

**2021
parent
information
: senior**

**MURRAYVILLE
COMMUNITY
COLLEGE**

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About this Senior Course Subject Information Handbook

Your Subject Information Handbook is designed to provide you with information about the VCE, VET and VCAL units being offered at Murrayville Community College. As students move into higher year levels in the College they have greater say over the program they study, and are asked to make more decisions which impact on their future. In addition, the subjects students are asked to select from are becoming more specific and specialized. While the College staff will provide assistance and guidelines, the responsibility for subject selection is increasingly with the students. This Handbook should be seen as part of the information gathering process for you and should be considered by you in conjunction with the Career Aptitude Testing and conversations with your parents, staff and others in higher education and industry. This Subject Information Booklet is divided into a number of sections to assist students in selecting the most appropriate course of study for them for their final years of schooling.

Section1: Selecting your VCE Subjects at Murrayville Community College.

Section 2:

A. What do students need to get their VCE certificate, and an ATAR?

B. What do students need to get their VCAL certificate?

Section 3: Possible career paths from specific subjects.

Section 4: Overview of VCE Studies offered at Murrayville Community College.

The description of units in this section of the Handbook provide you with a limited overview of the subject and a brief introduction to the content.

Section 5: Explanation of the content of VCE subjects.

The unit descriptions in this section of the Handbook provides you with a general description as well as lists of Assessment Tasks. Considerations for career paths and skills required are also included.

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### Section 1: Selecting your VCE Subjects at Murrayville Community College.

#### Some suggestions for subject selection:

- Select subjects you are interested in, have demonstrated some abilities in, and are related to a particular career pathway.
- If you are unsure of your career path select subjects you are interested in, and subjects which will keep your options open for you.
- If you are unsure of your career possibilities, refer to the Career Aptitude Test you have completed. Retake the test if you like and discuss the results with College staff, your parents, careers advisors, people in industries or the University / TAFE 'Office of Prospective Students.'

Remember it is always good to work towards a target, however, it is ok to keep your options open while you are investigating the possibilities;

- Don't select subjects because of friends;
- Don't select subjects on perceptions of who the teacher will be;
- Do select subjects you are good at, or that you enjoy;
- If you are unsure, do ask questions.

This is a time for you to accept more responsibility for your program of studies.

If you do not know, ask.

There is no such thing as a silly question.

## Section 2:

### A. What do students need to get their VCE certificate, and an ATAR?

The Victorian Curriculum and Assessment Authority (VCAA) set out certain types of units you must complete to attain the VCE certificate. **To obtain your VCE**, you must satisfactorily complete 16 units of study. This is the minimum. Eight of these 16 units may be from the VCE VET Studies. With regard to **the number of units studied**, at Murrayville Community College the following applies:

- Year 11 students are required to undertake a minimum of 12 units. That is 6 units of study in Semester 1 and 6 units of study in Semester 2. This may consist of VCE Units or VET Units;
- Year 12 students are required to undertake a minimum of 10 units. That is 5 sequences of Units 3 & 4.

In addition to the number of units studied there are a number of **other requirements** for students to complete their VCE Certificate.

- Students need to complete an approved combination involving at least 3 units of **English**. This may include:
  - English Units 1-4;
  - English Literature Units 1-4.
- Students must satisfactorily complete a **sequence of Units 3 & 4** in three studies in addition to the Units 3 & 4 sequence in English. These may be in VET studies at the appropriate level.

### B. What do students need to get their VET certificate?

VET is 'job ready training' designed for people whose focus is obtaining skills for the workforce.

**Students** value the VET in the VCE program because it:

- Allows students to combine general and vocational studies which, for many, provides a practical focus;
- Allows students to gain additional 'credit' on University ATAR scores and TAFE entry;
- Gives students direct experience of business and industry, which employers value in selection.

**Employers** value the VET in the VCE program because it:

- Contributes to the development of industry and work related skills for students;
- Provides students with a practical and focused introduction to workplace requirements;
- Enables employers to use the program for selection purposes;
- Enables industry to influence educational programs in schools;
- Provides useful training and supervisory experience for existing employees.

**Successful completion** of a VET in the VCE program provides students with:

- Two qualifications: a Victorian Certificate of Education (VCE) or Victorian Certificate of Applied Learning (VCAL) issued by the Victorian Curriculum and Assessment Authority and a VET Certificate issued by a Registered Training Organisation (RTO);
- Two Statements of Results issued by the Victorian Curriculum and Assessment Authority giving details of units completed in the VCE and modules/units of competence completed in the VET qualification;
- Can improve the student's Year 12 score and enable improved access to further education;
- The ability to articulate into further vocational education and training courses;
- Workplace experience, including structured workplace training.

Delivery of a VET program is undertaken by a Registered Training Organisation (RTO). These include TAFE institutes, private providers or schools.

VET is accessible to all students, undertaking the Victorian Certificate of Education (**VCE**), however, VET is a requirement for students undertaking the Victorian Certificate of Applied Learning (**VCAL**).

VET involves an increased amount of practical work, and a structured work placement. VET Agriculture is described as **non-scored**. This means that, rather than complete an examination, students are to demonstrate achievement in a series of competencies. If the certificate is completed students are awarded additional points towards their ATAR based on 10% of their best four graded (or scored) subjects (including English). VET Hospitality is either **scored** or **non-scored**. Non-scored will not contribute 10%, but still receives Certificate II in Hospitality; scored assessment contributes to the ATAR score.

**Summary of VET in the VCE:**

| Area of Study | Level of Study | Scored / Non-Scored Assessment |
|---------------|----------------|--------------------------------|
| Agriculture   | Certificate II | Non-Scored                     |

All workplaces are by negotiation with local employers, and MUST be in a local area or accessible to College staff as Work Place Assessors.

**Time Commitment**

Because of the time commitment of VET, it is College policy to provide students with early access to VET. It is strongly recommended that VCE students have completed all VET before commencing Year 12. VET can be completed by VCAL students in Year 12.

Parents and students should be aware that a VET program may involve a commitment out of normal school hours for work placement and to complete short training modules.

*The school will provide student information and induction to each student on enrolment for a course.*

*This will include:*

- *student selection, enrolment and induction/orientation procedures*
- *course information, including content and vocational outcomes*
- *provision for language, literacy and numeracy assistance*
- *student support, welfare and guidance services*
- *flexible learning and assessment procedures*
- *appeals and complaints procedures*
- *disciplinary procedures*
- *staff responsibilities for access and equity*
- *recognition of prior learning (RPL) arrangements*
- *recognition of AQF qualifications and statements of attainment issued by other RTOs.*

**Victorian Certificate of Applied Learning (VCAL)**

The Victorian Certificate of Applied Learning (VCAL) is a hands-on option for students in Years 11 and 12. Like the Victorian Certificate of Education (VCE), the VCAL is a recognised senior secondary qualification. Students who do the VCAL are more likely to be interested in going on to training at TAFE, doing an apprenticeship, or getting a job after completing Year 12.

Like the VCE the VCAL is a recognised senior qualification. Unlike the VCE which is widely used by students as a pathway to university, the VCAL is more for students who are likely to be interested in going on to training at TAFE, doing an apprenticeship, or getting a job after completing Year 12. The Victorian Certificate of Applied Learning (VCAL) caters for students who are seeking a flexible and hands-on alternative to an academic course.

**Note:** Students wanting to study at university are advised to undertake VCE studies.

The VCAL's flexibility enables students to design a study program that suits their interests and learning needs. Students select accredited VCE and Vocational Education and Training (VET) modules and units from the following four compulsory strands:

- Literacy and Numeracy Skills
- Work Related Skills
- Industry Specific Skills
- Personal Development Skills

Students who start their VCAL and then decide they would like to complete their VCE, are able to transfer between certificates. Any VCE studies successfully completed as part of the VCAL program will count towards the VCE.

A certificate and statement of results will be issued to students who successfully complete their VCAL. Assessment is progressive and students must satisfactorily demonstrate that they are competent in a number of areas.

Prospective VCAL students may begin at any of three levels: Foundation, Intermediate or Senior and their program takes one year to complete. Some students may want to take 18 months to complete a level.

**What does a VCAL program look like?**

A 'VCAL Program' is a set of at least ten credits taken over one year or longer. One VCAL credit is equivalent to one VCE unit, a VCE VET unit or 100 hours of vocational training or Further Education modules. A student's VCAL program is individual and will depend on what you want to study, what you have already completed, and what you must complete to gain the award.

**VCAL Requirements****You must study:**

- At least one credit in each of the four VCAL strands:  
Literacy and Numeracy (English and Maths), Industry Skills (a VET subject), Work Skills and Personal Development Skills (new VCAL subjects)
- Five credits at the same award level
- VET Certificate credits at the Intermediate and Senior award levels.

You may choose any other units to make up your program of at least ten credits.

You must satisfactorily complete a minimum of ten credits including:

- One credit in each of the four VCAL strands
- Five credits at the same award level, including satisfactory completion of a Literacy unit and a Personal Development Skills unit.
- At least five other credits from any of the strands, and from any of the award levels.

**Choosing a Program**

**Step 1 :** Identify your interests, abilities and strengths and link these with appropriate work/career choices.

**Step 2 :** Consider the Vocational Education programs that the College offers and get some ideas about which options you are most interested in.

**Step 3 :** Identify which English and Maths level you want to study.

**Please Note:**

You will be asked to attend an individual course selection interview. If you are unsure about some choices we will help you choose a suitable program.

**Recognising Prior Studies**

Prior studies in the VCE or at a TAFE or further education provider may be acknowledged and credit transfer is possible (this helps make up the ten credits needed for the award of a certificate, so you may be awarded the certificate in less than one year).

Decisions relating to the award of credit for recognised prior learning rest with the College.

**VCE and VCAL Credit Transfer**

Students who start a VCAL program may decide to move into a full VCE program at some stage. Credit transfers in the two VCAL units, Work Related Skills (WRS) and Personal Development Skills (PDS), can be counted towards the VCE award.

PDS + WRS Intermediate Units = One credit each at VCE unit 1 or 2 level.

PDS + WRS Senior units = One credit each at VCE unit 3 or 4 level.

**Section 3: Possible career paths from specific subjects.**

Each subject has suggested career outcomes at the bottom of the page. If you require more information, or wish to obtain further details about a subject or a career, ask your teachers or the Careers Coordinator.

**Section 4 : Overview of VCE Studies offered at Murrayville Community College****Compulsory Subject for ALL VCE students****English (or equivalent)**

is the study of texts including novels, plays, short stories, poetry, film and media texts. Students respond orally and in writing to a range of issues.

## VCE Subjects - 2021

**Agricultural and Horticultural Studies** allows students to develop and apply theoretical knowledge and skills to real world business and practices. They apply their acquired knowledge and skills to design, develop and manage an agricultural or a horticultural project. It complements the skills focus of competency training available through Vocational Education and Training agriculture and horticulture certificates.

**Art** focuses on encouraging artistic development through personal and independent exploration. Students develop ideas and personal concepts, and refine skills and techniques in art making. Students explore art and society, artistic identity and develop analytical skills through the interpretation of specific artworks and the use of analytical frameworks.

**Unit 1** explores materials, techniques and working methods.

**Unit 2** focuses on selected media.

In **Units 3 & 4** students present a broad and innovative body of work as well as undertaking art interpretation, debating and criticism of ideas and issues in art.

**Biology** is the study of living organisms and their interaction with their environment.

**Unit 1** examines cells and organisms and how they function.

**Unit 2** focuses on how organisms adapt to and interact with their environment.

**Unit 3** examines the activities occurring within cells, and how organisms protect themselves against disease and infection.

**Unit 4** focuses on genetics and evolution.

**Chemistry** is the study of chemical, chemical processes and chemical reactions.

**Unit 1** focuses on the periodic table and properties of materials.

**Unit 2** focuses on environmental chemistry related to water and the atmosphere.

**Units 3 and 4** examine large-scale industrial production of some chemicals and the work of chemists, and the use of energy in non-living and living systems, and the properties of elements in the periodic table.

**Geography** is the study of places and the ways natural and human forces produce change.

**Unit 1** investigates hazards and disasters,

**Unit 2** tourism,

**Unit 3** changing the land,

**Unit 4** human population.

**Health and Human Development** is the study of factors which contribute to the wellbeing of individuals, families and communities.

**Units 1 & 2** will focus on Adolescence and Families.

**Units 3 & 4** look at the nutrition within Australia's health and an international perspective on personal development and health.

**History** is the study of people, events and places over time.

Within **Units 1 & 2** students examine Twentieth Century History before and after 1945.

In **Units 3 & 4** students can study either Australian History, or Revolutions.

### **Mathematics -**

**Foundation Mathematics** is the study of practical contexts in maths relating to everyday life, recreation, work and study.

**Further Mathematics** is the study of Mathematics with the focus on Statistics and Data (Core), Trigonometry, Graphs and Relationships, and Business Mathematics. Only available at Units 3 and 4.

**General Mathematics** provides a general study of Maths intended to accommodate a range of student abilities and interests. Topics include, Statistics, Arithmetic, Functions and Graphs, Algebra, Geometry, Trigonometry.

**Mathematical Methods** is the study of probability, calculus and trigonometry with the aim of giving students the background for further studies in Science and Mathematics. This can be studied as Units 1-4.

**Specialist Mathematics** is the study of Mathematics which aims to extend the students and materials beyond that of General or Further Mathematics. This is a high level of Mathematical study.



**Outdoor and Environmental Studies** is the study of how humans understand and relate to nature in the context of outdoor environments.

**Units 1 & 2** focus on historical and recent issues relating to human participation in the natural environment.

**Units 3 & 4** include a study of conservation within the natural environment.

**Physical Education** study is designed to enable students to understand the social, environmental and biological factors that influence participation in physical activity; analyse the processes associated with skill development in the performance of physical activity; examine the relationships between social, environmental and biological influences on participation in physical activity; develop a critical perspective on physical activity; use practical activity to enhance the theoretical understanding of physical performance; use correct terminology when explaining theoretical and practical concepts.

**Unit 1** looks at learning and improving skill.

**Unit 2** examines the active body.

**Unit 3** studies physiological and participatory perspective of physical activity.

**Unit 4** is on enhancing physical performance.

**Physics** is the science of working with the interaction and properties of matter and energy.

**Unit 1** looks at light, heating and cooling, radioactivity and nuclear energy.

**Unit 2** examines movement and electricity.

**Unit 3** looks at sound, power and electronic systems.

**Unit 4** focuses on motion, gravity and structures.

**Product, Design and Technology** - students assume the role of a designer-maker and develop knowledge and skills to produce effective and creative responses to design challenges.

**Unit 1** is on design modification and production.

**Unit 2** studies collaborative design.

**Unit 3** focuses on design, technological innovation and manufacture.

**Unit 4** focuses on product development, evaluation and promotion.

**Psychology** is the scientific study of thoughts, feelings and behaviour.

**Unit 1** explores the behaviour of people in groups.

**Unit 2** examines the behaviour of individuals while studying the major regions of the brain and their function.

**Unit 3** students study the nervous system, in particular the brain and the spinal chord, exploring visual sensation and perception.

In **Unit 4** students study memory and look at how we remember and why we forget.

**Studio Art** aims to develop the ability to establish effective art practices through the application of a design process and the production of a cohesive folio of artworks. Students also explore artworks and artists from different times and locations through Units 1-4.

**Unit 1** focuses on using sources of inspiration and ideas as the basis for artworks, exploring a wide range of materials and techniques.

In **Unit 2** students use a design process to produce artworks and develop skills in visual analysis.

In **Unit 3** students produce a range of potential solutions in art using a design brief. They also explore professional art practices and styles.

In **Unit 4** students produce a cohesive folio of finished artworks as well as study art industry issues.

**Systems Engineering** promotes innovative systems thinking and problem-solving skills through the application of the systems engineering process. It is based on integrated mechanical and electrotechnological engineered systems, and provides opportunities for students to learn about and engage with systems from a practical and purposeful perspective.

**Visual Communications and Design** is the study of the vocabulary and grammar of visual communication, which includes an understanding of, and application of, drawing and drawing conventions, design elements, principles and design process in visual communication.

**Unit 1** focuses on visual communication.

**Unit 2** focuses on communication in context.

**Unit 3** focuses on visual communication practices.

**Unit 4** focuses on designing to a brief.

## SAMPLE VCE PATHWAYS

**ARTS/HUMANITIES PATHWAY**

| Compulsory Units                           | Suggested units                                                                                                                   | Other Units                                                                                |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| English 1 or EAL 1 and/<br>or Literature 1 | Select from:<br>20th Century History 1-2<br>Australian History 3-4<br>Politics 1- 4                                               | Examples: Other units which interest you such as Food Studies, Studio Arts and Psychology. |
| English 2 or EAL 2 and/<br>or Literature 2 | Legal Studies 1-4<br>Sociology 1-4<br>Geography 1- 4                                                                              |                                                                                            |
| English 3 or EAL 3 and/<br>or Literature 3 | Units from Maths<br>Units from the Sciences Selecting other units<br>Units from the Arts & Technology<br>(Design Tech/Studio Art) | Selecting other units may depend on which direction you wish to take after completing VCE. |
| English 4 or EAL 4 and/<br>or Literature 4 |                                                                                                                                   |                                                                                            |

THIS PATHWAY MAY LEAD TO:

| Employment                                                              | University                                                                                                                                                                                                                                                                     | TAFE                                                                  | Careers Manager                                                                        |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Limited opportunities for students seeking employment directly from VCE | <b>Bachelor degrees in:</b><br>Arts, Humanities VCE Social Science, Family Studies, Social Work, Public Relations, Teaching, Education Arts/Media<br><br>You can major in Philosophy, Politics Humanities & Social Science Professional Writing Journalism History & Geography | <b>Diplomas &amp; Certificates in:</b><br>Social & Community Services | Tertiary Entry Needs<br>Prerequisites<br>Recommended Units<br>Any special requirements |

**MATHS/SCIENCE/ENGINEERING PATHWAY**

| Compulsory Units                           | Suggested units |           |                                          |             |
|--------------------------------------------|-----------------|-----------|------------------------------------------|-------------|
| English 1 or EAL 1 and/<br>or Literature 1 | Physics 1       | Methods 1 | General Maths 1                          | Chemistry 1 |
| English 2 or EAL 2 and/<br>or Literature 2 | Physics 2       | Methods 2 | General Maths 2                          | Chemistry 2 |
| English 3 or EAL 3 and/<br>or Literature 3 | Physics 3       | Methods 3 | Specialist Maths 3<br>or Further Maths 3 | Chemistry 3 |
| English 4 or EAL 4 and/<br>or Literature 4 | Physics 4       | Methods 4 | Specialist Maths 4 or<br>Further Maths 4 | Chemistry 4 |

THIS PATHWAY MAY LEAD TO:

| Employment                                                                                                               | University                                                                                                                                                  | TAFE                                                                     | Careers Manager                                                                            |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Limited opportunities for students seeking employment directly from VCE<br><br>Some traineeships are available- Lab Tech | <b>Bachelor degrees in:</b><br>Architecture, Engineering, Science (Applied, Physical, Chemical, Biological), Education, Manufacturing<br>Project Management | <b>Diplomas &amp; Certificates in:</b><br>Engineering<br>Applied Science | Tertiary Entry Needs<br>Prerequisites<br><br>Recommended Units<br>Any special requirements |

**HEALTH SCIENCES PATHWAY**

| Compulsory Units                        | Suggested units              |                                          |                 | Other Units                                                                                |
|-----------------------------------------|------------------------------|------------------------------------------|-----------------|--------------------------------------------------------------------------------------------|
| English 1 or EAL 1 and /or Literature 1 | Chemistry 1 and/or Biology 1 | Health & Human Dev 1 and/or Psychology 1 | General Maths 1 | Selecting other units may depend on which direction you wish to take after completing VCE. |
| English 1 or EAL 2 and /or Literature 2 | Chemistry 2 and/or Biology 2 | Health & Human Dev 2 and/or Psychology 2 | General Maths 2 |                                                                                            |
| English 1 or EAL 3 and /or Literature 3 | Chemistry 3 and/or Biology 3 | Health & Human Dev 3 and/or Psychology 3 | Further Maths 3 |                                                                                            |
| English 4 or EAL 4 and /or Literature 4 | Chemistry 4 and/or Biology 4 | Health & Human Dev 4 and/or Psychology 4 | Further Maths 4 |                                                                                            |

THIS PATHWAY MAY LEAD TO:

| Employment                                                                                                 | University                                                                                                                                                                                              | TAFE                                                                                                                                                                                      | Careers Manager                                                                         |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Limited opportunities for students seeking employment directly from VCE<br>Some traineeships are available | <b>Bachelor degrees in:</b><br>Advanced Certificates<br>Child Care,<br>Chiropractic, Nursing,<br>Physical Education<br>Teaching, Paramedics,<br>Occupational Therapy<br>Public Health<br>Human Movement | <b>Associate Diplomas, Certificates in:</b><br>Childcare<br>Occupational Studies<br>Hospitality Studies<br>Tourism<br>Events Management<br>Social & Community Services<br>Health Sciences | Tertiary Entry Needs Prerequisites<br><br>Recommended Units<br>Any special requirements |



SAMPLE VCAL PATHWAY

**INDUSTRY PATHWAY IN AGRICULTURE/RETAIL - VCE unit options**

| Sample VCAL Program |                                             |                                                                            |                                                                                                                      |                                                                                          |                                                                                                                    |               |
|---------------------|---------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------|
|                     | Industry Pathway studies Agriculture/Retail |                                                                            |                                                                                                                      |                                                                                          |                                                                                                                    | Other studies |
| Year 10             | Careers learning tailored to the industry   | AusVELS Level 10                                                           |                                                                                                                      |                                                                                          |                                                                                                                    |               |
| Year 11             | VCE VET Agriculture/Retail<br>2 Credits     | Numeracy Skills Intermediate<br>1 Credit                                   | Literacy Skills Intermediate Reading and Writing<br><br>Literacy Skills Intermediate Oral Communication<br>2 Credits | VCE VET in Agriculture/Retail<br>2 Credits                                               | Personal Development Skills Intermediate Units 1 and 2<br><br>Work Related Skills Intermediate Unit 1<br>3 Credits |               |
| Year 12             | VCE VET in Agriculture/Retail<br>2 Credits  | Numeracy Skills Senior<br><br>Advanced Numeracy Skills Senior<br>2 Credits | Literacy Skills Senior Reading and Writing<br><br>Literacy Skills Senior Oral Communication<br>2 Credits             | VCAL Work Related Skills Senior Unit 1<br><br>VCE VET in Agriculture/Retail<br>2 Credits | Personal Development Skills Senior Units 1 and 2<br><br>2 Credits                                                  |               |

| Sample VCE Program |                                           |                                   |                       |                                          |                                  |                           |
|--------------------|-------------------------------------------|-----------------------------------|-----------------------|------------------------------------------|----------------------------------|---------------------------|
|                    | Industry Pathway studies                  |                                   |                       |                                          | Other studies                    |                           |
| Year 9             | Careers learning tailored to the industry | AusVELS Level 9                   |                       |                                          |                                  |                           |
| Year 10            | VCE VET Agriculture/Retail 1, 2, and 1    | AusVELS Level 10                  |                       |                                          |                                  |                           |
| Year 11            | VCE VET Agriculture/Retail Units 3 and 4  | General Mathematics Units 1 and 2 | English Units 1 and 2 | VCE VET Agriculture/Retail Units 1 and 2 | Physical Education Units 1 and 2 | Agriculture Units 1 and 2 |
| Year 12            |                                           | Further Mathematics Units 3 and 4 | English Units 3 and 4 | Industry and Enterprise Units 3 and 4    | Physical Education Units 3 and 4 | Agriculture Units 3 and 4 |

**VCE Subjects – 2021**

**Compulsory Units**

English (or equivalent)

**Elective VCE Subjects – 2021**

Agricultural & Horticultural Studies

Art

Biology

Chemistry

Geography

Health and Human Development

History

Mathematics - Foundation Mathematics

Mathematics - Further Mathematics

Mathematics - General

Mathematics - Methods

Mathematics - Specialist

Outdoor and Environmental Studies

Physical Education

Physics

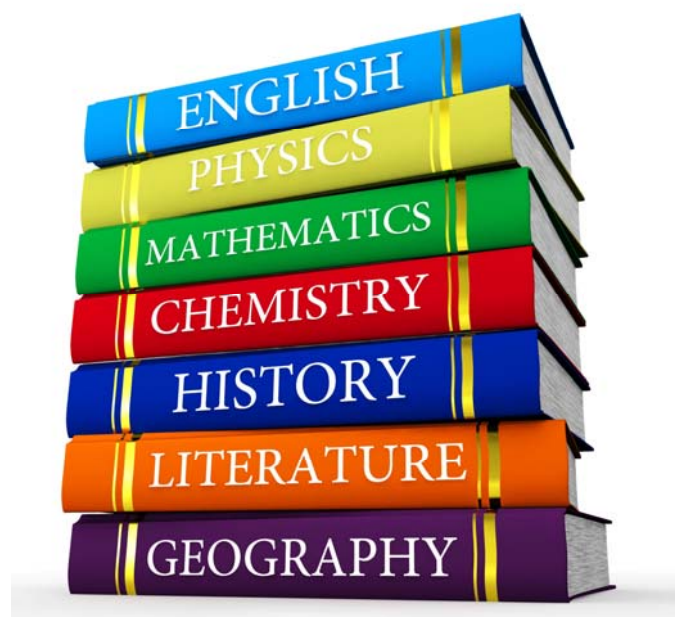
Product, Design and Technology

Psychology

Studio Arts

Systems Engineering

Visual Communications and Design



## GLOSSARY OF TERMS

### Acronyms

|         |                                                  |
|---------|--------------------------------------------------|
| ATAR    | Australian Tertiary Admission Rank               |
| DECV    | Distance Education Centre of Victoria            |
| ESL     | English as a Second Language                     |
| GA      | General Assessment                               |
| GAT     | General Achievement Test                         |
| LOTE    | Language(s) Other Than English                   |
| NA      | Not Assessed                                     |
| RTO     | Registered Training Organisation                 |
| SAC     | School-assessed Coursework                       |
| SAT     | School-assessed Task                             |
| SATAC   | South Australian Tertiary Admissions Centre      |
| TAFE    | Technical and Further Education                  |
| UG      | Ungraded                                         |
| VASS    | Victorian Assessment Software System             |
| VCAA    | Victorian Curriculum and Assessment Authority    |
| VCAL    | Victorian Certificate of Applied Learning        |
| VCE     | Victorian Certificate of Education               |
| VCE VET | Approved VET program providing credit in the VCE |
| VET     | Vocational Education and Training                |
| VTAC    | Victorian Tertiary Admissions Centre             |

### Glossary

**ACCREDITATION PERIOD** – the period during which a study is accredited as a VCE study.

**ASSESSING SCHOOL**– the school responsible for providing the assessment (through VASS) for one or more units for a student. The assessing school is usually, but not always, the home school. A student may have one or more assessing schools.

**ASSESSMENT PLAN** - a set of tasks relating to the assessment of units of competence/modules undertaken in the Unit 3 and 4 sequence of a scored VCE VET program.

**AUSTRALIAN TERTIARY ADMISSION RANK (ATAR)** - the overall ranking on a scale of zero to 100 that a student receives, based on his or her *Study Scores*. The ATAR is calculated by VTAC and used by universities and TAFE institutes to select students for courses. Formerly known as Equivalent National Tertiary Entrance Rank (ENTER).

**AUTHENTICATION** - the process of ensuring that the work submitted by students for assessment is their own.

**COURSEWORK AUDIT** - as part of an ongoing monitoring and quality assurance program by the VCAA, samples of School-assessed Coursework material are collected from schools each semester. The work collected is used to monitor schools' administration of School-assessed Coursework.

**EXAMINATIONS** - external assessments set and marked by the VCAA. All studies have at least one examination. Most written examinations are held in November, with a small number in June. Performance examinations and examinations: oral component are held in October and November.

**GENERAL ACHIEVEMENT TEST (GAT)** - a test of knowledge and skills in writing, mathematics, science and technology, humanities and social sciences and the arts. It is done by all students doing a Unit 3 and 4 sequence and used by the VCAA to check that schools are marking School-assessed Tasks to the same standard, as part of the statistical moderation of School-assessed Coursework and as a quality assurance check on the VCAA's marking of examinations and School-assessed Tasks. It does not count towards students' VCE graduation, but students' GAT results are reported to them with their *Statement of Results*.

**GRADED ASSESSMENT** - all VCE studies have three Graded Assessments for each Unit 3 and 4 sequence except for scored VCE VET programs, which have two.

**MODULE** - a distinct component of the vocational training curriculum, comprising specified learning outcomes, assessment criteria and other information to support the delivery of training and conduct of assessment.

**NOMINAL HOURS** - the proposed hours required for the delivery and assessment of vocational training as determined by the Office of Training and Tertiary Education.

**OUTCOMES** - what a student must know, or be able to do, in order to satisfactorily complete a unit as specified in the study design.

## GLOSSARY OF TERMS (continued)

PRINCIPAL - refers to principals, college principals of multi-campus schools, headmasters, headmistresses and directors.

REGISTERED TRAINING ORGANISATION (RTO) - an organization which is registered and approved to deliver Vocational Education and Training (VET) programs within a defined Scope of Registration.

SATISFACTORY COMPLETION - the school decision that a student has demonstrated achievement of the *outcomes* for a unit. Students receive an 'S' for the satisfactory completion of a unit. If they do not satisfactorily complete a unit, they receive an 'N' for it. Students qualify for the VCE when they satisfy units which meet the program requirements set out in Section 5.

SCHOOL-ASSESSED COURSEWORK - a school-based assessment which is reported as a grade for either a Unit 3 and 4 sequence or Unit 3 and Unit 4 individually. School-assessed Coursework consists of a set of assessment tasks that assess students' achievement of Units 3 and 4 outcomes.

SCHOOL-ASSESSED TASK - a school-based assessment for a Unit 3 and 4 sequence and reported as a grade. A school-assessed Task is set by the VCAA and assessed by teachers in accordance with published criteria. Tasks are subject to review by a panel appointed by the VCAA.

SEMESTER - one half of the academic year. Most units are completed in one semester.

SEQUENCE - units 3 and 4 are designed to be taken as a sequence at Year 12 level.

SPECIAL PROVISION - arrangements that are made to allow students who are experiencing significant hardship the maximum opportunity to demonstrate both what they know and what they can do.

STATEMENT OF MARKS - for each examination including the GAT, students can apply for a statement showing the marks they obtained for each question/criteria and the maximum mark available. A fee is charged for each statement.

STATEMENT OF MARKS – STUDY SCORE - the document(s) issued by the VCAA showing the results a student achieved in the VCE, and whether he/she has graduated. See also *VCE Certificate*.

STATISTICAL MODERATION - the process used to ensure that schools' assessments are comparable throughout the State. It involves adjusting each school's School-assessed Coursework scores for each study to match the level and spread of the external reference scores for the students in that school doing that study.

STUDENT NUMBER - the number assigned to each student enrolled in VCE, VCE VET and VCAL.

STUDIES - the subjects available in the VCE.

STUDY DESIGN - a study design for each VCE study is published by the VCAA. It specifies the content for the study and how students' work is to be assessed. School and other VCE providers must adhere to the study designs.

STUDY SCORE - a score from zero to 50 which shows how a student performed in a study, relative to all other students doing that same study. It is based on the student's results in school assessments and examinations.

UNITS - the components of a study. There are usually four units in a study, numbered 1, 2, 3 and 4.

VICTORIAN ASSESSMENT SOFTWARE SYSTEM (VASS) - the Internet-based system used by schools to enter VCE enrolments and results directly onto the VCAA central database.

VASS ADMINISTRATOR - school-based users of VASS who have system control for their school.

VCE CERTIFICATE - the certificate awarded to students who meet the requirements for graduation of the VCE. See also *Statement of Results*.

VCE PROVIDER - a school or other institution authorized to offer VCE units.

VCE VOCATIONAL EDUCATION AND TRAINING (VCE VET) - nationally recognized vocational certificates integrated within the VCE.

VTAC - Victorian Tertiary Admissions Centre, which acts on behalf of universities, TAFEs and other providers facilitating and coordinating the joint selection system. It calculates and distributes the *Australian Tertiary Admission Rank (ATAR)*.

RECORD OF SUBJECT SELECTION FOR 2021

Name : .....

I will be returning to Murrayville Community College. Definitely / Maybe / No (Circle one)

Career area(s) of interest - fill in at least one.

- 1. ....
2. ....
3. ....

The subjects I have to do in order to access my chosen career pathway are:

.....

The institutes where suitable courses are available are (to be confirmed with Careers Teacher) :

.....

Unit 1 & 2 choices - list in priority order, from 1st to 7th. Remember, you may only be doing 5 units, but name 6. If a Year 11 student in 2020, fill in the units you did / are doing.

Year 11 : Semester 1

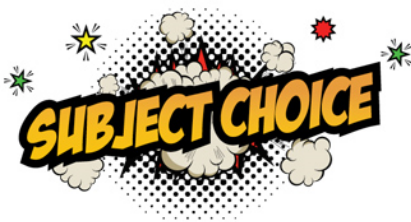
Year 11 : Semester 2

- 1. ENGLISH (or equivalent)
2. ....
3. ....
4. ....
5. ....
6. ....

- 1. ENGLISH (or equivalent)
2. ....
3. ....
4. ....
5. ....
6. ....

Year 12

- 1. ENGLISH (or equivalent)
2. ....
3. ....
4. ....
5. ....





## AGRICULTURAL AND HORTICULTURAL STUDIES

### Unit 1 : Food and Fibre Industries

Students develop their understanding of Australia's agricultural and horticultural industries and research the opportunities and practical realities of working in the sector. 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 seek to understand socio-cultural influences on food and fibre practices, and best practice in agriculture and horticulture in terms of climate zones, soil quality, plant and animal selection, workplace health and safety, and the collection and analysis of quality-assurance data.

### Unit 2: Plant and Animal Production

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. They evaluate the effectiveness and sustainability of agricultural or horticultural practices. 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 within the contexts of food and fibre production. They undertake practical tasks relating to the growth and management of plants and animals.

### Unit 3: Technology, Innovation and Business Design

In this area of study students focus on the dynamic and innovative nature of Australia's food and fibre production industries. They reflect on the rate of change, the rise of new challenges, and the sector's ever-increasing engagement with innovation and technology. Students inquire into the broad role of innovation and technology in food and fibre production, and consider the impacts of new and emerging tools and applications, as well as innovative research projects. Students reflect on past initiatives, contemporary responses to consumer concerns and ways to evaluate the effectiveness of particular innovations in agricultural and horticultural practices.

### Unit 4: Sustainable Food and Fibre Production

In this unit students examine sustainability in terms of land management, as well as its role in food and fibre industries. Sustainability is a holistic concept with environmental, economic and social dimensions. Students research the effects of climate change on food and fibre production through case studies of effective responses to this and other environmental challenges. Students 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. In particular, students consider the constant monitoring of environmental indicators. 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 securing sustainable markets, for adding value to primary produce, and for ensuring and promoting the high quality of Australian-grown products.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); end of year exam.

#### WHY STUDY AGRICULTURAL & HORTICULTURAL STUDIES?

If you have an interest in working in the industry and like being outdoors. VCE Ag/Hort can be completed in conjunction with VET Certificate II in Agriculture.

#### CAREER OPTIONS ARE:

- Farming
- Horticulturist
- Landscaper
- Fisheries Officer
- Environmental Scientist
- Agricultural Scientist
- Botanist

Managing an Ag/Hort business, from a variety of choices including:

- fisheries
- poultry
- sheep
- viticulture
- gardening
- seeding/flower production
- hydroponics
- cropping, etc.



## ART

### Unit 1

This unit focuses on realising ideas through the exploration of techniques, selected art form(s) and/or media. Students are introduced to materials, skills and concepts, both practical and theoretical, through a process of investigation and discussion. It includes exploration, and research leading to visual solutions. The unit also explores the social dimensions of art with reference to the importance of the social functions that art can serve and the ways in which social issues are interpreted in past and present-day art.

**ASSESSMENT TASKS** - a folio of visual solutions to a selection of set tasks; written and oral reports; short-answer responses supported by visual references.

### Unit 2

This unit focuses on the development of art works produced from observational, conceptual and/or imaginative starting points, demonstrating effective working methods and the development of technical skills through the visual exploration of selected art form(s) and/or media. This unit also explores artistic identity with reference to specific artworks including distinctive approaches to creativity and individuality.

**ASSESSMENT TASKS** – a folio of visual solutions in an area of personal interest; written and oral reports; short-answer responses discussing expressions of artistic identity and innovation supported by visual references.

### Unit 3

This unit focuses on making personal art responses through a broad and innovative investigation including exploration and experimentation within selected art form(s) and/or media. Throughout the unit students will develop and refine a sustained body of work. Students are introduced to the frameworks to interpret artworks produced before and since 1970. The frameworks will be used to respond critically to artworks, to interpret their meanings and messages and as a basis of comparisons between them.

### Unit 4

This unit focuses on the preparation of a final presentation, demonstrating imagination and innovation, evolution of ideas and the realisation of appropriate concepts, knowledge and skills. The final presentation may be exploratory in the resolution of visual imagery and/or may include more finished artworks. Thinking and working practices are documented throughout the unit as the visual forms explored in Unit 3 are developed. The unit also explores the meanings and messages of art using the interpretive frameworks explored in Unit 3. It focuses on developing skills in critical analysis of both art works and the arguments and information conveyed in commentaries on art to enable the development of personal points of view about the meaning of art works.

**ASSESSMENT** – Units 3 & 4 - School-assessed coursework; School-assessed task; end of year exam.

#### WHY STUDY ART?

It's a creative form of communication that not only allows you to explore your own ideas and emotions, but also develops your skills. It teaches you different ways of viewing the world and assists your ability to creatively solve problems.

#### CAREER OPTIONS ARE:

- |                        |                          |
|------------------------|--------------------------|
| • Architect            | • Teacher                |
| • Artist               | • Illustrator            |
| • Graphic Artist       | • Industrial Designer    |
| • Interior Designer    | • Occupational Therapist |
| • Photographer         | • Art Historian          |
| • Art Conservation     | • Art Critic             |
| • Museum Curator       | • Animator               |
| • Arts Administrator   | • Archaeologist          |
| • Art Gallery Director | • Fashion Designer       |
| • Advertising          |                          |



## BIOLOGY

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

In this unit students are introduced to some of the challenges to an organism in sustaining life. Students examine the cell as the structural and functional unit of life and the requirements for sustaining cellular processes. Students investigate how a diverse group of organisms form a living interconnected community that is adapted to, and utilises, the resources of its habitat. Students consider how the planet's biodiversity is classified and the factors that affect the growth of a population.

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

In this unit students study cell reproduction and the transmission of biological information from generation to generation. The role of stem cells in the differentiation, growth, repair and replacement of cells in humans is examined, and their potential use in medical therapies is considered. Students use chromosome theory and classical genetics to explain the inheritance of characteristics, analyse patterns of inheritance, interpret pedigree charts and predict outcomes of genetic crosses. They explore the relationship between genes, the environment and the regulation of genes in giving rise to phenotypes.

ASSESSMENT TASKS FOR UNITS 1 and 2 – may include:

a report of a fieldwork activity; annotations of a practical work folio; a bioinformatics exercise; media response; data analysis; problem solving; reflective learning journal/blog; test. A student-directed investigation into, and communication of, an issue related to the Unit is to be undertaken in Area of Study 3 in both Units.

### Unit 3 : How do cells maintain life?

In this unit students investigate the workings of the cell from several perspectives. They explore the differential permeability of the plasma membrane. They consider base-pairing specificity, the binding of enzymes and substrates, the response of receptors to signalling molecules and reactions between antigens and antibodies to highlight the importance of molecular interactions based on the complementary nature of specific molecules. Students study the synthesis, structure and function of nucleic acids and proteins as key molecules in cellular processes.

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

In this unit students consider the continual change and challenges to which life on Earth has been subjected. They investigate the relatedness between species and the impact of various change events on a population's gene pool. Students examine the structural and cognitive trends in the human fossil record and the interrelationships between human biological and cultural evolution. The biological consequences, and social and ethical implications, of manipulating the DNA molecule and applying biotechnologies is explored for both the individual and the species.

A student practical investigation related to cellular processes and/or biological change and continuity over time is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4, and is assessed in Unit 4, Outcome 3.

ASSESSMENT – School-assessed coursework including practical investigation (Units 3 & 4) 40%; end of year exam 60%.

#### WHY STUDY BIOLOGY?

Biology is about what makes living things tick, how they reproduce and the genetic manipulation of living things. If it has a life, you can study it in Biology.

#### CAREER OPTIONS ARE:

- Forensic Scientist
- Environmental Scientist
- Biomedical Scientist
- Biologist
- Geneticist
- Zoologist/Botanist
- Dietician
- Medical Doctor / Physiotherapist



## CHEMISTRY

### Unit 1 : How can the diversity of materials be explained?

In this unit students investigate the chemical properties of a range of materials from metals and salts to polymers and nanomaterials. Using their knowledge of elements and atomic structure students explore and explain the relationships between properties, structure and bonding forces within and between particles that vary in size from the visible, through nanoparticles, to molecules and atoms. Students are introduced to quantitative concepts in chemistry including the mole concept.

### Unit 2 : What makes water such a unique chemical?

In this unit students explore the physical and chemical properties of water, the reactions that occur in water and various methods of water analysis. They relate the properties of water to the water molecule's structure, polarity and bonding. Students focus on the use of analytical techniques, both in the laboratory and in the field, to measure the solubility and concentrations of solutes in water, and to analyse water samples for various solutes including chemical contaminants.

#### ASSESSMENT TASKS FOR UNIT 1 AND UNIT 2 - may include:

a report of a practical activity; annotations of a practical work folio; a modelling activity; media response; data analysis; problem solving; reflective learning journal/blog; test. A research investigation in Unit 1 and practical investigation into an aspect of water quality in Unit 2 is undertaken in Area of Study 3.

### Unit 3 : How can chemical processes be designed to optimise efficiency?

In this unit students explore energy options and the chemical production of materials with reference to efficiencies, renewability and the minimisation of their impact on the environment. Students analyse manufacturing processes with reference to factors that influence their reaction rates and extent. They investigate and apply the equilibrium law and Le Chatelier's principle to different reaction systems, to predict and explain the conditions that will improve the efficiency and percentage yield of chemical processes.

### Unit 4 : How are organic compounds categorised, analysed and used?

In this unit students investigate the structural features, bonding, typical reactions and uses of the major families of organic compounds including those found in food. They consider the nature of the reactions involved to predict the products of reaction pathways and to design pathways to produce particular compounds from given starting materials.

A student practical investigation related to energy and/or food is undertaken either in Unit 3 or Unit 4, or across both Units 3 and 4, and is assessed in Unit 4, Outcome 3.

ASSESSMENT – School-assessed coursework including practical investigation (Units 3 & 4) 40%; end of year exam 60%.

#### WHY STUDY CHEMISTRY?

Great experiments.  
Interesting.  
Relates to real life situations.  
Use technology.  
Building blocks of why reactions and everything occurs around us.  
Create ..... !!

#### CAREER OPTIONS ARE:

- Pharmacy
- Engineering
- Teaching
- Veterinary Nurse
- Forensic Science
- Analytical Chemist
- Winemaker
- Nanotechnologist



## COMPUTING

VCE Applied Computing focuses on the strategies and techniques for creating digital solutions to meet specific needs and to manage the threats to data, information and software security. The study examines the attributes of each component of an information system including people, processes, data and digital systems (hardware, software, networks), and how their interrelationships affect the types and quality of digital solutions.

VCE Applied Computing is underpinned by four key concepts: digital systems, data and information, approaches to problem solving, and interactions and impact.

### Unit 1: Applied Computing

In this unit students are introduced to the stages of the problem-solving methodology. Students focus on how data can be used within software tools such as databases and spreadsheets to create data visualisations, and the use of programming languages to develop working software solutions.

**ASSESSMENT TASKS** - Assignments involving the use of digital solutions.

### Unit 2: Applied Computing

In this unit students focus on developing innovative solutions to needs or opportunities that they have identified, and propose strategies for reducing security risks to data and information in a networked environment.

**ASSESSMENT TASKS** - Group assignment, as well as individual assignments including a case study

*An assignment for both Units 1 & 2 will be to design a large scale project tailored around a student's interest. This will be an area where the student can practise and develop their skills, and centres around any digital solution they find interesting and further develop relevant skills.*

*For Units 3 & 4, there are two options that students can select between:*

*Students may elect to undertake one or both of these Units 3 and 4 sequences.*

*Each unit deals with specific content contained in areas of study and is designed to enable students to achieve a set of outcomes for that unit. Each outcome is described in terms of key knowledge and key skills.*

### Unit 3: Data Analytics

In this unit students apply the problem-solving methodology to identify and extract data through the use of software tools such as database, spreadsheet and data visualisation software to create data visualisations or infographics. Students develop an understanding of the analysis, design and development stages of the problem-solving methodology.

### Unit 4: Data Analytics

In this unit students focus on determining the findings of a research question by developing infographics or dynamic data visualisations based on large complex data sets and on the security strategies used by an organisation to protect data and information from threats.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); end of year exam.

### Unit 3: Software Development

In this unit students apply the problem-solving methodology to develop working software modules using a programming language. Students develop an understanding of the analysis, design and development stages of the problem-solving methodology.

### Unit 4: Data Analytics

In this unit students focus on how the information needs of individuals and organisations are met through the creation of software solutions. They consider the risks to software and data during the software development process, as well as throughout the use of the software solution by an organisation.

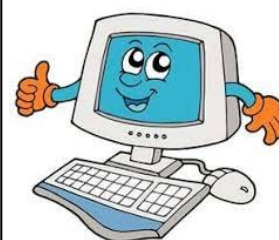
**ASSESSMENT** - school-assessed coursework (Units 3 & 4); end of year exam.

#### WHY STUDY COMPUTING?

In our world where technology is constantly advancing, there is a greater need for an understanding of how this technology operates than ever before. A study of Computing will equip students with a strong foundation in how computers communicate, as well as how to solve problems using a digital solution.

#### CAREER OPTIONS INCLUDE:

- Software development
- Database administration
- Computer Hardware Engineering
- Computer Systems Analysis,
- Computer Network Architecture
- Web Development
- Cyber Security, etc





## ENGLISH

The study of English helps students develop skills that are required in all professional fields of work, including: Engineering, ICT, Management, Finance, Teaching and Law. As a result, the study of English, or an equivalent, is a compulsory component of your VCE certificate. There are two main Areas of Study in Units 1-4 English. Below are the suggested course outlines for Units 1-4.

| Area of Study                                                                                                                   | 1: Reading & Creating Texts                                                                                                                                                                                                                            | 2: Analysing & Presenting Arguments                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UNIT 1</b>                                                                                                                   | Students read and respond to two texts analytically and creatively.<br>Students develop their skills in creating written, spoken and multimodal texts.<br>*Text selection to be confirmed in Term 4 - limit of one multimodal; one must be Australian. | Students analyse arguments and the use of persuasive language in texts. They create their own texts intended to position audiences. Students develop their skills in creating written, spoken and multimodal texts. |
| ASSESSMENT<br>Total of 100 marks for Unit 1                                                                                     | <b>2 assessment tasks, totalling 50 marks</b><br>1 x text response (800 words)<br>1 x creative response and written explanation (800 words)                                                                                                            | <b>2 assessment tasks, totalling 50 marks</b><br>1 x language analysis<br>1 x point of view piece<br>*one assessment task in Unit 1 must be oral                                                                    |
| <b>UNIT 2</b>                                                                                                                   | Students compare the presentation of ideas, issues and themes in two texts.<br>Students develop their skills in creating written, spoken and multimodal texts.                                                                                         | Students analyse arguments and the use of persuasive language in texts. They create their own texts intended to position audiences. Students develop their skills in creating written, spoken and multimodal texts. |
| ASSESSMENT<br>Total of 100 marks for Unit 2                                                                                     | <b>1 assessment task, totalling 50 marks</b><br>1 x comparative response to two texts (900 – 1200 words)                                                                                                                                               | <b>2 assessment tasks, totalling 50 marks</b><br>1 x language analysis<br>1 x point of view piece                                                                                                                   |
| <b>In addition to the above tasks, both areas of study to be assessed in a mid-year (2 hour) and end-of-year (3 hour) exam.</b> |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                     |

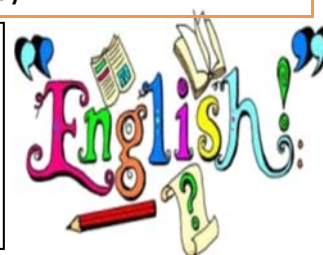
| Area of Study                                                                             | 1: Reading & Creating Texts                                                                                                                                                                                                                                      | 2: Analysing & Presenting Arguments                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UNIT 3</b>                                                                             | Students read and respond to two texts analytically and creatively. They justify their authorial decisions in a written explanation for the creative response.<br>*Text selection to be confirmed in Term 4 - must be selected from the VCAA approved text list. | Students compare arguments and analyse the use of persuasive language in two or three current media texts, published since 1st September of the previous year.                                                      |
| ASSESSMENT<br>(SACs)<br>Total of 100 marks for Unit 3                                     | <b>2 SACs, totalling 60 marks</b><br>1 x text response 30 marks<br>1 x creative response with explanation 30 marks<br>The suggested word length is 800-1000 words for each task.                                                                                 | <b>1 SAC, totalling 40 marks.</b><br>Written analysis of argument and persuasive language used in media texts on a current issue.<br>The suggested word length is 800-1000 words for this task.                     |
| <b>UNIT 4</b>                                                                             | Students compare the presentation of ideas, issues and themes in two texts.<br>Students develop their skills in creating written, spoken and multimodal texts.                                                                                                   | Students present a point of view in oral form, based on a current issue within the media. They produce a written statement of intention on how they used arguments and persuasive language to position an audience. |
| ASSESSMENT<br>SACs<br>Total of 100 marks for Unit 4                                       | <b>1 SAC, totalling 60 marks</b><br>1 x comparative response<br>The suggested word length is 1000-1200 words for this task.                                                                                                                                      | <b>1 SAC, totalling 40 marks</b><br>Statement of Intention 10 marks<br>Point of view oral 30 marks<br>The suggested word length is 1000-1200 words for this task.                                                   |
| <b>The above SACs make up 50% of your overall mark for the year, (25% each semester).</b> |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                     |
| <b>The end-of-year exam makes up the other 50%.</b>                                       |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                     |
| <b>The three hour exam contains a task based on each of the areas of study.</b>           |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                     |

## ALL STUDENTS OF UNITS 1-4 ENGLISH

There is an expectation that students will read their set texts and complete an array of writing tasks during the Christmas holiday period before commencing the school year. Unit 3 and 4 texts will need to be ordered and paid for in November of the previous year. Unit 1 and 2 texts are generally supplied by the school.

## CAREER OPTIONS ARE:

The study of English can lead to jobs in journalism, publishing, media, acting, teaching, marketing, and is a component of all professional degrees.



## GEOGRAPHY

### Unit 1 : Hazards and Disasters

Hazards represent the potential to cause harm to people and or the environment whereas disasters are judgments about the impacts of hazard events. Hazards include a wide range of situations including those within local areas, such as fast moving traffic or the likelihood of coastal erosion, to regional and global hazards such as drought and infectious disease. Students examine the processes involved with hazards and hazard events, including their causes and impacts, human responses to hazard events and interconnections between human activities and natural phenomena. This unit investigates how people have responded to specific types of hazards, including attempts to reduce vulnerability to, and the impact of, hazard events.

### Unit 2 : Tourism

In this unit students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed and continues to change and its impacts on people, places and environments. They select contrasting examples of tourism from within Australia and elsewhere in the world to support their investigations.

**ASSESSMENT TASKS** – 2 Fieldwork Reports (1500-2000 words) - one for each unit, + one other assessment type per unit (either a test, case study, report or folio of exercises).

### Unit 3 : Changing the Land

Students investigate three major processes that are changing land cover in many regions of the world:

- deforestation
- desertification, and
- melting glaciers and ice sheets.

Students investigate the distribution and causes of these three processes. They select one location for each of the three processes to develop a greater understanding of the changes to land cover produced by these processes, the impacts of these changes and responses to these changes at different scales. At a local scale students investigate land use change using appropriate fieldwork techniques and secondary sources. They investigate the scale of change, the reasons for change and the impacts of change. Students undertake fieldwork and produce a fieldwork report.

### Unit 4 : Human Population - trends and issues

In this unit students investigate the geography of human populations. They explore the patterns of population change, movement and distribution, and how governments, organisations and individuals have responded to those changes in different parts of the world. In this unit, students study population dynamics before undertaking an investigation into two significant population trends arising in different parts of the world. They examine the dynamics of populations and their economic, social, political and environmental impacts on people and places.

**ASSESSMENT** - Fieldwork Report (1500-2000 words), Analysis of Geographic Data, Test, End of Year Exam.

To satisfy learning outcomes for Units 1, 2 & 3 some fieldwork is necessary. This may mean students are required to go on a camp which will require additional payment.

#### WHY STUDY GEOGRAPHY?

As the world is becoming smaller due to globalisation, Geography is an essential tool for giving students an understanding of their place in the world. They gain an understanding of how decisions they make impact on other people and the environment, not only in their local region, but globally as well.



#### CAREER OPTIONS ARE:

- |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Land and Resource Managers</li> <li>• Parks Rangers / Landcare Officers</li> <li>• Town/Urban Planning</li> <li>• Analytical and Advisory for Councils' Property Development</li> <li>• Transportation/Logistics Management</li> </ul> | <ul style="list-style-type: none"> <li>• Marketing</li> <li>• Real Estate</li> <li>• Emergency Management</li> <li>• GIS Specialist</li> <li>• Teaching</li> <li>• Climatologist</li> <li>• Demographer</li> </ul> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## HEALTH & HUMAN DEVELOPMENT

### Unit 1 - Understanding health & wellbeing

In this unit students identify personal perspectives and priorities relating to health and wellbeing, and enquire into factors that influence health attitudes, beliefs and practices, including among Aboriginal and Torres Strait Islanders. Students look at multiple dimensions of health and wellbeing, the complex interplay of influences on health and wellbeing and the indicators used to measure and evaluate health status. With a focus on youth, students consider their own health as individuals and as a cohort. They build health literacy through interpreting and using data, through investigating the role of food, and through extended inquiry into one youth health focus area.

### Unit 2 - Managing health & development

Students enquire into the Australian healthcare system and extend their capacity to access and analyse health information. They investigate the challenges and opportunities presented by digital media and health technologies, and consider issues surrounding the use of health data and access to quality health care.

**ASSESSMENT TASKS - Units 1 & 2** - Tasks for assessment may include: short written report, eg: media analysis, research inquiry, blog or case study analysis; oral presentation, eg: debate or podcast; visual presentation, eg: graphic organiser, concept/mind map, annotated poster, digital presentation; structured questions, including data analysis.

### Unit 3 - Australia's health in a globalised world

This unit looks at health, wellbeing and illness as multidimensional, dynamic and subject to different interpretations and contexts. Students begin to explore health and wellbeing as a global concept and to take a broader approach to inquiry. As they consider the benefits of optimal health and wellbeing and its importance as an individual and a collective resource, their thinking extends to health as a universal right. Students look at the fundamental conditions required for health improvement, as stated by the World Health Organization (WHO).

### Unit 4 - Health and human development in a global context

In this unit students explore global health, human development and sustainability and their interdependencies. They identify and analyse similarities and differences in health status between people in developing countries and Australia. Students will investigate the role of the United Nations Millennium Development Goals. They will explore the role of international organisations including UN and WHO in achieving sustainable improvements in health and human development as well as Australia's contribution through AusAid and contributions to non-government organisations.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); plus end of year exam worth 50%.

#### WHY STUDY HEALTH & HUMAN DEVELOPMENT?

It is a fascinating study of our health and development across the lifespan, and is very interesting because it is all about us and the people around us, from our close family through to our very poor neighbours in developing countries.

#### CAREER OPTIONS ARE:

- Dietitian/Nutritionist
- Naturopath
- Welfare/Youth/Social Worker
- Health Promotions Officer
- Teacher
- Nurse
- Consumer Advisor
- Nanny
- Child Care Worker
- Speech Therapist





## HISTORY

The study of VCE History assists students to understand themselves, others and their world, and broadens their perspective by examining people, groups, events, ideas and movements. Through studying VCE History, students develop social, political, economic and cultural understanding. They also explore continuity and change: the world is not as it has always been, and it will be subject to change in the future. In this sense, history is relevant to contemporary issues. It fosters an understanding of human agency and informs decision making in the present.

### Units 1 and 2: Twentieth century History 1918 –1939

Unit 1: Students examine consequences of the peace treaties which ended World War One, and the impact of ideologies on nations and the events that led to World War Two. Students focus on the social life and cultural expression in the 1920s and 1930s and their relation to the technological, political and economic changes of the period.

Unit Two: Students explore the nature and impact of the Cold War and challenges and changes to existing political, economic and social arrangements in the second half of the twentieth century.

ASSESSMENT TASKS - over Units 1 and 2 include a historical inquiry, an analysis of primary sources, an analysis of historical interpretations and an essay.

### Units 3 & 4 : Australian History

In VCE Australian History students explore four periods of time which span some of the transformative events and processes that developed and changed the nature of Australian society and created modern Australia. Study begins in the 1830s with the expansion of European control over much of southern Australia as squatters appropriated country inhabited by Aboriginal peoples. The remaining three time periods consider transformations undergone by the new Australian nation in the twentieth century.

#### Areas of Study:

Unit 3: Transformations: Colonial society to nation

The reshaping of Port Phillip District/Victoria, 1834 –1860

Making a people and a nation 1890 –1920

Unit 4: Transformations: Old certainties and new visions

Crises that tested the nation 1929 –1945

Voices for change 1965 –2000

### Units 3 & 4 : Revolutions

Students investigate the significant historical causes and consequences of political revolution. Revolutions represent great ruptures in time and are a major turning point which brings about the collapse and destruction of an existing political order resulting in a pervasive change to society. Revolutions are caused by the interplay of ideas, events, individuals and popular movements. Their consequences have a profound effect on the political and social structures of the post-revolutionary society.

ASSESSMENT TASKS – over Units 3 and 4 include a historical inquiry, an analysis of primary sources, an analysis of historical interpretations and an essay.

#### WHY STUDY HISTORY?

History emphasizes the uniqueness of human experience, both individual and collective.

This develops critical thinking and analysis of our place in the world.

#### CAREER OPTIONS ARE:

- |                                |                             |
|--------------------------------|-----------------------------|
| • Tourism                      | • Administration            |
| • Writer                       | • Photographer              |
| • Library or Museum Technician | • Journalist                |
| • Researcher                   | • Teaching                  |
| • Political Scientist          | • Barrister                 |
| • Solicitor                    | • Criminologist             |
| • Diplomat                     | • Film / Stage / Television |
| • Foreign Affairs Officer      | • Philosophy                |





## MATHEMATICS - FOUNDATION MATHS

### Units 1 & 2

Foundation Mathematics provides for the continuing mathematical development of students entering VCE, who need mathematical skills to support their other VCE subjects, including VET studies, and who do not intend to undertake Unit 3 and 4 studies in VCE Mathematics in the following year.

In Foundation Mathematics there is a strong emphasis on using mathematics in practical contexts relating to everyday life, recreation, work and study. These units will be especially useful for students undertaking VET studies.

The areas of study for Units 1 and 2 of Foundation Mathematics are 'Space, shape and design', 'Patterns and number', 'Handling data' and 'Measurement'.

At the end of Unit 1, students will be expected to have covered material equivalent to two areas of study. All areas of study will be completed over the two units. Unit 2 can be used to complement Unit 1 in development of the course material.

Depending on students' chosen course, Unit 1 may be done over one year and Unit 2 over a second year. Alternatively, both units may be completed in one year.

### ASSESSMENT TASKS -

Assignments

Project work

Pre-apprenticeship booklets

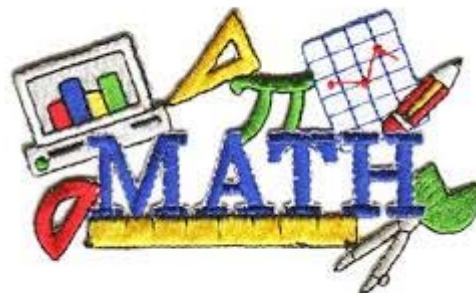
### WHY STUDY FOUNDATION MATHEMATICS?

Foundation Maths will provide students with a solid foundation for the maths they are likely to meet in everyday life.

The course provides students with skills in report writing, mathematical analysis of statistical data and confidence with standard calculations and interpretation methods.

### CAREER OPTIONS ARE:

- Trade occupations



## MATHEMATICS - GENERAL

### Units 1 & 2

General Mathematics provides a course of study for diverse groups of students. Topics could include:

- linear relations and equations
- computation and practical arithmetic
- financial arithmetic
- matrices
- graphs and networks
- number patterns and recursion
- shape and measurement
- applications of trigonometry
- linear graphs and models
- inequalities and linear programming
- variation
- investigating and comparing data distributions
- investigating relationships between two numerical variables.

Tasks associated with these topics, are often related to everyday situations. This encourages students to apply their mathematics to situations familiar to them. Students will be encouraged to investigate large amounts of data and use more difficult or complex calculations with the aide of graphics calculators and computer spreadsheets, graphing packages, dynamic geometry systems and computer algebra systems in a variety of contexts. General Mathematics is an important choice for students who are required to have VCE Mathematics and will be going on to study Further Mathematics. A sequence of General Mathematics and Further Mathematics is adequate for most university and TAFE courses. Students intending to study science courses at tertiary level should, however, study Mathematics Methods.

### ASSESSMENT TASKS -

Unit 1 : assignments; tests; summary and review notes.

Unit 2 : short written responses; problem solving tasks and/or modelling tasks; tests; summary and review notes.

## MATHEMATICS - FURTHER

### Units 3 & 4

In Further Mathematics the students will undertake two modules in addition to the core of Data analysis and financial modelling. These modules are: matrices, networks and decision mathematics, geometry and measurement, graphs and relations.

The appropriate use of technology to support and develop the teaching and learning of mathematics is to be incorporated throughout the course. In particular, students are encouraged to use graphics calculators, spreadsheets or statistical software in 'Data analysis', dynamic geometry systems in 'Geometry and trigonometry' and graphics calculators, graphing packages or computer algebra systems in the remaining areas of study both in the learning of new material and the application of this material in a variety of different contexts.

ASSESSMENT - school-assessed coursework (Units 3 & 4); 2 end of year exams.

#### **WHY STUDY GENERAL & FURTHER MATHEMATICS?**

General Maths followed by Further Maths provides basic maths skills required or desired by many tertiary courses, including TAFE.

The course provides students with skills in report writing, mathematical analysis of statistical data and confidence with standard calculations and interpretation methods.

#### **CAREER OPTIONS ARE:**

- Most diploma TAFE courses
- University Arts courses
- Social Science courses
- Specialised courses such as Nursing



## MATHEMATICS - METHODS (CAS)

### Units 1 & 2

The areas of study for this unit are: functions and graphs; algebra; calculus; probability.  
The appropriate use of computer algebra system (CAS) technology supports the curriculum.

ASSESSMENT TASKS - assignments; tests; summary or review notes; short written responses; problem-solving tasks; modelling tasks; mathematical investigations.

Semester 1 & 2 exams.

### Units 3 & 4

In this unit, students study 'Calculus', including differentiation and anti-differentiation, 'Probability and Statistics', 'Functions and Graphs', and 'Algebra', including Exponential and Trigonometric functions.

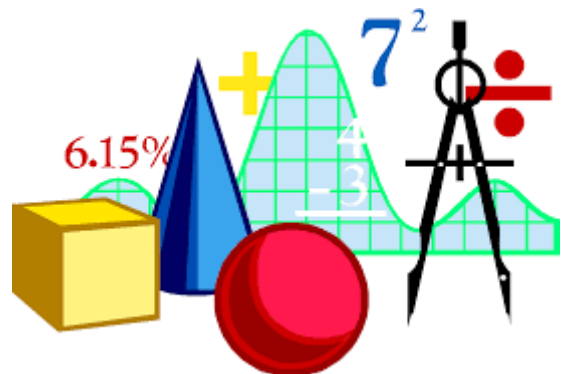
ASSESSMENT - school-assessed coursework (Units 3 & 4); 2 end of year exams (one exam is calculator free); 1 application task; 2 tests; 2 analysis tasks.

#### WHY STUDY MATHEMATICS METHODS?

Leads to greater career opportunities.  
Pre-requisite for many of the leading occupations.  
Develops problem-solving skills.

#### CAREER OPTIONS ARE:

- Engineer
- Architect
- Geophysicist
- Teacher
- Robotics
- Lawyer
- Doctor
- Pilot
- Town Planner
- Croupier
- Survey Assistant
- Bank Officer
- Accountant
- Most Science related courses



## MATHEMATICS - SPECIALIST MATHEMATICS

### Units 1 & 2

This unit involves extending and developing students' previous studies in number systems; coordinate geometry; trigonometric functions; algebra and arithmetic. Studies include – vectors, complex numbers, kinematics, trigonometric identities, statics, mechanics, and probability and statistics.

Students are required to apply mathematical knowledge and skills creatively to solve problems in unfamiliar situations, including real-life situations; learn and practise mathematical algorithms, routine and techniques, and use them to find solutions to standard problems; complete independent analysis tasks involving the use of mathematics. Students will use calculators and computer spread sheets, graphing packages, dynamic geometry systems and computer algebra systems.

This study is important for students wanting to study Specialist Mathematics 3 & 4. Specialist Mathematics is a suggested study for students wanting to proceed to university studies in engineering, computing or mathematics.

### ASSESSMENT TASKS -

Unit 1 - assignments; tests; summary and review notes.

Unit 2 - projects; short written responses; problem solving tasks and/or modelling tasks.

### Unit 3

This unit involves extending and developing the material from Mathematical Methods Units 3 & 4 in number systems, coordinate geometry; trigonometric functions; calculus; algebra; study of vectors in two and three dimensions; mechanics, probability and statistics. Students are required to apply mathematical knowledge and skills creatively to solve problems in unfamiliar situations, including real-life situations; learn and practise mathematical algorithms, routine and techniques, and use them to find solutions to standard problems; complete independent analysis tasks involving the use of mathematics. Students will use calculators and computer spread sheets, graphing packages, dynamic geometry systems and computer algebra systems.

### Unit 4

This unit involves extending and developing the material in coordinate geometry; trigonometric functions; calculus; algebra; study of vectors in two and three dimensions to include studies of mechanical systems. Students are required to undertake a problem-solving task; learn and practise mathematical algorithms, routines and techniques, and use them to find solutions to standard problems; undertake extended independent application investigations involving the use of mathematics. Students will use calculators and computer spread sheets, graphing packages, dynamic geometry systems and computer algebra systems. Specialist Mathematics is a suggested study for those wanting to study a maximum amount of mathematic and/or those students wanting to study engineering, physical sciences or mathematics at tertiary level.

ASSESSMENT - School-assessed coursework (Units 3 & 4); two end of year exams.

### WHY STUDY SPECIALIST MATHS?

A study of Specialist Mathematics provides students with suitable background knowledge to understand and analyse mathematical ideas and techniques, and to solve problems confidently and eloquently. Students will have confidence and skills to tackle all maths courses at tertiary level.

### CAREER OPTIONS ARE:

Skills acquired from a study of Specialist Maths are desirable for tertiary studies in:

- Maths
- Engineering
- Science
- Social Sciences



## OUTDOOR & ENVIRONMENTAL STUDIES

### Unit 1 : Exploring outdoor experiences

This unit examines some of the ways in which humans understand and relate to nature through experiences of outdoor environments. The focus is on individuals and their personal responses to and experiences of outdoor environments.

Students are provided with the opportunity to explore the many ways in which nature is understood and perceived. Students develop a clear understanding of the range of motivations for interacting with outdoor environments and the factors that affect an individual's access to outdoor experiences and relationships with outdoor environments.

**ASSESSMENT TASKS** - demonstration of achievement is based on the student's performance on a selection of assessment tasks: oral presentations; practical reports in non-text format such as multimedia, annotated visual display; short reports of outdoor experiences; tests; written responses.

### Unit 2 : Discovering outdoor environments

This unit focuses on the characteristics of outdoor environments and different ways of understanding them, as well as the human impacts on outdoor environments.

In this unit students study nature's impact on humans, as well as the ecological, social and economic implications of human impact on outdoor environments. Students develop a clear understanding of the impact of technologies and changing human lifestyles on outdoor environments.

**ASSESSMENT TASKS** - demonstration of achievement is based on the student's performance on a selection of assessment tasks: oral presentations; practical reports in non-text format such as multimedia, annotated visual display; short reports of outdoor experiences; tests; written responses.

### Unit 3 : Relationships with outdoor environments

The focus of this unit is the ecological, historical and social contexts of relationships between humans and outdoor environments in Australia. Case studies of impacts on outdoor environments are examined in the context of the changing nature of human relationships with outdoor environments in Australia.

Students consider a number of factors that influence contemporary relationships with outdoor environments. They also examine the dynamic nature of relationships between humans and their environment.

### Unit 4 : Sustainable outdoor relationships

This unit focuses on the conservation and use of the natural environment. The maintenance of natural In this unit students explore the sustainable use and management of outdoor environments. They examine the contemporary state of environments in Australia, consider the importance of healthy outdoor environments, and examine the issues in relation to the capacity of outdoor environments to support the future needs of the Australian population.

Students examine the importance of developing a balance between human needs and the conservation of outdoor environments and consider the skills needed to be environmentally responsible citizens. They investigate current agreements and environmental legislation, as well as management strategies and policies for achieving and maintaining healthy and sustainable environments in contemporary Australian society.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); end of year exam.

Through outdoor experiences, students develop practical skills and knowledge to help them live sustainably in outdoor environments. Students understand the links between practical experiences and theoretical investigations, gaining insight into a variety of responses to, and relationships with, nature.

#### WHY STUDY OUTDOOR & ENVIRONMENTAL STUDIES?

This subject will be of interest if you enjoy participating in activities in the outdoor environment and have an interest in the environment.

#### CAREER OPTIONS ARE:

- |                         |                      |
|-------------------------|----------------------|
| • Tourism Industry      | • Recreation Officer |
| • Outdoor Education     | • Instructor         |
| • Environmental Science | • Fisheries Officer  |
| • Park Ranger           |                      |

*Note: Please consider that there are 2 compulsory outdoor camps which form the basis of study for Units 3 & 4. Approximate cost \$300.*





## PHYSICAL EDUCATION

### Unit 1 : The human body in motion

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. Using a contemporary approach, students evaluate the social, cultural and environmental influences on movement. They consider the implications of the use of legal and illegal practices to improve the performance of the musculoskeletal and cardiorespiratory systems, evaluating perceived benefits and describing potential harms. They also recommend and implement strategies to minimise the risk of illness or injury to each system.

### Unit 2 : Physical activity, sport and society

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 health and wellbeing as well as in other people's lives in different population groups. 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. They explore a range of factors that influence and facilitate participation in regular physical activity. They collect data to determine perceived enablers of and barriers to physical activity and the ways in which opportunities for participation in physical activity can be extended in various communities, social, cultural and environmental contexts. Students investigate individual and population-based consequences of physical inactivity and sedentary behaviour. They then create and participate in an activity plan that meets the physical activity and sedentary behaviour guidelines relevant to the particular population group being studied. Students apply various methods to assess physical activity and sedentary behaviour levels at the individual and population level, and analyse the data in relation to physical activity and sedentary behaviour guidelines. Students study and apply the social-ecological model and/or the Youth Physical Activity Promotion Model to critique a range of individual- and settings-based strategies that are effective in promoting participation in some form of regular physical activity.

**ASSESSMENT** - The main assessment for unit 1 & 2 is a reflective folio and written report, along with tests, case studies, data analysis, oral presentations, multimedia presentations and practical laboratory reports.

### Unit 3 : Physical activity participation and physiological performance

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

### Unit 4 : Enhancing performance

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

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); end of year exam.

#### WHY STUDY PHYSICAL EDUCATION?

If you want to know how the body works and have an interest in physical activity, you will enjoy this subject. A great subject to study with Biology, Psychology or Health and Human Development.



#### CAREER OPTIONS ARE:

- Fitness Leadership
- Human Movement
- Sports Administrator
- Nurse - Registered
- Health Promotion
- Physiotherapist
- Ambulance Officer
- Physical Education Teacher
- Massage Therapist



## PHYSICS

### Unit 1 : What ideas explain the physical world?

In this unit students explore some of the fundamental ideas and models used by physicists in an attempt to understand and explain the world. They consider thermal concepts by investigating heat and assessing the impact of human use of energy on the environment. Students evaluate common analogies used to explain electricity and investigate how electricity can be manipulated and utilised. They examine current scientifically accepted theories that explain how matter and energy have changed since the origins of the Universe.

### Unit 2 : What do experiments reveal about the physical world?

In this unit students explore the power of experiments in developing models and theories. They make direct observations of physics phenomena and examine the ways in which phenomena can be explored including through indirect observations. Students investigate the ways in which forces are involved both in moving objects and in keeping objects stationary. They choose one of twelve options related to astrophysics, astrophysics, bioelectricity, biomechanics, electronics, flight, medical physics, nuclear energy, nuclear physics, optics, sound and sports science.

Students design and undertake investigations involving at least one independent, continuous variable.

A student-designed practical investigation related to content drawn from Area of Study 1 and/or Area of Study 2 is undertaken in Area of Study 3.

**ASSESSMENT TASKS** -(Units 1 & 2) - folios; data analysis; multimedia presentations; responses to a media article; practical reports; written reports; tests.

### Unit 3 : How do fields explain motion and electricity?

In this unit, students explore the importance of energy in explaining the physical world. They examine the production of electricity and its delivery to homes. They explore the interactions, effects and applications of gravitational, electric and magnetic fields including the design and operation of particle accelerators. Students use Newton's laws and Einstein's theories to investigate and describe motion.

Students design and undertake investigations involving at least two independent variables, with at least one of these being continuous.

### Unit 4 : How can two contradictory models explain both light and matter?

Students explore the use of wave and particle theories to model the properties of light and matter. They examine how the concept of the wave is used to explain the nature of light and analyse its limitations in describing light behaviour. Students further investigate light by using a particle model to explain its behaviour.

Students design and undertake investigations involving at least two continuous independent variables.

A student -designed practical investigation related to waves, fields or motion is undertaken either in Unit 3 or Unit 4, or across both Unit 3 and Unit 4. The findings of the investigation are presented in a scientific poster format.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4) 40%; end of year exam 60%.

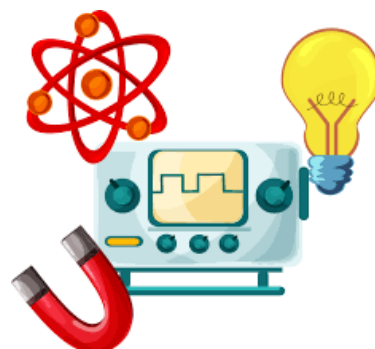
#### WHY STUDY PHYSICS?

Physics will be of value if you enjoy finding out how things work. Physics is often the key to the basis of many other science disciplines; understanding physics puts you in a very advantageous position.

#### CAREER OPTIONS ARE:

Study of Physics leads to careers in:

- |                             |                       |
|-----------------------------|-----------------------|
| • Electronics               | • Engineering         |
| • Engineering               | • Mining industry     |
| • Physiotherapy             | • Digital electronics |
| • Nuclear/ Particle physics | • Science             |



## PRODUCT, DESIGN & TECHNOLOGY

### (Students can work with wood, metal, plastics or fabric)

**Rationale :** Designers play an important part in our daily lives. They determine the form and function of the products we use and wear. They transform ideas into drawings and plans for the creation and manufacture of useful products that fulfil human needs and wants. In recent history the use of resources to create an ever increasing array of products has given designers an increased responsibility to think sustainably. Students develop an understanding of the consequences of product design choices. They develop the necessary skills to critically analyse existing products and to develop their own creative solutions.

#### Unit 1 : Sustainable product redevelopment

This unit focuses on the analysis, modification and redesign of a product design to improve its social, economic and/or environmental sustainability. Students consider the sustainability of an existing product, such as the impact of sourcing materials, manufacture, distribution, use and likely disposal. They consider how a redeveloped product should attempt to solve a problem related to the original product. Students will create a design brief design brief and folio to produce a solution to a problem. This will include a focus on the tools, processes, techniques, knowledge and skills a designer uses to develop a solution to a problem.

#### Unit 2 : Collaborative design

In this unit each student works as a member of a team to design and develop a product range or contribute to the design and production of a group product. This mirrors professional design practice where designers often work within a multidisciplinary team to develop solutions to design problems. The student works both individually and as a member of a small design team to address a problem, need or opportunity that requires a product within a product range or based on a theme, or component of a product. This provides the student with the opportunity to work with others while taking responsibility for particular aspects of the design and production processes.

ASSESSMENT TASKS (Units 1 & 2) – design folio and completed product; may also include written reports, oral presentations and/or case studies.

#### Unit 3 : Applying the product design process

Students are engaged in the design and development of a product that meets the needs and expectations of end-users which is influenced by a range of complex factors. These include client or community requirements, innovation, social and economic trends, availability of resources and technological developments in industry. In this unit, students investigate a client or end user's needs, prepare a design brief, devise evaluation criteria, carry out research and propose a series of design options. They justify the choice of a preferred design option and develop a work plan, and commence production of the product, which is completed and evaluated in Unit 4.

#### Unit 4 : Product development and evaluation

Students continue with the production of their designed solution, with consultation with the end user. Students record their progress in the production of their product. After completing their project, students evaluate their design in collaboration with the end user. They also make comparisons between similar products to evaluate their success in relation to product design factors. There is an increased focus on environmental, economical and social viability which impact on products throughout their life cycle.

ASSESSMENT- school-assessed coursework (Units 3 & 4); School-assessed task – Units 3 & 4; end of year exam.

#### WHY STUDY DESIGN TECHNOLOGY?

To further develop students' understanding of the design process on industrial setting, and develop project management and problem-solving skills.

#### CAREER OPTIONS ARE:

Advancement into manufacturing trades and entry into manufacturing courses in both TAFE and university, including engineering and design orientated subjects.

*Note: School Assessed Task – Units 3 & 4.*

*Students need to supply their own materials to design and make a product according to set criteria. Costs can range from \$50-500 (for materials), depending on the style of the product. Students also need to present a folio for the written component of the School Assessed Task.*



## PSYCHOLOGY

### Unit 1 - How are behaviour and mental processes shaped?

In this unit students investigate the structure and functioning of the human brain and the role it plays in the overall functioning of the human nervous system. Students explore brain plasticity and the influence that brain damage may have on a person's psychological functioning. They consider the complex nature of psychological development, including situations where psychological development may not occur as expected. Students examine the contribution that classical and contemporary studies have made to an understanding of the human brain and its functions, and to the development of different psychological models and theories used to predict and explain the development of thoughts, feelings and behaviours.

### Unit 2 - How do external factors influence behaviour and mental processes?

In this unit students investigate how perception of stimuli enables a person to interact with the world around them and how their perception of stimuli can be distorted. They evaluate the role social cognition plays in a person's attitudes, perception of themselves and relationships with others. Students explore a variety of factors and contexts that can influence the behaviour of an individual and groups. They examine the contribution that classical and contemporary research has made to the understanding of human perception and why individuals and groups behave in specific ways.

#### ASSESSMENT TASKS (selected from the following):

a report, a research investigation, a brain structure modelling activity, a logbook of practical activities, analysis of data/results, media analysis/response, problem solving, test, reflective learning journal/blog.

### Unit 3 - How does experience affect behaviour and mental processes?

In this unit students examine both macro-level and micro-level functioning of the nervous system to explain how the human nervous system enables a person to interact with the world around them. They explore how stress may affect a person's psychological functioning and consider the causes and management of stress. Students investigate how mechanisms of memory and learning lead to the acquisition of knowledge, the development of new capacities and changed behaviours. They consider the limitations and fallibility of memory and how memory can be improved. Students examine the contribution that classical and contemporary research has made to the understanding of the structure and function of the nervous system, and to the understanding of biological, psychological and social factors that influence learning and memory.

### Unit 4 - How is wellbeing developed and maintained?

In this unit students examine the nature of consciousness and how changes in levels of consciousness can affect mental processes and behaviour. They consider the role of sleep and the impact that sleep disturbances may have on a person's functioning. Students explore the concept of a mental health continuum and apply a biopsychosocial approach, as a scientific model, to analyse mental health and disorder. They use specific phobia to illustrate how the development and management of a mental disorder can be considered as an interaction between biological, psychological and social factors. Students examine the contribution that classical and contemporary research has made to the understanding of consciousness, including sleep, and the development of an individual's mental functioning and wellbeing.

#### ASSESSMENT TASKS :

school-assessed coursework, selected from a choice of annotations, comparison, report of student investigation, analysis of data, media analysis, structured questions, reflective learning journal, test; PLUS a structured scientific poster, AND end-of-year exam.

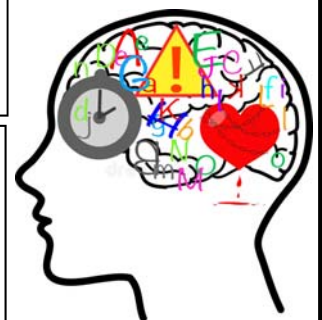
#### **WHY STUDY PSYCHOLOGY?**

This subject looks at describing, predicting, controlling and explaining behaviour and mental process - a great subject for all VCE students!

It is interesting to find out why people behave as they do, and to investigate subjects such as normality and intelligence.

#### **CAREER OPTIONS:**

- Psychologist (industry, health centres, schools, defence force, private practice)
- Welfare
- Youth Worker
- Nurse
- Occupational Therapist
- Social Worker
- Child Care Worker
- Teacher



## STUDIO ARTS

### Unit 1

This unit focuses on using sources of inspiration and ideas as the basis for artworks and exploring a wide range of materials and techniques as tools for translating ideas, observations and experiences into visual form. Students also explore the ways in which artists from different times and locations have interpreted ideas and sources of inspiration and used materials and techniques in the production of artworks.

**ASSESSMENT TASKS** - selection of exploratory work showing sources of ideas and inspiration translated into visual form through the use of a variety of material and techniques; extended and short-answer written presentations discussing ways in which artists interpret sources of inspiration and use materials and techniques – presentations should include visual material.

### Unit 2

This unit focuses on establishing and using a design process to produce artworks. The design process includes the use of sources of inspiration, experimentation with materials and techniques, and the development of aesthetic qualities and potential solutions prior to the production of artworks. Students also develop skills in the visual analysis of artworks. Artworks from different times and locations are analysed to understand artists' ideas and the creation of aesthetic qualities and identifiable styles.

**ASSESSMENT TASKS** - a folio including design explorations and artworks; extended and short responses discussing the ways a variety of art works use design elements and principles, signs, symbols and images to communicate ideas and develop styles – presentations should include visual reference material.

### Unit 3

This unit focuses on the implementation of the design process leading to the production of a range of potential solutions. Students use a work brief to define an area of exploration and apply a design process to explore and develop their ideas and produce a range of potential solutions. The unit also explores professional art practices in relation to particular art form(s) and the development of distinctive styles in artworks. Students investigate the response of artists to a wide range of stimuli and their use of materials and techniques. Considerations arising from the use made of the work of other artists in the making of new artwork are analysed.

### Unit 4

This unit focuses on the production of a cohesive folio of finished artworks. In developing this folio, students present visual and written documentation explaining how potential solutions generated in Unit 3 will be used to produce a cohesive folio of finished artworks. These artworks should reflect the skillful application of materials and techniques, and the resolution of aims, ideas and aesthetic qualities. This unit also explores aspects of artists' involvement in the current art industry focusing on the role of galleries and the methods and considerations involved in the preparation, presentation and conservation of artworks. Students analyse current art industry issues about the content and context of art in a contemporary setting. They also develop and substantiate personal points of views about the issues studied.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); end of year exam.

#### WHY STUDY STUDIO ARTS?

It's a creative form of communication that not only allows you to explore your own ideas and emotions, but also develops your skills. It teaches you different ways of viewing the world and assist your ability to creatively solve problems. It can lead to a range of interesting careers.

#### CAREER OPTIONS ARE:

- |                     |                       |                          |
|---------------------|-----------------------|--------------------------|
| • Architect         | • Advertising         | • Museum Curator         |
| • Artist            | • Fashion Designer    | • Arts Administrator     |
| • Graphic Artist    | • Animator            | • Art Historian          |
| • Interior Designer | • Teacher             | • Art Gallery Director   |
| • Photographer      | • Illustrator         | • Occupational Therapist |
| • Art Conservation  | • Industrial Designer | • Art Critic             |



## SYSTEMS ENGINEERING

**Rationale :** VCE Systems Engineering promotes innovative systems thinking and problem-solving skills through the application of the systems engineering process. The study is based on integrated mechanical and electrotechnological engineered systems, and provides opportunities for students to learn about and engage with systems from a practical and purposeful perspective. Students gain knowledge and understanding about technological systems and their applications. VCE Systems Engineering integrates aspects of designing, planning, producing, testing and evaluating in a project management process. It prepares students for careers in engineering, manufacturing and design through a university or TAFE vocational study pathway, employment, apprenticeships and traineeships. The study provides a rigorous academic foundation and a practical working knowledge of design strategies, production processes and evaluation practices. People with these skills, and the ability to apply systems engineering processes, are in increasing demand as participants in teams that are engaged with complex and multidisciplinary projects.

### Unit 1 : Mechanical systems

This unit focuses on engineering fundamentals as the basis of understanding concepts, principles and components that operate in mechanical systems. The term 'mechanical systems' includes systems that utilise all forms of mechanical components and their linkages. While this unit contains the fundamental physics and theoretical understanding of mechanical systems and how they work, the focus is on the creation of a system. The creation process draws heavily upon design and innovation processes. Students create an operational system using the systems engineering process. The focus is on a mechanical system; however, it may include some electrotechnological components. Students are introduced to mechanical engineering principles including mechanical subsystems and devices, their motions, elementary applied physics, and related mathematical calculations that can be applied to define and explain the physical characteristics of these systems.

### Unit 2 : Electrotechnological systems

In this unit students study fundamental electrotechnological engineering principles. The term 'electrotechnological' encompasses systems that include electrical/electronic circuitry including microelectronic circuitry. Through the application of the systems engineering process, students create operational electrotechnological systems, which may also include mechanical components or electro-mechanical subsystems. While this unit contains fundamental physics and theoretical understanding of electrotechnological systems and how they work, the focus is on the creation of electrotechnological systems, drawing heavily upon design and innovation processes. Students study fundamental electrotechnological principles including applied electrical theory, standard representation of electronic components and devices, elementary applied physics in electrical circuits and mathematical processes that can be applied to define and explain the electrical characteristics of circuits.

**ASSESSMENT TASKS** (Units 1 & 2) – documentation of the systems engineering process using one or more of: a multimedia/simulation presentation / an electronic portfolio / a brochure / a poster / a written report / production work to create an electrotechnological system / practical demonstrations / an oral presentation. Costs : \$20-\$150 per unit.

### Unit 3 : Integrated and controlled systems

In this unit students study engineering principles used to explain physical properties of integrated systems and how they work. Students design and plan an operational, mechanical and electrotechnological integrated and controlled system. They learn about the technologies used to harness energy sources to provide power for engineered systems, and commence work on the creation of an integrated and controlled system using the systems engineering process. This production work has a strong emphasis on innovation, designing, producing, testing and evaluating. Students manage the project, taking into consideration the factors that will influence the creation and use of their integrated and controlled system.

### Unit 4 : Systems control

In this unit students investigate new and emerging technologies, consider reasons for their development and analyse their impacts. Students continue producing their mechanical and electrotechnological integrated and controlled system using the systems engineering process. They develop their understanding of the open-source model in the development of integrated and controlled systems, and document its use fairly. They effectively document the use of project and risk management methods throughout the creation of the system. They use a range of materials, tools, equipment and components. Students test, diagnose and analyse the performance of the system. They evaluate their process and the system.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); School-assessed task – Units 3 & 4; end of year exam.

#### WHY STUDY SYSTEMS ENGINEERING?

To further develop students' understanding of the systems engineering process and use this to solve technological problems, as well as an awareness of associated challenges.

#### CAREER OPTIONS ARE:

People with these skills, and the ability to apply systems engineering processes, are in increasing demand as participants in teams that are engaged with complex and multidisciplinary projects

*Note: School Assessed Task – Units 3 & 4. Students need to supply their own materials to design and make a product according to set criteria. Costs can range from \$50-500 (for materials), depending on the style of the product. Students will also need a folio for the written component of the School Assessed Task.*





## VISUAL COMMUNICATION & DESIGN

### Unit 1

The main purpose of this unit is to enable students to develop an understanding of instrumental drawing methods and freehand drawing including drawing from direct observation. The unit involves the study of a range of drawing methods, including relevant Australian Standards conventions. Students develop practical skills in the application of appropriate drawing methods, design elements and principles, and information and communication technology. The unit also introduces students to the diversity of visual communication and the role of the design process in visual communication production.

**ASSESSMENT TASKS** - folio of instrumental drawings of objects; folio of drawings of objects that show one-point and two-point perspective drawing, rendering techniques, proportion, scale, relationship of objects, explanatory diagrams; folio of visual communications that use design elements and principles to satisfy stated purpose(s); written and/or oral report supported by visual material explaining the design process in the production of visual communications.

### Unit 2

The main purpose of this unit is to enable students to develop and refine practical skills by generating images and developing them through freehand drawing, instrumental drawing and the use of information and communications technology. In the development of visual communications, this unit enables students to develop an awareness of how the design process facilitates exploration and experimentation and how information and ideas are communicated.

**ASSESSMENT TASKS** - folio of instrumental drawings of objects that include paraline drawing, scale, Australian Standard conventions in dimensioning, cross-sectioning and circular representations, conversion of two-dimensional orthogonal views into three-dimensional drawing systems and vice versa; folio of freehand drawings of objects that shows development of rendered three-dimensional images; a folio of visual communication solution(s) to set task(s); written response, supported by visual material, that describes and analyses contemporary and historical examples of visual communications or a Powerpoint presentation supported by visual material and speaker's notes.

### Unit 3

The main purpose of this unit is to enable students to develop an understanding of visual communication production through the application of the design process to satisfy specific communication needs. Within the unit, students consider existing visual communication and analyse and evaluate examples. Students will also investigate the production of visual communications in a professional setting and examine the nature of professional practice in the design and production of visual communications.

### Unit 4

The main purpose of this unit is to enable students to apply their knowledge of the components of the design process in the preparation of one design brief. Students apply their practical skills to the development and production of two distinct final visual communication presentations through application of the design process and based on the requirements of the brief.

**ASSESSMENT** - school-assessed coursework (Units 3 & 4); end of year exam.

#### WHY STUDY VISUAL COMMUNICATION & DESIGN?

To develop skills in drawing and design.  
To learn a range of design based software applications.  
It can lead to creative and interesting career options.

#### CAREER OPTIONS ARE:

- Architecture
- Industrial and Multi-media Design
- Advertising and Marketing
- Fashion
- Engineering
- Graphic Design
- Cartography



### VOCATIONAL EDUCATION TRAINING (VET) : Agriculture

The VET programs are competency based so that at a particular point a student completes a task or they don't. Once they have demonstrated competency for a particular module they receive an S (satisfactory). The following is an overview of a program of approximately two years duration.

All students must complete 200 hours of work placement, achieved through a combination of regular work placement, intensive blocks (like harvest) and weekend work.

#### Units that must be completed to gain the Certificate

- Participate in WHS processes
- Work effectively in the industry
- Participate in environmentally sustainable work practices
- Operate tractors
- Apply chemicals under supervision
- Muster and move livestock
- Handle livestock using basic techniques
- Pen sheep
- Provide feed for livestock
- Identify and mark livestock
- Treat weeds
- Care for health and welfare of livestock
- Perform board duties
- Monitor water supplies
- Assist in preparing for shearing and crutching
- Treat plant pests, diseases and disorders
- Assist agricultural crop establishment
- Provide first aid

- \* Certificates are awarded at the completion of Year 12 unless an early application for completion is received.
- \* Please note : Students are expected to keep accurate work records for this subject.

