



TYRRELL COLLEGE  
*Your opportunity to succeed*

SUBJECT SELECTION HANDBOOK

SENIOR

PATHWAYS

2024

## OUR MOTTO

*Your opportunity to succeed.*

## OUR PURPOSE

*To provide a safe, positive and challenging environment where everyone aspires to aim high and become responsible, caring and contributing community members.*

## OUR VALUES

- *Respect*
- *Responsibility*
- *Honesty*
- *Aim High*

Our College aims to foster a caring college climate which encourages personal responsibility and self-discipline. It is the responsibility of the staff, students and parents to encourage these principles:

- Fairness and honesty
- Respect for the rights of others
- The development of self-discipline
- Encouragement of sharing, tolerance and compassion among students
- Respect for the dignity of others

We are committed to a series of programs (School Wide Positive Behaviours and Respectful Relationships) which provide developmental lessons aimed at fostering and reinforcing these principles in a positive way.

Appropriate language and manners should be used and will be encouraged at all times.

Bullying, whether it be physical, verbal or cyber, will not be tolerated at any level.

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# INTRODUCTION

In 2024, our Senior School program will continue to change in line with the statewide VCE/VCE-VM updates. We are actively seeking ways to enhance our programs and provide students with a wider range of subjects and certifications.

Our selection of VCE and VET subjects may vary each year based on the availability of teaching staff. However, we strive to maintain a wide variety of subjects for students to choose from.

It is important for students to select their subjects based on personal preferences and their intended career pathway during the Senior years. While we do our best to accommodate all students' desired preferences, there may be instances where this is not possible.

The subject blocks will be created based on students' subject preferences and career goals. If there is a subject of interest that is not currently offered, we encourage students to reach out to the school to discuss potential options, as we are willing to create individual programs to meet their needs.

We encourage families to discuss with their students what their current aspirations are once they complete school. If unknown, please reassure your child that this is quite alright, and that their pathway simply needs to allow for as many options as possible so that opportunities are not restricted. When talking to your child, discuss what they enjoy, what they are good at and what types of jobs they would like to do in the future. Some may choose to review their Morrisby Career Report that highlights the areas of strength and preferences.

Our teachers and careers advisors will work closely with students to provide advice about what Vocational Education and Training (VET), prerequisites, subjects and ATARs would help to provide the most realistic and appropriate pathway for them.

The transition into the Senior years of schooling can be quite stressful for students and families and so we encourage you all to keep the lines of communication open and access your teachers and careers advisors as often as necessary. Clarity of information will assist staff in ensuring that all possible resources and supports are provided.

## YEAR 10 ADMINISTRATIVE GUIDELINES

Tyrrell College aims to offer a comprehensive education to all students. We provide a wide range of subjects that prepare students for the Victorian Certificate of Education (VCE), Vocational Education and Training (VET) certificates, the VCE Vocational Major (VM), and the Victorian Pathways Certificate (VPC).

The Year 10 program at Tyrrell College consists of six blocks of four lessons each. The structure of blocks for 2024 is outlined below:

Year long subjects (3 blocks)	Semester long subjects (2 blocks)	Elective line (1 block)
English Maths VCE VM Work Related Skills*	Science History Art Health/PE	VCE VET Work Placement (SWL)**

All Year 10 students and their parents or guardians **must** attend a careers pathways meeting **before** submitting their program request for their Senior years.

### Please note:

- \*VCE VM Work Related Skills provides students who successfully complete the course with units towards their VCE VM. This course also involves the completion of a week-long work experience opportunity.
- \*\*Structured Work Place Learning (SWL) – can contribute a maximum of two Units towards a Senior Certificate. It must be related to an industry specific VET that a student undertakes and hours must be kept in a logbook.
- When choosing a VCE elective please refer to the 2026 VTAC Prerequisite Guide for more information on the subjects you will need to complete for your chosen career pathway.

Please see your careers advisor for more information about prerequisites or go to the VTAC website.

<https://www.vtac.edu.au/files/pdf/publications/prerequisites-for-2026-v2a.pdf>

You can also investigate the prerequisites required for specific courses using the Prerequisite Explorer link below.

[VTAC VCE Prerequisite Explorer - YouTube](#)

VTAC Guide for choosing VCE studies for Year 9 and 10 students.

[VTAC Guide for Choosing VCE Studies for Year 9 & 10 Students - YouTube](#)

Refer to the relevant sections of the subject selection booklet for more information on each elective subject.

# VCE ADMINISTRATIVE GUIDELINES

## ORGANISATIONAL STRUCTURE OF VCE

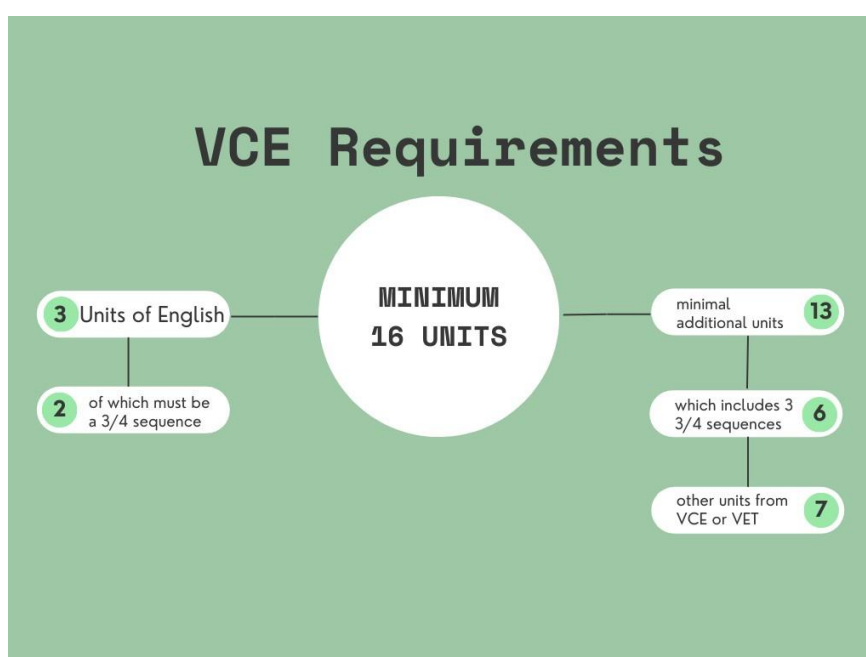
The Victorian Certificate of Education (VCE) involves two or more years of continual study and assessment. It ensures that every student has to meet the same assessment requirements: a combination of externally marked exams and school assessed coursework (SACs) and tasks (SATs).

## VCE REQUIREMENTS

For students to satisfactorily complete their VCE they must have a satisfactory result (S) for a minimum of 16 units. This must include:

- at least three units from the English Group, two of which must be a Unit 3-4 sequence
- an additional three Unit 3-4 sequences of studies other than English, which may include a number of other English sequences once the English requirement has been met.

Units 3 and 4 of all studies must be undertaken as a sequence in a single academic year; a student may not enrol in Unit 4 only. Students must undertake Unit 3 before commencing Unit 4 of a study.



## CHOOSING UNITS

After English, the remaining units are determined by each individual student. The choice of these units is made in consultation with parents, the Unit Leader, the Careers Advisor and any other person from whom the student may wish to seek advice. Subjects will relate to students' interests, capacities and intended career paths. Don't choose units just because you believe they will give you an advantage in the VTAC scaling process or because your friends are doing them.

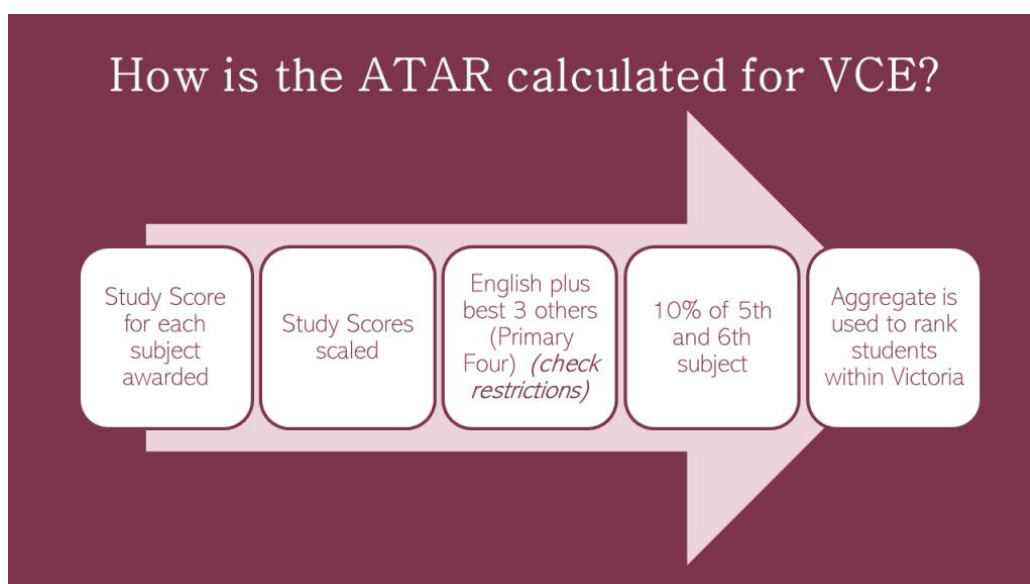
## STUDY SCORE

Students will receive a study score out of 50 which sums up their total achievement in each study. This only applies to Unit 3 and 4 studies.

## THE ATAR

Students will be issued with an Australia wide ATAR (Australian Tertiary Admissions Rank) which will be derived from the VCE study scores. These scores are adjusted by a comparison process (scaling) which adjusts for the fact that it is more difficult to obtain a high VCE study score in some studies than others.

The ATAR is calculated by adding your study scores from English Units 3 and 4 to your next best three study scores. You can also include 10 percent of your fifth and sixth Unit 3 and 4 study scores.



## THE GAT

The VCAA (Victorian Curriculum & Assessment Authority) requires students to complete the General Achievement Task (GAT) as a means of confirming school assessment. All Year 11 and 12 students taking any VCE Unit 3 and 4 sequence will be required to sit the GAT (including those undertaking VCE VM subjects).

The GAT, is a general achievement test – it is not a test of knowledge about a particular subject or topic. The GAT is split into two sections:

- **Section A:** Assesses basic literacy and numeracy skills.
- **Section B:** Assesses skills in mathematics, science, technology, the arts and humanities, with an increased focus on critical and creative thinking skills.

The VCAA uses the results from the GAT to:

- Review school assessment of School-Assessed Tasks (SATs)
- Apply statistical moderation to School-Assessed Coursework (SAC)
- Check the accuracy of student scores in examinations
- Request authentication checks by schools for particular students' School-Assessed Tasks
- Calculate derived examination scores

## LEARNING VIA DISTANCE EDUCATION

Learning via distance education allows students to participate in a class taught from a distance education provider or other school in our network. This option is available to our students when there is only a small number of students wishing to take the class or due to a lack of the required teacher expertise at the College.

Learning via distance education places some extra demands on students. Students must be willing to learn independently and they must work without direct supervision. Students need to honestly appraise their understanding and performance and actively seek help from their teacher when required.



Please see your careers advisor for more information about prerequisites or go to the VTAC website.

<https://www.vtac.edu.au/files/pdf/publications/prerequisites-for-2026-v2a.pdf>

You can also investigate the prerequisites required for specific courses using the Prerequisite Explorer link below.

[VTAC VCE Prerequisite Explorer - YouTube](#)

VTAC Guide for choosing VCE studies for Year 9 and 10 students.

[VTAC Guide for Choosing VCE Studies for Year 9 & 10 Students - YouTube](#)

# VCE VOCATIONAL MAJOR (VM) GUIDELINES

The VCE Vocational Major (VM) is a vocational program within the VCE designed to be completed over a minimum of two years. The VCE VM can be an atypical pathway to university as an add on to a scored VCE certificate or as an unscored pathway into apprenticeships, traineeships, further education and training or directly into the workforce.

To be eligible to receive the VCE VM, students must satisfactorily complete a **minimum** of 16 units, including:

- 3 VCE VM Literacy or VCE English units (including a Unit 3–4 sequence)
- 2 VCE VM Numeracy or VCE Mathematics units
- 2 VCE VM Work Related Skills (WRS) units
- 2 VCE VM Personal Development Skills (PDS) units, and
- 2 VET credits at Certificate II level or above (180 nominal hours)

Students must complete a **minimum of three other** Unit 3–4 sequences as part of their program. Units 3 and 4 of VM studies may be undertaken together over the duration of the academic year to enable these to be integrated. Students can also include other VCE studies and VET, and can receive structured workplace learning recognition. Most students will undertake between 16-20 units over the two years.

## ASSESSMENT OF VCE VM SUBJECTS

The four subjects specific to the VCE VM (Literacy, Numeracy, PDS and WRS) are standards-based and have specific learning outcomes, all of which must be met to gain a satisfactory grade in each unit.

Unlike other VCE studies there are no external assessments of VCE VM Unit 3–4 sequences, and VCE VM studies do not receive a study score and therefore they **do not** contribute to the ATAR. If a student wishes to receive study scores, they can choose from the wide range of VCE studies and scored VCE VET programs that contain both internal and external assessment components.

For more information on the VCE Vocational Major please view the following website.

<https://www.vcaa.vic.edu.au/curriculum/vce/Pages/AboutVCEVocationalMajor.aspx>

## VET ADMINISTRATIVE GUIDELINES

Vocational Education and Training (VET) programs are an excellent option for students who would like to gain practical skills and knowledge that will enable them to succeed in their chosen career path. These programs may be undertaken as part of the Victorian Certificate of Education (VCE) or VCE Vocational Major.

In some VET subjects, students are given extra credit towards their ATAR score through scored assessment or block credit, providing an incentive for students to pursue these courses. Additionally, students may be able to negotiate alternative VET programs with the VET/VCE/VCE VM coordinator, allowing for greater flexibility in their course selection.

It is worth noting that VET programs often involve a component of structured workplace learning, where students can gain valuable hands-on experience in a real-world environment.

This practical learning experience allows students to develop relevant skills and competencies, as well as build important industry contacts that may assist with future job applications. As such, VET programs offer a unique opportunity for students to gain practical skills, experience industry-specific training, and improve their employability prospects.

Assessment for VET is competency based (S/N). This assessment is carried out by the classroom teacher and/or the Registered Training Organisation.

### **Scored VCE VET studies**

'Scored VCE VET studies' are VCE VET Unit 3 - 4 sequences with a scored assessment.

When calculating your aggregate, VCE VET Unit 3 - 4 sequences with a scored assessment are treated in the same way as other Unit 3 and 4 VCE studies.

However, if you choose not to take the scored assessment for a study when it is available, the study cannot be used in the calculation of your aggregate.

### **Unscored VCE VET studies**

Unscored VCE VET studies are VCE VET Unit 3 - 4 sequences with no scored assessment available (it cannot be awarded if assessment was available, but you chose not to take it).

Since there are no scores available for unscored sequences, VTAC may include the sequence as an increment (the fifth and/or sixth study). The amount of an increment is determined by calculating 10 per cent of the fourth study score of your primary four.

Up to two unscored VCE VET increments may contribute to your aggregate.

## STRUCTURED WORKPLACE LEARNING

Structured Workplace Learning (SWL) provides students with an immersive and practical learning environment where they can learn and apply knowledge and skills that are directly relevant to the workplace. This hands-on experience allows students to try out different career choices and gain a better understanding of various industries before leaving school.

SWL also provides students with the opportunity to develop valuable contacts with potential employers and work alongside adult professionals in an adult environment, thereby gaining an appreciation of the real world of work.

SWL allows students to demonstrate mastery of specific skills and competencies related to their accredited VET in Schools programs, which is often a mandatory component of such courses.

SWL also contributes to the development of lifelong learning skills, as it is an excellent platform for students to undertake relevant curriculum and develop crucial employability skills, such as communication, teamwork, and problem-solving. Students can earn VCAA credits for their VCE/VCE VM certificate through the Structured Workplace Learning Recognition (SWLR) program, further enhancing their academic achievements and career prospects.

## SCHOOL BASED APPRENTICESHIP

School-based apprenticeships (SBATs) are an excellent option for students who wish to gain both academic qualifications and practical, industry-based experience while still completing their senior secondary certificate.

SBATs are available to students over the age of 15 years who are enrolled in either a VCE or VCE VM program. They involve a negotiated training program leading to a nationally recognised qualification in their chosen trade or profession.

In addition to their academic studies, students are expected to undertake paid work of an average of 10-15 hours per week that is an integral part of the program. Through this work, students gain valuable industry experience and develop crucial employability skills.

Furthermore, students must also complete VET/TAFE type modules as part of their SBAT, which offers them practical, hands-on experience and industry-specific training in their chosen field of work.

SBATs typically take around two years to complete, with students balancing their academic studies, paid work, and vocational training to achieve their academic and professional goals. Overall, SBATs offer students a unique opportunity to gain both academic and practical experience, thereby improving their career prospects and employability.

## VET SUBJECTS OFFERED IN 2024

VET COURSE	NUMBER OF YEARS	UNITS	SCORED (S) OR NON-SCORED (NS)
VET Certificate II in Agriculture	2	1-4	NS
VET Certificate II in Engineering Pathways	2	1-4	NS
VET Certificate II in Community Services	1	1-2	NS
VCE VET Certificate III in Music - Sound Production	2	1-4	S/NS
VCE VET Certificate III in Sports and Recreation (2024 2 <sup>nd</sup> year enrolment)	2	1-4	S/NS
VCE VET Certificate III in Sports, Aquatics and Recreation (2025 1st year enrolment)	2	1-4	S/NS

***\*All VET and VCE VET are subject to staffing availability and student numbers***

### OTHER VET SUBJECTS

If you are interested in completing an alternative VET subject, you are required to make an appointment with the Senior Unit Leader and the Careers Advisor. We cannot guarantee that other VET subjects will be available from other providers/schools nor that it will align with our current timetable. We are, however, happy to investigate all options on your behalf.

More information can be found at:

<https://www.vcaa.vic.edu.au/curriculum/vet/vce-vet-programs/Pages/Index.aspx>

<https://www.vcaa.vic.edu.au/studentguides/getvet/Pages/Index.aspx>

# VET AGRICULTURE

## **AHC20122 – CERTIFICATE II IN AGRICULTURE**

This qualification describes the skills and knowledge for general job roles in rural and regional Australia, and supporting job roles in agriculture including livestock production, cropping or in the case of mixed farming workplaces, both cropping and livestock.

### **Learning Areas**

- Participate in workplace health and safety processes
- Participate in environmentally sustainable work practices
- Work effectively in industry
- Participate in workplace communication

\*Electives to be confirmed in 2024

### **Job Opportunities:**

- Farm Management
- Farm Operations
- Agricultural Sciences
- Landcare
- Environmental Sciences
- Agronomy
- Agricultural Biotechnology
- Wool Classing.

**Credit in the VCE (including VCE VM and VPC):** recognition of up to four VCE VET units at Units 1 & 2 level, and a VCE VET Unit 3–4 sequence.

Confirmed by VCAA.

[Pages - VCE VET Agriculture, Horticulture, Conservation and Ecosystem Management \(vcaa.vic.edu.au\)](https://vcaa.vic.edu.au)

# VET ENGINEERING

## **MEM20422 CERTIFICATE II IN ENGINEERING PATHWAYS**

This qualification is designed to develop trade-like skills and offers an introduction to essential engineering practices. Students explore the world of welding, machining, and utilising engineering tools and equipment to create and modify objects. With a focus on safe practices and simulated work environments, this qualification is ideal for those seeking exposure to the engineering industry. Students gain valuable knowledge and skills that enhance their employability in engineering or related workplaces.

### **LEARNING AREAS**

- Work safely and effectively in manufacturing and engineering
- Develop a career plan for the engineering and manufacturing industries
- Undertake a basic engineering project
- Participate in environmentally sustainable work practices
- Organise and communicate information
- Interact with computing technology
- Use hand tools
- Use power tools/handheld operations
- Use engineering workshop machines
- Use electric welding machines
- Use fabrication equipment
- Work in a team

### **CAREER PATHWAYS**

- Engineering
- Manufacturing
- Fitter and Turner
- Electrician
- Automotive

### **CREDIT IN THE VCE (including VCE VM and VPC)**

Certificate II qualifications provide credit at VCE Units 1 & 2 level only. Each completed 90 nominal hours of training provides one VCE unit of credit. Credit accrues in the following sequence: Units 1, 2, 1 & 2 up to a maximum of six VCE units.

Confirmed by VCAA.

<https://www.vcaa.vic.edu.au/assessment/results/credit-recognition/Pages/BlockCreditRecognition.aspx>

# VET SPORTS, AQUATICS & RECREATION

## **SIS30122 CERTIFICATE III IN SPORTS, AQUATICS AND RECREATION**

Through the new Certificate III in Sport, Aquatics and Recreation, students thoroughly develop the skills and knowledge to deliver sport and recreation services. Students who complete this program develop the ability to work independently in the industry, using their judgement to effectively complete work activities. Selected units in Certificate III program cover various key areas within the industry, including recreation session delivery, coaching, technology, officiating, and working with diverse people. The skills and knowledge developed by completing these units provide students with a strong foundation for whichever direction they take in the industry.

### **LEARNING AREAS**

- Delivery of recreation sessions
- Workplace health and safety
- Conditioning for sport
- Officiating
- Technology in the sport, fitness and recreation industry
- Client service and working with diverse people
- First aid and responding to emergencies

Further to the above, at the time of publication, the VCAA program guide for this qualification is yet to be released. Accordingly, the RTO will make any necessary adjustments to the structure of this program.

### **CREDIT IN THE VCE (including VCE VM and VPC)**

Certificate III qualifications provide credit at VCE units 1 to 4 level. Each completed 90 nominal hours of training provides one VCE unit of credit. Credit accrues in the following sequence: units 1, 2, 3, 4, 3 and 4 up to a maximum of six VCE units.

Confirmed by VCAA.

<https://www.vcaa.vic.edu.au/assessment/results/credit-recognition/Pages/BlockCreditRecognition.aspx>

### **CAREER PATHWAYS**

- Recreation Officer
- Activity Operation Officer
- Sport and Recreation Attendant
- Community Activities Officer
- Leisure Services Officer



# VET COMMUNITY SERVICES

## **CHC22015 VET COMMUNITY SERVICES (Certificate II Community Services)**

This certificate allows students to develop the skills and knowledge to undertake community services work such as providing support and assistance to a variety of clients including childcare, the elderly and the disability sector. This program is perfect for students looking to move into a range of areas in the community services sector and is the perfect building block for developing a sound educational base specific to the fastest growing sector in Australia.

### **LEARNING AREAS**

- Working with diverse people
- Communication in the workplace
- Work health and safety
- Providing initial advice to clients
- Patients, or customers
- Teamwork

### **CAREER PATHWAYS**

- Assistant community services worker
- Assistant childcare worker
- Assistant disability worker
- Elderly assistant
- Care service employee
- Customer service staff
- Social work roles
- Youth services roles

### **CREDIT IN THE VCE (including VCE VM and VPC)**

Certificate II qualifications provide credit at VCE units 1 & 2 level only. Each completed 90 nominal hours of training provides one VCE unit of credit. Credit accrues in the following sequence: units 1, 2, 1 & 2 up to a maximum of six VCE units.

Confirmed by VCAA.

<https://www.vcaa.vic.edu.au/assessment/results/credit-recognition/Pages/BlockCreditRecognition.aspx>

# VCE VET MUSIC - SOUND PRODUCTION

## CUA30920 CERTIFICATE II IN MUSIC

The Certificate III in Music assists students in developing a wide range of competencies in varied work contexts of the music industry, as well as in environments that require skills in music performance, music creation or composition, sound production or music business.

**Sound Production Specialisation:** provides students with the practical skills and knowledge to record, mix and edit sound sources. Units 1 & 2 of the program can include units such as implementing, repairing and maintaining audio equipment, performing basic sound editing and developing music industry knowledge.

### LEARNING AREAS

- Work effectively with others
- Contribute to the health and safety of self
- Develop and apply creative arts industry knowledge

\*Elective to be determined in 2024

### CAREER PATHWAYS

- Studio assistant
- Performer
- Session musician
- Producer
- Stagehand, songwriter, broadcaster
- Sound & lighting technician

### CREDIT IN THE VCE (including VCE VM and VPC)

ATAR contribution for either of the **Performance** or **Sound Production** scored Unit 3 - 4 sequences in the VCE VET Music Industry program must undertake scored assessment for the purpose of achieving a **study score**. This study score can contribute directly to the ATAR, either as one of the student's best four studies (the primary four) or as a fifth or sixth study increment. Where a student elects not to receive a study score no contribution to the ATAR will be available. Where an additional non-scored VCE VET Units 3 - 4 sequence is undertaken students may be eligible for a fifth or sixth study increment.

# ACCOUNTING

## Overview:

Students acquire knowledge and skills to record financial data and report accounting information in a manner appropriate to the needs of the user. They develop an understanding of the role of accounting in the management and operation of a business and develop skills in the use of ICT in an accounting system. They gain an understanding of ethical considerations in relation to business decision-making and acquire the capacity to identify, analyse and interpret financial data and information. Students apply critical thinking skills to a range of situations to improve the financial decision-making within a business.

## Prerequisites:

Unit 1 & 2: Year 10 Humanities (recommended)

Unit 3 and 4: VCE Accounting Units 1 & 2 (recommended)

Course Outline	
<b>UNIT 1</b>	<p><b>Role of accounting in business</b></p> <p>This unit explores the establishment of a business and the role of accounting in the determination of business success or failure. In this, it considers the importance of accounting information to stakeholders. Students analyse, interpret and evaluate the performance of the business using financial and non-financial information and use these evaluations to make recommendations regarding the suitability of a business as an investment. Students record financial data and prepare reports for service businesses owned by sole proprietors.</p>
<b>UNIT 2</b>	<p><b>Accounting and decision-making for a trading business</b></p> <p>Students develop their knowledge of the accounting process for sole proprietors operating a trading business, with a focus on inventory, accounts receivable, accounts payable and non-current assets. Students use manual processes and ICT, including spreadsheets, to prepare historical and budgeted accounting reports. Students analyse and evaluate the performance of the business relating to inventory, accounts receivable, accounts payable and non-current assets. They use relevant financial and other information to predict, budget and compare the potential effects of alternative strategies on the performance of the business. Using these evaluations, students develop and suggest strategies to improve business performance.</p>
<b>UNIT 3</b>	<p><b>Financial accounting for a trading business</b></p> <p>This unit focuses on financial accounting for a trading business owned by a sole proprietor and highlights the role of accounting as an information system. Students use the double entry system of recording financial data and prepare reports using the accrual basis of accounting and the perpetual method of inventory recording. Students develop their understanding of the accounting processes for recording and reporting and consider the effect of decisions made on the performance of the business. They interpret reports and information presented in a variety of formats and suggest strategies to improve the performance of the business.</p>
<b>UNIT 4</b>	<p><b>Recording, reporting, budgeting, and decision-making</b></p> <p>In this unit students further develop their understanding of accounting for a trading business owned by a sole proprietor and the role of accounting as an information system. They use the double entry system of recording financial data and prepare reports using the accrual basis of accounting and the perpetual method of inventory recording. Both manual methods and ICT are used to record and report. Students extend their understanding of the recording and reporting process with the inclusion of balance day adjustments and alternative depreciation methods. They investigate the role and importance of budgeting in decision-making and analyse and interpret accounting reports and graphical representations to evaluate the performance of a business. From this, students suggest strategies to improve business performance.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school-based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 & 4 will contribute 25% each to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/Accounting/Pages/index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/Accounting/Pages/index.aspx</a>	

# AGRICULTURAL AND HORTICULTURAL STUDIES

## Overview:

Australia faces a rising population and increasing urgency to conserve resources and mitigate the effects of climate change. Sustainable management of food and fibre industries is vital for local, national and global markets. The broad, applied nature of VCE Agricultural and Horticultural Studies prepares students for further studies and careers in agriculture, horticulture, land management, agricultural business practice and natural resource management. This study complements the skills focus of the competency-based nationally recognised VCE VET Agriculture, Horticulture, Conservation and Land Management program.

## Prerequisites:

Unit 1 and 2: Year 10 Science (recommended)  
Unit 3 and 4: VCE Agriculture and Horticulture Studies Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<p><b>Change and opportunity</b></p> <p>In this unit students develop their understanding of Australia's agricultural and horticultural industries. They consider sources of food and fibre indigenous to Victoria prior to European settlement, and current and past perceptions of Australian agricultural and horticultural industries. Students explore contemporary career pathways and professional roles, with a focus on innovation and creative problem solving in the face of change and challenge. Students undertake practical tasks reflecting best-practice understandings.</p>
<b>UNIT 2</b>	<p><b>Growing plants and animals</b></p> <p>In this unit students research plant and animal nutrition, growth and reproduction. They develop an understanding of the conditions in which plants and animals grow and reproduce, and of related issues and challenges. Students investigate the structure, function, nutrition, and growth of plants. They explore animal nutrition and digestion, and growth and development, and make comparisons between production methods. Students research reproductive processes and technologies for both plants and animals.</p>
<b>UNIT 3</b>	<p><b>Securing the future</b></p> <p>In this unit students examine the role of research and data, innovation and technology in Australia's food and fibre industries. Students research Australia's past responses to such challenges, analysing responses leading to successful outcomes as well as those with unforeseen consequences. They investigate the protection of agricultural and horticultural industries against pests, diseases and weeds, and measures to combat the serious threat posed by biological resistances.</p>
<b>UNIT 4</b>	<p><b>Sustainable food and fibre production</b></p> <p>Students research the effects of climate change on food and fibre production through case studies of effective responses to this and other environmental challenges. They investigate environmental degradation and approaches to sustainable land management and rehabilitation. They study ecosystems, the importance of biodiversity and the applicability of environmental modification techniques. Within the context of agricultural and/or horticultural practices, sustainability is viewed as both a challenge and an opportunity, with students extending their thinking across the entire production chain from resource suppliers through to consumers. They research strategies for adding value to primary produce.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 and 2 are school-based. Procedures for assessment of levels of achievement in Units 1 and 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework Unit 3 and 4 will contribute 30% and 30% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 40% to the study score.
Study Design	
<p><a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/agricultural-and-horticultural-studies/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/agricultural-and-horticultural-studies/Pages/Index.aspx</a></p>	

# ART CREATIVE PRACTICE

## Overview:

In the study of VCE Art Creative Practice, research and investigation inform art making. Through the study of artworks, the practices of artists and their role in society, students develop their individual art practice, and communicate ideas and meaning using a range of materials, techniques and processes. In the practice of making and responding, students develop their skills in critical and creative thinking, innovation, problem-solving and risk-taking. By combining a focused study of artworks, art practice and practical art making, students recognise the interplay between research, art practice and the analysis and interpretation of art works.

## Prerequisites:

Unit 1 & 2: Year 10 Art and/or Year 10 Product Design and Technology (recommended)  
 Unit 3 and 4: VCE Art Creative Practice Units 1 & 2 and/or VCE Visual Communication Design Units 1 & 2, and/or VCE Produce Design and Technology Units 1 & 2 (recommended)

Course Outline	
<b>UNIT 1</b>	<b>Interpreting artworks and exploring the creative practice</b> Students use experimental and inquiry based learning to explore ideas of personal interest using creative practice. Students use a range of materials, techniques, processes and art forms to create a body of experimental work in response to their research of artists and their personal observations of artworks.
<b>UNIT 2</b>	<b>Interpreting art works and developing the creative practice</b> Students investigate the artistic and collaborative practices of artists to make and present artworks using creative practice. They develop visual responses based on their investigations and explore the way historical and contemporary cultural contexts influence the artworks and the practices of artists, as well as their own art practice.
<b>UNIT 3</b>	<b>Investigation, ideas, artworks and the creative practice</b> Students use inquiry and project-based learning as starting points to develop a body of work known as the SAT. They explore ideas and experiment with materials, techniques and processes using creative practice. Students research historical and contemporary artists and investigate the issues that may arise from these artworks. Art practice commenced during unit 3 is refined and resolved during unit 4.
<b>UNIT 4</b>	<b>Interpreting, resolving and presenting artworks and the creative practice</b> Students continue to develop their work through research and exploration to support the development and refinement of their art. Throughout their research students study the practices of selected artists to inform their own art practice. Students continue to build upon the ideas begun in Unit 3 and present a critique of their use of the creative practice. They reflect on the feedback from their critique to further refine and resolve a body of work that demonstrates their use of the creative practice and the realisation of their personal ideas. Students present their body of work to an audience accompanied by documentation of their use of the creative practice.
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	The School-assessed Task in Unit 3 and 4 will contribute 60 % to the study score. School-assessed Coursework in Unit 4 will contribute 10 % to the study score.
<b>Exam:</b>	The examination will contribute 30 % to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/ArtCreativePractice/Pages/index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/ArtCreativePractice/Pages/index.aspx</a>	

\*\* Note: Students who require specialist materials and equipment will be expected to provide these for their own use.

# AUSTRALIAN HISTORY

## Overview:

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.

## Prerequisites:

Unit 3 and 4: Units 1 & 2 Modern History (recommended)

Course Outline	
<b>UNIT 3</b>	<p><b>From custodianship to the Anthropocene (60,000 BCE–1901)</b> Students investigate the historical role of humans in shaping the Australian landscape and ways in which the environment has influenced human activity. Aboriginal and Torres Strait Islander peoples managed and actively changed the land in response to the environmental features and conditions of the Australian continent.</p> <p><b>From custodianship to the Anthropocene (1950–2010)</b> Students investigate the way in which Australian's perspectives of the environment changed and/or remained the same after 1950. They consider the changing nature and economic importance of rural and resource industries during this time.</p>
<b>UNIT 4</b>	<p><b>War and upheaval (1909–1950)</b> Students investigate the debates and perspectives about Australia's participation in World War One and World War Two.</p> <p><b>Transformations 1950-1992</b> Students investigate Australia's involvement and reasons for participation in post-World War Two conflicts and the subsequent debates arising from these conflicts.</p>
Assessment	
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework Unit 3 and 4 will contribute 25% each to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/history/Pages/index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/history/Pages/index.aspx</a>	

# BIOLOGY

## Overview:

The study of Biology explores the diversity of life as it has evolved and changed over time and considers how living organisms function and interact. It explores the processes of life, from the molecular world of the cell to that of the whole organism and examines how life forms maintain and ensure their continuity. Students study contemporary research, models and theories to understand how knowledge in biology has developed and how this knowledge continues to change in response to new evidence and discoveries.

## Prerequisites:

Unit 1 & 2: Year 10 Science  
Unit 3 and 4: VCE Biology Units 1 & 2 Biology (recommended)

Course Outline	
<b>UNIT 1</b>	<p><b>How do organisms regulate their functions?</b></p> <p>In this unit 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.</p>
<b>UNIT 2</b>	<p><b>How does inheritance impact on diversity?</b></p> <p>In this unit students explore reproduction and the transmission of biological information across generations and the impact this has on diversity. They investigate meiosis, factors that influence gene expression and explain the inheritance of traits through the interpretation of pedigree charts and outcomes of genetic crosses. Students analyse the advantages and disadvantages of asexual and sexual reproductive strategies, including cloning technologies. They study adaptations and explore interdependences between species, and how to maintain a population. Students consider the contributions of Aboriginal and Torres Strait Islander knowledge and perspectives in understanding the survival of organisms in Australian ecosystems.</p>
<b>UNIT 3</b>	<p><b>How do cells maintain life?</b></p> <p>In this unit students investigate the workings of the cell from several perspectives. They explore the relationship between nucleic acids and proteins as key cellular 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.</p>
<b>UNIT 4</b>	<p><b>How does life change and respond to challenges?</b></p> <p>In this unit students consider the continual change and challenges to life on Earth. They study the human immune system and the interactions between its components to provide immunity to a specific pathogen and consider how the application of this 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 change events on gene pools and the biological consequences of changes in allele frequencies. Students examine the evidence for relatedness between species and examine the evidence for structural trends in the human fossil record. A student-led scientific investigation related to cellular processes and/or responses to challenges over time is undertaken in either Unit 3 or Unit 4, or across both Units, and is assessed in Unit 4, Outcome 3.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 20% and 30% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/biology/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/biology/Pages/Index.aspx</a>	

# BUSINESS MANAGEMENT

## Overview:

VCE Business Management is a sequence of units that detail the stages through which businesses, of different types and sizes, progress from the first idea of a business concept, to planning and establishing a business, day-to-day management and planning for improvement. Business entities provide goods and services in the pursuit of business objectives. All businesses share broadly common processes and make decisions through them that affect managers and owners at each stage of the business life cycle.

## Prerequisites:

Unit 1 & 2: Year 10 Humanities (recommended)

Unit 3 and 4: VCE Business Management Units 1 & 2 (recommended)

Course Outline	
<b>UNIT 1</b>	<p><b>Planning a business</b></p> <p>Businesses of all sizes are major contributors to the economic and social wellbeing of a nation. The ability of entrepreneurs to establish a business and the fostering of conditions under which new business ideas can emerge are vital for a nation's wellbeing. Taking a business idea and planning how to make it a reality are the cornerstones of economic and social development. In this unit students explore the factors affecting business ideas and the internal and external environments within which businesses operate, as well as the effect of these on planning a business. They also consider the importance of the business sector to the national economy and social wellbeing.</p>
<b>UNIT 2</b>	<p><b>Establishing a business</b></p> <p>This unit focuses on the establishment phase of a business. Establishing a business involves compliance with legal requirements as well as decisions about how best to establish a system of financial record keeping, staff the business and establish a customer base. In this unit students examine the legal requirements that must be met to establish a business. They investigate the essential features of effective marketing and consider the best way to meet the needs of the business in terms of staffing and financial record keeping. Students analyse management practices by applying key knowledge to contemporary business case studies from the past four years.</p>
<b>UNIT 3</b>	<p><b>Managing a business</b></p> <p>In this unit students explore the key processes and considerations for managing a business efficiently and effectively to achieve business objectives. Students examine different types of businesses and their respective objectives and stakeholders. They investigate strategies to manage both staff and business operations to meet objectives, and develop an understanding of the complexity and challenge of managing businesses. Students compare theoretical perspectives with current practice through the use of contemporary Australian and global business case studies from the past four years.</p>
<b>UNIT 4</b>	<p><b>Transforming a business</b></p> <p>Businesses are under constant pressure to adapt and change to meet their objectives. In this unit students consider the importance of reviewing key performance indicators to determine current performance and the strategic management necessary to position a business for the future. Students study a theoretical model to undertake change and consider a variety of strategies to manage change in the most efficient and effective way to improve business performance. They investigate the importance of effective management and leadership in change management. Using one or more contemporary business case studies from the past four years, students evaluate business practice against theory.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 & 4 will contribute 25% each to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/business-management/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/business-management/Pages/Index.aspx</a>	



# CHEMISTRY

## Overview:

The study of VCE Chemistry involves investigating and analysing the composition and behaviour of matter, and the chemical processes involved in producing useful materials for society in ways that minimise adverse effects on human health and the environment. Chemistry underpins the generation of energy for use in homes and industry, the maintenance of clean air and water, the production of food, medicines and new materials, and the treatment of wastes.

## Prerequisites:

Unit 1 & 2: Year 10 Science  
Unit 3 and 4: VCE Chemistry Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<p><b>How can the diversity of materials be explained?</b></p> <p>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.</p>
<b>UNIT 2</b>	<p><b>How do chemical reactions shape the natural world?</b></p> <p>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.</p>
<b>UNIT 3</b>	<p><b>How can design and innovation help to optimise chemical processes?</b></p> <p>In this unit students investigate the chemical production of energy and materials. They explore how innovation, design and sustainability principles and concepts can be applied to produce energy and materials while minimising possible harmful effects of production on human health and the environment. Students analyse and compare different fuels as energy sources for society, with reference to the energy transformations and chemical reactions involved, energy efficiencies, environmental impacts and potential applications.</p>
<b>UNIT 4</b>	<p><b>How are carbon-based compounds designed for purpose?</b></p> <p>Carbon is the basis not only of the structure of living tissues but is also found in fuels, foods, medicines, polymers and many other materials that we use in everyday life. In this unit students investigate the structures and reactions of carbon-based organic compounds, including considering how green chemistry principles are applied in the production of synthetic organic compounds. They study the metabolism of food and the action of medicines in the body</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 20% and 30 % respectively, to the study score.
<b>Exam:</b>	The examination will contribute 50 % to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/chemistry/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/chemistry/Pages/Index.aspx</a>	

# ENGLISH

## Overview:

The English language is central to the way in which students understand, critique and appreciate their world, and to the ways in which they participate socially, economically and culturally in our global society. The study of English encourages the development of literate individuals capable of critical and imaginative thinking, aesthetic appreciation and creativity. This study also develops students' ability to create and analyse texts moving from interpretation to reflection and critical analysis.

## Prerequisites:

Unit 1 & 2: Year 10 English  
Unit 3 and 4: Unit 1 & 2 English

Course Outline	
<b>UNIT 1</b>	Students engage in reading and viewing texts with a focus on personal connections with the story. They discuss and clarify the ideas and values presented by authors through their evocations of character, setting and plot, and through investigations of the point of view and/or the voice of the text. Students also read and engage imaginatively and critically with mentor texts that model effective writing. Through guided reading of mentor texts, students develop an understanding of the diverse ways that vocabulary, text structures, language features and ideas can interweave to craft compelling texts. They consider texts through knowledge of the ways purpose, context (incl. mode) and audience influence and shape writing.
<b>UNIT 2</b>	Students read or view a text, engaging with the ideas, concerns and tensions, and recognise ways vocabulary, text structures, language features and conventions of a text work together to create meaning. Through discussions about representations in a text, they examine ways readers understand text considering its historical context, and social and cultural values. They consider the way arguments are developed and delivered in forms of media. Students explore the structure of texts, including contention, sequence of arguments, use of supporting evidence and persuasive strategies. They closely examine the language and visuals employed by the author, and offer analysis of the intended effect on the audience. Students apply their knowledge of argument to create a point of view text for oral presentation.
<b>UNIT 3</b>	In this area of study, students apply reading and viewing strategies to critically engage with a text, considering its dynamics and complexities and reflecting on the motivations of its characters. They analyse the ways authors construct meaning through vocabulary, text structures, language features and conventions, and the presentation of ideas. They are provided with opportunities to understand and explore the historical context, and the social and cultural values of a text, and recognise how these elements influence the way a text is read or viewed, is understood by different audiences, and positions its readers in different ways. Students also work with mentor texts to inspire their own creative processes, to generate ideas for their writing, and as models for effective writing. They reflect on the deliberate choices they have made through their writing processes in their commentaries.
<b>UNIT 4</b>	In this unit, students further sharpen their skills of reading and viewing texts, developed in the corresponding area of study in Unit 3. Students consolidate their capacity to critically analyse texts and deepen their understanding of the ideas and values a text can convey. Students apply reading and viewing strategies to engage with a text, and discuss and analyse the ways authors construct meaning in a text through the presentation of ideas, concerns and conflicts, and the use of vocabulary, text structures and language features. They establish how our values can influence the way a text is read or viewed, can be understood by different audiences, and can position readers in different ways. Students analyse the use of argument & language, and visuals in texts that debate a contemporary and significant national or international issue.
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 25% and 25% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/english-and-eal/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/english-and-eal/Pages/Index.aspx</a>	

# VCE VOCATIONAL MAJOR

## LITERACY

### Overview:

VCE Vocational Major Literacy focuses on the development of the knowledge and skills required to be literate in Australia today. The key knowledge and key skills encompass a student's ability to interpret and create texts that have purpose, and are accurate and effective, with confidence and fluency.

Students will engage with texts that are drawn from a wide range of contexts and be focused on participating in the workplace and community. Further to this, texts should be drawn from a range of sources including media texts, multimodal texts, texts used in daily interactions, and workplace texts from increasingly complex and unfamiliar settings.

As students develop these skills, they engage with texts that encompass the everyday language of personal experience to the more abstract, specialised and technical language of different workplaces, including the language of further study.

The applied learning approach of this study is intended to meet the needs of students with a wide range of abilities and aspirations.

The study is made up of four units. Each unit deals with specific content contained in the areas of study and is designed to enable students to achieve a set of outcomes for that unit. The areas of study may be undertaken concurrently so that reading and writing outcomes are integrated, where this is deemed appropriate by the teacher. Each outcome is described in terms of key knowledge and key skills.

This study is made up of four units. To be eligible for a VCE VM Certificate, students MUST attain a satisfactory grade in at least three of these units, including the Unit 3-4 sequence.

### Prerequisites:

Unit 1 & 2: MYLNS Literacy or Year 10 English  
Unit 3 and 4: VCE Vocational Major Literacy Units 1&2

Course Outline	
<b>UNIT 1</b>	<ul style="list-style-type: none"> <li>Area of Study 1: Literacy for personal use</li> <li>Area of Study 2: Understanding and creating digital texts</li> </ul>
<b>UNIT 2</b>	<ul style="list-style-type: none"> <li>Area of Study 1: Understanding issues and voices</li> <li>Area of Study 2: Responding to opinions</li> </ul>
<b>UNIT 3</b>	<ul style="list-style-type: none"> <li>Area of Study 1: Accessing and understanding informational, organisational and procedural texts</li> <li>Area of Study 2: Creating and responding to organisational, informational or procedural texts</li> </ul>
<b>UNIT 4</b>	<ul style="list-style-type: none"> <li>Area of Study 1: Understanding and engaging with literacy for advocacy</li> <li>Area of Study 2: Speaking to advise or to advocate</li> </ul>
Assessment	
All assessments at Units 1 & 2 and Unit 3 and 4 are school based. Procedures for assessment of levels of achievement in Units 1 to 4 are a matter for school decision.	
<b>NOTE: VCE Vocational Major Literacy cannot be completed as a scored VCE subject.</b>	
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMLiteracy/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMLiteracy/Pages/Index.aspx</a>	

# FOUNDATION MATHEMATICS

## Overview:

VCE Foundation Mathematics Units 1-4 provide for the continuing mathematical development of students with respect to problems encountered in practical contexts in everyday life at home, in the community, at work and in study.

**NOTE: FOUNDATION MATHEMATICS MAY NOT COUNT AS “A MATHS” FOR SOME UNIVERSITY COURSES AT SOME UNIVERSITIES.**

## Prerequisites:

Unit 1 & 2: Year 10 General Mathematics  
Unit 3 and 4: VCE Foundation Mathematics Units 1 & 2

Course Outline	
<b>UNIT 1 &amp; 2</b>	<p>Foundation Mathematics Units 1 &amp; 2 focus on providing students with the mathematical knowledge, skills, understanding and dispositions to solve problems in real contexts for a range of workplace, personal, further learning, and community settings relevant to contemporary society.</p> <p>Students learn about:</p> <ul style="list-style-type: none"> <li>• earning and managing money</li> <li>• working with numbers, fractions, percentages and ratios</li> <li>• constructing and interpreting graphs including measures of centre and spread</li> <li>• measurement including length, area, volume and time</li> </ul> <p>The content is taught through contexts present in students' other studies, work and personal or other familiar situations.</p>
<b>UNIT 3 &amp; 4</b>	<p>Foundation Mathematics Units 3 and 4 focus on providing students with the mathematical knowledge, skills and understanding to solve problems in real contexts for a range of workplace, personal, further learning, community and global settings relevant to contemporary society.</p> <p>Areas of study include:</p> <ul style="list-style-type: none"> <li>• data analysis and statistics</li> <li>• financial and consumer arithmetic</li> <li>• space and measurement</li> </ul> <p>The content is taught through contexts present in students' other studies, work and personal or other familiar situations.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 40% and 20% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 40% to the study score.
Study Design	
<p><a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/foundationmathematics/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/foundationmathematics/Pages/Index.aspx</a></p>	

# GENERAL MATHEMATICS

## Overview:

VCE General Mathematics Units 1-4 provide for the study of non-calculus and discrete mathematics topics. They are designed to be widely accessible and provide preparation for general employment, business or further study, in particular where data analysis, recursion and financial modelling, networks and matrices are important.

## Prerequisites:

Unit 1 & 2: Year 10 General Mathematics.

Unit 3 and 4: VCE General Mathematics Units 1 & 2 and/or VCE Specialist Mathematics Units 1 & 2

**\*\*VCE Mathematical Methods Units 1&2 is NOT suitable preparation for General Mathematics Units 3&4\*\***

Course Outline	
<b>UNIT 1</b>	<p>The areas of study for Unit 1 of General Mathematics are:</p> <ul style="list-style-type: none"> <li>Investigating and comparing data distributions</li> <li>Arithmetic and geometric sequences, first-order linear recurrence relations and financial mathematics</li> <li>Linear functions, graphs, equations and models</li> <li>Matrices</li> </ul> <p>Students also complete a mathematical investigation spanning one to two weeks.</p>
<b>UNIT 2</b>	<p>The areas of study for Unit 2 of General Mathematics are:</p> <ul style="list-style-type: none"> <li>Investigating relationships between two numerical variables</li> <li>Graphs and networks</li> <li>Variation</li> <li>Space, measurement and applications of trigonometry</li> </ul> <p>Students also complete a mathematical investigation spanning one to two weeks.</p>
<b>UNIT 3 &amp; 4</b>	<p>General Mathematics Units 3 and 4 comprises:</p> <ul style="list-style-type: none"> <li>Data analysis</li> <li>Recursion and financial modelling</li> <li>Matrices</li> <li>Networks and decision mathematics</li> </ul>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 24% and 16% respectively, to the study score.
<b>Exam:</b>	The examinations will contribute 60% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/generalmathematics/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/generalmathematics/Pages/Index.aspx</a>	

# MATHEMATICAL METHODS

## Overview:

VCE Mathematical Methods Units 1–4 provide for the study of simple elementary functions, transformations and combinations of these functions, algebra, calculus, probability and statistics, and their applications in a variety of practical and theoretical contexts. They also provide background for further study in science, technology, engineering and mathematics (STEM), humanities, economics and medicine.

## Prerequisites:

Unit 1 & 2: Year 10 Advanced Mathematics  
Unit 3 and 4: VCE Mathematical Methods Units 1 & 2

Course Outline	
<b>UNIT 1 &amp; 2</b>	<p>Mathematical Methods Units 1 &amp; 2 provide an introductory study of simple elementary functions of a single real variable, algebra, calculus, probability and statistics and their applications in a variety of practical and theoretical contexts.</p> <p>The focus of Unit 1 is the study of simple algebraic functions and the focus of Unit 2 is the study of simple transcendental functions, the calculus of polynomial functions and related modelling applications. The areas of study across both Units 1 &amp; 2 are:</p> <ul style="list-style-type: none"> <li>• Functions, relations and graphs</li> <li>• Algebra, number and structure</li> <li>• Calculus</li> <li>• Data analysis, probability and statistics</li> </ul>
<b>UNIT 3 &amp; 4</b>	<p>Mathematical Methods Units 3 and 4 extend the introductory study of simple elementary functions of a single real variable, to include combinations of these functions, algebra, calculus, probability and statistics, and their applications in a variety of practical and theoretical contexts.</p> <p>Units 3 and 4 consist of the areas of study:</p> <ul style="list-style-type: none"> <li>• Functions, relations and graphs</li> <li>• Algebra, number and structure</li> <li>• Calculus</li> <li>• Data analysis, probability and statistics</li> </ul>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 20% and 20% respectively, to the study score.
<b>Exam:</b>	The examinations will contribute 60% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/mathematicalmethods/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/mathematicalmethods/Pages/Index.aspx</a>	

# SPECIALIST MATHEMATICS

## Overview:

Specialist Mathematics Units 1-4 is for students who are very good at maths. It is specifically designed for students interested in studying Engineering or Technology at university and is often a prerequisite. To study Specialist Mathematics, you must also study Mathematical Methods. Doing well in Methods and Specialist can significantly increase your ATAR.

## Prerequisites:

Unit 1 & 2: Year 10 Advanced Mathematics, Corequisite VCE Mathematical Methods Units 1 & 2  
 Unit 3 and 4: VCE Mathematical Methods Units 1 & 2 and VCE Specialist Mathematics Units 1 & 2  
 Corequisite VCE Mathematical Methods Units 3 & 4

Course Outline	
<b>UNIT 1 &amp; 2</b>	<p>Specialist Mathematics Units 1 &amp; 2 provide a course of study for students who wish to undertake an in-depth study of mathematics, with an emphasis on concepts, skills and processes related to mathematical structure, modelling, problem-solving, reasoning and proof. This study has a focus on interest in the discipline of mathematics 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.</p> <p>The areas of study are:</p> <ul style="list-style-type: none"> <li>• Proof and number, Graph theory, Logic and algorithms</li> <li>• Sequences and series, combinatorics, matrices</li> <li>• Simulation, sampling and sampling distributions</li> <li>• Trigonometry, transformations, vectors in the plane</li> <li>• Complex numbers</li> <li>• Functions, relations and graphs</li> </ul>
<b>UNIT 3 &amp; 4</b>	<p>Specialist Mathematics Units 3 and 4 highlight mathematical structure, reasoning and proof and applications across a range of modelling contexts.</p> <p>The areas of study are:</p> <ul style="list-style-type: none"> <li>• Logic and proof</li> <li>• Functions, relations and graphs</li> <li>• Complex numbers</li> <li>• Calculus</li> <li>• Vectors</li> <li>• Data analysis, probability and statistics</li> </ul>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 20% and 20% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 60% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/specialistmathematics/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/specialistmathematics/Pages/Index.aspx</a>	

# VCE VOCATIONAL MAJOR

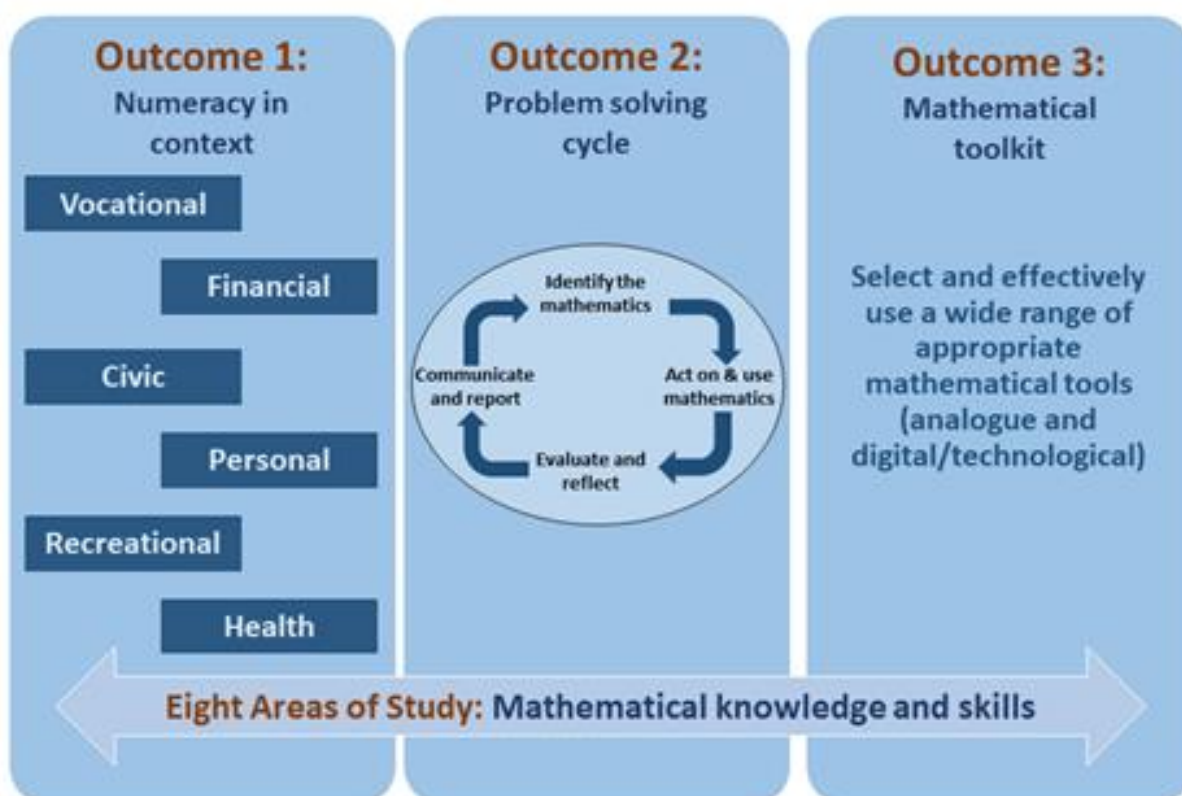
## NUMERACY

### Overview:

VCE Vocational Major Numeracy focuses on enabling students to develop and enhance their numeracy skills to make sense of their personal, public and vocational lives. Students develop mathematical skills with consideration of their local, national and global environments and contexts, and an awareness and use of appropriate technologies.

The Numeracy study design is structured around four complementary and essential components: eight areas of study; six numeracy contexts; the problem-solving cycle; and the mathematical toolkit.

\*\*\* Note: VCE Foundation Mathematics also gives credit to the VCE VM certificate. Students choosing to do the VM certificate may complete an unscored VCE Foundation Mathematics in order to gain their two VM Numeracy credits. VCE Foundation Mathematics contains much of the same content as VM Numeracy and is also taught through vocational and real life contexts.





This study is made up of four units. To be eligible for a VCE VM Certificate, students MUST attain a satisfactory grade in at least two of these units.

**Prerequisites:**

Unit 1 & 2: MYLNS Numeracy or Year 10 General Mathematics  
Unit 3 and 4: VCE Vocational Major Numeracy Units 1 & 2

Course Outline	
<b>UNIT 1</b>	There are four areas of study for Unit 1: <ul style="list-style-type: none"> <li>• Area of Study 1: Number</li> <li>• Area of Study 2: Shape</li> <li>• Area of Study 3: Quantity and measures</li> <li>• Area of Study 4: Relationships</li> </ul>
<b>UNIT 2</b>	There are four areas of study for Unit 2: <ul style="list-style-type: none"> <li>• Area of Study 5: Dimension and direction</li> <li>• Area of Study 6: Data</li> <li>• Area of Study 7: Uncertainty</li> <li>• Area of Study 8: Systematics</li> </ul>
<b>UNIT 3</b>	There are four areas of study in Unit 3: <ul style="list-style-type: none"> <li>• Area of Study 1: Number</li> <li>• Area of Study 2: Shape</li> <li>• Area of Study 3: Quantity and measures</li> <li>• Area of Study 4: Relationships</li> </ul>
<b>UNIT 4</b>	There are four areas of study for Unit 4: <ul style="list-style-type: none"> <li>• Area of Study 5: Dimension and direction</li> <li>• Area of Study 6: Data</li> <li>• Area of Study 7: Uncertainty</li> <li>• Area of Study 8: Systematics</li> </ul>
Assessment	
All assessments at Units 1 & 2 and Unit 3 and 4 are school based. Procedures for assessment of levels of achievement in Units 1 to 4 are a matter for school decision. <b>NOTE: VCE Vocational Major Numeracy cannot be completed as a scored VCE subject.</b>	
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMNumeracy/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMNumeracy/Pages/Index.aspx</a>	

# HEALTH AND HUMAN DEVELOPMENT

## Overview:

VCE Health and Human Development provides students with broad understanding of health and wellbeing that reach far beyond the individual. Students learn how important health and wellbeing is to themselves and to families, communities, nations and global society. Students explore the complex interplay of biological, sociocultural and environmental factors that support and improve health and wellbeing and those that put it at risk. The study provides opportunities for students to view health and wellbeing, and development, holistically – across the lifespan and the globe, and through a lens of social equity and justice.

## Prerequisites:

- Unit 1 & 2: No formal prerequisites. An interest in health and wellbeing across the lifespan, nutrition and medical technology.
- Unit 3 and 4: VCE Health and Human Development Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<p><b>Understanding health and wellbeing</b></p> <p>During this unit, students explain multiple dimensions of health and wellbeing, indicators used to measure health status and analyse factors that contribute to variations in health status of youth. Students investigate the roles and sources of major nutrients and the use of food selection models and other tools to promote healthy eating. They look at the health and wellbeing consequences of dietary imbalance, especially for youth, and consider the social, cultural and political factors that influence the food practices of, and food choices made by, youth.</p>
<b>UNIT 2</b>	<p><b>Managing health and development</b></p> <p>This unit investigates and explains the developmental changes in the transition from youth to adulthood, analysing factors that contribute to healthy development during prenatal and early childhood stages of the lifespan and explains health and wellbeing as an intergenerational concept. Students will be able to describe how to access Australia's health system, explain how it promotes health and wellbeing in their local community, and analyse a range of issues associated with the use of new and emerging health procedures and technologies.</p>
<b>UNIT 3</b>	<p><b>Australia's health in a globalised world</b></p> <p>In this unit, students explore and explain the complex, dynamic and global nature of health and wellbeing, plus interpret and apply Australia's health status data and analyse variations in health status. Their thinking extends to health as a universal right. While the emphasis is on the Australian health system, students explain changes to public health approaches, analyse improvements in population health over time and evaluate health promotion strategies.</p>
<b>UNIT 4</b>	<p><b>Health and human development in a global context</b></p> <p>This unit examines health and wellbeing and human development in a global context. Students analyse similarities and differences in health status and burden of disease globally and the factors that contribute to differences in health and wellbeing; relationships between Sustainable Development Goals (SDGs) and their role in the promotion of health and human development, and evaluate the effectiveness of global aid programs. Students also investigate the role of non-government organisations and Australia's overseas aid program. Students evaluate the effectiveness of health initiatives and programs in a global context and reflect on their capacity to take action.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 25% and 25% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<p><a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/health-human-development/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/health-human-development/Pages/Index.aspx</a></p>	

# LEGAL STUDIES

## Overview:

In contemporary Australian society, a range of laws exists to protect the rights of individuals and to achieve social cohesion. Providing valuable insight into their relationship with the law and the legal system enables students to become active and informed citizens, with the confidence and ability to access and participate in the legal system, appreciating the underlying principles of the rule of law, how legal systems and processes aim to achieve social cohesion, and how they can affect positive change to laws and the legal system.

## Prerequisites:

Unit 1 & 2: Year 10 Humanities (recommended)  
Unit 3 and 4: VCE Legal Studies Units 1&2 (recommended)

Course Outline	
<b>UNIT 1</b>	<p><b>The presumption of innocence</b></p> <p>Laws, including criminal law, aim to achieve social cohesion and protect the rights of individuals. Criminal law is aimed at maintaining social order. Students develop an understanding of legal foundations, such as the different types and sources of law, the characteristics of an effective law, and an overview of parliament and the courts. They develop an appreciation of how legal principles and information are used in making reasoned judgments and conclusions about the culpability of an accused, how a criminal case is determined, and the types and purposes of sanctions.</p>
<b>UNIT 2</b>	<p><b>Wrongs and rights</b></p> <p>Civil law aims to protect the rights of individuals. When rights are infringed, a dispute may arise requiring resolution, and remedies may be awarded. Students investigate key concepts of civil law and apply these to various scenarios to determine whether a party is liable in a civil dispute. They explore different areas of civil law, and the methods and institutions that may be used to resolve a civil dispute and provide remedies. They apply knowledge through an investigation of civil cases from the past four years and develop an understanding of how human rights are protected in Australia, possible reforms to the protection of rights, and investigate a contemporary human rights issue in Australia.</p>
<b>UNIT 3</b>	<p><b>Rights and justice</b></p> <p>The Victorian justice system aims to protect the rights of individuals and uphold the principles of justice: fairness, equality and access. Students examine the methods and institutions in the criminal and civil justice system, including the Magistrates' Court, County Court and Supreme Court, as well as other means and institutions used to determine and resolve cases. They explore the rights available to an accused and to victims in the criminal justice system, the roles of the judge, jury, legal practitioners and the parties, and the ability of sanctions and remedies to achieve their purposes.</p>
<b>UNIT 4</b>	<p><b>The people, the law and reform</b></p> <p>The study of Australia's laws and legal system includes an understanding of institutions that make and reform our laws. Students explore how the Australian Constitution establishes the law-making powers of the Commonwealth and state parliaments, how it protects the Australian people through structures that act as a check on parliament in law-making, and the significance of the High Court in protecting and interpreting the Australian Constitution. They investigate parliament and the courts, and the relationship between the two in law-making, and consider the roles of the individual, the media and law reform bodies in influencing changes to the law, and past and future constitutional reform.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school-based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 25% each to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/legalstudies/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/legalstudies/Pages/Index.aspx</a>	

# MODERN HISTORY

## UNITS 1 & 2

### Overview:

History is a dynamic discipline that involves structured inquiry into the human actions, forces and conditions (social, political, economic, cultural, environmental and technological) that have shaped the past and present. To make meaning of the past, historians use historical sources, which include primary sources and historical interpretations. Historians analyse and evaluate evidence and use this when constructing historical arguments. As historians ask new questions, revise interpretations, or discover new sources, fresh understandings about the past come to light.

### Prerequisites:

**Unit 1 & 2:** Year 10 Humanities

Course Outline	
<b>UNIT 1</b>	<p><b>Change and Conflict</b></p> <p>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.</p>
<b>UNIT 2</b>	<p><b>The Changing World Order</b></p> <p>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 20<sup>th</sup> century and the first decade of the 21<sup>st</sup> century.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school-based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/history/Pages/index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/history/Pages/index.aspx</a>	

# PHYSICAL EDUCATION

## Overview:

VCE Physical Education explores the complex interrelationships between anatomical, biomechanical, physiological and skill acquisition principles to understand their role in producing and refining movement, and examines behavioural, psychological, environmental, and sociocultural influences on performance and participation in physical activity. Students participate in practical activities to examine the core concepts that underpin movement and influence performance and participation in physical activity, sport, and exercise. Through integrated learning experiences, students apply theoretical concepts and reflect critically on factors that affect all levels of performance and participation in sport, exercise, and physical activity.

## Prerequisites:

Unit 1 & 2: Year 10 Health and PE (recommended)  
Unit 3 and 4: VCE Physical Education Units 1 & 2 (recommended)

Course Outline	
<b>UNIT 1</b>	<p><b>The human body in motion</b></p> <p>In this unit students explore how the musculoskeletal and cardiorespiratory systems work together to produce movement. Through practical activities students explore the relationships between the body systems and physical activity, sport, and exercise, and how the systems adapt and adjust to the demands of the activity. Students investigate the role and function of the main structures in each system and how they respond to physical activity, sport, and exercise. They explore how the capacity and functioning of each system acts as an enabler or barrier to movement and participation in physical activity.</p>
<b>UNIT 2</b>	<p><b>Physical activity, sport, and society</b></p> <p>This unit develops students' understanding of physical activity, sport, and society from a participatory perspective. Students are introduced to types of physical activity and the role participation in physical activity and sedentary behaviour plays in their own, and others', health and wellbeing. Through a series of practical activities, students experience and explore different types of physical activity promoted in their own and different population groups. They gain an appreciation of the level of physical activity required for health benefits. Students investigate how participation in physical activity varies across the lifespan.</p>
<b>UNIT 3</b>	<p><b>Movement skills and energy for physical activity</b></p> <p>This unit explores biomechanical and skill acquisition principles used to analyse human movement skills and energy production from a physiological perspective. Students analyse movement skills and apply biomechanical and skill acquisition principles to improve and refine movement in physical activity, sport, and exercise. They use practical activities to demonstrate how correct application of these principles can lead to improved performance. Students investigate the relative contribution and interplay of the three energy systems to performance in physical activity, sport, and exercise. In particular, they investigate the characteristics of each system and the interplay of the systems during physical activity.</p>
<b>UNIT 4</b>	<p><b>Training to improve performance</b></p> <p>In this unit 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. Improvements in performance, in particular fitness, depend on the ability of the individual and/ or coach to gain, apply and evaluate knowledge and understanding of training. Students analyse skill frequencies, movement patterns, heart rates and work-to-rest ratios to determine the requirements of an activity. Students consider the physiological, psychological, and sociological requirements of training to design and evaluate an effective training program.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 25% each to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/physicaleducation/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/physicaleducation/Pages/Index.aspx</a>	

# PHYSICS

## Overview:

The study of VCE Physics involves investigating, understanding and explaining the behaviour of physical phenomena in the Universe. Models, including mathematical models, are used to explore, simplify and predict how physical systems behave at varying scales from the very small (quantum and particle physics) through to the very large (astronomy and cosmology). Beginning with classical ideas and considering their limitations, and then being introduced to more modern explanations of the world, provides a novel lens through which students experience the world around them, drawing on their natural curiosity and wonder.

## Prerequisites:

Unit 1 & 2: Year 10 Science  
Unit 3 and 4: VCE Physics Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<p><b>How is energy useful to society?</b></p> <p>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.</p>
<b>UNIT 2</b>	<p><b>How does Physics help us to understand the world?</b></p> <p>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 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 then choose one of 18 options to study. Students undertake their own student-adapted/ designed scientific investigation.</p>
<b>UNIT 3</b>	<p><b>How do fields explain motion and electricity?</b></p> <p>Students use Newton's laws to investigate motion in one and two dimensions. They explore the concept of the field as a model used by physicists to explain observations of motion of objects not in apparent contact. Students compare and contrast three fundamental fields – gravitational, magnetic and electric – and how they relate to one another. They consider the importance of the field to the motion of particles within the field. Students examine the production of electricity and its delivery to homes. They explore fields in relation to the transmission of electricity over large distances and in the design and operation of particle accelerators.</p>
<b>UNIT 4</b>	<p><b>How have creative ideas and investigation revolutionised thinking in physics?</b></p> <p>Students explore some monumental changes in thinking in Physics that have changed the course of how physicists understand and investigate the Universe. They examine the limitations of the wave model in describing light behaviour and use a particle model to better explain some observations of light. Matter, that was once explained using a particle model, is re-imagined using a wave model. Students are challenged to think beyond how they experience the physical world of their everyday lives to thinking from a new perspective, as they imagine the relativistic world of length contraction and time dilation when motion approaches the speed of light. They are invited to wonder about how Einstein's revolutionary thinking allowed the development of modern-day devices such as the GPS. A student-designed practical investigation involving the generation of primary data and including one continuous, independent variable related to fields, motion or light is undertaken either in Unit 3 or Unit 4.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 30% and 20% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/physics/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/physics/Pages/Index.aspx</a>	

# PRODUCT DESIGN AND TECHNOLOGY

## Overview:

Designers play an important part in our daily lives, determining the form and function of products we use and transform ideas into drawings and plans for the creation and manufacture of useful products that fulfil human needs and wants. VCE Product Design and Technology can inform sustainable behaviours and develop technical skills to present multiple solutions to everyday life situations. It contributes to creating confident and unique problem solvers and project managers well equipped to deal with the multi-disciplinary nature of modern workplaces.

## Prerequisites:

Unit 1 & 2: Year 10 Design and Technology (recommended)  
Unit 3 and 4: VCE Product and Design Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<p><b>Product re-design and sustainability</b></p> <p>This unit focuses on the analysis, modification and improvement of a product design with consideration of the materials used and issues of sustainability. Finite resources and the proliferation of waste require sustainable product design thinking. Many products in use today have been redesigned to suit the changing needs and demands of users but with little consideration of their sustainability.</p>
<b>UNIT 2</b>	<p><b>Collaborative design</b></p> <p>In this unit students work in teams to design and develop an item in a product range or contribute to the design, planning and production of a group product. They focus on factors including: human needs and wants; function, purpose and context for product design; aesthetics; materials and sustainability; and the impact of these factors on a design solution.</p>
<b>UNIT 3</b>	<p><b>Applying the product design process</b></p> <p>In this unit students are engaged in the design and development of a product that meets the needs and expectations of a client and/or an end-user, developed through a design process and influenced by a range of complex factors. These factors include the purpose, function and context of the product; human-centred design factors; innovation and creativity; visual, tactile and aesthetic factors; sustainability concerns; economic limitations; legal responsibilities; material characteristics and properties; and technology.</p>
<b>UNIT 4</b>	<p><b>Product development and evaluation</b></p> <p>In this unit students learn that evaluations are made at various points of product design, development and production. In the role of designer, students judge the suitability and viability of design ideas and options referring to the design brief and evaluation criteria in collaboration with a client and/or an end-user. Comparisons between similar products help to judge the success of a product in relation to a range of product design factors. The environmental, economic and social impact of products throughout their life cycle can be analysed and evaluated with reference to the product design factors.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 12% and 8% respectively, to the study score. The School Assessed Task (SAT) will contribute 50% to the study score.
<b>Exam:</b>	The examination will contribute 30% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/productdesign-and-technology/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/productdesign-and-technology/Pages/Index.aspx</a>	

**\*\* Note:** Students who require specialist materials and equipment will be expected to provide these for their own use.

# PSYCHOLOGY

## Overview:

Psychology is a multifaceted discipline that seeks to describe, explain, understand and predict human behaviour and mental processes. It includes many sub-fields of study that explore and seek to better understand how individuals, groups, communities and societies think, feel and act.

## Prerequisites:

Unit 1 & 2: Year 10 Science (recommended)  
Unit 3 and 4: VCE Psychology Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<p><b>How are behaviour and mental processes shaped?</b></p> <p>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 has made to an understanding of psychological development and theories used to predict and explain the development of thoughts, emotions and behaviours. They investigate the human brain, the role it plays in mental processes and behaviour and explore plasticity and the influence brain damage may have on psychological functioning.</p>
<b>UNIT 2</b>	<p><b>How do internal and external factors influence behaviour and mental processes?</b></p> <p>In this unit 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 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.</p>
<b>UNIT 3</b>	<p><b>How does experience affect behaviour and mental processes?</b></p> <p>In this unit students investigate the contribution that classical and contemporary research has made to the understanding of the functioning of the nervous system and of biological, psychological and social factors that influence learning and memory. Students investigate how the nervous system enables a person to interact with the world around them. They explore how stress may affect psychological functioning and consider stress as a psychobiological process, including emerging research into the relationship between the gut and the brain. Students investigate how mechanisms of learning and memory lead to the acquisition of knowledge and the development of new and changed behaviours. They consider models to explain learning and memory and the interconnectedness of brain regions involved in memory.</p>
<b>UNIT 4</b>	<p><b>How is mental wellbeing supported and maintained?</b></p> <p>Students explore the demand for sleep and the influences of sleep on mental wellbeing. They consider the biological mechanisms that regulate sleep and the relationship between rapid and non-rapid eye movement sleep over a life span. They study the impact that changes to sleep-wake cycles and sleep hygiene have and consider the contribution that classical and contemporary research has made to understanding sleep. Students consider ways mental wellbeing may be defined and conceptualised, including social and emotional wellbeing as a multidimensional and holistic framework to wellbeing. They explore mental wellbeing as a continuum and apply a biopsychosocial approach to understand phobia. They explore how mental wellbeing can be supported by considering the importance of protective factors and cultural determinants as integral to the wellbeing of Aboriginal and Torres Strait Islander peoples.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 20% and 30% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 50% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/psychology/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/psychology/Pages/Index.aspx</a>	



# SYSTEMS ENGINEERING

## Overview:

VCE Systems Engineering involves the design, production, operation, evaluation and iteration of integrated systems, which mediate and control many aspects of human experience such as mechanical systems, software controlled microcontrollers and electronics. Studying this subject will build your skills in software development, the implementation of the IoT (Internet of Things) and constructing practical electronic components.

## Prerequisites:

Unit 1 & 2: Yr 10 Science  
Unit 3 and 4: VCE Systems Engineering Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<p><b>Mechanical Systems</b></p> <p>In this unit students learn about fundamental mechanical engineering principles and the components required when producing an operational system. Students learn fundamental principles of how mechanisms and simple mechanical systems provide movement and mechanical advantage, and how the specific components of a system or an entire mechanical system can be represented diagrammatically. This area of study also provides students with the opportunity to produce, test and evaluate an operational mechanical system.</p>
<b>UNIT 2</b>	<p><b>Electrotechnological systems</b></p> <p>In this unit students focus on electrotechnological engineering principles and the components and materials that make operational electrotechnological systems. Students develop their understanding of commonly used components, including their typical performance, physical appearance, implementation and how they should be represented in schematic circuit diagrams and in circuit simulation software.</p>
<b>UNIT 3</b>	<p><b>Integrated and controlled systems</b></p> <p>This unit focuses on engineering knowledge associated with the integration, calibration and control of mechanical and electrotechnological systems, how they work and can be adjusted, as well as how their performance can be calculated and represented diagrammatically in a range of forms. Students use fundamental physics and applied mathematics to solve systems engineering problems.</p>
<b>UNIT 4</b>	<p><b>Systems control</b></p> <p>On completion of this unit the student should be able to finalise production, test and diagnose a mechanical and electrotechnological integrated and controlled system using the systems engineering process, and manage, document and evaluate the system and the process, as well as their use of it. The student should also be able to evaluate a range of new or emerging systems engineering technologies and analyse the likely impacts of a selected technology.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 and 4 will contribute 10% and 60% respectively, to the study score.
<b>Exam:</b>	The examination will contribute 30% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/systemsengineering/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/systemsengineering/Pages/Index.aspx</a>	

# VISUAL COMMUNICATION DESIGN

## Overview:

Visual Communication Design is a study of visual language and the role it plays in communicating ideas, solving problems and influencing behaviours. Students learn to manipulate type and imagery when designing for specific contexts, purposes and audiences. They choose and combine manual and digital methods, media and materials with design elements and principles. In doing so, they learn how aesthetic considerations contribute to effective communication and resolution of design ideas, and how designers visually communicate concepts when developing messages, objects, environments and interactive experiences.

## Prerequisites:

Unit 1 & 2: Year 10 Art and/or Year 10 Product Design and Technology (recommended)  
 Unit 3 and 4: VCE Creative Art Practice Units 1 & 2, and/or VCE Visual Communication and Design Units 1 & 2, and/or Product Design and Technology Units 1 & 2 (recommended)

Course Outline	
<b>UNIT 1</b>	<p><b>Introduction to visual communication design</b></p> <p>In this unit, students are introduced to the practices and processes used by designers to identify, reframe and resolve design problems. Practical projects in Unit 1 focus on the design of messages and objects with students using the design process to create their own works. Students apply a range of methods, media and materials to develop their projects focusing on brand strategy and product development.</p>
<b>UNIT 2</b>	<p><b>Design contexts and connections</b></p> <p>Unit 2 builds on the understanding of practices developed in Unit 1. Students develop their knowledge of good design, different research methods and understanding of design factors as they explore the design process. Practical tasks focus on the design of environments and interactive experiences. Students adopt the practices of design specialists working in fields such as architecture, landscape and interior design while discovering the role of the interactive designer in the realm of user-experience.</p>
<b>UNIT 3</b>	<p><b>Visual communication in design practice</b></p> <p>Students explore and experience the ways in which designers work, while also analysing the work that they design. This exposure to designers' work provides the foundation for students' own investigation of the VCD design process. Students research a selected design problem and create a brief for a real or fictional client, identifying two distinct design needs. They generate, test and evaluate design ideas and share these with others. These design ideas are then further developed in Unit 4.</p>
<b>UNIT 4</b>	<p><b>Delivering design solutions</b></p> <p>Students continue to explore the design process, resolving design concepts and solutions for two final presentations. Ideas developed in Unit 3 are evaluated, selected, refined and shared with others for further review. Students choose how to best present design solutions, considering the aesthetic impact and communication of their ideas. They select materials, methods and media appropriate for the presentations of their final designs and address the design criteria specified in the brief.</p>
Assessment	
<b>Unit 1 &amp; 2:</b>	All assessments at Units 1 & 2 are school based. Procedures for assessment of levels of achievement in Units 1 & 2 are a matter for school decision.
<b>Unit 3 &amp; 4:</b>	School-assessed Coursework in Unit 3 will contribute 20 % to the study score. School-assessed Task in Unit 3 and 4 will contribute 50% to the study score.
<b>Exam:</b>	The examination will contribute 30% to the study score.
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/visualcommunicationdesign/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/visualcommunicationdesign/Pages/Index.aspx</a>	

\*\* **Note:** Students who require specialist materials and equipment will be expected to provide these for their own use.

# VCE VOCATIONAL MAJOR PERSONAL DEVELOPMENT SKILLS (PDS)

## Overview:

VCE Vocational Major Personal Development Skills (PDS) takes an active approach to personal development, self-realisation and citizenship by exploring interrelationships between individuals and communities. PDS focuses on health, wellbeing, community engagement and social sciences, and provides a framework through which students seek to understand and optimise their potential as individuals and as members of their community.

This study provides opportunities for students to explore influences on identity, set and achieve personal goals, interact positively with diverse communities, and identify and respond to challenges. Students will develop skills in self-knowledge and care, accessing reliable information, teamwork, and identifying their goals and future pathways. PDS explores concepts of effective leadership, self-management, project planning and teamwork to support students to engage in their work, community and personal environments.

Through self-reflection, independent research, critical and creative thinking, and collaborative action, students will extend their capacity to understand and connect with the world they live in, and build their potential to be resilient, capable citizens.

This study is made up of four units. To be eligible for a VCE VM Certificate, students MUST attain a satisfactory grade in at least two of these units.

## Prerequisites:

Unit 3 and 4: VCE Vocational Major Personal Development Skills Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<b>Healthy individuals</b> <ul style="list-style-type: none"> <li>Area of Study 1: Personal identity and emotional intelligence</li> <li>Area of Study 2: Community health and wellbeing</li> <li>Area of Study 3: Promoting a healthy life</li> </ul>
<b>UNIT 2</b>	<b>Connecting with community</b> <ul style="list-style-type: none"> <li>Area of Study 1: What is community?</li> <li>Area of Study 2: Community cohesion</li> <li>Area of Study 3: Engaging and supporting community</li> </ul>
<b>UNIT 3</b>	<b>Leadership and teamwork</b> <ul style="list-style-type: none"> <li>Area of Study 1: Social awareness and interpersonal skills</li> <li>Area of Study 2: Effective leadership</li> <li>Area of Study 3: Effective teamwork</li> </ul>
<b>UNIT 4</b>	<b>Community project</b> <ul style="list-style-type: none"> <li>Area of Study 1: Planning a community project</li> <li>Area of Study 2: Implementing a community project</li> <li>Area of Study 3: Evaluating a community project</li> </ul>
Assessment	
All assessments at Units 1 & 2 and Unit 3 and 4 are school based. Procedures for assessment of levels of achievement in Units 1 to 4 are a matter for school decision. <b>NOTE: VCE Vocational Major Personal Development Skills cannot be completed as a scored VCE subject.</b>	
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMPersonalDevelopmentSkills/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMPersonalDevelopmentSkills/Pages/Index.aspx</a>	

# VCE VOCATIONAL MAJOR WORK RELATED SKILLS (WRS)

## Overview:

VCE Vocational Major Work Related Skills (WRS) examines a range of skills, knowledge and capabilities relevant to achieving individual career and educational goals. Students will develop a broad understanding of workplace environments and the future of work and education in order to engage in theoretical and practical planning and decision-making for a successful transition to their desired pathway.

This study is made up of four units. To be eligible for a VCE VM Certificate, students MUST attain a satisfactory grade in at least two of these units.

## Prerequisites:

Unit 3 and 4: VCE Vocational Major Work Related Skills Units 1 & 2

Course Outline	
<b>UNIT 1</b>	<b>Careers and learning for the future</b> <ul style="list-style-type: none"> <li>Area of Study 1: Future careers</li> <li>Area of Study 2: Presentation of career and education goals</li> </ul>
<b>UNIT 2</b>	<b>Workplace skills and capabilities</b> <ul style="list-style-type: none"> <li>Area of Study 1: Skills and capabilities for employment and further education</li> <li>Area of Study 2: Transferable skills and capabilities</li> </ul>
<b>UNIT 3</b>	<b>Industrial relations, workplace environment and practice</b> <ul style="list-style-type: none"> <li>Area of Study 1: Workplace wellbeing and personal accountability</li> <li>Area of Study 2: Workplace responsibilities and rights</li> <li>Area of Study 3: Communication and collaboration</li> </ul>
<b>UNIT 4</b>	<b>Portfolio preparation and presentation</b> <ul style="list-style-type: none"> <li>Area of Study 1: Portfolio development</li> <li>Area of Study 2: Portfolio presentation</li> </ul>
Assessment	
All assessments at Units 1 & 2 and Unit 3 and 4 are school based. Procedures for assessment of levels of achievement in Units 1 to 4 are a matter for school decision. <b>NOTE: VCE Vocational Major Work Related Skills cannot be completed as a scored VCE subject.</b>	
Study Design	
<a href="https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMWorkRelatedSkills/Pages/Index.aspx">https://www.vcaa.vic.edu.au/curriculum/vce/vce-study-designs/VCEVMWorkRelatedSkills/Pages/Index.aspx</a>	

# VCE VICTORIAN PATHWAYS CERTIFICATE (VPC) GUIDELINES

***Entry into the VPC course is via interview only.***

The Victorian Pathways Certificate (VPC) is an inclusive Year 11 and 12 standards-based certificate that meets the needs of a smaller number of students who are not able or ready to complete the VCE (including the VCE Vocational Major). It provides an enriched curriculum and excellent support for students to develop the skills, capabilities and qualities for success in personal and civic life. While the VPC is not a senior secondary qualification, it can be a pathway to the VCE.

The VPC is designed to develop and extend pathways for young people, while providing flexibility for different cohorts. The VPC is suitable for students whose previous schooling experience may have been disrupted for a variety of reasons, including students with additional needs, students who have missed significant periods of learning and vulnerable students at risk of disengaging from their education. Students will gain the skills, knowledge, values and capabilities to make informed choices about pathways into a senior secondary qualification, entry level Vocational Education and Training (VET) course or employment.

To be eligible to receive the VPC, students must satisfactorily complete a minimum of 12 units, including:

- at least two units of VPC Literacy (or units from the VCE English group including VCE Vocational Major Literacy)
- at least two units of VPC Numeracy (or units from the VCE Mathematics group including VCE Vocational Major Numeracy)
- at least two VPC Personal Development Skills units
- at least two VPC Work Related Skills units

Students can also include units from VCE studies, VCE Vocational Major studies, and VET units of competency. VPC students can receive VET credit for 90 nominal hours at the Certificate 1 or above level and receive Structured Workplace Learning (SWL) recognition. Many students will undertake more than 12 units over the VPC.

## OTHER VCE SUBJECTS

The following is a list of further VCE subjects on offer from the VCAA. Tyrrell College can explore avenues in providing these via online platforms or through distance education. For Study Designs and more information on subjects not already in this handbook, see the VCAA website ([www.vcaa.vic.edu.au](http://www.vcaa.vic.edu.au)) or speak to Mrs Ryan, Miss Hickey or Mr Coffey.

- Art Making and Exhibiting
- Australian and Global Politics
- Classical Studies
- Dance
- Drama
- Economics
- English Language
- Environmental Science
- Food Studies
- Geography
- Languages – See VCAA for a list and more information
- Literature
- Media
- Music
- Outdoor and Environmental Studies
- Philosophy
- Religion and Society
- Sociology
- Texts and Traditions
- Theatre Studies

# CHECKLIST

To qualify for a **VCE Certificate** students **must** complete a minimum of 16 units which **must** include:

- 3 units of an English group which **must** include a 3/4 sequence
- 3 other Unit 3/4 sequences
- The remaining units can be made up of VCE or VET subjects

To qualify for a **VCE Vocational Major Certificate** students **must** complete a minimum of 16 units which **must** include:

- 3 units of an English group which **must** include a 3/4 sequence
- 3 other Unit 3/4 sequences (eg: VCE, VCE VM or VET)
- 2 units of a maths group
- 2 units of VCE VM Work Related Skills
- 2 units of VCE VM Personal Development Skills
- 180 hours of a Certificate II or above VET subject