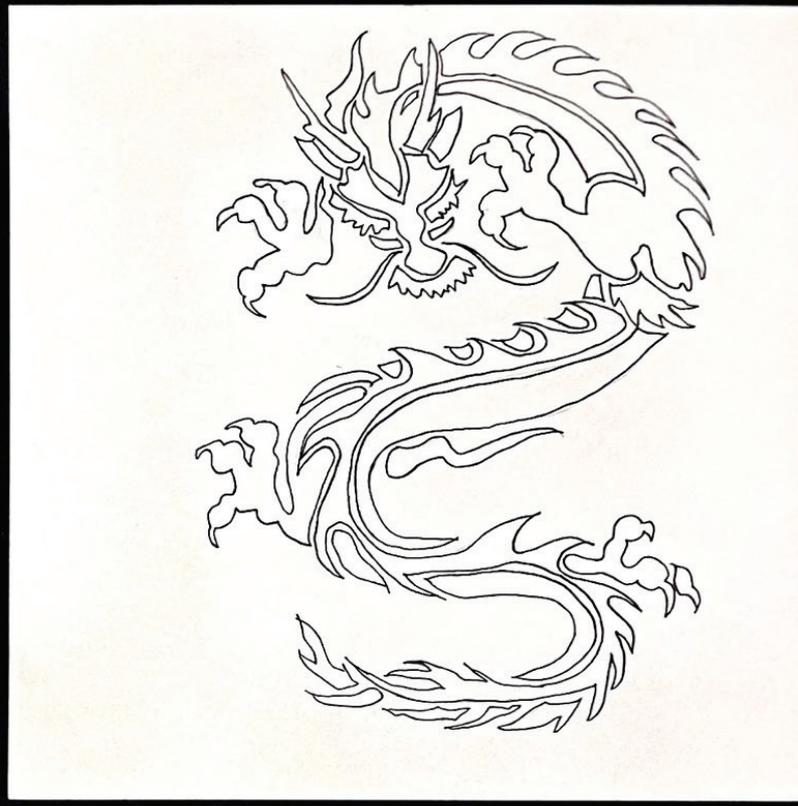
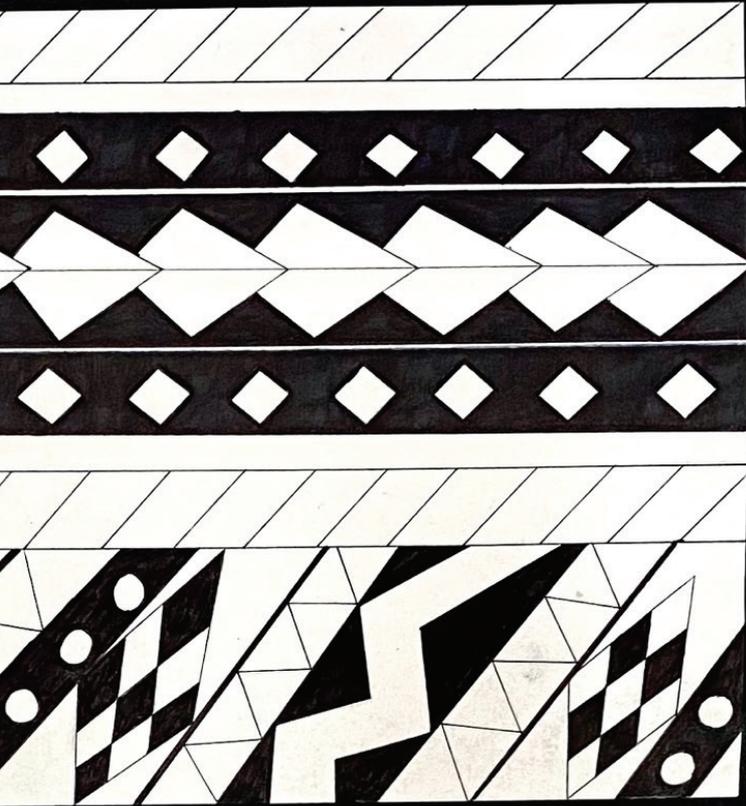
- ▶ Analysis and practice in context
- ▶ Design industry practice
- ▶ Design Brief, development, refinement and evaluation, design, final presentations
- ▶ End of year examination

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 Units 3 and 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 the Assistant Principal of the Senior School.



BUSINESS STUDIES

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

In these subjects, students:

- ▶ investigate relevant content - e.g. current economic issues
- ▶ develop management and enterprise knowledge and skills - e.g. students manage a school based enterprise
- ▶ develop essential life-skills - e.g. financial management skills
- ▶ focus on contemporary issues - e.g. 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



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 and 2

Unit 1: Role of accounting in business

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 1 is cash accounting.

Unit 2: Accounting and decision-making for a trading business

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 and 4

Unit 3: Financial accounting for a trading business

Units 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.

Assessment activities

- ▶ 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.
- ▶ 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
- ▶ End of year examination (50%) for a trading business.

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:

- ▶ Corporate and taxation accountant
- ▶ Teaching
- ▶ National business
- ▶ International business

BUSINESS MANAGEMENT

Business Management Units 1 and 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 businesses work from various points of view – manager, employee, customer, community member.

Business Management Units 3 and 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

Throughout the year students will complete a series of short tasks of structured questions. 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 businesses work from various points of view – manager, employee, customer, community member.

LEGAL STUDIES

Legal Studies Units 1 and 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, victims' 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 and 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

Assessment is in the form of 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, victims' 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.

ENGLISH

The study of English promotes effective participation in Australian society through understanding the various uses of the English language and employing 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 Units 3 and 4 sequence in the English group (i.e English 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

VCE-VM Literacy

See the VCE-VM section for more details.

Units 1 and 2 Foundation English

Units 1 and 2 English

This is compulsory

Units 1 and 2 Literature

If you achieved above level or higher in Core English you may also choose to complete Units 1 and 2 English Literature

YEAR 12

VCE-VM Literacy

Units 3 and 4 English

Units 3 and 4 English

Units 3 and 4 Literature

Prerequisite: Unit 2 Literature

Overview

This subject focuses on developing students' 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, argument 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 students' 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
- ▶ Argument 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.

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. 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 School English teachers.

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 be required 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 note taking and 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 to 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 Units 3 and 4 sequence in the English group (i.e. 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.

FOUNDATION ENGLISH

Overview

This subject is an opportunity for students to develop their literacy skills before proceeding to Units 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 Units 1 and 2 English

Students who have experienced difficulty with the literacy components of Year 10 English may consider completing Foundation English. The pathway once Units 1 and 2 Foundation English are completed is Units 3 and 4 English.

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 note taking 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 to 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

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
- ▶ 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
- ▶ Creative response to a literary text
- ▶ a piece of argumentative writing
- ▶ an oral presentation on a selected local, national or global issue

Unit Exams

NOTE: There are no Units 3 and 4 Foundation English classes offered as part of VCE.

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 and 2 Literature are pre-requisites for Units 3 and 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.

HUMANITIES

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

In these subjects, students:

- ▶ investigate relevant content - e.g. current economic issues
- ▶ develop management and enterprise knowledge and skills - e.g. students manage a school based enterprise
- ▶ develop essential life-skills - e.g. financial management skills
- ▶ focus on contemporary issues - e.g. 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



Why you should consider Humanities units in your VCE

Prepare yourself for the 21st century and 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.

Head in the right direction and undertake 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	▶ report writing skills
▶ analysis	▶ judgement of sources
▶ written and oral presentation skills	▶ problem solving
▶ inter-personal skills	▶ teamwork

MODERN HISTORY

Overview

This subject involves investigating some of the most interesting events from modern history, including both World Wars, the Cold War recent events such as terrorism and conflict in the Middle East.

Unit 1: Change and conflict

In this unit students investigate the nature of social, political, economic and cultural change in the later part of the 19th century and the first half of the 20th century. Modern History provides students with an opportunity to explore the significant events, ideas, individuals and movements that shaped the social, political, economic and technological conditions and developments that have defined the modern world.

This unit contains two areas of study. The first is Ideology and Conflict, in this unit students examine the consequences of World War One, the rise of dictators in Europe and the causes of World War Two. The second area of study, Society and Cultural Change, focusses on how cultural life both reflected and challenged the prevailing political, economic and social conditions and the role did individuals, groups and movements play in social and cultural continuity and/or change.

Unit 2: The changing world order

In this unit students investigate the nature and impact of the Cold War and challenges and changes to social, political and economic structures and systems of power in the second half of the 20th century and the first decade of the 21st century.

The first area of study, 'Causes, course and consequences of the Cold War' looks at the causes and consequences of the Cold War and the increased tensions and conflict of this era. The second area of study, 'Challenge and Change' examines challenges faced by social and political structures and the manner in which the actions and ideas of popular movements and individuals contribute to continuity and change.

Assessment activities:

- ▶ Primary and secondary source analysis tasks
- ▶ Historical essay writing
- ▶ Inquiry tasks

Selection advice

VCE Modern History enables students to understand the world we live in today by looking at the recent past. This subject suits students who enjoy 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 will enjoy VCE Modern History.

Links to further pathways

These units link directly to Units 3 and 4 History as offered at Mount Clear College, (Revolutions or Australian History). The knowledge and skills gained in VCE Modern History will assist students in their study of other Humanities subjects. The successful completion of VCE Modern History will prepare students for university study of history, politics and culture.

Studies in VCE History can lead to study and career options in the following areas:

- ▶ Anthropologist
- ▶ Archaeologist
- ▶ Archivist
- ▶ Art historian
- ▶ Author
- ▶ Conservator
- ▶ Criminologist
- ▶ Cultural heritage officer
- ▶ Diplomat
- ▶ Historian
- ▶ Journalist
- ▶ Lawyer
- ▶ Librarian
- ▶ Museum curator
- ▶ Photographer
- ▶ Playwright
- ▶ Political scientist
- ▶ Publisher
- ▶ Records manager
- ▶ Researcher
- ▶ Script writer
- ▶ Solicitor
- ▶ Teacher
- ▶ University lecturer

AUSTRALIAN HISTORY

In Units 3 and 4 Australian History, students develop their understanding of the foundational and transformative ideas, perspectives and events in Australia's history and the complexity of continuity and change in the nation's story.

The study of Australian history is considered both within a national and a global context, particularly Aboriginal and Torres Strait Islander peoples and culture, a colonial settler society within the British Empire and as part of the Asia-Pacific region. Students come to understand that the history of Australia is contested and that the past continues to contribute to ongoing interpretations, debates and tensions in Australian society.

There are two Areas of Study in VCE Australian History, Foundations and Transformation. For each area of study students will conduct two investigations from the following:

- ▶ From custodianship to the Anthropocene (60,000 BCE–2010)
- ▶ Creating a nation (1834–2008)
- ▶ Power and resistance (1788–1998)
- ▶ War and upheaval (1909–1992).

In the Foundations area of study students focus on the foundations of continuity and change in Australian history. They consider how ideas, perspectives, events and the differing social, political and economic experiences may have triggered changes and the extent of continuity and change in Australia and among Australians. The revolutionary nature of the Australian experience is explored, including how the continent's distinct environment and landscape has shaped and been shaped by human processes and actions, and the embrace of democratic experiments that placed Australia in the vanguard of individual and political rights and freedoms in the 19th and early 20th centuries.

The Transformation of study students focus on the extent to which Australia was transformed and changed by social, political and economic events, ideas, experiences and movements that took place after World War Two.

Assessment activities

All Assessment tasks 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

VCE Australian History would suit students who want to better understand the nation we live in, its past and role in the world today. VCE Australian History suits students with an interest in history who like to research information to broaden their knowledge and understanding of Australian history.

Please note that if this subject does not get enough selections to run in 2023, students who elect it will automatically be placed into VCE History Revolutions Units 3 and 4.

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.

Studies in VCE History can lead to study and career options in the following areas:

- ▶ Anthropologist
- ▶ Archaeologist
- ▶ Archivist
- ▶ Art historian
- ▶ Author
- ▶ Conservator
- ▶ Criminologist
- ▶ Cultural heritage officer
- ▶ Diplomat
- ▶ Historian
- ▶ Journalist
- ▶ Lawyer
- ▶ Librarian
- ▶ Museum curator
- ▶ Photographer
- ▶ Playwright
- ▶ Political scientist
- ▶ Publisher
- ▶ Records manager
- ▶ Researcher
- ▶ Script writer
- ▶ Solicitor
- ▶ Teacher
- ▶ University lecturer

HISTORY REVOLUTIONS

In Units 3 and 4 Revolutions students investigate the significant historical causes and consequences of political revolution. Revolutions represent great ruptures in time and are a major turning point in the collapse and destruction of an existing political order which results in extensive change to society.

Two of the following Revolutions will be studied:

- ▶ The American Revolution (1754–4 July 1776)
- ▶ The French Revolution (1774–4 August 1789)
- ▶ The Russian Revolution (1896– 26 October 1917)
- ▶ The Chinese Revolution (1912–1 October 1949)

These will be examined through two Areas of study, Causes of Revolution and Consequences of Revolution. Revolutions are caused by the interplay of events, ideas, individuals and popular movements, and the interplay between the political, social, cultural, economic and environmental conditions.

Their consequences have a profound effect on the political and social structures of the post-revolutionary society. Revolution is a dramatically accelerated process whereby the new regime attempts to create political, social, cultural and economic change and transformation based on the regime's ideology.

Assessment activities

All Assessment tasks 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

VCE Revolutions would suit students who want to better understand the world we live in, significant modern civilizations and conflict between them. VCE History Revolutions suits students with an interest in history who like to research information to broaden their knowledge and understanding of the global political landscape.

Please note that if this subject does not get enough selections to run in 2023, students who elect it will automatically be placed into VCE History Revolutions Units 3 and 4.

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.

Studies in VCE History can lead to study and career options in the following areas:

- ▶ Anthropologist
- ▶ Archaeologist
- ▶ Archivist
- ▶ Art historian
- ▶ Author
- ▶ Conservator
- ▶ Criminologist
- ▶ Cultural heritage officer
- ▶ Diplomat
- ▶ Historian
- ▶ Journalist
- ▶ Lawyer
- ▶ Librarian
- ▶ Museum curator
- ▶ Photographer
- ▶ Playwright
- ▶ Political scientist
- ▶ Publisher
- ▶ Records manager
- ▶ Researcher
- ▶ Script writer
- ▶ Solicitor
- ▶ Teacher
- ▶ University lecturer

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% of score)
- ▶ Critical Thinking Test (10% of score)
- ▶ Externally-assessed task (60% of score consisting of an oral presentation to a non-specialist panel and a 4000 word written report)

Students' Common 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 for a Units 1 and 2 sequence?

No, VCE Extended Investigation is offered in Units 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.



LANGUAGES

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 VCE Chinese Language – Culture & Society (for English speaking students).



JAPANESE LANGUAGE

Unit 1

The areas of study comprise of themes and topics, grammar text types, vocabulary and kinds of writing. This unit should allow students 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 of themes and topics, grammar text types, vocabulary and kinds of writing. This unit will allow students 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 and 4

The areas of study comprise of 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

CHINESE LANGUAGE – CULTURE & SOCIETY

Unit 1

In this unit students focus on important aspects of life in modern China. Students analyse the schooling system to consider and reflect on cultural values, and participate in discussions and analyse research about family and education in China. Students interact with other learners of the language and share information related to aspects of their personal world and life in Chinese-speaking communities. Students develop their reading and comprehension skills in Chinese and produce texts.

Unit 2

This unit focuses on the importance of myths, legends and Chinese art. Aspects of Chinese culture are explored through Chinese mythology. Students undertake research related to, for example, mythology, legends and art. This unit also focuses on developing students' spoken Chinese skills. Students are given opportunities to write appropriately for context and situation.

Unit 3

In this unit students investigate significant schools of thought throughout Chinese history and their impact on contemporary culture. Students explore and discuss in English the significance of Chinese philosophy and concepts related to contemporary Chinese culture. Students present information on leisure in China using appropriate intonation, tones and stress with the appropriate vocabulary and expressions.

Unit 4

This unit focuses on an exploration of contemporary Chinese social values as well as through China's role in the global economy. Students investigate technological, social and political change in China. They reflect upon their own and others' cultural values and further develop the capacity to interact with other speakers of the language. Students also further develop their writing skills in the area of future employment.

Assessment activities

Students complete a variety of reading, writing, listening and speaking tasks.

Selection advice

Students must have completed Year 10 Chinese.

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

CHINESE AS A FIRST LANGUAGE

Year 11 or 12

In Year 11 or 12, students complete Units 3 and 4, which focus on listening, reading, writing and speaking (detail 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。

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 graphing 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 Units 1 and 2 Maths subjects very carefully, as this will affect your choice of Maths at the Units 3 and 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 level of Mathematics that you are confident in and what your Year 10 Maths teacher has recommended, based off what skills and abilities you have shown in Year 10.

What mathematics subjects do we offer?

The following Mathematics Units are offered at Mount Clear College:

Units 1 and 2

Foundation Mathematics
General Mathematics
Mathematics Methods
Specialist Mathematics

Units 3 and 4

Further Mathematics
Mathematical Methods
Specialist Mathematics

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 CAS Calculator (TI Nspire CAS Calculator approximately \$260 brand new). 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

Year 10	Year 11	Year 12
If you found the study of Mathematics challenging in Year 10 and only intend to complete Mathematics to Year 11	Units 1 and 2 Maths for Life	No Maths subject
	No Maths subject	No Maths subject
If you have satisfactorily completed Year 10 Core Mathematics or Maths for Life, and have a good understanding of Mathematics, and intend to study Further Maths in Year 12	Units 1 and 2 General Mathematics	Units 3 and 4 Further Mathematics
		No Maths subject
If you have satisfactorily completed Year 10 Analytical Mathematics, have achieved At Level or Above Level in your CATs, and intend to study Maths Methods or Specialist Maths in Year 12	Units 1 and 2 Maths Methods	Units 3 and 4 Maths Methods
	Units 1 and 2 Maths Methods AND	Units 3 and 4 Maths Methods AND
	Units 1 and 2 Specialist Maths	Units 3 and 4 Specialist Maths

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 and 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 and 4 component. However, students who do well in Units 1 and 2 are encouraged to follow a mathematics pathway beyond Year 11.

TAFE Certificates of Diplomas in Nursing Age Care Child Care Business Sport and Recreation University Bachelor Degrees in Performing Arts Drama Arts/Media Visual Arts Graphic Design Employment Limited opportunities exist for all students directly from VCE. See the Careers Teacher about Traineeships and Apprenticeships.

TAFE

Certificates & Diplomas in

- ▶ Nursing
- ▶ Age Care
- ▶ Child Care
- ▶ Business
- ▶ Sport and Recreation

University

Bachelor Degrees in

- ▶ Performing Arts
- ▶ Drama
- ▶ Arts/Media
- ▶ Visual Arts
- ▶ Graphic Design

Employment

Limited opportunities exist for all students directly from VCE.

See the Careers Teacher about Traineeships and Apprenticeships.

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 and 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 Units 3 and 4 or Specialist Maths Units 3 and 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 (Approx \$260 brand new) to satisfy the requirements of the course.

Links to further pathways

TAFE Certificates of Diplomas in: Nursing Age Care Child Care Business Sport and Recreation University Bachelor Degrees in: Performing Arts Drama Arts/Media Visual Arts Graphic Design Commerce Teaching Applied Science plus many more Employment Opportunities exist for all students directly from VCE. See the Careers Teacher about Traineeships and Apprenticeships.

TAFE

Certificates & Diplomas in

- ▶ Nursing
- ▶ Age Care
- ▶ Child Care
- ▶ Business
- ▶ Sport and Recreation

University

Bachelor Degrees in

- ▶ Performing Arts
- ▶ Drama
- ▶ Arts/Media
- ▶ Visual Arts
- ▶ Graphic Design
- ▶ Commerce
- ▶ Teaching
- ▶ Applied Science
- ▶ plus many more

Employment

Limited opportunities exist for all students directly from VCE.

See the Careers Teacher about Traineeships and Apprenticeships.

FURTHER MATHEMATICS

Units 3 and 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.

Links to further pathways

TAFE Certificates of Diplomas in: Nursing Age Care Child Care Business Sport and Recreation University Bachelor Degrees in: Performing Arts Drama Arts/Media Visual Arts Graphic Design Commerce Teaching Applied Science plus many more employment opportunities exist for all students directly from VCE. See the Careers Teacher about Traineeships and Apprenticeships.

TAFE

Certificates & Diplomas in

- ▶ Nursing
- ▶ Age Care
- ▶ Child Care
- ▶ Business
- ▶ Sport and Recreation

University

Bachelor Degrees in

- ▶ Performing Arts
- ▶ Drama
- ▶ Arts/Media
- ▶ Visual Arts
- ▶ Graphic Design
- ▶ Commerce
- ▶ Teaching
- ▶ Applied Science
- ▶ plus many more

Employment

Limited opportunities exist for all students directly from VCE.

See the Careers Teacher about Traineeships and Apprenticeships.

MATHEMATICAL METHODS

Units 1 and 2

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

Mathematical Methods Units 1 and 2 are designed for students who excel in all algebraic areas of Mathematics and/or who wish to pursue a tertiary course which requires Mathematical Methods (sometimes with Specialist Maths) for entry – e.g. Engineering, Mathematics, many Science and Information Technology courses and some Commerce courses. These units have an extremely 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

Selection advice

Mathematical Methods Units 1 and 2 can only be attempted after a student has satisfactorily completed Year 10 Analytical Maths. The study builds directly on the work completed in Year 10 Analytical Maths

Units 3 and 4

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

Links to further pathways

TAFE Certificates of Diplomas in: Nursing Age Care Child Care Business Sport and Recreation Teaching Engineering University Bachelor Degrees in: Law Medicine Psychology Engineering Commerce Teaching Applied Science plus many more employment opportunities exist for all students directly from VCE. See the Careers Teacher about Traineeships and Apprenticeships.

TAFE

Certificates & Diplomas in

- ▶ Nursing
- ▶ Age Care
- ▶ Child Care
- ▶ Business
- ▶ Sport and Recreation
- ▶ Teaching
- ▶ Engineering

University

Bachelor Degrees in

- ▶ Law
- ▶ Medicine
- ▶ Psychology
- ▶ Engineering
- ▶ Commerce
- ▶ Teaching
- ▶ Applied Science
- ▶ plus many more

Employment

Limited opportunities exist for all students directly from VCE.

See the Careers Teacher about Traineeships and Apprenticeships.

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 and 2 Specialist Mathematics

Units 1 and 2 provide a course of study for students who wish to undertake an advanced, 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 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 excel in all areas of Mathematics and particularly advanced Algebra skills are essential. 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 (Approx \$260 brand new) to satisfy the requirements of the course.

Units 3 and 4 Specialist Mathematics

Units 3 and 4 consist of the areas of study: 'Functions and graphs', 'Algebra', 'Calculus', 'Vectors', 'Mechanics' and 'Probability and statistics'.

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 the overall mark for the subject).

Selection advice

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

Students require a high level 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 (Approx \$260 brand new) to satisfy the requirements of the course.

Links to further pathways

TAFE Certificates or Diplomas in: Nursing, Age Care, Child Care, Business, Sport and Recreation, Teaching, Engineering, University Bachelor Degrees in: Law, Medicine, Psychology, Engineering, Commerce, Teaching, Applied Science plus many more employment opportunities exist for all students directly from VCE. See the Careers Teacher about Traineeships and Apprenticeships.

TAFE

Certificates & Diplomas in

- ▶ Nursing
- ▶ Age Care
- ▶ Child Care
- ▶ Business
- ▶ Sport and Recreation
- ▶ Teaching
- ▶ Engineering

University

Bachelor Degrees in

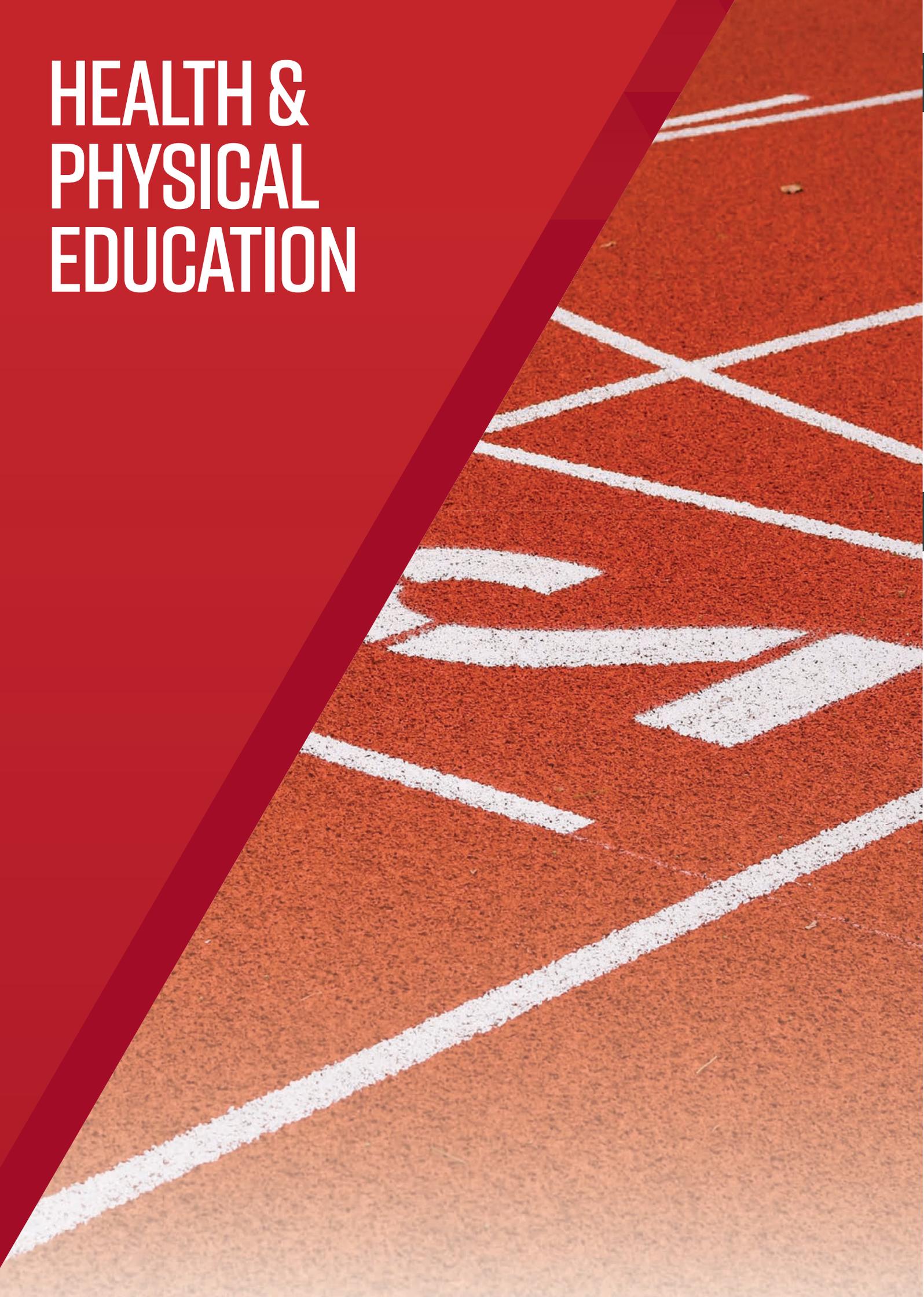
- ▶ Law
- ▶ Medicine
- ▶ Psychology
- ▶ Engineering
- ▶ Commerce
- ▶ Teaching
- ▶ Applied Science
- ▶ plus many more

Employment

Limited opportunities exist for all students directly from VCE.

See the Careers Teacher about Traineeships and Apprenticeships.

HEALTH & PHYSICAL EDUCATION



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 Units 1 and 2

In Units 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 Units 3 and 4

In Units 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 & 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

Units 1 and 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.

Units 3 and 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 and 2 and Year 11 students at Units 3 and 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 and 2 will incur an additional cost of \$750 (2 camps). Units 3 and 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

Units 1 and 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.

Units 3 and 4

Students complete a series of structured question assessments and a lab report focussed 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.

SCIENCE

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!



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 organisms regulate their functions?

In Unit 1 students examine the cell as the structural and functional unit of life, from the single celled to the multicellular organism, including the requirements for sustaining cellular processes. Students focus on cell growth, replacement and death and the role of stem cells in differentiation, specialisation and renewal of cells. They explore how systems function through cell specialisation in vascular plants and animals, and consider the role homeostatic mechanisms play in maintaining an animal's internal environment.

Unit 2: How does inheritance impact on diversity?

In Unit 2 students explore reproduction and the transmission of biological information from generation to generation and the impact this has on species diversity. They apply their understanding of chromosomes to explain the process of meiosis. Students consider how the relationship between genes, and the environment and epigenetic factors influence phenotypic expression. They explain the inheritance of characteristics, analyse patterns of inheritance, interpret pedigree charts and predict outcomes of genetic crosses. Students analyse the advantages and disadvantages of asexual and sexual reproductive strategies, including the use of reproductive cloning technologies. They study structural, physiological and behavioural adaptations that enhance an organism's survival. Students explore interdependences between species, focusing on how keystone species and top predators structure and maintain the distribution, density and size of a population. They also consider the contributions of Aboriginal and Torres Strait Islander knowledge and perspectives in understanding the survival of organisms in Australian ecosystems.

Assessment activities

- ▶ Practical investigations
- ▶ Written tests
- ▶ Extended Practical Investigation
- ▶ Ethical research report
- ▶ End of Unit Exams

Unit 3: How do cells maintain life?

In Unit 3 students investigate the workings of the cell from several perspectives. Students analyse the structure and function of nucleic acids as information molecules, gene structure and expression in prokaryotic and eukaryotic cells and proteins as a diverse group of functional molecules. They examine the biological consequences of manipulating the DNA molecule and applying biotechnologies. Students explore the structure, regulation and rate of biochemical pathways, with reference to photosynthesis and cellular respiration. They explore how the application of biotechnologies to biochemical pathways could lead to improvements in agricultural practices.

Students apply their knowledge of cellular processes through investigation of a selected case study, data analysis and/or a bioethical issue. Examples of investigation topics include, but are not limited to: discovery and development of the model of the structure of DNA; proteomic research applications; transgenic organism use in agriculture; use, research and regulation of gene technologies, including CRISPR-Cas9; outcomes and unexpected consequences of the use of enzyme inhibitors such as pesticides and drugs; research into increasing efficiency of photosynthesis or cellular respiration or impact of poisons on the cellular respiration pathway.

Unit 4: How does life change and respond to challenges?

In Unit 4 students study the human immune system and the interactions between its components to provide immunity to a specific pathogen. Students consider how the application of biological knowledge can be used to respond to bioethical issues and challenges related to disease. Students consider how evolutionary biology is based on the accumulation of evidence over time. They investigate the impact of various change events on a population's gene pool and the biological consequences of changes in allele frequencies. Students examine the evidence for relatedness between species and change in life forms over time using evidence from paleontology, structural morphology, molecular homology and comparative genomics. Students examine the evidence for structural trends in the human fossil record, recognising that interpretations can be contested, refined or replaced when challenged by new evidence.

Selection advice

This subject would suit students who 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.

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 the diversity of materials be explained?

In Unit 1 students explore the development and use of materials for specific purposes is an important human endeavour. In this unit students investigate the chemical structures and properties of a range of materials, including covalent compounds, metals, ionic compounds and polymers. They are introduced to ways that chemical quantities are measured. They consider how manufacturing innovations lead to more sustainable products being produced for society through the use of renewable raw materials and a transition from a linear economy towards a circular economy. Students conduct practical investigations involving the reactivity series of metals, separation of mixtures by chromatography, use of precipitation reactions to identify ionic compounds, determination of empirical formulas, and synthesis of polymers.

Throughout this unit students use chemistry terminology including symbols, formulas, chemical nomenclature and equations to represent and explain observations and data from their own investigations and to evaluate the chemistry-based claims of others.

Unit 2: How do chemical reactions shape the natural world?

In Unit 2 students will study how society is dependent on the work of chemists to analyse the materials and products in everyday use. In this unit students analyse and compare different substances dissolved in water and the gases that may be produced in chemical reactions. They explore applications of acid-base and redox reactions in society.

Students conduct practical investigations involving the specific heat capacity of water, acid-base and redox reactions, solubility, molar volume of a gas, volumetric analysis, and the use of a calibration curve.

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.

This subject would suit students who 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.

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's dynamic systems interconnected to support life?

Earth has been dramatically altered over the past 4.5 billion years by naturally occurring climate swings, volcanic activity, drifting continents and other transformative processes. Human activities and lifestyles have an impact on, and are impacted by, Earth's systems both directly and indirectly, and with both immediate and far-reaching effects. Students examine the processes and interactions occurring within and between Earth's four interrelated systems – the atmosphere, biosphere, hydrosphere and lithosphere. They focus on how ecosystem functioning can influence many local, regional and global environmental conditions such as plant productivity, soil fertility, water quality and air quality. Students explore how changes that have taken place throughout geological and recent history are fundamental to predicting the likely impact of future changes. They consider a variety of influencing factors in achieving a solutions-focused approach to responsible management of challenges related to natural and human-induced environmental change.

Unit 2: What affects Earth's capacity to sustain life?

A sustainable food and water system with a minimal environmental footprint is necessary to secure the food and water supplies that can meet the demands of current and future populations of Earth's species, including humans. Both natural and human activities can generate pollution that can cause adverse effects across Earth's four interrelated systems – the atmosphere, biosphere, hydrosphere and lithosphere – and consequently affect food and water security. Pollution can make air and water resources hazardous for plants and animals. It can directly harm soil microorganisms and larger soil-dwelling organisms, with consequences for soil biodiversity, as well as impacting on food security by impairing plant function and reducing food yields. In this unit students consider pollution as well as food and water security as complex and systemic environmental challenges facing current and future generations. They examine the characteristics, impacts, assessment and management of a range of pollutants that are emitted or discharged into Earth's air, soil, water and biological systems, and explore factors that limit and enable the sustainable supply of adequate and affordable food and water.

Assessment activities

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

Unit 3: How can biodiversity and development be sustained?

In Unit 3 students focus on environmental management through the application of sustainability principles. They explore the value of the biosphere to all living things by examining the concept of biodiversity and the ecosystem services important for human health and well-being. They analyse the processes that threaten biodiversity and evaluate biodiversity management strategies for a selected threatened endemic animal or plant species. Students use a selected environmental science case study with reference to sustainability principles and environmental management strategies to explore management from an Earth systems perspective, including impacts on the atmosphere, biosphere, hydrosphere and lithosphere.

Unit 4: How can climate change and the impacts of human energy use be managed?

In Unit 4 students explore different factors that contribute to the variability of Earth's climate and that can affect living things, human society and the environment at local, regional and global scales. Students compare sources, availability, reliability and efficiencies of renewable and non-renewable energy resources in order to evaluate the suitability and consequences of their use in terms of upholding sustainability principles. They analyse various factors that are involved in responsible environmental decision-making and consider how science can be used to inform the management of climate change and the impacts of energy production and use.

Measurement of environmental indicators often involves uncertainty. Students develop skills in data interpretation, extrapolation and interpolation and test predictions. They recognise the limitations of contradictory, provisional and incomplete data derived from observations and models. They explore relationships and patterns in data, and make judgments about accuracy and validity of evidence.

Selection advice

This subject would suit students who 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.

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: How is energy useful to society?

In Unit 1 students examine some of the fundamental ideas and models used by physicists in an attempt to understand and explain energy. Models used to understand light, thermal energy, radioactivity, nuclear processes and electricity are explored. Students apply these physics ideas to contemporary societal issues: communication, climate change and global warming, medical treatment, electrical home safety and Australian energy needs.

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: How does physics help us to understand the world?

In Unit 2 students explore the power of experiments in developing models and theories. They investigate a variety of phenomena by making their own observations and generating questions, which in turn lead to experiments. Students investigate the ways in which forces are involved both in moving objects and in keeping objects stationary and apply these concepts to a chosen case study of motion. Students choose one of eighteen options related to climate science, nuclear energy, flight, structural engineering, biomechanics, medical physics, bioelectricity, optics, photography, music, sports science, electronics, astrophysics, astrobiology, Australian traditional artefacts and techniques, particle physics, cosmology and local physics research. The selection of an option enables students to pursue an area of interest through an investigation

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 photoelectric 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

This subject would suit students who 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.

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?

In Unit 1 students examine the complex nature of psychological development, including situations where psychological development may not occur as expected. Students examine the contribution that classical and contemporary knowledge from Western and non-Western societies, including Aboriginal and Torres Strait Islander peoples, has made to an understanding of psychological development and to the development of psychological models and theories used to predict and explain the development of thoughts, emotions and behaviours. They investigate the structure and functioning of the human brain and the role it plays in mental processes and behaviour and explore brain plasticity and the influence that brain damage may have on a person's psychological functioning.

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

In Unit 2 students 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 individuals and groups, recognising that different cultural groups have different experiences and values. Students are encouraged to consider Aboriginal and Torres Strait Islander people's experiences within Australian society and how these experiences may affect psychological functioning. Students examine the contribution that classical and contemporary research has made to the understandings of human perception and why individuals and groups behave in specific ways. 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.

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

This subject would suit students who 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 STUDIES

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.



Overview

This study takes an interdisciplinary approach to the exploration of food, with an emphasis on extending food knowledge and skills and building individual pathways to health and wellbeing through the application of practical food skills. Food Studies provides a framework for informed and confident food selection and food preparation within today's complex architecture of influences and choices.

Students explore food from a wide range of perspectives. They study past and present patterns of eating, Australian and global food production systems and the many physical and social functions and roles of food. They research economic, environmental and ethical dimensions of food and critically evaluate information, marketing messages and new trends.

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 \$150 per year.

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.

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.

Metals (Units 1, 2, 3 & 4) Wood (Units 1, 2, 3 & 4)

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.

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-user's needs, prepare a design brief, devise evaluation criteria, carry out research and propose a series of design options. They justify the choice of a preferred design option and develop a work plan and commence production of the product, which will be completed and evaluated in Unit 4.

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.

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.

Units 1 and 2

- ▶ Unit 1 Mechanical Engineering Fundamentals
- ▶ Unit 2 Electrotechnology Engineering Fundamentals

Units 3 and 4

- ▶ Unit 3 Systems Engineering & Energy
- ▶ Unit 4 Integrated and Control Systems Engineering

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

This subject would suit students who 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.

VET PROGRAMS



CERT 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

The course runs for two years.

Outcomes

On completion of this program students will have completed Certificate II in Building & Construction and receive a Statement of Attainment for the below 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

CERT 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

The course runs for two 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.

CERT III IN MUSIC INDUSTRY (PERFORMANCE)

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 group and solo settings, improvisation, work at a music event, explore career options and understand copyright.

Program Length

The course runs for two years, however, students are able to join in the second year to gain a partial completion and study score towards their ATAR.

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
- ▶ Plan a career in the creative arts industry
- ▶ Work effectively in the music industry
- ▶ Develop and apply aural perception skills
- ▶ 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

Head of Music

Two year course, VCE accredited, aimed at Years 10/11/12.

CERT III IN MUSIC INDUSTRY (SOUND PRODUCTION)

Overview

This program provides a broad overview of the music industry which provides students with the knowledge, skills, and competency to enhance their employment prospects in the music and creative arts industries.

Students communicate with live performers and learn the practical skills and knowledge to record, mix and edit sound sources.

Students record a basic music demo and mix it in a studio environment.

Students connect with the music industry and mix the sound for professional and school based musicians (bands/soloists) in local music venues, churches and online.

Program Length

The course runs for two years.

Outcomes

Satisfactory completion of the program entitles the student to Certificate III in Music Industry.

Credit/Unit eligibility towards your relevant Senior Secondary Certificate.

Units of competency covered

First Year:

- ▶ Implement copyright arrangements
- ▶ Work effectively in the music industry
- ▶ Plan a career in the creative arts industry
- ▶ Develop basic audio skills and knowledge
- ▶ Perform basic sound editing
- ▶ Compile and replay audio material

Second Year:

- ▶ Operate sound reinforcement systems
- ▶ Install and disassemble audio equipment
- ▶ Mix music in studio environments
- ▶ Record and mix basic music demos
- ▶ Manage audio input sources

Links to further pathways

The job roles that relate to this qualification may include:

- ▶ Assistant sound technician
- ▶ Assistant music/band manager
- ▶ Musician
- ▶ Sound assistant
- ▶ Road crew
- ▶ Music engineer
- ▶ Live mixer

Contact

Highlands LLEN

mountclearcollege.vic.edu.au
(03) 5330 1500
mount.clear.co@education.vic.gov.au
59 Olympic Ave
Mount Clear VIC 3350
Australia

ABN: 90 179 340 100 | CRICOS Provider No. 00861K

Discover more at mountclearcollege.vic.edu.au