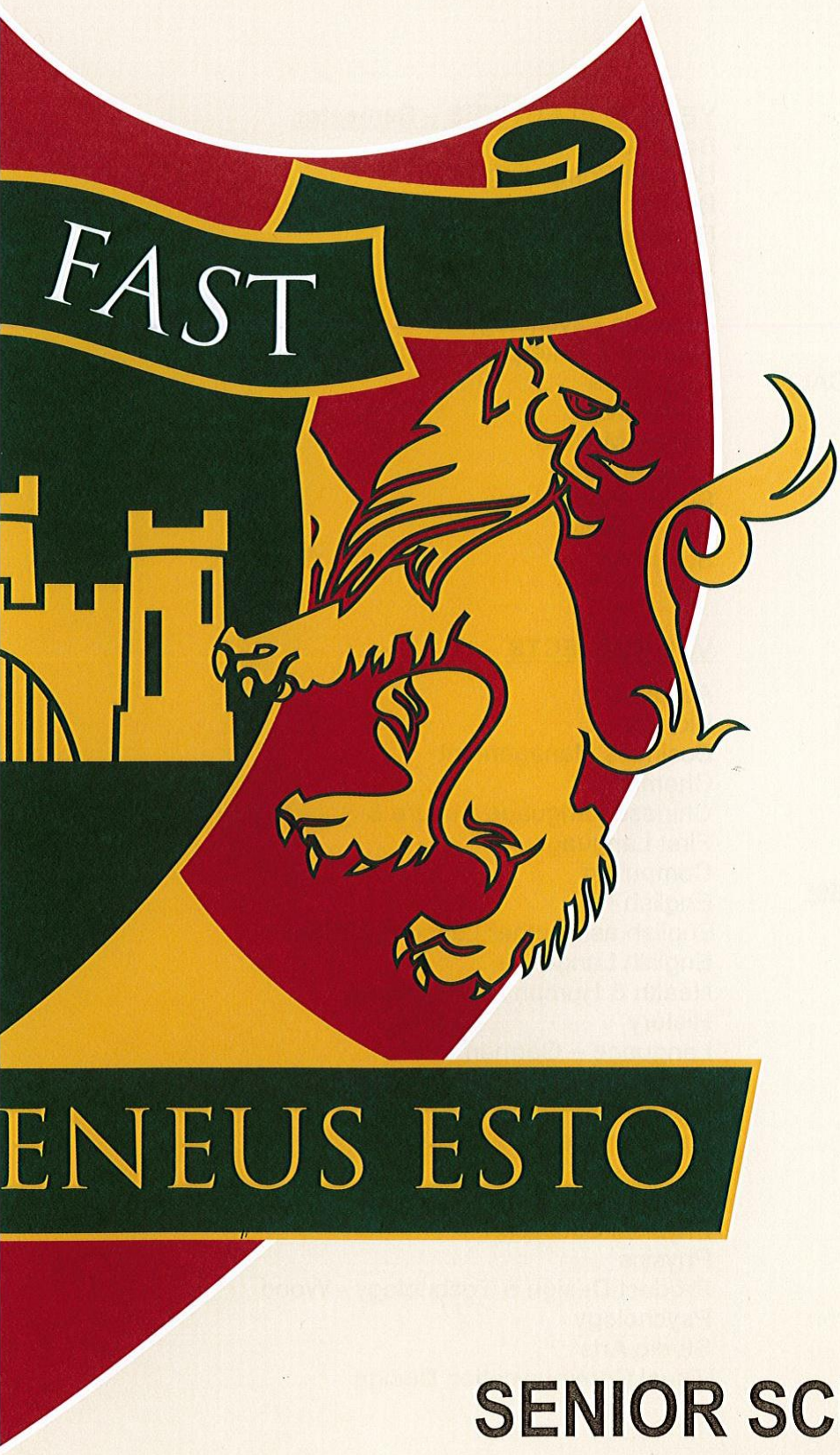

MACLEOD COLLEGE

A STATE P~12 SCHOOL

SENIOR SCHOOL 10 - 12
COURSE GUIDELINES
2020 - 2022

Year 10 – 12 SENIOR SCHOOL COURSE GUIDELINES 2020 – 2022

INDEX

Macleod  **College**

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Victorian Curriculum and Assessment Authority No. 01064

Senior School Team

The Senior School Team is a dynamic team who is responsible for the management of the general day-to-day issues generated by students in Years 10 – 12.

The team is involved in the development, implementation and management of proactive programs that enhance student engagement and ultimately learning both within and outside of the classroom.

These programs are designed to cater for the needs of students in Years 10 – 12, their parents, our community and of the College, consistent with the College's Strategic Plan goals and priorities, vision, mission, values and beliefs.

Some of the roles of the team include:-

- monitoring individual student progress
- ensuring effective reporting of student progress
- maintaining clear and open communication with parents, support personnel and, where appropriate, external agencies
- monitoring attendance
- ensuring effective support structures are in place
- providing key support in student welfare
- ensuring an effective operation of the College Code of Conduct
- promoting student involvement in co-curricular activities
- acknowledging and promoting student achievement across all areas both within and outside of school
- enhancing the involvement of parents in their children's education
- attracting the involvement of both the local and wider communities in the College.

Glossary of Terms

Academic: Theoretical learning which can provide a variety of skills and knowledge.

ATAR*: **Australian Tertiary Admission Rank**. The overall ranking on a scale of zero to 99.95 that a* student receives based on his/her Study Scores. The ATAR is calculated by VTAC and used by universities, TAFE institutes and independent tertiary colleges to select students for courses.

Macleod Graduation Certificate: An award given to all students who successfully complete Macleod graduation requirements at Year 12 level.

Macleod Subjects: Units of study at Year 10 accredited by Macleod College. You will acquire skills and knowledge preparing for VCE.

Pathway: The name given to education, training and LifeWork options.

Prerequisite: A subject that must be completed before entry into another subject or course.

Primary Four: A combination of subjects used in the calculation of your ATAR score; an English, ESL or Literature, and your next best three results. These four subjects will be counted in full when your ATAR is calculated.

Scaling: An adjustment made to Study Scores by VTAC based on a statistical moderation process.

ASBA Australian School Based Apprenticeship: A nationally accredited apprenticeship undertaken as part of your studies.

Semester: Two terms of study, a half-year.

Sequence: The combined study of Units 3 and 4.

Study Score: A score from zero to 50 which shows how a student performed in a VCE study, relative to all other students doing the same study. It is based on the student's results in school assessments and examinations.

TAFE Technical and Further Education: A training college offering courses designed for providing students with skills for employment.

Tertiary: Continuing education after completing Senior School through TAFE, University or Private College.

Unit: The amount of work allocated to complete a one semester length subject of study.

University: An educational institution offering degree courses usually requiring three or more years of study. These can be academic or vocational.

University Enhancement: A course of study accredited by a university for inclusion in the VCE as a 6th subject.

VCAA Victorian Curriculum and Assessment Authority: It administers the VCE.

VCE: Victorian Certificate of Education.

VCE Subjects: Subjects accredited by VCAA for study in the VCE program.

VET in the VCE subjects Vocational Education and Training. Certificate Courses available as part of the VCE.

Vocational: Practical learning directed towards a particular occupation and its skills.

VTAC Victorian Tertiary Admissions Centre: administers the application and selection process of tertiary places within Victoria.

About Macleod College Senior School: The Pathway to Your Future

How to Study in the Senior School

Senior School students are managers of their individual study programs. Your week will include timetabled classes for each of your subjects and a number of personal study sessions. Assemblies will also be included.

For each of your subjects you will be expected to attend classes, complete preparation reading, work tasks and assignments. Much of this work will be individual (there is not as much group work in Senior School).

You will need to be organised!
Effective time management is a life and leadership skill that all students should aim to develop. By learning to organise your time and your scheduled study sessions you can achieve great things.

Study sessions are available to provide time for you to organise and manage your learning needs (you have the daily planner to help you).

- complete work assignments
- seek out help or conference with teachers, Senior School Team Members and the Careers Counsellor
- develop and participate in study groups with students taking the same subjects as yourself
- work towards completing MACLEOD COLLEGE Graduation Certificate requirements
- research, develop and extend your study programs
- explore career pathways

It is up to you to maximise your personal and academic success. You are encouraged to make decisions, accept responsibility and direct your own learning. This will help equip you for life beyond school.

Senior School Explained

Flexibility within the Senior School - Macleod College offers a variety of courses; there are many ways a program of study can be individually tailored for a Senior School's student. You may study a combination of Macleod, VCE, VET in the VCE and VCAL. Year 13 and University Enhancement subjects are available to students who have achieved exceptional results in unit 3/4 studies. Some students undertake a School Based New Apprenticeship to complement their studies.

Macleod College Core and Elective subjects - At Year 10 these offer the opportunity to consolidate skills and explore new subject areas. They are also often regarded as prerequisites for VCE studies in equivalent areas. They are accredited by the College.

VCE units - VCE Units are programs of study developed and managed by an external body, the VCAA (Victorian Curriculum and Assessment Authority). These cover a wide range of subjects and study styles.

VET units - These are vocational subjects. They provide the opportunity to develop work-related competencies and skills. There is often a Work Placement requirement. Students obtain credit for VCE units and also receive a nationally recognised VET Certificate.
Macleod College is part of the Northern Metropolitan VET Cluster and a wide range of VET subjects are available. Students are advised to refer to the Northern Metropolitan VET Cluster Handbook for more specific information. See page 12 for more details.

University Enhancement - Enhancement studies are first year university studies available to VCE students who are very able academically. There are strict entrance requirements set by the University. Upon satisfactory completion these studies can be used as a sixth study bonus in the calculation of the ATAR.

ASBA

Australian School Based Apprenticeship **(ASBA) -** These are available in a wide range of vocational areas, students are advised to meet with the Transitions & Pathways Coordinator for more information. Students study a relevant VET/VCE subject and pursue paid employment for one day a week in their chosen field whilst studying for their VCE. It is important to choose a program which is challenging and stimulating, that you will enjoy and which will utilise your interests, skills and abilities. See page 14 for more details.

First Year – Year 10 - Year 10 students study six core areas for the whole year (English, Maths, Science, Humanities & PE/Health). There are also 3 Elective Blocks, from which the students can choose one full-year subject, or a combination of shorter courses. Some students with exemplary academic results may choose to undertake a VCE Unit 1/2 subject.

Second Year – Year 11 - Year 11 students begin to focus their program, studying at least 10 semester-length units of study.
VCE 1/2 +/or VCE 3/4 +/or VET/VCAL

Third Year – Year 12 - Year 12 students concentrate on 5 subjects, studying each one for 2 units, known as a 3/4 sequence. Information specific to each year level is provided later in this booklet.

What do These Terms Mean?

What is the VCE?

The VCE is a course of study, which is accredited by the Victorian Curriculum and Assessment Authority (VCAA). VCAA ensures a standardised, common curriculum and is taught and assessed throughout the state.

Most subjects offer four units of study. Units I and 2 provide background knowledge preparation for Units 3 and 4. To gain a study score credit for a subject, both Units 3 and 4 must be studied. It is not necessary for you to have studied all four units in a subject. However, some subjects are sequential and it is recommended all four units be studied, for example Sciences, Maths and Languages.

VCE Requirements - To meet the graduation requirement of the VCE, each student must satisfactorily complete a minimum of at least 16 VCE units (across their total VCE course of study).
These units must include:

- at least 3 units of English/ESL/Literature/Language (including a sequence at the Unit 3 or 4 level)
- at least 3 other sequences of Units 3/4 studies

Subject areas include:

- The Arts
- Business Studies
- English/Literature/Language/ESL
- Health and Physical Education
- Humanities
- Languages
- Mathematics
- Science
- Technology

A maximum of three VET in the VCE subjects can be studied, two of which can be included in the student's primary four and the other as a bonus subject.

Students can study more VET subjects if they are not seeking an ATAR.

A University Enhancement subject can be counted as a 6th bonus, and offers other advantages.

Students receive a statement of results from VCAA at the end of each year of VCE study.

Each VCE and most VET in the VCE subjects receive a study score out of 50.

What is the 'ATAR' Score?

The Victorian Tertiary Admissions Centre (VTAC) converts students' VCE results into an Australian Tertiary Admission Rank (ATAR) using a statistical scaling process. This process has been developed by tertiary institutions who may use it as part of their selection process.

To obtain an ATAR score you must meet VCE requirements and your studies must include:

- a 3/4 sequence in English/EAL/Literature/English Language
- a minimum of 3 other 3/4 sequences
- a maximum of 5 other 3/4 sequences
- two sequences can be VET subjects

Further Unit 3/4 sequences can be studied but they will not be used to calculate the ATAR.

The ATAR is calculated by aggregating your scaled study scores in a maximum of 6 subjects. This ATAR aggregate ...is a score between 0 and 210+ which is then converted into an ATAR up to 99.95 at intervals of 0.05. "

English/ESL/Literature/Language and your best three subjects (known as the Primary Four subjects) are counted in full in compiling the aggregate score. Your fifth and sixth subjects each count as a 10% bonus.

University Enhancement subjects must be counted as the 6th bonus subject. VET subjects carry a full study score which can be included in your Primary Four, with the exception of Horticulture, Applied Language Screen and Community Recreation, which provide a 10% bonus as a fifth and/or sixth subject.
Only two VET subjects can count in your Primary Four.

Calculation of Aggregate Score and ATAR

Example I:

Scaled Study Scores

English	34
Maths Methods	36
Economics	33
Studio Arts	32
Chemistry	31

10% bonus for Chemistry 3.1
PE 29 - 10% bonus for PE 2.9

Aggregate Score = 141
ATAR = 77.40

Example 2:

Scaled Study Scores

English	34
History	46
VET IT	43
Further Maths	42
Psychology	35

10% bonus for Psychology 3.5
LOTE: Chinese 42 10% bonus for LOTE: Chinese 4:1

Aggregate Score = 172.6
ATAR = above 94

NOTE: **ATAR** score cannot be directly calculated from study scores.

An **ATAR** may contain studies accumulated over a number of years. However, students need to be aware that some tertiary institutions apply their own penalties for repeated studies. Students must investigate each individual tertiary institution's enrolment policy. Middle band selection criteria will be specified for each tertiary institution for each course they offer.

The criteria will include considerations that were previously handled by bonuses for particular studies; consideration of any relevant factor introduced by using **ATARs** rather than the previously announced scoring formula for the course; more detailed consideration of VCE results, and whatever other factors had been previously specified as relevant for middle-band selection for that course.

Further information regarding the tertiary selection process can be obtained in the *ATAR into Tertiary Courses booklet* published by VTAC, available in the Careers Office, Senior School office or the VTAC website (www.vtac.edu.au) The Unit Descriptions and details of courses listed in this outline have been written by the relevant Key Learning Area Leaders following ***Victorian Curriculum and Assessment Authority (VCAA)*** study guidelines. In some study areas, KLAs have chosen to provide additional course content information.

The VCE Structure

The VCE is designed to provide a comprehensive curriculum while providing opportunity for choice and for developing a specialist emphasis. Students should commit themselves to a two year program, but it is possible to change direction at the end of Unit 1 and at the end of Unit 2. The second year is less flexible than the first because students must satisfactorily complete at least three pairs of Units 3 and 4 as well as studies in English.

How many Units?

The VCE is a two-year course. Most students will complete 20 units over two years. Students will enrol in at least 10 units during Year 11 and at least 10 units in Year 12. At Macleod College it is an enrolment requirement that students attempt five pairs of Unit 3 and 4 studies, including an English, during their Year 12 year. Some students may choose to undertake an additional study in a LOTE through the School of Distance Education or the Victorian School of Languages (VSL) e.g. Chinese, Korean, Macedonian (many languages possible).

Assessment in VCE

Assessment of Units 3 and 4

- For each study, students' levels of achievement for Units 3 and 4 sequences will be assessed using school-based assessment and external examinations.
- Each study will have a number of assessment components, including school based assessment tasks and at least one examination – please refer to the relevant study design for more detail.

VCE study score

- The VCE study score will be derived from the sum of the student's performances in all school assessed coursework and external examinations.
- In addition, students will receive separate from their VCE results, an Australian Tertiary Admission Rank (ATAR) from the Victorian Tertiary Admissions Centre (VTAC) which will be used for tertiary selection. The Tertiary Entrance Rank is designed specifically for use by tertiary institutions for selection into their faculties.

There will be an opportunity for Year 11 students, with teacher approval, to undertake a Unit 3/4 study. Whilst there are some restrictions in terms of choice of studies, those students wishing to maximize their ATAR scores should seriously consider undertaking a Unit 3/4 study in Year 11. However, students will still need to enrol in five pairs of Unit 3 and 4 studies, including English, during their Year 12 year.

The GAT

The General Achievement Test is used to ensure that all schools are marking their students in a way that is fair and uniform across Victoria. It has been introduced so that school assessment can be retained as an integral part of the VCE.

All students enrolled in <u>one</u> or more Unit 3 and 4 studies are required to take the GAT. <u>It is vital that students complete the GAT to the best of their ability, otherwise their own future subject scores might be downgraded to match GAT results.</u>

The GAT is a general test, which measures what level of general achievement students have accomplished across three broad areas:

- written communication
- mathematics, science, technology
- humanities, arts, social sciences

Because the GAT does not test knowledge of a particular subject or topic, it is not possible to study for the GAT in the way students study for an examination. This is one reason the VCAA adopted the introduction of the GAT instead of other methods of monitoring school assessment as it virtually does not add to student workload.

The VCAA uses the GAT scores as a basis for:

- reviewing school assessments in SAT
- checking the accuracy of student scores in examinations.
- requesting authentication checks by schools for particular students' SATs
- enhancing the statistical moderation of school-assessed Coursework.

NB:-<u>Students' results are adjusted if they are not consistent with examination results or indicative grades or school-based assessments.</u>

Statistical Moderation

Statistical Moderation is a process for adjusting schools' assessments to the same standard, while maintaining the students' rank order by the individual school. VCAA will use it to ensure that the coursework assessments given by different schools are comparable throughout the State.

VCAA will use the examination scores in each study as the basis for statistical moderation of schools' assessments. The VCE assessment program includes the GAT in studies, where in doing so, a better match with schools' assessments throughout the State is achieved.

In moderating schools' assessments in each study, VCAA will:

- identify the moderation group for each study at each school
- form an external score for each student doing the study
- use the external scores of the moderation group to adjust the school coursework scores for the group

NB:-**Students should be aware that school given scores are subject to statistical moderation and are thus likely to change.**

English Requirements

Regardless of a student's enrolment type, English units may be selected from English Units 1 to 4, English (EAL) Units 3 & 4, English Language Units 1 to 4 and Literature Units 1 to 4.

No more than two units at Unit 1 & 2 level selected from English Units 1 & 2, English Language Units 1 & 2, Foundation English Units 1 & 2 and Literature Units 1 & 2 may count towards the English requirement.

Students may not obtain credit for both English Units 3 & 4 and English (EAL) Units 3 & 4.
Units from the English group may also contribute to the sequences other than English requirement. In calculating whether students meet the minimum requirements for the award of the VCE, the VCAA first calculates the student's English units.

Once students have either met the English requirements that relates to their enrolment type, or have satisfied an English sequence, any additional sequences from the English group will be credited towards the sequences other than English requirement.

The following table provides examples of how English requirements will apply (the requirements for students who are adults and have interstate or overseas credit or have achieved their Intermediate of Senior VCAL are not listed).

Note: All possible combinations of units from the English group have not been listed on this table.

English group Units I and 2 satisfactorily completed	**English group Units 3 and 4 satisfactorily completed**	**English requirement?**	**Sequences other than English**	**Units contributing to 16 unit count**	**Note**
English Units I and 2	English Units 3 and 4	Yes	0	4	
English Units I and 2	Literature Units 3 and 4	Yes	0	4	
English Units I and 2	Literature Unit 3	Yes	0	3	Because there is no **S** for Literature Unit 4, there will be no Study Score and no ATAR score.
Literature Units 1 and 2	Literature Units 3 and 4	Yes	0	4	

English group Units I and 2 satisfactorily completed	English group Units 3 and 4 satisfactorily completed	English requirement?	Sequences other than English	Units contributing to 16 unit count	Note
English Language Units 1 and 2	English Language Units 3 and 4	Yes	0	4	
English Units 1 and 2	English Language Units 3 and 4	Yes	0	4	
English Units 1 and 2	English Units 3 and 4 English Language Units 3 and 4	Yes	1	6	The study score for both Unit 3 and 4 sequences can be included in the primary four for ATAR.
	English Units 3 and 4 English Language Units 3 and 4	Yes	1	4	The study score for both Unit 3 and 4 sequences can be included in the primary four for ATAR.
	English Units 3 and 4 Literature Units 3 and 4	Yes	1	4	The study scores for both Unit 3 and 4 sequences can be included in the primary four for ATAR
Literature Units 1 and 2 English Units 1 and 2		No	0	4	Only two of these units count towards the English requirement. The student needs at least one **S** from Units 3 and 4.
	English Units 3 and 4 English Language Units 3 and 4 Literature Units 3 and 4	Yes	2	6	Only two study scores from Unit 3 and 4 sequences can be included in the primary four for ATAR.
English Units 1 and 2	English Unit 3 English Language Units 3 and 4	Yes	1	5	
English Unit 1 Literature Unit 2	English Unit 3	Yes	0	3	Because there is no **S** for English Unit 4, there will be no study score and no ATAR.

Students are reminded that when undertaking VCAL Literacy Skills Reading & Writing Units, they may obtain a credit towards one unit only at Unit 1 & 2 English, provided they have met the specified outcomes for that unit.

If students wish to obtain a study score at Units 3 & 4 level (required for an ATAR score), then they must complete two units at Unit 3 & 4 level from the English group. Students must consult with the VCAL Coordinator and Senior School Team Leader regarding these choices.

VTAC advises that for the calculation of a student's ATAR, satisfactory completion of both Unit 3 and 4 of an English sequence is required. Details on minimum tertiary entrance requirements and ATAR eligibility requirements are available from VTAC at www.vtac.edu.au.

TAFE Accreditation - VCAA and the State Training Board have developed formal arrangements where specific combinations of VCE units provide considerable credit towards TAFE Advanced Certificate Courses. These credits make it possible to complete some TAFE courses in a shorter period of time.

Victorian Certificate of Applied Learning (VCAL)

The Victorian Certificate of Applied Learning (VCAL) is a 'hands-on' alternative senior school certificate for students in Years 11 and 12. VCAL gives practical work-related experience, as well as literacy and numeracy skills and the opportunity to build personal skills that are important for life and work. Like the Victorian Certificate of Education (VCE), VCAL is an accredited secondary school certificate.

There are three levels of VCAL – Foundation, Intermediate and Senior – and individual counselling will determine the most suitable level of study for each student. Each student undertaking VCAL is required to undertake a vocational unit of study (such as a VET subject) as part of their learning program.

Students most suited to undertaking VCAL are those interested in going onto training at Technical and Further Education (TAFE) institutes, doing an apprenticeship or getting a job after completing school. However, if a student starts VCAL, they may transfer to the VCE.

The VCAL program's flexibility enables students to undertake a study program that suits individual interests and learning needs. Accredited modules and units are selected for the following four compulsory strands:

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

Typical VCAL Program

- Monday, Tuesday & Friday at school
- Wednesday – TAFE
- Thursday – Work Placement

Students who successfully complete the VCAL will receive a certificate and statement of results that detail the areas of study that have been completed.

The VCAL has been designed to allow flexible entry and exit for other courses. It also provides maximum credit toward further study a student may undertake in the future.
Students who have successfully completed the VCAL at Intermediate level or Senior level who enrol in the VCE in a subsequent year will be eligible to complete the VCE if they satisfactorily complete:

- two units from the VCE English group
- three sequences of VCE units 3 and 4 in studies other than English (see Credit for VCAL units within the VCE)

Credit for VCAL units within the VCE

If a VCAL student who has not yet completed a VCAL Intermediate or VCAL Senior certificate transfers to the VCE, s/he must meet VCE requirements for continuing students and may count units successfully completed.

Studies completed as part of a VCAL learning program that have been identified as Intermediate or Senior level will contribute towards the VCE as follows:

- ✶ Intermediate VCAL units contribute towards the VCE at Unit 1-2 level
- ✶ Senior VCAL units contribute towards the VCE at Unit 3-4 level
- ✶ Senior VCAL units can be accumulated towards VCE Unit 3-4 sequences in the following ways:
  - any 2 Senior VCAL units from the Personal Development Skills strands and Literacy and Numeracy Skills strands
  - a combination of any Senior VCAL Personal Development Skills/Literacy and Numeracy Skills unit and 90 nominal hours of appropriate further Education training at AQF III and above from the Literacy and Numeracy Skills strands
  - any 2 Senior VCAL, units from the Work-Related Skills strand
  - a combination of any Senior VCAL. Work Related Skills unit and 90 nominal hours of appropriate VET training at AQF III or above from the Industry Specific Skills strand.

Further Information

1. The Careers Centre and the library contain some important references which will assist in students' decisions.
2. *'The Job Guide'*: The Job Guide contains information about all occupations in Australia.
3. The *Annual Tertiary Entrance Requirements* booklet summarises entrance requirements for universities and colleges of advanced education.
4. TAFE Handbook: *The TAFE (Technical and Further Education Handbook)* contains an extensive list of all Certificate, Associate Diploma and Trade courses throughout the State.
5. *Job and Course Explorer*: The OZJAC program is another way to search for information regarding both jobs and courses. JAC is located in the Careers Centre and in the library and after researching information, students can print a copy of all the relevant data.
6. VTAC site – www.VTAC.EDU.AU
7. WWW.SOFWEB.EDU.AU
8. WWW.VCAA.VIC.EDU.AU

Vocational Education and Training (VET)

What is VET?

The Vocational Education and Training (VET) program lets you take your VCE, VCAL and a VET Certificate at the same time. VET programs provide for a more vocational VCE by combining both vocational and general education.

On successful completion of study, students are awarded their VCE, VCAL as well as a VET Certificate. This certificate is at Level Two in the Australian Quality Training Framework and is recognised nationally. Students are eligible to apply for an Australian Tertiary Admission Rank (ATAR) and are also granted credit towards other VET certificate and diploma courses.

How does it work?

Students start the program in Year 11 and undertake a range of VCE /VET units to gain practical and academic experience. Assessment is outcome and skill-based in VET units, that is, the student will have to demonstrate their ability to perform all the required tasks, tests and assignments. You may be required to do at least 40 - 80 hours of work placement. This may occur out of school hours or during vacation time. Select the VCE / VET units required for the certificate you have chosen. Generally each VET unit is worth one VCE unit.

Vocational Education and Training (VET)

Students are able to select from a wide range of VET courses offered through the Northern Melbourne VET Cluster of which Macleod College is a member school. Macleod College will be offering VET Hairdressing Units 1 and 2, but students may wish to undertake other VET studies at some of our network schools.

VET programs are usually run each Wednesday. Each program requires students to undertake some work experience (40 – 80 hours) related to the VET study which gives them a chance to learn more about the industry and the skills it requires.

Details of the VET courses on offer are to be found in the NMVC VET Handbook which can be obtained from the VET/Careers Coordinator.

Students undertaking a VET subject need to be aware that course fees apply and these fees are levied to cover the shortfall between the cost of the course and the level of government funding provided. Details of the cost of courses will be provided to students at their course selection interview.

It should be noted that it is each student's responsibility to make his/her own way each week to and from the school where the VET program is being delivered, and so are advised to ensure that transport to the VET course they select is manageable.

Features of VET

VET programs are nationally recognised qualifications that can be credited towards the attainment of the VCE or VCAL certificate. They are vocationally orientated senior school studies that are designed to meet the needs of industry. They focus on developing industry specific and workplace skills, and can provide credit towards future TAFE studies.

VET programs have a Unit 1 – 4 structure just like VCE units. From 2008, there is no limitation on the number of VCE units a student may select to study. All VET programs with a Unit 3 and 4 scored assessment sequence can be used in the calculation of the Australian Tertiary Admission Ranking (ATAR) score and can count in the Primary Four in the same way as a non-VET subject. When scored assessment is not available for a VET subject, it contributes as a 10% bonus to the Primary Four.

Assessment

The assessment of VET studies is outcome and skill-based. This means students have to demonstrate their ability to perform all of the required tasks, tests and assignments to a satisfactory standard.

Application Process

There are three steps in making an application for a NMVC VET program:

- **Step 1** Read the NMVC Handbook and course requirements carefully, select your program and complete the NMVC Application Form. Submit this application to the VET Coordinator.
- **Step 2** Attend the compulsory Information Enrolment Evening in Term 4. You will be advised by letter about the location, date and time of this event.
- **Step 3** Payment for the VET course must be received by the date advertised in Term 4, prior to commencing the program in the following year.

Please check with the VET/Careers for VET offerings in 2019 and beyond.

Macleod College offers a range of VET units, as well as a limited number of Australian School Based Apprenticeships (ASBA). Students who complete all or part of these programs will receive credit towards satisfactory completion of the VCE.

Australian School Based Apprenticeships (ASBA)

The ASBA comprises of three main parts:

- Enrolment in the VCE/VCAL at school
- Enrolment with a Registered Training Organisation (RTO) in a structured training program that leads to a vocational qualification
- Part time paid work

Students may not be simultaneously enrolled in an ASBA and a VCE VET program in the same industry.
For certificates at Australian Quality Framework Level II credit is granted at Units 1 and 2, subject to completion of sufficient hours of training. AQF Level III certificates are credited at Units 3 and 4.
Credit is awarded on the basis of achieving units of competence in the modules. The maximum amount of credit available for ASBA is eight units, which may include two sequences at Unit 3 and 4 level.
NOTE: **Students enrolled in an ASBA will need to negotiate appropriate time release with the College.**

VET

Students may receive an 'S' (satisfactory/pass) for a unit of competence when they have demonstrated competence as assessed by the RTO. Students receive an 'S' for a module when they have demonstrated achievement of all the learning outcomes as assessed by the RTO.
Satisfactory completion of VCE VET units is calculated automatically as student's satisfactorily complete unit of competence. The maximum amount of credit available for VET is eight units, which may include two sequences at Unit 3 and 4 level. All certificates and statements of attainment are awarded by the RTO and recorded on the VCE Statement of Results.

Example:- The Certificate III in Hospitality includes Scored Assessments for each of two components:

- School-assessed Coursework
- Examination based on Unit 3 and 4 sequence, set by VCAA.

These scores are statistically moderated and are used to calculate study scores using the same procedures as other VCE studies. For further information, refer to the VCAA website at www.vcaa.vic.edu.au/vet

YEAR 11

Choosing Your Program – Year 11

In Year 11, many students begin to focus their study towards their developing areas of interest whilst still continuing to experiment.

What sort of subjects can I study?

In Year 11 you can study a combination of:
VCE 1/2 units VCE 3/4 units VET subjects VCAL

What can I choose?

Most students study 10 units of VCE or VET subjects.

This can be personalised and you are encouraged to speak with the Careers Counsellor about your plans. Most of your subjects will be studied as two-unit sequences; this helps to build the skills and knowledge for 3/4 study. You may also take some single units to increase your range of subjects.

Are there any guidelines for me to follow?

We recommend some students take a VCE 3/4 and/or VET in Year II.
This allows you to:

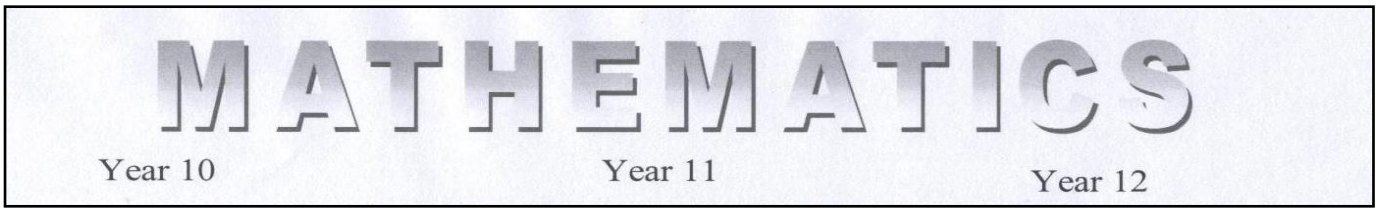
- experience the study demands and assessment process of 3/4 study
- include a 6th bonus subject in your program

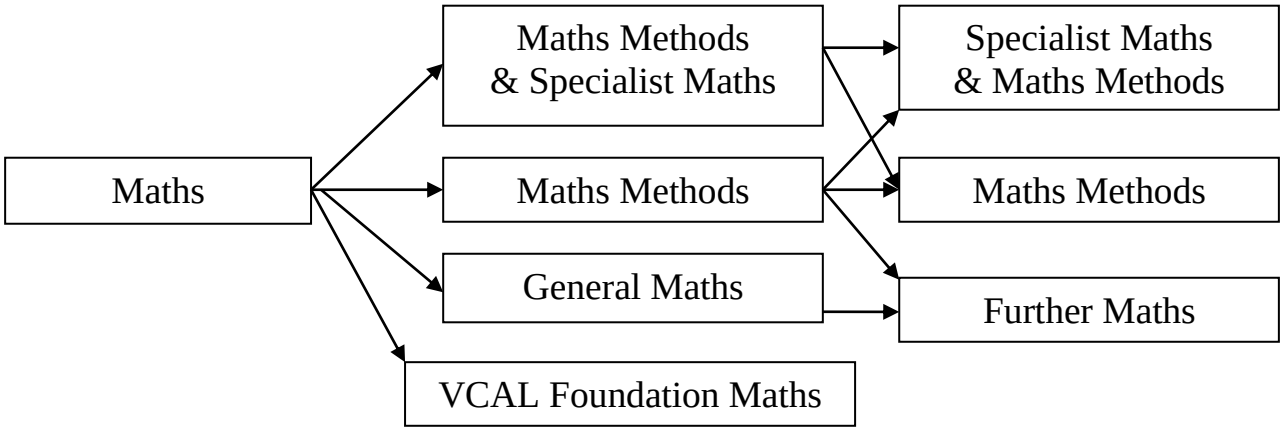
It is important you consider any prerequisites for any tertiary studies you may be considering.

Please Note: That if a Year 11 student does not achieve a study score of 30 or more for their Unit 3/4 study they will repeat that study in the following year. If a student obtains a study score of higher than 30 they may apply to only do 4 studies in Year 12 or will be required to pick up another subject. (Panel made up of level coordinators, sub school head, AP and curriculum coordinator will decide if a student is permitted to do only 4 studies).

Mathematics Guidelines

Choose the correct level of Mathematics. Maths is a sequential subject that builds skills and changing the level of Maths you study during the year may be disruptive to your learning.





Please read the subject entries, look at your Maths Selection Test result and gain advice from your Maths teacher.

How do I decide what to include in my Program?

We recommend you:

- read about the subjects on offer in the Senior School Curriculum section of this handbook
- discuss your selection with your parents, friends and teachers
- attend the VCE Information Evening
- make use of the Career Counselling process

What happens next?

The subject selection process will be a little different to the process going into year 10. In Term 3 you will be asked to nominate subjects in priority order which you would like to do.

A basic timetable with blocks will be distributed to students and you will be asked to then select the subjects you wish to do. It is therefore vital that you take every step in this process seriously because the timetable will be based on your selections.

Every effort will be made to include all your choices within the framework of the timetable grid. If there are any issues with your selection we will contact you for counselling.

You will be given details of:

- the date your form must be returned
- any changes to subject offerings
- the information you need to supply
- the subject selection form

YEAR 12

Choosing Your Program – Year 12

In Year 12, students usually concentrate on five subjects studying each as a sequence of two Units (a 3/4 sequence).

What sort of subjects can I study?

In Year 12 you can study a combination of:

- VCE 3/4 Units
- VET
- VCAL
- a University Enhancement subject
- a Year 13 subject

University Enhancement Subjects

Students who have a strong interest and academic results in a subject may choose to apply to study a University Enhancement course that is offered by a University. These subjects may provide a 6th bonus score. Entry is determined by the University, and based on previous VCE results.

What can I choose?

Year 12 students usually choose five subjects. Variations may be considered.

Are there any guidelines for me to follow?

We recommend you carefully consider the VCE Requirements to ensure you meet them. It is also important you consider the prerequisites for any tertiary studies you may be considering.

How do I decide what to include in my Program?

For many of you, choosing your program will be a simple process as you continue with the plan embarked upon in the previous year, or you may need to redefine plans and goals in light of your studies so far.

Also, your interests, skills and personal values may have changed. It is really worth using the subject selection process to carefully consider your options.

What happens next?

Priority is given to Year 12 students when formulating the timetable grid within the subject selection process. If there are any issues with your selection we will contact you for counselling.
You will be given details of:

- any changes to subject offerings
- the information you need to supply
- the subject selection form
- the date your form must be returned

PLEASE NOTE: UNITS OF STUDY WILL RUN SUBJECT TO VIABLE STUDENT NUMBERS.

Year 10 Core Subjects

ENGLISH

Length of Course: **Full Year**

In Year 10 English, students read a wide range of texts including novels, plays and films. They continue to interpret, create, evaluate, discuss and perform responses to these texts. Students create a range of imaginative, informative, persuasive, analytical and comparative responses to demonstrate their understanding of the course content. Assessment includes a variety of individual and group tasks.

We teach and report on our courses under the following headings:

- **Reading and Viewing:** Students read a variety of texts each term. They interpret, analyse and evaluate the texts by considering text structure, language features, social and cultural contexts, characterisation and thematic connections.

- **Writing:** Students construct a range of responses to texts to articulate complex ideas including analytical, imaginative and comparative responses. They continue to build on their grammar, vocabulary, punctuation and spelling skills by reviewing, editing and refining their work.

- **Speaking and Listening:** This area focuses upon student performance in formal oral presentations and debates, role plays, speeches and dramatic readings, whole class and small group discussions.

Assessment: Includes analytical essays, comparative essays, tests, oral presentations and imaginative responses. All assessment tasks are based on the Victorian Curriculum and are assessed using the appropriate achievement standards. They incorporate topics from the Language, Literature and Literacy strands.

ENGLISH AS ANOTHER LANGUAGE

Length of Course: **Full Year**

Students eligible for EAL will undertake their English study in distinct EAL classes that run parallel to the English classes. In Year 10 EAL, students read a wide range of texts including novels, short stories and films. They continue to interpret, create, evaluate, discuss and perform responses to these texts. Students create a range of imaginative, informative, persuasive, analytical and comparative texts to demonstrate their understanding of the course content. Assessment includes a variety of individual and group tasks.

We teach and report on our courses under the following headings:

- Reading and Viewing: Students read a variety of texts each term. They interpret, analyse and evaluate the texts by considering text structure, language features, social and cultural contexts, characterisation and thematic connections.

- Writing: Students construct a range of responses to texts to articulate complex ideas including analytical, imaginative and comparative responses. They continue to build on their grammar, vocabulary, punctuation and spelling skills by reviewing, editing and refining their work.

- Speaking and Listening: This area focuses upon student performance in formal oral presentations and debates, role plays, speeches and dramatic readings, whole class and small group discussions.

Assessment: Includes analytical essays, tests, oral presentations and imaginative responses. All assessment tasks are based on the Victorian Curriculum and are assessed using the appropriate achievement standards. They incorporate topics from the Language, Literature and Literacy strands.

HEALTH EDUCATION

Length of Course: **Full Year**

This course is designed to develop the knowledge, skills and attitudes that will assist students in leading healthy, fulfilling lives.

Nutrition and Food Consumption:
Students will study a range of issues relating to Nutrition and Food Consumption patterns within Australia. They will develop an understanding of the importance of good nutrition and the need to maintain a healthy diet.

Adolescent Challenges:
Students will participate in a range of classroom activities based on the topics of body image, mental health issues and resilience. Students will examine the mental health issues relevant to young people and develop useful strategies to assist them in recognizing and managing stress, anxiety and depression.

Sexual Health, Rights and Responsibilities:
Students will study Human Reproduction, Contraception, STI's, Diversity and Respectful Relationships. They will complete class activities relating to their own rights, responsibilities and options with regard to personal safety and the safety of others.

Assessment:
Class work, research tasks, class participation, tests and mid-year and end of year examinations.

HUMANITIES

Length of Course: **Full year**

The Humanities involves the study of human societies and environments, people and their cultures in the past and present. It aims to develop key concepts and skills in students so that they may understand the way in which people and societies have organised their world and made meaning of it.
Within the domains of History, Geography, and Economics, Civics and Citizenship, the year 10 Humanities course covers topics such as:

History
- The world and Australia post WWI
- The Rise of the Nazis
- World War II and its impact
- The Holocaust
- The World and Australia Post WWII
- The Cold War
- Rights and Freedoms
- A Globalising World: Pop culture, Environmental Movements & Migration

Geography
- Environmental Change and Management
- The Geography of Wellbeing

Economics & Citizenship
- Managing a Business
- The Global Economy
- Pathways and Careers

Assessments include: Research Projects and Inquiries, Creative Responses from Historical Perspectives, Environmental Management Plan, Business Plan, Country Wellbeing Profile, Tests, Exam.

MATHEMATICS

Length of Course: **Full Year**

All students will study a broad range of topics in Mathematics during Semester 1. Topics covered will include: Algebra and Equations, Trigonometry, Measurement and Probability. In Semester 2, students may elect to do either **General Maths** or **Mathematical Methods** as their core subject.

General Mathematics concentrates on building upon and extending the topics of Statistics and Financial Maths. Students who take this course will expect to study Foundation Mathematics or General Mathematics in VCE.

Mathematical Methods concentrates on extending students' knowledge of Non-linear Functions and Graphs and the Real Number System. Emphasis is placed on extending the students' algebra skills. Most students would be expected to continue on to Mathematical Methods in Year 11.

Due to changes in VCE Maths studies, student choices of Maths classes at Year 10 have been reviewed. Mathematical Methods (Units 1 - 4) requires a high level of understanding in all topics. Despite our program of teacher recommendations and subject counselling, we feel that some students are still making inappropriate choices.

To enrol in:

- **Year 11** Maths Methods, students need to achieve at least 60% pass on the Semester Exams and an average of at least 60% on topic tests.
- **Year 11** General Maths, students need to achieve at least 50% pass on the Semester Exams and an average of at least 50% on topic tests.
- **Year 11** Specialist students need to show excellence in all topics throughout the year.

Students who do not attain this standard will be recommended to do one of the following:

- Enrol in Units I and 2 Foundation Maths
- Repeat Year 10 Maths
- Do no VCE Maths

All students studying Mathematical Methods or General Mathematics in Year 11 will also be required to purchase a CAS calculator. This can be used for all Year 10 Maths classes and will ensure that students are familiar with its operation before VCE classes begin.

Assessment: Students' skills will be assessed by Tests, Assignments, Homework sheets and Bookwork. All courses are based on the Victorian Curriculum and are assessed using the appropriate Victorian Curriculum levels. They incorporate topics from the strands of Number and Algebra, Measurement and Geometry, Statistics and Probability.

PHYSICAL EDUCATION

Length of Course: **Full Year**

The Year 10 PE course is a practical based subject. Students will endeavour to develop proficiency in a wide range of skills and game based sports. Students will develop techniques to improve the quality of their performance through practical participation, observation and feedback. The course also aims to promote a healthy lifestyle and improve student physical and social wellbeing. Students shall participate in the following themed based units:

Invasion games (Netball, Soccer, Lacrosse, European handball etc), Net and Wall (Table Tennis, Badminton, Volleyball), Striking and Fielding (Baseball, Softball, Cricket)

Students are assessed on the following:

- Participation
- Co-operation and teamwork
- Linking of rules, strategies and tactics into various sports

SCIENCE

Length of course: **Full**

In Year 10 Science students will extend their understanding of four key domains of scientific knowledge and gain skills in scientific investigations. They will explore big questions in the fields of Chemistry, Physics, Earth and Space Science and Biology with approximately one term spent on each.

In Chemistry, students will investigate chemical elements and reactions and they will form links with biological science. In Biology, students will explore the diversity of life on earth as they learn about genetics and evolution. Physics will focus on motion and forces and in Earth and Space Science students will explore current theories on the origin of the universe.

Critical thinking skills, experimental procedures and data collection and interpretation will feature heavily in this course.

Assessment: Student achievement will be assessed through:

- Topic tests
- Class-work including second hand data analysis
- Projects completed at home
- Reports of experiments
- Semester exam

Year 10 Art/Technology Subjects

THE ARTS - ART

Length of Course: Semester

This course provides an essential focus on drawing, painting and printmaking. The students are provided with workshop-style lessons that will focus on building technical skills through observational drawing, technique and colour studies in painting, and relief and/or intaglio processes in printmaking. The students refine their personal aesthetic through working and responding perceptively as an artist, craftsperson and/or audience.

The students adapt ideas, visual images and practices from selected artists and use them to inform their own personal aesthetic when making artworks and presenting them to an audience. As they experience visual arts, students draw on artworks from a range of cultures, times and locations. They reflect on the development of different traditional and contemporary styles of art works.

Students who wish to further develop their skills in art are encouraged to enrol into the Studio Arts Elective.

Assessment: Visual Diary, Artworks, Analysis Tasks, Examination.

THE ARTS - MEDIA

Length of Course: Semester

In Media at Year 10, students will use media production skills and processes such as problem solving, working as a team, or independently; setting and following personal and group timelines; and independently using media equipment safely and responsibly.

Students extend their understanding and skills in making digital artworks. They will learn how to bring sophistication to their work by applying a range of visual techniques. Students explore the creative capabilities of video editing software by manipulating selected software and hardware to capture, record, edit and refine their creative products.

Students will complete a variety of skill-building practical tasks in order to improve their understanding of film theory. They will use the knowledge they develop undertaking these tasks to create a short narrative film. Students will also study the work of acclaimed directors, which will enable them to reflect on the techniques used by other artists, the impact media products have on selected audiences and to generate ideas for their own work.

Assessment: Practical work, film analysis assignment and exam.

THE ARTS - MUSIC

Length of Course: Semester

Year 10 music is designed to allow students to develop their musical skills and acquire new skills that will enable them to undertake VCE Unit 1 Music Performance in Year 11. Students will rehearse and perform works on their chosen instruments and will learn how to stage a performance.

They will learn how to use recording and notation software such as Garage Band and Sibelius and will use these to complete assignments such as song transcription and composition.

Assessment: Practical work, workbook and exam.

THE ARTS – VISUAL COMMUNICATION

Length of Course: Semester

In Visual Communication Design students develop essential skills in drawing methods to produce design solutions for the world around them. They focus on applying the Design Elements and Principles as visual tools to produce effective visual communications. Students learn about the design process, the role of the visual communication designer, and their contribution to society.

They apply this knowledge in response to a Design Brief, and produce and present their development of visual communications through a folio and final product(s) that are created manually and/or digitally. They explore the significance of visual communication design in different times, places and cultures, and build an understanding of the important role of visual communication design in contemporary society to apply this knowledge in their own visual communications.

Assessment: Practical Work (Sketchbook, Final Products), Response Task, Examination.

TECHNOLOGY – FOOD

Length of Course: **Semester**

Students will work with a range of ingredients and develop practical skills in food preparation to produce food products including meals, cakes, biscuits, pastries as well as preserved food products. They will develop an understanding of food safety and hygiene.

Students will use the Design Process to design their own food products as well as investigate the various functions of ingredients in food products. They will learn about some of the physical and chemical interactions and changes which foods undergo during storage, preparation and processing. Students will also learn to assess products through the sensory evaluation of the appearance, aroma, taste and texture of foods.

Assessment: Foods and Recipes (investigating, designing, planning, producing and evaluating), Recipe Portfolio (practical work, recipe analysis and evaluation), Practical Exam.

TECHNOLOGY - CREATIVE CAKES & BISCUITS

Length of Course: Semester

Students will produce a range of cakes and biscuits that will extend their skills in food preparation techniques and processes. The focus will be on creativity in the presentation and decoration of their final product. They will work safely and hygienically with tools and equipment to produce a variety of cafe quality food items. Students will use the Design Process to develop their own products.

Assessment: Design Process to Plan, Chocolate Creation, Celebration Cake, Foods Folio (activities production, evaluation), Practical Examination.

TECHNOLOGY – MATERIALS

Length of Course: Semester

At Year 10, this course is designed to allow students to work with a variety of materials including wood, metals and plastic. Students work through both set and negotiated projects aimed at teaching them different methods of design and construction.

This subject allows students to use their skills and knowledge gained in previous Metal, Wood and classes as well as developing a new understanding of the different processes.

Projects in this subject involve research, design, manufacture and evaluation around a set design brief, whilst upholding strict safety standards, which are explored through demonstrations, practical tasks and written work.

Students are expected to keep a record of all class notes; research tasks and design work in a visual diary, which demonstrates their exploration of concepts and materials as well as their own thoughts and ideas.

At Year 10, Materials allows students to concentrate on an area of particular interest to them e.g. welding.

Assessment: Workshop Practices, Production Models, Design & Planning, examination.

TECHNOLOGY – WOOD

Length of Course: Semester

This course requires students to make projects which demonstrate not only acceptable levels of knowledge, and skill in relation to practice in the area, but also a capacity to analyse, design, plan and carry through a task from concept to completion.

Students will effectively use a range of tools, machines and processes in the manufacture of classroom projects. The compulsory component in the program ensures specific skills and knowledge is covered. This involves students receiving instructions in advanced joint construction.

Students are expected to produce a technical drawing of all their projects. Adherence to necessary safety requirements are essential.

Assessment: Production Models, Design & Planning, Workshop Procedures, Exam.
Students may incur some materials costs due to the scale of their production model.

Year 10 Elective Subjects

BASKETBALL

Length of Course: Semester

Basketball elective is a purely practical elective that aims to extend upon students' knowledge of basketball skills, strategies and rules whilst developing leadership and communication skills.

Students will be developing their skills in the following areas

- Individual Basketball Fundamentals
- The development of a Universal Shot
- Team Play Concepts and Systems of Play
- Game Sense Approach to Basketball

Assessment: Participation in all activities. Self-analysis

BEYOND COMPUTING

Length of Course: Semester

This course explores and covers a variety of different computer applications and coding types, including video editing software such as iMovie and Microsoft Movie Maker, game engines such as Unity, and Sphero coding. Students learn different coding languages, such as HTML, and investigate their importance in a digital world.

Assessment: Various website coding, video editing using different software, Sphero coding, game building platform, and an end of semester examination

BIOLOGICAL SCIENCE

Length of Course: **Semester**

This semester unit will develop the skills and pre-requisite knowledge essential for a thorough understanding of the Biology area of study. Practical activities and classroom coursework will provide experience that will be of benefit in further study in VCE Biology.

Assessment includes class activities, an assignment task and an examination.

BRIDGING EAL

Length of course: Semester

Course description
This course provides the opportunity for additional English language study for students who are enrolled in Year 10 English as an Additional Language.

Speaking and listening skills are emphasised, along with close study of grammar and vocabulary. Students will read academic and media texts, and will create their own texts for a variety of audiences, purposes and contexts. Students will undertake multimodal tasks and activities with the focus on, speaking and listening, aural and oral.

Assessment
Classwork, oral presentations, assignments, examination.

ENVIRONMENTAL SCIENCE

Length of Course: Semester

Course Description
Our environment faces a number of threats including climate change and water shortages. This subject will help you understand what those threats are and what positive steps can be taken to achieve sustainability.

Many work places are required to follow environmental legislation and understanding these issues will help you navigate the requirements you may have to deal with in your working life. The course will be loosely based on the VCE Environmental Science Subject and will include an excursion to Edendale Farm.

FITNESS

Length of Course: Semester

Course Description
The fitness elective is a practical based subject allowing students who have a keen interest in developing their fitness levels to do so through a wide variety of leisure pursuits. Each semester the class will be individually tailored to meet the needs of the participants but may include rock climbing, boxing, kettlebell, bike riding, pilates, yoga, swimming, weight training, running/power walking and bounce classes.

Students will select a personal fitness goal they wish to achieve over the course of the semester and will work towards achieving this by its conclusion.
This elective will have a cost attached to it and is dependent on which leisure pursuits are chosen each semester.
Assessment- Full participation in all units covered in practical classes, fitness testing results.

FORENSIC PSYCHOLOGY

Length of Course: Semester

Course Description
This course looks at the connection between forensic psychology and the justice system. Students will look at what is involved in criminal profiling and the assessment and treatment of criminal behaviours. They will be able to look at case studies of criminal behaviours and examine the role that a forensic psychologist would play in assisting authorities. Students will also be introduced to mental state examinations of criminal defendants.

Assessment: Includes an assignment, case studies, activities and an examination.

INDUSTRY & ENTERPRISE - UNIT 1 - Compulsory

Length of Course: Semester

Course Description
This unit prepares students for effective workplace participation. Their exploration of the importance of work-related skills is integral to this unit. Students develop work-related skills by actively exploring their individual career goals and pathways. They observe industry and employment trends and analyse current and future work options. Students build work-related skills that assist in dealing with issues affecting participants in the workplace.

Students examine the diverse contexts in which work takes place in Australian society by investigating a range of work settings. They investigate job tasks and processes in work settings as well as entry level requirements associated with work in selected industries.

Students research a work-related issue, and consider strategies related to the development of interpersonal skills and effective communication to deal with the selected issue.

After completing the relevant occupational health and safety (OH&S) induction program, students demonstrate the practical application of their work-related skills by completing at least 35 hours of structured workplace learning.

Assessment includes tests and an examination.

LANGUAGE - GERMAN

Length of Course: Full Year

Year 10 German builds on the previous three years of secondary school German studies and is a prerequisite for VCE German. Students will be able to express themselves in German with more confidence and will participate in a range of engaging activities, including:

- Creating a German Gingerbread House
- Attending the Annual German Film Festival
- Work closely with native German speakers
- Language Learning Games
- Artistic Projects focused on Language Learning

Assessment includes class activities, tests and an examination.

LINGUISTICS

Length of course: semester

In this subject, students will be introduced to the essential building blocks of language: the sounds and sound systems (**phonetics** and **phonology**), how words and sentences are structured (**morphology**, **lexicology** and **syntax**) and how we understand meaning (**semantics** and **pragmatics**). Using the analytical tools of linguistics, students will begin applying them to a range of activities and assessments. These skills will allow students to analyse a range of human languages, including natural languages and those found in film and literature.

This subject is ideal for any students interested in language, those studying other languages and those interested in studying VCE English Language.
Assessments: Written and Oral Tests, Assignments, Reports, Exam.

LITERATURE

Length of course: semester

The study of literature focuses on the enjoyment and appreciation of reading that arises from discussion, debate and the challenge of exploring the meaning of literary texts. Students reflect on their own and the interpretations of others. This subject will challenge and extend students beyond the mainstream English classroom and develop essential skills for students interested in studying VCE Literature. Students will be expected to read and review a variety of novels, plays, poetry, films and essays.

Please Note: Some texts may need to be purchased throughout the course of the semester for this subject.

Assessments: Analytical Essays, Creative and Interpretive Writing, Exam.

MONEY MATTERS

Length of Course: Semester

Students look at everyday financial decisions that have an effect on their long-term wealth and learn how to budget on various incomes. They evaluate their rights as workers and their obligations as taxpayers. They are then introduced to the different types of interest, and how they can be used to their benefit. Students look at the pros and cons of credit, including how to use credit responsibly.

Assessment is based on satisfactory completion of set coursework, topic tests, a semester long portfolio, and end of semester examination.

PHOTOGRAPHY

Length of Course: Semester

Students develop their understanding of photographic techniques and processes. They complete a series of photographic tasks that aim to improve their understanding of how a camera works, and how to set the technical settings for image capture. Students will investigate the role of photography in society and the practices of influential photographers.

Assessment: Photographic exercises, Exam

SPORTS PSYCHOLOGY

Length of Course: Semester

Students will examine how psychological factors affect performance and how participation in sport and exercise affect psychological and physical factors. They will be shown case studies of athletic 'burn out' and how this has increased the number of sports psychologists seen in professional sporting teams around the world. Students will be introduced to techniques that are used to assist professional athletes and ensure that they achieve their personal best.

Assessment: Includes an assignment, case studies, activities and an examination.

SPORTS SKILLS

Length of Course: Semester

This practical based subject aims to develop and extend on existing skills and concentrates on coaching via the "Game Sense Approach". Students will be challenged to develop higher level physical and thinking skills relevant to a variety of sports, coaching and activities. Students will be required to coach, umpire and provide input into strategy and tactics to enhance both individual and team performance

Assessment: Participation/Officiate/School Representation/Coaching
VELS: Level 6 Movement & Physical Activity

STUDIO ARTS

Length of Course: Semester

This subject is suitable for students who will continue their VCE studies in Studio Arts.
At the Year 10 level students develop their understanding of a studio practice. Students develop and apply their technical skills by exploring, selecting and manipulating techniques and processes. They undertake an individualised project, where they research and conceptualise an idea around a theme. Students document their development and refinement processes in a working visual diary. They use personal and artistic inspiration to inform their practice.

Their artistic practice is further informed by the study of artworks from different cultures and times. They enhance their analytical skills through the art elements and design principles and focus on the interpretation of artworks within historical and cultural frameworks.

Assessment: Presentations, Mind Map, Visual Diary experimentation, Final Artworks, Exam.

FAST TRACK VCE
Units 1 & 2 Accounting
Units 1 & 2 Physical Education

VCE SUBJECTS – *THESE VCAA SUBJECT DESCRIPTORS WERE CORRECT AT THE TIME OF PUBLICATION. VCAA WILL ADVISE THE VCE MANAGER IF THERE ARE ANY CHANGES.*

ACCOUNTING

Scope of study
VCE Accounting explores the financial recording, reporting, analysis and decision-making processes of a sole proprietor small business. Students study both theoretical and practical aspects of accounting. They collect, record, report and analyse financial data, and report, classify, verify and interpret accounting information, using both manual methods and information and communications technology (ICT).

Students apply critical thinking skills to a range of business situations to model alternative outcomes and to provide accounting advice to business owners.

In business decision-making, financial as well as ethical considerations (incorporating social and environmental aspects) should be taken into account.

Rationale
Accounting involves modelling, forecasting and providing advice to stakeholders through the process of collecting, recording, reporting, analysing and interpreting financial and non-financial data and accounting information. This data and information is communicated to internal and external stakeholders and is used to inform decision-making within the business with a view to improving business performance. Accounting plays an integral role in the successful operation and management of businesses.

VCE Accounting prepares students for a university or TAFE vocational study pathway to commerce, management and accounting, leading to careers in areas such as financial accounting, management accounting, forensic/investigative accounting, taxation, environmental accounting, management and corporate or personal financial planning.

Structure
The study is made up of four units.
Unit 1: Role of accounting in business
Unit 2: Accounting and decision-making for a trading business
Unit 3: Financial accounting for a trading business
Unit 4: Recording, reporting, budgeting and decision-making

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.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 and Unit 4 as a sequence.

Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum

Unit 1: Role of Accounting in Business
This unit explores the establishment of a business and the role of accounting in the determination of business success or failure. In this, it considers the importance of accounting information to stakeholders. Students analyse, interpret and evaluate the performance of the business using financial and non-financial information. They use these evaluations to make recommendations regarding the suitability of a business as an investment.

Students record financial data and prepare reports for service businesses owned by sole proprietors.

Where appropriate, the accounting procedures developed in each area of study should incorporate the application of the Conceptual Framework and financial indicators to measure business performance, and take into account the range of ethical considerations faced by business owners when making decisions, including financial, social and environmental.

Unit 2: Accounting and Decision-making for a Trading Business
In this unit students develop their knowledge of the accounting process for sole proprietors operating a trading business, with a focus on inventory, accounts receivable, accounts payable and non-current assets. Students use manual processes and ICT, including spreadsheets, to prepare historical and budgeted accounting reports.

Students analyse and evaluate the performance of the business relating to inventory, accounts receivable, accounts payable and non-current assets. They use relevant financial and other information to predict, budget and compare the potential effects of alternative strategies on the performance of the business. Using these evaluations, students develop and suggest to the owner strategies to improve business performance.

Where appropriate, the accounting procedures developed in each area of study should incorporate application of the Conceptual Framework, financial indicators and ethical considerations for business owners when making business decisions, including financial, social and environmental.

Unit 3: Financial Accounting for a Trading Business
This unit focuses on financial accounting for a trading business owned by a sole proprietor, and highlights the role of accounting as an information system. Students use the double entry system of recording financial data and prepare reports using the accrual basis of accounting and the perpetual method of inventory recording.

Students develop their understanding of the accounting processes for recording and reporting and consider the effect of decisions made on the performance of the business. They interpret reports and information presented in a variety of formats and suggest strategies to the owner to improve the performance of the business.

Where appropriate, the accounting procedures developed in each area of study should incorporate the application of the Conceptual Framework, financial indicators to measure business performance, as well as the ethical considerations of business owners when making decisions, including financial, social and environmental.

Unit 4: Recording, Reporting, Budgeting and Decision-making
In this unit students further develop their understanding of accounting for a trading business owned by a sole proprietor and the role of accounting as an information system. Students use the double entry system of recording financial data, and prepare reports using the accrual basis of accounting and the perpetual method of inventory recording. Both manual methods and ICT are used to record and report.

Students extend their understanding of the recording and reporting process with the inclusion of balance day adjustments and alternative depreciation methods. They investigate both the role and importance of budgeting in decision-making for a business. They analyse and interpret accounting reports and graphical representations to evaluate the performance of a business. From this evaluation, students suggest strategies to business owners to improve business performance.

Where appropriate, the accounting procedures developed in each area of study should incorporate application of the Conceptual Framework and financial indicators to measure business performance, as well as the ethical considerations of business owners when making decisions, including financial, social and environmental.

Assessment

Satisfactory Completion

The award of satisfactory completion for a unit is based on whether the student has demonstrated the set of outcomes specified for the unit. Teachers should use a variety of learning activities and assessment tasks to provide a range of opportunities for students to demonstrate the key knowledge and key skills in the outcomes.

The areas of study and key knowledge and key skills listed for the outcomes should be used for course design and the development of learning activities and assessment tasks.

Levels of Achievement

Units 1 and 2

Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Accounting are as follows:

- **Unit 3 School-assessed Coursework: 25 per cent**
- **Unit 4 School-assessed Coursework: 25 per cent**
- **End-of-year examination: 50 per cent.**

BIOLOGY

Scope of Study

Biology is a diverse and evolving science discipline that seeks to understand and explore the nature of life, past and present. Despite the diversity of organisms and their many adaptations for survival in various environments, all life forms share a degree of relatedness and a common origin. The study explores the dynamic relationships between organisms and their interactions with the non-living environment. It also explores the processes of life, from the molecular world of the cell to that of the whole organism, that maintain life and ensure its continuity.

Students examine classical and contemporary research, models and theories to understand how knowledge in biology has evolved and continues to evolve in response to new evidence and discoveries. An understanding of the complexities and diversity of biology leads students to appreciate the interconnectedness of the content areas both within biology, and across biology and the other sciences.

An important feature of undertaking a VCE science study is the opportunity for students to engage in a range of inquiry tasks that may be self-designed, develop key science skills and interrogate the links between theory, knowledge and practice. In VCE Biology inquiry methodologies can include laboratory experimentation, fieldwork which may also involve use of technologies and sampling techniques, microscopy, local and remote data logging, simulations, animations, literature reviews and the use of global databases and bioinformatics tools. Students work collaboratively as well as independently on a range of tasks. They pose questions, formulate hypotheses and collect, analyse and critically interpret qualitative and quantitative data.

They analyse the limitations of data, evaluate methodologies and results, justify conclusions, make recommendations and communicate their findings. Students investigate and evaluate issues, changes and alternative proposals by considering both shorter and longer term consequences for the individual, environment and society. Knowledge of the safety considerations and bioethical standards associated with biological investigations is integral to the study of VCE Biology.

As well as an increased understanding of scientific processes, students develop capacities that enable them to critically assess the strengths and limitations of science, respect evidence-based conclusions and gain an awareness of the ethical, social and political contexts of scientific endeavours.

Rationale

VCE Biology enables students to investigate the processes involved in sustaining life at cellular, system, species and ecosystem levels. In undertaking this study, students examine how life has evolved over time and understand that in the dynamic and interconnected system of life all change has a consequence that may affect an individual, a species or the collective biodiversity of Earth.

The study gives students insights into how knowledge of molecular and evolutionary concepts underpin much of contemporary biology, and the applications used by society to resolve problems and make advancements.

In VCE Biology students develop a range of inquiry skills involving practical experimentation and research, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary biology-related issues, and communicate their views from an informed position.

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

Structure
The study is made up of four units:
Unit 1: How do living things stay alive?
Unit 2: How is continuity of life maintained?
Unit 3: How do cells maintain life?
Unit 4: How does life change and respond to challenges over time
Each unit contains two or three areas of study.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Students entering Unit 3 without Units 1 and/or 2 may be required to undertake additional preparation as prescribed by their teacher
All VCE studies are benchmarked against comparable national and international curriculum.

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, from the single celled to the multicellular organism, and the requirements for sustaining cellular processes in terms of inputs and outputs. They analyse types of adaptations that enhance the organism's survival in a particular environment and consider the role homeostatic mechanisms play in maintaining the internal environment.

Students investigate how a diverse group of organisms form a living interconnected community that is adapted to, and utilises, the abiotic resources of its habitat. The role of a keystone species in maintaining the structure of an ecosystem is explored. 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 focus on cell reproduction and the transmission of biological information from generation to generation. Students learn that all cells are derived from pre-existing cells through the cell cycle. They examine the process of DNA replication and compare cell division in both prokaryotic and eukaryotic organisms.

Students explore the mechanisms of asexual and sexual reproductive strategies, and consider the advantages and disadvantages of these two types of reproduction. 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 terminology from 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.

They consider the role of genetic knowledge in decision making about the inheritance of autosomal dominant, autosomal recessive and sex-linked genetic conditions. In this context the uses of genetic screening and its social and ethical issues are examined.

Unit 3: How Do Cells Maintain Life?
The cell is a dynamic system of interacting molecules that define life. An understanding of the workings of the cell enables an appreciation of both the capabilities and the limitations of living organisms whether animal, plant, fungus or microorganism. The convergence of cytology, genetics and biochemistry makes cell biology one of the most rapidly evolving disciplines in contemporary biology.

In this unit students investigate the workings of the cell from several perspectives. They explore the importance of the insolubility of the plasma membrane in water and its differential permeability to specific solutes in defining the cell, its internal spaces and the control of the movement of molecules and ions in and out of such spaces.

Students 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. They explore the chemistry of cells by examining the nature of biochemical pathways, their components and energy transformations. Cells communicate with each other using a variety of signalling molecules.

Students consider the types of signals, the transduction of information within the cell and cellular responses. At this molecular level students study the human immune system and the interactions between its components to provide immunity to a specific antigen.

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. The accumulation of changes over time is considered as a mechanism for biological evolution by natural selection that leads to the rise of new species.

Students examine change in life forms using evidence from palaeontology, biogeography, developmental biology and structural morphology. They explore how technological developments in the fields of comparative genomics, molecular homology and bioinformatics have resulted in evidence of change through measurements of relatedness between species.

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.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Assessment of levels of achievement for these units will not be reported to the VCAA. Schools may choose to report levels of achievement using grades, descriptive statements or other indicators.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Biology are as follows:
Unit 3 School-assessed Coursework: 16 per cent
Unit 4 School-assessed Coursework: 24 per cent
End-of-year examination: 60 per cent.

BUSINESS MANAGEMENT

Scope of Study
VCE Business Management examines the ways businesses manage resources to achieve objectives. The VCE Business Management study design follows the process from the first idea for a business concept, to planning and establishing a business, through to the day-to-day management of a business. It also considers changes that need to be made to ensure continued success of a business.

Students develop an understanding of the complexity of the challenges facing decision makers in managing these resources.

A range of management theories is considered and compared with management in practice through contemporary case studies drawn from the past four years. Students learn to propose and evaluate alternative strategies to contemporary challenges in establishing and maintaining a business.

Rationale
In contemporary Australian society there are a range of businesses managed by people who establish systems and processes to achieve a variety of objectives. These systems and processes are often drawn from historical experience and management theories designed to optimise the likelihood of achieving success.

In studying VCE Business Management, students develop knowledge and skills that enhance their confidence and ability to participate effectively as socially responsible and ethical members, managers and leaders of the business community, and as informed citizens, consumers and investors.

The study of Business Management leads to opportunities across all facets of the business and management field such as small business owner, project manager, human resource manager, operations manager or executive manager. Further study can lead to specialisation in areas such as marketing, public relations and event management.

Structure
The study is made up of four units.
Unit 1: Planning a business
Unit 2: Establishing a business
Unit 3: Managing a business
Unit 4: Transforming a business

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.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education.

Unit 1: Planning a Business
Businesses of all sizes are major contributors to the economic and social wellbeing of a nation. Therefore how businesses are formed and the fostering of conditions under which new business ideas can emerge are vital for a nation's wellbeing. Taking a business idea and planning how to make it a reality are the cornerstones of economic and social development.

In this unit students explore the factors affecting business ideas and the internal and external environments within which businesses operate, and the effect of these on planning a business.

Unit 2: Establishing a Business
This unit focuses on the establishment phase of a business's life. Establishing a business involves complying with legal requirements as well as making decisions about how best to establish a system of financial record keeping, staff the business and establish a customer base. In this unit students examine the legal requirements that must be satisfied to establish a business. They investigate the essential features of effective marketing and consider the best way to meet the needs of the business in terms of staffing and financial record keeping.

Students analyse various management practices in this area by applying this knowledge to contemporary business case studies from the past four years.

Unit 3: Managing a Business
In this unit students explore the key processes and issues concerned with managing a business efficiently and effectively to achieve the business objectives. Students examine the different types of businesses and their respective objectives. They consider corporate culture, management styles, management skills and the relationship between each of these. Students investigate strategies to manage both staff and business operations to meet objectives.

Students develop an understanding of the complexity and challenge of managing businesses and through the use of contemporary business case studies from the past four years have the opportunity to compare theoretical perspectives with current practice.

Unit 4: Transforming a Business
Businesses are under constant pressure to adapt and change to meet their objectives. In this unit students consider the importance of reviewing key performance indicators to determine current performance and the strategic management necessary to position a business for the future. Students study a theoretical model to undertake change, and consider a variety of strategies to manage change in the most efficient and effective way to improve business performance.

They investigate the importance of leadership in change management. Using a contemporary business case study from the past four years, students evaluate business practice against theory.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Business Management are as follows:
- **Unit 3 School-assessed Coursework: 25 per cent**
- **Unit 4 School-assessed Coursework: 25 per cent**
- **End-of-year examination: 50 per cent.**

CHEMISTRY

Scope of study

Chemistry explores and explains the composition and behaviour of matter and the chemical processes that occur on Earth and beyond. Chemical models and theories are used to describe and explain known chemical reactions and processes. Chemistry underpins the production and development of energy, the maintenance of clean air and water, the production of food, medicines and new materials, and the treatment of wastes.

VCE Chemistry enables students to explore key processes related to matter and its behaviour. Students consider the relationship between materials and energy through four themes: the design and composition of useful materials, the reactions and analysis of chemicals in water, the efficient production and use of energy and materials, and the investigation of carbon-based compounds as important components of body tissues and materials used in society.

Students examine classical and contemporary research, models and theories to understand how knowledge in chemistry has evolved and continues to evolve in response to new evidence and discoveries. An understanding of the complexities and diversity of chemistry leads students to appreciate the interconnectedness of the content areas both within chemistry, and across chemistry and the other sciences.

An important feature of undertaking a VCE science study is the opportunity for students to engage in a range of inquiry tasks that may be self-designed, develop key science skills and interrogate the links between theory, knowledge and practice. In VCE Chemistry inquiry methodologies can include laboratory experimentation, modelling, site tours, fieldwork, local and remote data-logging, simulations, animations, literature reviews and the use of global databases. Students work collaboratively as well as independently on a range of tasks. They pose questions, formulate hypotheses and collect, analyse and critically interpret qualitative and quantitative data.

Students analyse the limitations of data, evaluate methodologies and results, justify conclusions, make recommendations and communicate their findings. They investigate and evaluate issues, changes and alternative proposals by considering both shorter and longer term consequences for the individual, environment and society. Knowledge of the safety considerations, including use of safety data sheets, and ethical standards associated with chemical investigations is integral to the study of VCE Chemistry.

As well as an increased understanding of scientific processes, students develop capacities that enable them to critically assess the strengths and limitations of science, respect evidence-based conclusions and gain an awareness of the ethical, social and political contexts of scientific endeavours.

Rationale

VCE Chemistry enables students to examine a range of chemical, biochemical and geophysical phenomena through the exploration of the nature of chemicals and chemical processes. In undertaking this study, students apply chemical principles to explain and quantify the behaviour of matter, as well as undertake practical activities that involve the analysis and synthesis of a variety of materials.

In VCE Chemistry students develop a range of inquiry skills involving practical experimentation and research specific to the knowledge of the discipline, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary chemistry-related issues, and communicate their views from an informed position.

VCE Chemistry provides for continuing study pathways within the discipline and leads to a range of careers. Branches of chemistry include organic chemistry, inorganic chemistry, analytical chemistry, physical chemistry and biochemistry. In addition, chemistry is applied in many fields of endeavour including agriculture, bushfire research, dentistry, dietetics, education, engineering, environmental sciences, forensic science, forestry, horticulture, medicine, metallurgy, meteorology, pharmacy, sports science, toxicology, veterinary science and viticulture.

Structure
The study is made up of four units:
Unit 1: How can the diversity of materials be explained?
Unit 2: What makes water such a unique chemical?
Unit 3: How can chemical processes be designed to optimise efficiency?
Unit 4: How are organic compounds categorised, analysed and used?

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Students entering Unit 3 without Units 1 and/or 2 may be required to undertake additional preparation as prescribed by their teacher.

Unit 1: How Can The Diversity of Materials Be Explained?
The development and use of materials for specific purposes is an important human endeavour. 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 examine the modification of metals, assess the factors that affect the formation of ionic crystals and investigate a range of non-metallic substances from molecules to polymers and giant lattices and relate their structures to specific applications.

Students are introduced to quantitative concepts in chemistry including the mole concept. They apply their
knowledge to determine the relative masses of elements and the composition of substances. Throughout the unit students use chemistry terminology including symbols, formulas, chemical nomenclature and equations to represent and explain observations and data from experiments, and to discuss chemical phenomena.

Unit 2: What Makes Water Such a Unique Chemical?
Water is the most widely used solvent on Earth. In this unit students explore the physical and chemical properties of water, the reactions that occur in water and various methods of water analysis.

Students examine the polar nature of a water molecule and the intermolecular forces between water molecules. They explore the relationship between these bonding forces and the physical and chemical properties of water. In this context students investigate solubility, concentration, pH and reactions in water including precipitation, acid-base and redox.

Students are introduced to stoichiometry and to analytical techniques and instrumental procedures, and apply these to determine concentrations of different species in water samples, including chemical contaminants. They use chemistry terminology including symbols, units, formulas and equations to represent and explain observations and data from experiments, and to discuss chemical phenomena. Students explore the solvent properties of water in a variety of contexts and analyse selected issues associated with substances dissolved in water.

Unit 3: How can Chemical Processes be Designed to Optimise Efficiency?
The global demand for energy and materials is increasing with world population growth. In this unit The global demand for energy and materials is increasing with world population growth. 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 compare and evaluate different chemical energy resources, including fossil fuels, biofuels, galvanic cells and fuel cells. They investigate the combustion of fuels, including the energy transformations involved, the use of stoichiometry to calculate the amounts of reactants and products involved in the reactions, and calculations of the amounts of energy released and their representations.

Students consider the purpose, design and operating principles of galvanic cells, fuel cells and electrolytic cells. In this context they use the electrochemical series to predict and write half and overall redox equations, and apply Faraday's laws to calculate quantities in electrolytic reactions.

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, including to predict and explain the conditions that will improve the efficiency and percentage yield of chemical processes. They use the language and conventions of chemistry including symbols, units, chemical formulas and equations to represent and explain observations and data collected from experiments, and to discuss chemical phenomena.

Unit 4: How are Organic Compounds Categorised, Analysed and Used?
The carbon atom has unique characteristics that explain the diversity and number of organic compounds that not only constitute living tissues but are also found in the fuels, foods, medicines and many of the materials we use in everyday life. 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.

Students study the ways in which organic structures are represented and named. They process data from
instrumental analyses of organic compounds to confirm or deduce organic structures, and perform volumetric analyses to determine the concentrations of organic chemicals in mixtures. Students 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.

Students investigate key food molecules through an exploration of their chemical structures, the hydrolytic reactions in which they are broken down and the condensation reactions in which they are rebuilt to form new molecules. In this context the role of enzymes and coenzymes in facilitating chemical reactions is explored. Students use calorimetry as an investigative tool to determine the energy released in the combustion of foods.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Chemistry are as follows:
Unit 3 School-assessed Coursework: 16 per cent
Unit 4 School-assessed Coursework: 24 per cent
End-of-year examination: 60 per cent.

CHINESE LANGUAGE CULTURE & SOCIETY

Scope of study
Through this study students develop an understanding of the language, social structures, traditions and contemporary cultural practices of diverse Chinese-speaking communities. They extend their study of the Chinese language, develop the skills to critically analyse different aspects of the cultures of Chinese-speaking peoples and their communities, and gain insight into the connections between languages, cultures and societies.

The language to be studied is Modern Standard Chinese.

For the purpose of this study design, Modern Standard Chinese is taken to be Putonghua in the spoken form and simplified character text in the written form. Throughout the Chinese-speaking communities, Modern Standard Chinese may also be known as Mandarin, Guoyu, Huayu, Hanyu, Zhongwen and Zhongguohua.

Rationale
The Chinese language is spoken by about a quarter of the world's population. It is the major language of
communication in China, Taiwan and Singapore, and is widely used by Chinese communities throughout the Asia-Pacific region, including Australia.

This study enables students to strengthen their communication skills in Modern Standard Chinese and to learn about aspects of the culture, history and social structures of Chinese-speaking communities through the medium of English. It also prepares students for further study and employment in areas such as tourism, technology, finance, services and business.

Structure
The study is made up of four units. 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 1
In this unit students focus on important aspects of life in modern China. They explore the tradition of filial piety and examine and explore the impact of generational change in families. Students analyse the schooling system to consider and reflect on cultural values in China.

They participate in discussions and analyse research about family and education in China. Students interact with other learners of the language and share information related to aspects of their personal world and life in Chinese-speaking communities. Students develop their reading and comprehension skills in Chinese and produce texts.

They also exchange information using appropriate vocabulary and expressions.

Unit 2
This unit focuses on the importance of myths, legends and Chinese art. Aspects of Chinese culture are explored through Chinese mythology as reflected through contemporary culture. Students undertake research related to, for example, mythology, legends and art.

This unit also focuses on developing the students' capacity to interact in spoken Chinese. Students develop their language skills by initiating, maintaining and closing an exchange.
Tourism, geographical features and regional differences in China are considered. Students are given opportunities to write appropriately for context and situation.

Unit 3
In this unit students investigate and examine significant and influential schools of thought throughout Chinese history and their impact on contemporary culture in China. Students explore and discuss in English the significance of Chinese philosophy and concepts related to contemporary Chinese culture and Chinese-speaking communities.

Students present information on leisure in China using appropriate intonation, tones and stress with the appropriate vocabulary and expressions. Students produce simple texts using their knowledge to infer meaning from linguistic and contextual features of various sources.

Unit 4
This unit focuses on an exploration of contemporary Chinese social values through aspects of change in China as well as through China's role in the global economy. Students investigate technological, social and political change in China. They reflect upon their own and others' cultural values and further develop the capacity to interact with other speakers of the language.

Information is also accessed through a range of spoken texts on the world of work and there is an emphasis on conveying meaning accurately in spoken Chinese. Students also further develop their writing skills in the area of future employment.

Satisfactory completion
The award of satisfactory completion for a unit is based on whether the student has demonstrated the set of outcomes specified for the unit.

Levels of Achievement
Units 1 & 2
All assessments at Units 1 and 2 are school-based. Procedures for assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 & 4
External assessment
The level of achievement for Units 3 and 4 is also assessed by two end-of-year examinations:
- an oral examination
- a written examination.

Oral examination (approximately 15 minutes) 30 marks
The oral examination has two sections and will be conducted in Chinese. It will be conducted with two assessors and will be recorded for verification purposes.
Section 1: General conversation in Chinese (7 minutes) 15 marks
The examination will begin with a conversation between the student and the assessor/s. It will consist of a general conversation about the student's personal world; for example, school and home life, family and friends, leisure and future aspirations.
Section 2: Presentation of a visual stimulus in Chinese (8 minutes) 15 marks
Students will provide a two-minute description of an item they have brought to the examination, such as a picture, a cartoon or an artefact. The stimulus will be related to the prescribed topics for Units 3 and 4. Students will then respond in Chinese to a series of simple questions on the stimulus provided.

Contribution to final assessment
School-assessed Coursework for Unit 3 contributes 25 per cent.
School-assessed Coursework for Unit 4 contributes 25 per cent.
The oral examination will contribute 15 per cent.
The written examination will contribute 35 per cent.

CHINESE FIRST LANGUAGE

Scope of Study
The language to be studied and assessed is the modern standard/official version of Chinese.

For the purpose of this study design, Modern Standard Chinese is taken to be putonghua in the spoken form and simplified character text in the written form. This does not, however, preclude the use of written texts in full-form or complex (traditional) characters.

Students may choose to use either complex or simplified characters in their writing.

Rationale
The study of a language other than English contributes to the overall education of students, most particularly in the area of communication, but also in the areas of cross-cultural understanding, cognitive development, literacy and general knowledge.

It provides access to the cultures of communities which use the language and promotes understanding of different attitudes and values within the wider Australian community and beyond.

The study of Chinese develops students' ability to understand and use a language which is spoken by about a quarter of the world's population. It is the major language of communication in China and Singapore, and is widely used by Chinese communities throughout the Asia-Pacific region, including Australia.

Studying Chinese can provide a basis for continued learning and a pathway for students into a number of post-secondary options. A knowledge of Chinese can provide students with enhanced vocational opportunities in many fields, including banking and international finance, commerce, diplomacy, and translating and interpreting.

Structure
The study is made up of four units. Each unit deals with specific content and is designed to enable students to achieve a set of outcomes. Each outcome is described in terms of key knowledge and skills.

Units 1 – 4 Common Areas of study
The areas of study for Chinese First Language comprise themes and topics, text types, kinds of writing, vocabulary and grammar. They are common to all four units of the study, and are designed to be drawn upon in an integrated way, as appropriate to the linguistic needs of the student, and the outcomes for the unit.

The themes and topics are the vehicle through which the student will demonstrate achievement of the outcomes, in the sense that they form the subject of the activities and tasks the student undertakes. The text types, kinds of writing, vocabulary and grammar are linked, both to each other, and to the themes and topics.

Together, as common areas of study, they add a further layer of definition to the knowledge and skills required for successful achievement of the outcomes.

The common areas of study provide the opportunity for the student to build upon what is familiar, as well as develop knowledge and skills in new and more challenging areas.

Themes, Topics and Sub-Topics
There are three prescribed themes:
• Self and others
• Tradition and change in the Chinese-speaking communities
• Global issues

These themes have a number of prescribed topics and suggested sub-topics. The placement of the topics under one or more of the three themes is intended to provide a particular perspective or perspectives for each of the topics. The suggested sub-topics expand on the topics, and are provided to guide the student and teacher as to how topics may be treated.

It is not expected that all topics will require the same amount of study time. The length of time and depth of treatment devoted to each topic will vary according to the outcomes being addressed, as well as the linguistic needs and interests of the student.

As well as acquiring the linguistic resources to function effectively as a non-specialist within all three themes, the student is required to undertake a detailed study in Units 3 and 4. This detailed study should relate to the prescribed themes and topics and be based on a selected sub-topic.

Satisfactory Completion
The award of satisfactory completion for a unit is based on whether the student has demonstrated the set of outcomes specified for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
Percentage contributions to the study score in Chinese First Language are as follows:
- **Unit 3 school-assessed coursework: 25 per cent**
- **Unit 4 school-assessed coursework: 25 per cent**
- **Examinations: oral component 10 per cent**
  written component 40 per cent

COMPUTING

Scope of study
VCE Computing focuses on the application of a problem-solving methodology, and strategies and techniques for managing information systems in a range of contexts, to create digital solutions that meet specific needs. 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 Computing is underpinned by four key concepts: approaches to problem solving, data and information, digital systems and interactions and impact. Together these form the conceptual framework of the study and the organising elements for its key knowledge.

An important component of the study is the opportunity for students to develop social capital, that is, the shared understanding in social networks that enable cooperation and a cooperative approach to problem solving.

VCE Computing provides students with opportunities to acquire and apply knowledge and skills to use digital systems efficiently and effectively when creating digital solutions both individually and as part of a network. Students investigate legal requirements and ethical responsibilities that individuals and organisations have with respect to the security and integrity of data.

Through a structured approach to problem solving, incorporating computational, design and systems thinking, students are equipped to orient themselves towards the future, with an awareness of the technical and societal implications of digital systems.

Rationale
The ubiquity and rapid pace of developments in digital systems, and the increasing availability of digitised data and information are having major influences on many aspects of society and the economy. This study equips students with the knowledge and skills to be discerning users of digital systems, data and information and creators of digital solutions. They are equipped to apply new ways of thinking as well as technical and social protocols when developing intellectual and social capital.

VCE Computing supports students to participate in a globalised society and economy as they learn how to exploit the capabilities of digital systems and manage risks when communicating and collaborating with others locally and globally. The study provides students with practical opportunities to create digital solutions for real-world problems in a range of settings, developing an essential tool set for current and future learning, work and social endeavours.

VCE Computing provides a pathway to further studies in areas such as computer science, information systems, business, systems engineering, robotics, linguistics, logistics, database management and software development, and to careers in digital-technologies based areas such as information architecture, web design, business analysis and project management.

Structure
The study is made up of four units:

Unit 1: Computing	Unit 2: Computing
Unit 3: Informatics	Unit 4: Informatics

Unit 1: Computing
In this unit students focus on how data, information and networked digital systems can be used to meet a range of users' current and future needs.

In Area of Study 1 students collect primary data when investigating an issue, practice or event and create a digital solution that graphically presents the findings of the investigation.

In Area of Study 2 students examine the technical underpinnings of wireless and mobile networks, and security controls to protect stored and transmitted data, to design a network solution that meets an identified need or opportunity. They predict the impact on users if the network solution were implemented.

In Area of Study 3 students acquire and apply their knowledge of information architecture and user interfaces, together with web authoring skills, when creating a website to present different viewpoints on a contemporary issue.

When creating solutions students need to apply relevant stages of the problem-solving methodology as well as computational, design and systems thinking skills.

Software tools
The following indicates the software tools that students are required to both study and use in this unit:-
Area of Study 1 - Any software tool to create a graphic solution
Area of Study 3 - Web authoring software, visualising thinking tool/s, tool for planning a project

The following indicates the software tool that students are required to use, but not required to study, in this unit:-
Area of Study 2 - A graphic tool to represent a network solution

Unit 2: Computing
In this unit students focus on data and how the application of computational, design and systems thinking skills support the creation of solutions that automate the processing of data.

In Area of Study 1 students develop their computational thinking skills when using a programming or scripting language to create solutions. They engage in the design and development stages of the problem-solving methodology.

In Area of Study 2 students develop a sound understanding of data and how a range of software tools can be used to extract data from large repositories and manipulate it to create visualisations that are clear, usable and attractive, and reduce the complexity of data.

In Area of Study 3 students apply all stages of the problem-solving methodology to create a solution using database management software and explain how they are personally affected by their interactions with a database system.

Software tools
The following indicates the software tools that students are required to both study and use in this unit:
Area of Study 1 - A programming or scripting language that can support object-oriented programming
Area of Study 2 - One data manipulation tool and one visualisation tool, for example a programming language, database software, spreadsheet software, data visualisation software
Area of Study 3 - Database management software

Unit 3: Informatics
In Informatics Units 3 and 4 students focus on data, information and information systems. In Unit 3 students consider data and how it is acquired, managed, manipulated and interpreted to meet a range of needs.

In Area of Study 1 students investigate the way organisations acquire data using interactive online solutions, such as websites and applications (apps), and consider how users interact with these solutions when conducting online transactions. They examine how relational database management systems (RDBMS) store and manipulate data typically acquired this way. Students use software to create user flow diagrams that depict how users interact with online solutions, and acquire and apply knowledge and skills in the use of an RDBMS to create a solution. Students develop an understanding of the power and risks of using complex data as a basis for decision making.

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

Software tools
The following indicates the software tools that students are required to both study and use in this unit.
Area of Study 1 - A relational database management system (RDBMS). Drawing or graphics software.

The following indicates the software tools that students are required to use, but not required to study, in this unit:-
Area of Study 2 - Appropriate tool for documenting project plans . Software tools to capture, store, prepare and manipulate data.

Unit 4: Informatics
In this unit, students focus on strategies and techniques for manipulating, managing and securing data and information to meet a range of needs.

In Area of Study 1 students draw on the analysis and conclusion of their hypothesis determined in Unit 3, Outcome 2, and then design, develop and evaluate a multimodal, online solution that effectively communicates the conclusion and findings. The evaluation focuses on the effectiveness of the solution in communicating the conclusion and the reasonableness of the findings. Students use their project plan to monitor their progress and assess the effectiveness of their plan and adjustments in managing the project.

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

Software tools
The following indicates the software tool that students are required to both study and use in this unit
Area of Study 1 - Software tools to manipulate data for creating a multimodal online solution

The following indicates the software tool that students are required to use, but not required to study, in this unit:-
Area of Study 1 - Appropriate tool for documenting project plans

Satisfactory Completion
The award of satisfactory completion for a unit is based on the teacher's decision that the student has demonstrated achievement of the set of outcomes specified for the unit.

Assessment of Levels of Achievement
Units 1 & 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

External Assessment
Unit 3 School-assessed Coursework: 10 per cent
Unit 4 School-assessed Coursework: 10 per cent
School-assessed Task: 30 per cent
The examination will contribute 50 per cent.

***PLEASE NOTE THAT THERE COULD BE A NEW STUDY DESIGN FOR UNITS 3 & 4 2021**

ENGLISH

Scope of Study
VCE English focuses on how English language is used to create meaning in written, spoken and multimodal texts of varying complexity.

Literary texts selected for study are drawn from the past and present, from Australia and from other cultures. Other texts are selected for analysis and presentation of argument.

The study is intended to meet the needs of students with a wide range of expectations and aspirations, including those for who English is an additional language.

Rationale
The study of English contributes to the development of literate individuals capable of critical and creative thinking, aesthetic appreciation and creativity. This study also develops students' ability to create and analyse texts, moving from interpretation to reflection and critical analysis.

Through engagement with texts from the contemporary world and from the past, and using texts from Australia and from other cultures, students studying English become confident, articulate and critically aware communicators and further develop a sense of themselves, their world and their place within it. English helps equip students for participation in a democratic society and the global community.

This study will build on the learning established through VELS English in the key discipline concepts of language, literature and literacy, and the language modes of listening, speaking, reading, viewing and writing.

Structure
The study is made up of four units. 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.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education.

Text selection
Units 1 and 2
In Units 1 and 2, text selection is a school-based decision, refer to book list.

Units 3 and 4
In Units 3 and 4, text selection is a school-based decision, refer to book list.

Unit 1
In this unit, students read and respond to texts analytically and creatively. They analyse arguments and the use of persuasive language in texts and create their own texts intended to position audiences.

Students develop their skills in creating written, spoken and multimodal texts.

Unit 2
In this unit students compare the presentation of ideas, issues and themes in texts. They analyse arguments presented and the use of persuasive language in texts and create their own texts intended to position audiences. Students develop their skills in creating written, spoken and multimodal texts.

Unit 3
In this unit students read and respond to texts analytically and creatively. They analyse arguments and the use of persuasive language in texts.

Unit 4
In this unit students compare the presentation of ideas, issues and themes in texts.
They create an oral presentation intended to position audiences about an issue currently debated in the media.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on the teacher's decision that the student has demonstrated achievement of the set of outcomes specified for the unit. Demonstration of achievement of outcomes and satisfactory completion of a unit are determined by evidence gained through the assessment of a range of learning activities and tasks.

Levels of Achievement
Units 1 and 2
Comprises a number of tasks designed to test competencies and will be done under formal test conditions.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE English/EAL are as follows:
Unit 3 School-assessed Coursework: 25 per cent
Unit 4 School-assessed Coursework: 25 per cent
End-of-year examination: 50 per cent.

EAL (ENGLISH AS ANOTHER LANGUAGE)

The EAL course is the same as English but the EAL assessment tasks are appropriately modified to suit the needs of students for whom English is their second language.

ENGLISH LANGUAGE

Scope of Study
VCE English Language explores the ways in which language is used by individuals and groups and reflects our thinking and values. Learning about language helps us to understand ourselves, the groups with which we identify and the society we inhabit.

English Language builds on students' previous learning about the conventions and codes used by speakers and writers of English. Informed by the discipline of linguistics, it provides students with metalinguistic tools to understand and analyse language use, variation and change. Students studying English Language examine how uses and interpretations of language are nuanced and complex rather than a series of fixed conventions. Students explore how people use spoken and written English to communicate, to think and innovate, to construct identities, to build and interrogate attitudes and assumptions and to create and disrupt social cohesion.

The study of English Language enables students to understand the structures, features and discourses of written and spoken texts through the systematic and objective deconstruction of language in use.

Rationale
The study of English Language enables students to further develop and refine their skills in reading, writing, listening to and speaking English. Students learn about personal and public discourses in workplaces, fields of study, trades and social groups.

In this study students read widely to develop their analytical skills and understanding of linguistics. Students are expected to study a range of texts, including publications and public commentary about language in print and multimodal form. Students also observe and discuss contemporary language in use, as well as consider a range of written and spoken texts.

Knowledge of how language functions provides a useful basis for further study or employment in numerous fields such as arts, sciences, law, politics, trades and education. The study supports language-related fields such as psychology, the study of other languages, speech and reading therapy, journalism and philosophy. It also supports study and employment in other communication-related fields, including designing information and communications technology solutions or programs.

Structure
The study is made up of four units:
Unit 1: Language and communication
Unit 2: Language change
Unit 3: Language variation and social purpose
Unit 4: Language variation and identity

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.

Metalanguage for Units 1 & 2
Each of the English Language units requires students to understand linguistic concepts and use metalanguage appropriately to describe and analyse language in an objective and a systematic way. Metalanguage underpins the key knowledge and key skills and provides students with the means to discuss elements of linguistic study. Students are required to understand and use the metalanguage contained in the unit and area of study.

Metalanguage for Units 3 and 4
Each of the English Language units requires students to understand linguistic concepts and use metalanguage appropriately to describe and analyse language in an objective and a systematic way. Metalanguage underpins the key knowledge and key skills and provides students with the means to discuss elements of linguistic study. Students are required to understand and use the metalanguage provided in the unit and area of study introductions, the key knowledge and skills, and the following lists.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education.

Unit 1: Language and Communication
Language is an essential aspect of human behaviour and the means by which individuals relate to the world, to each other and to the communities of which they are members. In this unit, students consider the way language is organised so that its users have the means to make sense of their experiences and to interact with others.

Students explore the various functions of language and the nature of language as an elaborate system of signs. The relationship between speech and writing as the dominant modes of language and the impact of situational and cultural contexts on language choices are also considered. Students investigate children's ability to acquire language and the stages of language acquisition across a range of subsystems.

Unit 2: Language Change
In this unit, students focus on language change. Languages are dynamic and language change is an inevitable and a continuous process. Students consider factors contributing to change over time in the English language and factors contributing to the spread of English. They explore texts from the past and from the present, considering how all subsystems of the language system are affected – phonetics and phonology, morphology and lexicology, syntax, discourse and semantics. Attitudes to language change vary considerably and these are also considered.

In addition to developing an understanding of how English has been transformed over the centuries, students explore the various possibilities for the future of English. They consider how the global spread of English has led to a diversification of the language and to English now being used by more people as an additional or a foreign language than as a first language. Contact between English and other languages has led to the development of geographical and ethnic varieties, but has also hastened the decline of indigenous languages. Students consider the cultural repercussions of the spread of English.

Unit 3: Language Variation and Social Purpose
In this unit students investigate English language in contemporary Australian social settings, along a continuum of informal and formal registers. They consider language as a means of social interaction, exploring how through written and spoken texts we communicate information, ideas, attitudes, prejudices and ideological stances.

Students examine the stylistic features of formal and informal language in both spoken and written modes: the grammatical and discourse structure of language; the choice and meanings of words within texts; how words are combined to convey a message; the purpose in conveying a message; and the particular context in which a message is conveyed. Students learn how to describe the interrelationship between words, sentences and text as a means of exploring how texts construct message and meaning.

Students consider how texts are influenced by the situational and cultural contexts in which they occur. They examine how function, field, mode, setting and the relationships between participants all contribute to a person's language choices, as do the values, attitudes and beliefs held by participants and the wider community.

Students learn how speakers and writers select features from within particular stylistic variants, or registers, and this in turn establishes the degree of formality within a discourse. They learn how language can be indicative of relationships, power structures and purpose through the choice of a particular variety of language and through the ways in which language varieties are used in processes of inclusion and exclusion.

Unit 4: Language Variation and Identity
In this unit, students focus on the role of language in establishing and challenging different identities. There are many varieties of English used in contemporary Australian society, including national, regional, cultural and social variations. Standard Australian English is the variety that is granted prestige in contemporary Australian society and it has a role in establishing national identity. However, non-Standard English varieties also play a role in constructing users' social and cultural identities.

Students examine a range of texts to explore the ways different identities are constructed. These texts include extracts from novels, films or television programs, poetry, letters and emails, transcripts of spoken interaction, songs, advertisements, speeches and bureaucratic or official documents.

Students explore how our sense of identity evolves in response to situations and experiences and is influenced by how we see ourselves and how others see us. Through our language we express ourselves as individuals and signal our membership of particular groups. Students explore how language can distinguish between 'us' and 'them', creating solidarity and reinforcing social distance.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on the teacher's decision that the student has demonstrated achievement of the set of outcomes specified for the unit. Demonstration of achievement of outcomes and satisfactory completion of a unit are determined by evidence gained through the assessment of a range of learning activities and tasks.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE English Language are as follows:
Unit 3 School-assessed Coursework: 25 per cent
Unit 4 School-assessed Coursework: 25 percent
End-of-year examination: 50 per cent.

HEALTH & HUMAN DEVELOPMENT

Scope of Study
VCE Health and Human Development takes a broad and multidimensional approach to defining and understanding health and wellbeing. Students investigate the World Health Organization's definition and other interpretations of health and wellbeing. For the purposes of this study, students consider wellbeing to be an implicit element of health. Wellbeing is a complex combination of all dimensions of health, characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged.

Students examine health and wellbeing, and human development as dynamic concepts, subject to a complex interplay of biological, sociocultural and environmental factors, many of which can be modified by health care and other interventions. Students consider the interaction of these factors, with particular focus on the social factors that influence health and wellbeing; that is, on how health and wellbeing, and development, may be influenced by the conditions into which people are born, grow, live, work and age.

Students consider Australian and global contexts as they investigate variations in health status between populations and nations. They look at the Australian healthcare system and research what is being done to address inequalities in health and development outcomes. They examine and evaluate the work of global organisations such as the United Nations and the World Health Organization, as well as non-government organisations and the Australian government's overseas aid program.

This study presents concepts of health and wellbeing, and human development, from a range of perspectives: individual and collective; local, national and global; and across time and the lifespan. Students develop health literacy as they connect their learning to their lives, communities and world. They develop a capacity to respond to health information, advertising and other media messages, enabling them to put strategies into action to promote health and wellbeing in both personal and community contexts.

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

VCE Health and Human Development is designed to foster health literacy. As individuals and as citizens, students develop their ability to navigate information, to recognise and enact supportive behaviours, and to evaluate healthcare initiatives and interventions. Students take this capacity with them as they leave school and apply their learning in positive and resilient ways through future changes and challenges.

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

Structure
The study is made up of four units.
Unit 1: Understanding health and wellbeing
Unit 2: Managing health and development
Unit 3: Australia's health in a globalised world
Unit 4: Health and human development in a global context

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education.

Unit 1: Understanding Health and Wellbeing
This unit looks at health and wellbeing as a concept with varied and evolving perspectives and definitions.
It takes the view that health and wellbeing are subject to a wide range of contexts and interpretations, with different meanings for different people. As a foundation to the understanding of health, students should investigate the World Health Organization's (WHO) definition and also explore other interpretations.

Wellbeing is a complex combination of all dimensions of health, characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged. For the purposes of this study, students should consider wellbeing to be an implicit element of health.

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 and Development
This unit investigates transitions in health and wellbeing, and development, from lifespan and societal perspectives. Students look at changes and expectations that are part of the progression from youth to adulthood.

This unit promotes the application of health literacy skills through an examination of adulthood as a time of increasing independence and responsibility, involving the establishment of long-term relationships, possible considerations of parenthood and management of health-related milestones and changes.

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.

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). They use this knowledge as background to their analysis and evaluation of variations in the health status of Australians. Area of Study 2 focuses on health promotion and improvements in population health over time.

Students look at various public health approaches and the interdependence of different models as they research health improvements and evaluate successful programs. While the emphasis is on the Australian health system, the progression of change in public health approaches should be seen within a global context.

Unit 4: Health and Human Development in a Global Context
This unit examines health and wellbeing, and human development in a global context. Students use data to investigate health status and burden of disease in different countries, exploring factors that contribute to health inequalities between and within countries, including the physical, social and economic conditions in which people live.

Students build their understanding of health in a global context through examining changes in burden of disease over time and studying the key concepts of sustainability and human development. They consider the health implications of increased globalisation and worldwide trends relating to climate change, digital technologies, world trade and the mass movement of people.

Area of Study 2 looks at global action to improve health and wellbeing and human development, focusing on the United Nations' (UN's) Sustainable Development Goals (SDGs) and the work of the World Health Organization (WHO).

Students also investigate the role of non-government organisations and Australia's overseas aid program. Students evaluate the effectiveness of health initiatives and programs in a global context and reflect on their capacity to take action.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on whether the student has demonstrated the set of outcomes specified for the unit.

Levels of Achievement

Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Health and Human Development are as follows:
- **Unit 3 School-assessed Coursework: 25 per cent**
- **Unit 4 School-assessed Coursework: 25 per cent**
- **End-of-year examination: 50 per cent.**

HISTORY

Scope of Study
History involves inquiry into human action in the past, to make meaning of the past using primary sources as evidence. As historians ask new questions, revise interpretations or discover new sources, fresh understandings come to light.

Although history deals with the particular – specific individuals and key events – the potential scope of historical inquiry is vast and formed by the questions that historians pursue, the availability of sources and the capacity of historians to interpret those sources. VCE History reflects this range of inquiry by enabling students to engage with a range of times, people, places and ideas.

Ancient History investigates individuals and societies (Mesopotamia, Egypt, Greece, Rome and China) across three millennia. Global Empires explores the ideas and power relations accompanying the growth of empires in the Early Modern period. Twentieth century History examines the aftermath of the Great War as well as the causes and consequences of World War Two. Australian History investigates national history from colonial times to the end of the twentieth century and includes the histories of Indigenous Peoples. Revolutions explores the causes and consequences of revolution in France and Russia.

Rationale
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.

The study of history fosters the ability to ask searching questions, to engage in independent research, and to construct arguments about the past based on evidence. Historical comprehension enables a source to be understood in relation to its context; that is, students make links between the source and the world in which it was produced.

We can never know the whole past. Historical knowledge rests on the interpretation of sources that are used as evidence. Furthermore, judgments of historical significance made by historians are central to the discipline. Historians do not always agree about the meaning that is taken from the past: historical interpretations are often subject to academic and public debate. The study of history equips students to take an informed position on such matters, helping them develop as individuals and citizens.

Structure
The study is made up of thirteen units.

Units 1 and 2	Units 3 and 4
Global empires Unit 1: The making of empires 1400 –1775 Unit 2: Empires at work 1400 –1775	*Revolutions* Units 3 and 4 Revolutions
Twentieth century history Unit 1: Twentieth century history 1918 –1939 Unit 2: Twentieth century history 1945 –2000	*Australian history* Unit 3: Transformations: Colonial society to nation Unit 4: Transformations: Old certainties and new visions
Ancient history Unit 1: Ancient Mesopotamia Unit 2: Ancient Egypt Unit 2: Early China	*Ancient History* Units 3 and 4 Ancient history

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.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

Units 1 and 2: Global Empires

Unit 1: The making of empires
1400 –1775
The Early Modern era, 1400 –1775, was a time of transition between medieval feudalism and the modern, secular nation-state. At the dawn of the era, international trade was dominated by three powerful empires – the Venetian Empire, China under the Ming dynasty and the Ottoman Empire – who between them controlled key industries, commodities and trade hubs including the Silk Road. Emerging powers Portugal, Spain, France, Britain and the Netherlands sought to circumvent the power of these established empires by gaining access to goods through alternative means and routes. By harnessing new knowledge and technology, they launched voyages of exploration to the Asia-Pacific, the Americas and Africa.

Around the same time, new ideas were emerging to disrupt traditional beliefs and institutions. The Ptolemaic model, which placed Earth at the centre of the universe, was challenged by Copernicus and taken up by Galileo and other scholars of the Scientific Revolution (c. 1550 –c. 1700). The Catholic Church was threatened by both new scientific knowledge and the Protestant Reformation (1517–c. 1648) which questioned Rome's divine authority. The new paradigm of empiricism questioned assumptions and beliefs about godly intervention in the natural world. Gutenberg's printing press (c. 1450) allowed ordinary people, for the first time in history, to circulate ideas without mediation by officials, leading the way for new debates about individualism, rights and liberties during the Enlightenment (c. 1650 –1790s).

The key idea, however, to give impetus to new global empires was mercantilism. As the feudal era gave way to the early stages of capitalism, European powers began to gain imperial control through monopolies, subsidies and East India companies, which extracted profit from new colonial possessions.

This unit examines how the Portuguese, Spanish, French, British and Dutch empires harnessed new ideas and technologies to usurp the power of the established empires of Venice, China and the Ottoman Empire, thus entrenching their ideas and influence across the globe.

Unit 2: Empires at work 1400 –1775
In this unit students explore the operation of European colonies and the challenges they faced from within and without.

In the Early Modern period, 1400 –1775, new empires began to establish colonies and to trade on a global scale. Britain, France, the Netherlands, Spain, Portugal, Russia and the Ottoman Empire gained colonial possessions in a number of continents. The Mughals in India and the Ming and Qing dynasties in China gained control over vast territories but these were regional rather than global in reach.

Through the 'Columbian exchange' that followed Christopher Columbus' arrival in the New World, technologies, plants, animals, culture and diseases began to travel between continents. Gradually, humans began to be traded as commodities too, as the triangular slave trade across the Atlantic drew in nearly all of the major empires. This trafficking in human misery was not ended until the abolition movements of the Modern era.

Despite their profitability, colonies brought a number of difficulties. Indigenous peoples resisted colonisation, settler societies were complex and unpredictable and colonies were a drain on resources. Rival powers jostled for advantage, alliances and resources. The many wars waged between Early Modern empires culminated in all-out global warfare in the Seven Years' War (1754– 63). Britain's success in this war led to a period of dominance which lasted well into the twentieth century.

Units 1 & 2 Twentieth Century History

Unit 1 1918 - 1939

In Unit 1 students explore the nature of political, social and cultural change in the period between the world wars.

World War One is regarded by many as marking the beginning of twentieth century history since it represented such a complete departure from the past and heralded changes that were to have an impact for decades to come. The post-war treaties ushered in a period where the world was, to a large degree, reshaped with new borders, movements, ideologies and power structures. These changes affected developments in Europe, the USA, Asia, Africa and the Middle East. Economic instability caused by the Great Depression also contributed to the development of political movements. Despite ideals about future peace, reflected in the establishment of the League of Nations, the world was again overtaken by war in 1939.

The period after World War One was characterised by significant social and cultural change in the contrasting decades of the 1920s and 1930s. New fascist governments used the military, education and propaganda to impose controls on the way people lived, to exclude particular groups of people and to silence criticism. In Germany, the persecution of the Jewish people became intensified. In the USSR, millions of people were forced to work in state-owned factories and farms and had limited personal freedom. Japan became increasingly militarised and anti-western. In the USA, the consumerism and material progress of the 1920s was tempered by the Great Crash of 1929. Writers, artists, musicians, choreographers and filmmakers reflected, promoted or resisted political, economic and social changes.

Unit 2: 1945 –2000

In Unit 2 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.

The establishment of the United Nations in 1945 was intended to take an internationalist approach to avoiding warfare, resolving political tensions and addressing threats to human life and safety. The Universal Declaration of Human Rights adopted in 1948 was the first global expression of human rights.

Despite internationalist moves, the second half of the twentieth century was dominated by the competing ideologies of democracy and communism, setting the backdrop for the Cold War.

The period also saw challenge and change to the established order in many countries. The continuation of moves towards decolonisation led to independence movements in former colonies in Africa, the Middle East, Asia and the Pacific. New countries were created and independence was achieved through both military and diplomatic means. Old conflicts also continued and terrorism became increasingly global. The second half of the twentieth century also saw the rise of social movements that challenged existing values and traditions, such as the civil rights movement, feminism and environmental movements.

Units 1– 4: Ancient History

Unit 1: Ancient Mesopotamia

In this unit, students explore Ancient Mesopotamia. The lands between the rivers Tigris and the Euphrates have been described as the ‘cradle of civilisation’. Although this view is now contested in ancient history and archaeology, the study of Ancient Mesopotamia provides important insights about the growth of cities. Students investigate the creation of city-states and empires. They examine the invention of writing – a pivotal development in human history. This unit highlights the importance of primary sources (the material record and written sources) to historical inquiry about the origins of civilisation.

Unit 2: Ancient Egypt

Ancient Egypt gave rise to a civilisation that endured for approximately three thousand years. Unlike Mesopotamia, Egypt was not threatened by its neighbours for the greater part of its history. The Nile served as the lifeblood of urban settlements in Upper and Lower Egypt. Kingdoms rose, flourished and fell around the banks of this great river. This unit highlights the importance of primary sources (the material record and written sources) to historical inquiry about Old and Middle Kingdom Egypt.

Unit 2: Early China
The foundations of civilisation in China have traditionally been located in the Yellow River Valley, but archaeological evidence now suggests that early settlement was not confined to this area. Life in small agricultural communities, with distinct regional identities, marks the beginnings of civilisation in China. Interactions between these small and diverse settlements led to the formation of rival states, and then to the growth of an enduring civilisation. The development of a series of empires was central to Chinese civilisation.

Early China refers to what is known as the pre-imperial and early imperial periods. Historians and archaeologists refer to the pre-imperial period (up to 221 BC) as Ancient China. This unit begins with Ancient China and concludes with the end of the Han Empire in AD 220. It highlights the importance of primary sources (the material record and written sources) to historical inquiry about Early China.

Units 3 and 4: Ancient history
Egypt, Greece and Rome were major civilisations of the ancient Mediterranean. They have bestowed a powerful legacy on the contemporary world. In each of Units 3 and 4, students explore the structures of one of these societies and a period of crisis in its history. Life in these ancient societies was shaped by the complex interplay of social, political and economic factors. Trade, warfare and the exchange of ideas between societies also influenced the way people lived. Furthermore, all three societies experienced dramatic crises which caused massive disruption. During these times of upheaval, individuals acted in ways that held profound consequences for themselves and for their society.

These units highlight the importance of primary sources to historical inquiry about ancient civilisations.

Units 3 and 4: Australian history
Over the last two hundred years the history of European settlement in Australia has brought radical changes for the descendants of both the original Aboriginal inhabitants and the incoming colonists. From 1788 onwards people, ideas and events created colonial societies and eventually a new nation that confronted significant challenges and changes in its first century of existence.

Transformations in Australia's history have occurred sometimes chaotically in response to a sudden rush for land or gold and at other times in a debated and planned fashion, as in the creation of what was, in the early twentieth century, an advanced democracy. Over this time, crises and movements have also led governments and people to modify the status quo to confront critical challenges to the stability and defence of the nation.

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. The first slice of time 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.

Unit 3: Transformations: Colonial society to nation
In this unit students explore the transformation of the Port Phillip District (later Victoria) from the 1830s through to the end of the tumultuous gold rush decade in 1860. They consider the dramatic changes introduced as the British colonisers swiftly established themselves, taking possession of the land and then its newly discovered mineral riches.

Students examine transformations in the way of life of the Aboriginal peoples and to the environment as the European society consolidated itself. They also consider how new visions for the future created by the gold rush and the Eureka rebellion further transformed the new colony.

Students explore the type of society Australians attempted to create in the early years of the newly federated nation. Much of the legislation debated and passed by the Commonwealth Parliament was relatively advanced and Australia was seen as a social laboratory exploring new forms of rights and benefits for its citizens. Students evaluate the effect that Australian involvement in World War One had on the country's egalitarian and socially progressive aspirations.

Unit 4: Transformations: Old certainties and new visions
In this unit students investigate the continuing development of the nation in the early part of the twentieth century and the dramatic changes that occurred in the latter part of the century. After World War One the process of nation building was renewed. However, world events soon intruded again into the lives of all Australians. The economic crisis of the 1930s followed by another world war redirected the nation's priorities for a time as it struggled to regain economic stability and defeat its military enemies. The experience of both the Depression and World War Two gave rise to renewed thinking by Australians about how to achieve the type of society envisaged at the time of Federation. In Area of Study 1 students focus on one of the crises faced by the nation: The Great Depression 1929 –1939 or World War Two 1939 –1945.

In Area of Study 2 students explore social, economic and political changes in the latter part of the twentieth century that collectively challenged and/or overturned much of Australia's earlier carefully constructed social and economic fabric. Students examine two changes drawn from: Australia's involvement in the Vietnam War, Aboriginal land rights, equality for women, new patterns of immigration and/or a global economy.

Units 3 & 4 Revolutions

In Units 3 and 4 Revolutions students investigate the significant historical causes and consequences of political revolution. Revolutions represent great ruptures in time and are a major turning point 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. Revolution is a dramatically accelerated process whereby the new order attempts to create political and social change and transformation based on a new ideology. Progress in a post-revolutionary society is not guaranteed or inevitable. Post-revolutionary regimes are often threatened internally by civil war and externally by foreign threats. These challenges can result in a compromise of revolutionary ideals and extreme measures of violence, oppression and terror.

In these units students develop an understanding of the complexity and multiplicity of causes and consequences in the revolutionary narrative. They construct an argument about the past using primary sources as evidence and evaluate the extent to which the revolution brought change to the lives of people. They consider how perspectives of the revolution give an insight into the continuity and change experienced by those who lived through dramatic revolutionary moments. Students evaluate historical interpretations about the causes and consequences of revolution and the effects of change instigated by the new order.

For the two selected revolutions, both areas of study must be undertaken. Students are expected to demonstrate a progression from Unit 3 to Unit 4 in historical understanding and skills.
The periods for this study are:

- The French Revolution from 1774 to October 1789 (Accession of Louis XVI to the throne to The October Days 1789)
- The Russian Revolution from 1896 to October 1917 (Coronation of Tsar Nicholas to the 25th October Revolution 1917)

Assessment
Satisfactory Completion - The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks for the unit.
Levels of Achievement
Units 1 and 2 -
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.
Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.
Contribution to Final Assessment
School-assessed Coursework for Unit 3 will contribute 25 per cent to the study score.
School-assessed Coursework for Unit 4 will contribute 25 per cent to the study score.
The examination will contribute 50 per cent.

LANGUAGES - GERMAN

The Language
The language to be studied and assessed is modern standard German. The German language is a pluricentric language with different national standards in Austria, Germany and Switzerland and with regional varieties across Europe. Students are required to know that different standard versions exist in written and spoken German, but they are not required to study them.

Study
VCE German focuses on student participation in interpersonal communication, interpreting the language of other speakers, and presenting information and ideas in German on a range of themes and topics. Students develop and extend skills in listening, speaking, reading, writing and viewing in German in a range of contexts and develop cultural understanding in interpreting and creating language.

Students develop their understanding of the relationships between language and culture in new contexts and consider how these relationships shape communities. Throughout the study students are given opportunities to make connections and comparisons based on personal reflections about the role of language and culture in communication and in personal identity.

Rationale
The study of German contributes to student personal development in a range of areas including communication skills, intercultural understanding, cognitive development, literacy and general knowledge. Learning and using an additional language encourages students to examine the influences on their perspectives and society, and to consider issues important for effective personal, social and international communication.

It enables students to examine the nature of language, including their own, and the role of culture in language, communication and identity. By understanding the process of language learning, students can apply skills and knowledge to other contexts and languages. Learning a language engages analytical and reflective capabilities and enhances critical and creative thinking.

The study of German provides students with the ability to understand and use a language that is spoken across Europe. German is the official language of Germany, Austria, Switzerland, Liechtenstein, Belgium, Luxembourg and South Tyrol in Italy. It is also one of the official languages of the European Union.

As well as being used within communities across Europe, Latin America and Africa, there is a significant German heritage within Australia. Knowledge of the German language provides direct access to the cultures, traditions, beliefs, attitudes and values of these communities.

The study of German develops students' ability to understand and use a language which has long been recognised as a world language of culture, music, theology and philosophy, as well as a key language in the fields of science, medicine, engineering, architecture, economics and technology. German-speaking countries have emerged as strong international leaders in trade, commerce, politics, environment and sustainability.

The study of a specific language exposes students to different experiences and perspectives at a personal level. It encourages students to be open to different ways of thinking, acting and interacting in the world, even beyond the language being studied and their own language.

A broad range of social, economic and vocational opportunities result from study in a second language. Students are able to engage with German-speaking communities in Australia and internationally in a variety of endeavours.

Structure
The study is made up of four units. Each unit deals with language and specific content contained in the 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 1
In this unit students develop an understanding of the language and culture/s of German-speaking communities through the study of three or more topics from prescribed themes. Each area of study in the unit must focus on a different subtopic.

Students access and share useful information on the topics and subtopics through German and consolidate and extend vocabulary and grammar knowledge and language skills. They focus on analysing cultural products or practices including visual, spoken or written texts.

Cultural products or practices can be drawn from a diverse range of texts, activities and creations. These may include the following: stories, poems, plays, novels, songs, films, photographs, artworks, architecture, technology, food, clothing, sports and festivals. Students apply acquired knowledge of the German culture and language to new contexts.

Students reflect on the interplay between language and culture, and its impact on the individual's language use in specific contexts and for specific audiences.

Unit 2
In this unit students develop an understanding of aspects of language and culture through the study of three or more topics from the prescribed themes listed on page 11. Each area of study must focus on a different subtopic. Students analyse visual, spoken and written texts. They access and share useful information on the topics and subtopics through German and consolidate and extend vocabulary, grammar knowledge and language skills.

Cultural products or practices can be used to demonstrate how culture and perspectives may vary between communities. Students reflect on the interplay between language and culture, and its impact on meaning, understanding and the individual's language use in specific contexts and for specific audiences.

Unit 3
In this unit students investigate the way German speakers interpret and express ideas, and negotiate and persuade in German through the study of three or more subtopics from the prescribed themes and topics. Each area of study must cover a different subtopic, though teachers may choose to teach more than one subtopic in an area of study.

Students interpret information, inform others, and reflect upon and develop persuasive arguments. They access and share useful information on the subtopics through German, and consolidate and extend vocabulary and grammar knowledge and language skills.

Students consider the influence of language and culture in shaping meaning and reflect on the practices, products and perspectives of the cultures of German-speaking communities. They reflect on how knowledge of German and German-speaking communities can be applied in a range of contexts and endeavours, such as further study, travel, business or community involvement.

Unit 4
In this unit students investigate aspects of culture through the study of two or more subtopics from the prescribed themes and topics. Area of Study 1 and Area of Study 2 may focus on the same subtopic. Area of Study 3 should cover a different subtopic to the subtopic/s chosen for Areas of Study 1 and 2.

Students build on their knowledge of German-speaking communities, considering cultural perspectives and language and explaining personal observations. Students consolidate and extend vocabulary, grammar knowledge and language skills to investigate the topics through German.

Students identify and reflect on cultural products or practices that provide insights into German-speaking communities. Cultural products or practices can be drawn from a diverse range of texts, activities and creations.

Students reflect on the ways culture, place and time influence values, attitudes and behaviours. They consider how knowledge of more than one culture can influence the ways individuals relate to each other and function in the world.

Levels of Achievement
Unit 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

- **Unit 3 school-assessed coursework: 25 per cent**
- **Unit 4 school-assessed coursework: 25 per cent**
- **Examinations: oral component)**
  written component) 50 per cent

LEGAL STUDIES

Rationale
In contemporary Australian society there is a range of complex laws that exist to protect the rights of individuals and to achieve social cohesion. These laws are made by bodies such as parliament and the courts and are upheld by a number of institutions and processes within the legal system. Members of society interact with the laws and the legal system in many aspects of their lives and can influence law makers.

The study of VCE Legal Studies enables students to become active and informed citizens by providing them with valuable insights into their relationship with the law and the legal system. They develop knowledge and skills that enhance their confidence and ability to access and participate in the legal system.

Students come to appreciate how legal systems and processes aim to achieve social cohesion, and how they themselves can create positive changes to laws and the legal system. VCE Legal Studies equips students with the ability to research and analyse legal information and apply legal reasoning and decision-making skills, and fosters critical thinking to solve legal problems.

Further study in the legal field can lead to a broad range of career opportunities such as lawyer, paralegal, legal secretary and careers in the courtroom.

Structure
The study is made up of four units and each unit contains between two and four areas of study.

Unit 1: Guilt & Liability	Unit 3: Unit 3 Rights and Justice
Unit 2: Sanctions, remedies and rights	Unit 4: Unit 4 The people and the law

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.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 and Unit 4 as a sequence. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

Unit 1: Guilt & Liability
Criminal law and civil law aim to achieve social cohesion and protect the rights of individuals. Criminal law is aimed at maintaining social order and infringing criminal law can result in charges. Civil law deals with the infringement of a person's or group's rights and breaching civil law can result in litigation.

In this unit students develop an understanding of legal foundations, such as the different types and sources of law and the existence of a court hierarchy in Victoria. Students investigate key concepts of criminal law and civil law and apply these to actual and/or hypothetical scenarios to determine whether an accused may be found guilty of a crime, or liable in a civil dispute.

In doing so, students develop an appreciation of the way in which legal principles and information are used in making reasoned judgments and conclusions about the culpability of an accused, and the liability of a party in a civil dispute.

Unit 2: Sanctions, Remedies & Rights
Criminal law and civil law aim to protect the rights of individuals. When rights are infringed, a case or dispute may arise which needs to be determined or resolved, and sanctions or remedies may be imposed.

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

Students undertake a detailed investigation of two criminal cases and two civil cases from the past four years to form a judgment about the ability of sanctions and remedies to achieve the principles of justice.

Students develop their understanding of the way rights are protected in Australia and in another country, and possible reforms to the protection of rights. They examine a significant case in relation to the protection of rights in Australia.

Unit 3: Rights & Justice
The Victorian justice system, which includes the criminal and civil justice systems, aims to protect the rights of individuals and uphold the principles of justice: fairness, equality and access. In this unit students examine the methods and institutions in the justice system and consider their appropriateness in determining criminal cases and resolving civil disputes. Students consider the Magistrates' Court, County Court and Supreme Court within the Victorian court hierarchy, as well as other Victorian legal institutions and bodies available to assist with cases.

Students explore matters such as the rights available to an accused and to victims in the criminal justice system, the roles of the judge, jury, legal practitioners and the parties, and the ability of sanctions and remedies to achieve their purposes. Students investigate the extent to which the principles of justice are upheld in the justice system.

They discuss recent reforms from the past four years and recommended reforms to enhance the ability of the justice system to achieve the principles of justice. Throughout this unit, students apply legal reasoning and information to actual and/or hypothetical scenarios.

Unit 4: The People & the Law
The study of Australia's laws and legal system involves an understanding of institutions that make and reform our laws, and the relationship between the Australian people, the Australian Constitution and law-making bodies.
In this unit, students explore how the Australian Constitution establishes the law-making powers of the Commonwealth and state parliaments, and protects the Australian people through structures that act as a check on parliament in law-making. Students develop an understanding of the significance of the High Court in protecting and interpreting the Australian Constitution.

They investigate parliament and the courts, and the relationship between the two in law-making, and consider the roles of the individual, the media and law reform bodies in influencing law reform.
Throughout this unit, students apply legal reasoning and information to actual scenarios.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
A combination of structured assignments, an action plan and report, case study, tests and a 90 minute examination.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Legal Studies are as follows:
- **Unit 3 School-assessed Coursework: 25 per cent**
- **Unit 4 School-assessed Coursework: 25 per cent**
- **End-of-year examination: 50 per cent.**

LITERATURE

Scope of study
VCE Literature focuses on the meaning derived from texts, the relationship between texts, the contexts in which texts are produced and read, and the experiences the reader brings to the texts.

In VCE Literature students undertake close reading of texts and analyse how language and literary elements and techniques function within a text. Emphasis is placed on recognition of a text's complexity and meaning, and on consideration of how that meaning is embodied in its literary form. The study provides opportunities for reading deeply, widely and critically, responding analytically and creatively, and appreciating the aesthetic merit of texts.

VCE Literature enables students to examine the historical and cultural contexts within which both readers and texts are situated. It investigates the assumptions, views and values which both writer and reader bring to the texts and it encourages students to contemplate how we read as well as what we read. It considers how literary criticism informs the readings of texts and the ways texts relate to their contexts and to each other.

Accordingly, the texts selected for study are drawn from the past through to the present, and vary in form and social and cultural contexts.

Rationale
VCE Literature provides opportunities for students to develop their awareness of other people, places and cultures and explore the way texts represent the complexity of human experience. Students examine the evolving and dialogic nature of texts, the changing contexts in which they were produced and notions of value. They develop an understanding and appreciation of literature, and an ability to reflect critically on the aesthetic and intellectual aspects of texts.

The study of Literature enables students to consider the power and complexity of language, the ways literary features and techniques contribute to meaning and the significance of form and structure. They develop their capacity to read and interpret texts and reflect on their interpretations and those of others, and in turn reflect on their personal experience and the experiences of others, cultivating an awareness that there are multiple readings of texts and that the nature of language and text is dynamic. They are encouraged to be independent, innovative and creative, developing the ability to read deeply and widely and to establish and articulate their views through creative and analytical responses.

Structure
The study is made up of four units:
Unit 1: Approaches to literature
Unit 2: Context and connections
Unit 3: Form and transformation
Unit 4: Interpreting texts
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 1: Approaches to literature
In this unit, students focus on the ways in which the interaction between text and reader creates meaning. Students' analyses of the features and conventions of texts help them develop increasingly discriminating responses to a range of literary forms and styles.

Students respond critically, creatively and reflectively to the ideas and concerns of texts and gain insights into how texts function as representations of human experience. They develop familiarity with key terms, concepts and practices that equip them for further studies in literature. They develop an awareness of how the views and values that readers hold may influence the reading of a text.

Unit 2: Context and Connections
In this unit students explore the ways literary texts connect with each other and with the world. They deepen their examination of the ways their own culture and the cultures represented in texts can influence their interpretations and shape different meanings. Drawing on a range of literary texts, students consider the relationships between authors, audiences and contexts. Ideas, language and structures of different texts from past and present eras and/or cultures are compared and contrasted.

Students analyse the similarities and differences across texts and establish connections between them. They engage in close reading of texts and create analytical responses that are evidence-based. By experimenting with textual structures and language features, students understand how imaginative texts are informed by close analysis.

Unit 3: Form and Transformation
In this unit students consider how the form of a text affects meaning, and how writers construct their texts.
They investigate ways writers adapt and transform texts and how meaning is affected as texts are adapted and transformed. They consider how the perspectives of those adapting texts may inform or influence the adaptations. Students draw on their study of adaptations and transformations to develop creative responses to texts.

Students develop their skills in communicating ideas in both written and oral forms.

Unit 4: Interpreting Texts
In this unit students develop critical and analytic responses to texts. They consider the context of their responses to texts as well as the ideas explored in the texts, the style of the language and points of view. They investigate literary criticism informing both the reading and writing of texts. Students develop an informed and sustained interpretation supported by close textual analysis.

For the purposes of this unit, literary criticism is characterised by extended, informed and substantiated views on texts and may include reviews, peer-reviewed articles and transcripts of speeches. Specifically, for Unit 4 Outcome 1, the literary criticism selected must reflect different perspectives, assumptions and ideas about the views and values of the text/s studied.

Satisfactory completion - The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of achievement
Units 1 and 2 - Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Literature are as follows:
- **Unit 3 School-assessed Coursework: 25 per cent**
- **Unit 4 School-assessed Coursework: 25 per cent**
- **End-of-year examination: 50 per cent.**

MATHEMATICS

Scope of Study
Mathematics is the study of function and pattern in number, logic, space and structure, and of randomness, chance, variability and uncertainty in data and events. It is both a framework for thinking and a means of symbolic communication that is powerful, logical, concise and precise. Mathematics also provides a means by which people can understand and manage human and natural aspects of the world and inter-relationships between these.

Essential mathematical activities include: conjecturing, hypothesising and problem posing; estimating, calculating and computing; abstracting, proving, refuting and inferring; applying, investigating, modelling and problem solving.

Rationale
This study is designed to provide access to worthwhile and challenging mathematical learning in a way which takes into account the interests, needs, dispositions and aspirations of a wide range of students, and introduces them to key aspects of the discipline.

It is also designed to promote students' awareness of the importance of mathematics in everyday life in a technological society, and to develop confidence and the disposition to make effective use of mathematical concepts, processes and skills in practical and theoretical contexts.

Aims
This study enables students to:
- develop mathematical concepts, knowledge and skills
- apply mathematics to analyse, investigate and model a variety of contexts and solve practical and theoretical problems in situations that range from well-defined and familiar to open-ended and unfamiliar
- use technology effectively as a tool for working mathematically.

Structure
The study is made up of the following units:
- General Mathematics Units 1 and 2
- Mathematical Methods Units 1 and 2
- Specialist Mathematics Units 1 and 2
- Further Mathematics Units 3 and 4
- Mathematical Methods Units 3 and 4
- Specialist Mathematics Units 3 and 4

Due to changes in VCE Maths studies, student choices of Maths classes at Year 11 have been reviewed. Mathematical Methods requires a high level of understanding in all topics.

Despite our program of teacher recommendations and subject counselling, we feel that some students are still making inappropriate choices.

UNITS 1 & 2

In order to make sure that students are aware of the level of difficulty involved in the various VCE Maths studies available in 2018, recommended guidelines for entry into Maths Methods Units 1 & 2 and General Maths Units 1 & 2 will operate.

<u>To enrol in:</u>
- **Year 11 Maths methods, students need to achieve at least 60% pass on the Semester Exams a and an average of at least 60% on topic tests.**
- **Year 11 General Maths, students need to achieve at least 50% pass on the Semester Exams and an average of at least 50% on topic tests.**
- **Year 11 Specialist Maths, students needs to show excellence in all topics throughout the year.**

General Mathematics Units 1 and 2

General Mathematics provides for different combinations of student interests and preparation for study of VCE Mathematics at the Unit 3 and 4 level. The areas of study for General Mathematics Unit 1 and Unit 2 are 'Algebra and structure', 'Arithmetic and number', 'Discrete mathematics', 'Geometry, measurement and trigonometry', 'Graphs of linear and non-linear relations' and 'Statistics'.

For Units 1 and 2, to suit the range of students entering the study, content must be selected from the six areas of study using the following rules:

- for each unit, content covers four or more topics in their entirety, selected from at least three different areas of study
- courses intended as preparation for study at the Units 3 and 4 level should include a selection of topics from areas of study that provide a suitable background for these studies
- topics can also be selected from those available for Specialist Mathematics Units 1 and 2
- content covered from an area of study provides a clear progression in knowledge and skills from Unit 1 to Unit 2.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations and graphs with and without the use of technology. They should have facility with relevant mental and by-hand approaches to estimation and computation.

Mathematical Methods

Mathematical Methods Units 1

Mathematical Methods Units 1 and 2 provide an introductory study of simple elementary functions of a single real variable, algebra, calculus, probability and statistics and their applications in a variety of practical and theoretical contexts. They are designed as preparation for Mathematical Methods Units 3 and 4 and contain assumed knowledge and skills for these units.

The focus of Unit 1 is the study of simple algebraic functions, and the areas of study are 'Functions and graphs', 'Algebra', 'Calculus' and 'Probability and statistics'. At the end of Unit 1, students are expected to have covered the content outlined in each area of study, with the exception of 'Algebra' which extends across Units 1 and 2.

In undertaking this unit, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs and differentiation with and without the use of technology.

Mathematical Methods Units 2

In Unit 2 students focus on the study of simple transcendental functions and the calculus of simple algebraic functions. The areas of study are 'Functions and graphs', 'Algebra', 'Calculus', and 'Probability and statistics'. At the end of Unit 2, students are expected to have covered the material outlined in each area of study.

Material from the 'Functions and graphs', 'Algebra', 'Calculus', and 'Probability and statistics' areas of study should be organised so that there is a clear progression of skills and knowledge from Unit 1 to Unit 2 in each area of study.

In undertaking this unit, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs, differentiation and anti-differentiation with and without the use of technology.

Mathematical Methods provides a course for students wanting to study a <u>HIGH</u> level of maths.

Specialist Mathematics

Specialist Mathematics Units 1 and 2

Specialist Mathematics Units 1 and 2 provide a course of study for students who wish to undertake an in-depth study of mathematics, with an emphasis on concepts, skills and processes related to mathematical structure, modelling, problem solving and reasoning.

This study has a focus on interest in the discipline of mathematics in its own right and investigation of a broad range of applications, as well as development of a sound background for further studies in mathematics and mathematics related fields.

Mathematical Methods Units 1 and 2 and Specialist Mathematics Units 1 and 2, taken in conjunction, provide a comprehensive preparation for Specialist Mathematics Units 3 and 4. The areas of study for Units 1 and 2 of Specialist Mathematics are 'Algebra and structure', 'Arithmetic and number', 'Discrete mathematics', 'Geometry, measurement and trigonometry', 'Graphs of linear and non-linear relations' and 'Statistics'.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational, real and complex arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations and graphs with and without the use of technology.

Units 3 & 4

To enrol in:

- **Maths Methods Units 3 & 4, students need to achieve an average of at least 60% on topic tests and the Semester Exams in Maths Methods Units 1 and 2.**
- **Further Maths Units 3 & 4, students need to achieve an average of at least 60% on topic tests in General Maths or have satisfactorily completed Maths Methods Units 1 and 2 and passed the Semester Exams.**
- **Specialist Maths, students need to achieve an average of at least 70% on topic tests in Maths Methods and 60% in Specialist Maths and passes on both Semester Exams.**

These guidelines will hopefully improve the student's ability to maximise possible ATAR scores by giving them realistic expectations in subject selection.

Further Mathematics Units 3 and 4

Further Mathematics consists of two areas of study, a compulsory Core area of study to be completed in Unit 3 and an Applications area of study to be completed in Unit 4. The Core comprises 'Data analysis' and 'Recursion and financial modelling'. The Applications comprises two modules to be completed in their entirety, from a selection of four possible modules: 'Matrices', 'Networks and decision mathematics', 'Geometry and measurement' and 'Graphs and relations'. 'Data analysis' comprises 40 per cent of the content to be covered, 'Recursion and financial modelling' comprises 20 per cent of the content to be covered, and each selected module comprises 20 per cent of the content to be covered.

Assumed knowledge and skills for the Core are contained in the General Mathematics Units 1 and 2 topics: 'Computation and practical arithmetic', 'Investigating and comparing data distributions', 'Investigating relationships between two numerical variables', 'Linear graphs and modelling', 'Linear relations and equations', and 'Number patterns and recursion'. For each module there are related topics in General Mathematics Units 1 and 2.

Area of Study 1 – Unit 3

Core

Data Analysis - Investigating data distributions, investigating associations between two variables, investigating and modelling linear associations and investigating and modelling time series data.

Recursion and Financial Modelling - Depreciation of assets, compound interest investments and loans, reducing balance loans, annuities and perpetuities and compound interest.

Area of Study 2 – Unit 4
Applications - Students will complete two modules selected from the following four modules.

Matrices - This module covers definition of matrices, different types of matrices, matrix operations, transition matrices and the use of first-order linear matrix recurrence relations.

Networks and Decision Mathematics - This module covers definition and representation of different kinds of undirected and directed graphs, eulerian trails, eulerian circuits, bridges, hamiltonian paths and cycles.

Geometry and Measurement - This module covers the use of measurement, geometry and trigonometry to formulate and solve problems involving angle, length, area and volume in two and three dimensions the plane and the surface of the earth.

Graphs and Relations - This module covers the use of linear relations, including piecewise defined relations, and non-linear relations to model a range of practical situations.

Mathematical Methods

Mathematical Methods Units 3 and 4
Mathematical Methods Units 3 and 4 are completely prescribed and extend the introductory study of simple elementary functions of a single real variable, to include combinations of these functions, algebra, calculus, probability and statistics, and their applications in a variety of practical and theoretical contexts. Units 3 and 4 consist of the areas of study 'Functions and graphs', 'Calculus', 'Algebra' and 'Probability and statistics'.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational and real arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs, differentiation, anti-differentiation, integration and inference with and without the use of technology.

Area of Study 1 - Functions and Graphs - In this area of study students cover transformations of the plane and the behaviour of some elementary functions of a single real variable, including key features of their graphs such as axis intercepts, stationary points, points of inflection, domain (including maximal, implied or natural domain), co-domain and range, asymptotic behaviour and symmetry. The behaviour of these functions and their graphs is to be linked to applications in practical situations.

Area of Study 2 - Algebra - In this area of study, students cover the algebra of functions, including composition of functions, simple functional relations, inverse functions and the solution of equations. They also study the identification of appropriate solution processes for solving equations, and systems of simultaneous equations, presented in various forms.

Students also cover recognition of equations and systems of equations that are solvable using inverse operations or factorisation, and the use of graphical and numerical approaches for problems involving equations where exact value solutions are not required or which are not solvable by other methods.

Area of Study 3 - Calculus - In this area of study students cover graphical treatment of limits, continuity and differentiability of functions of a single real variable, and differentiation, anti-differentiation and integration of these functions. This material is to be linked to applications in practical situations.

Area of Study 4 - Probability and Statistics - In this area of study students cover discrete and continuous random variables, their representation using tables, probability functions (specified by rule and defining parameters as appropriate); the calculation and interpretation of central measures and measures of spread; and statistical inference for sample proportions.

The focus is on understanding the notion of a random variable, related parameters, properties and application and interpretation in context for a given probability distribution.

Specialist Mathematics

Specialist Mathematics Units 3 and 4

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

Specialist Mathematics Units 3 and 4 assumes familiarity with the key knowledge and skills from Mathematical Methods Units 1 and 2, the key knowledge and skills from Specialist Mathematics Units 1 and 2 topics 'Number systems and recursion' and 'Geometry in the plane and proof', and concurrent or previous study of Mathematical Methods Units 3 and 4.

In undertaking these units, students are expected to be able to apply techniques, routines and processes involving rational, real and complex arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulation, equations, graphs, differentiation, anti-differentiation and integration and inference with and without the use of technology.

Area of Study 1 – Functions and Graphs – In this area of study students cover inverse circular functions, reciprocal functions, rational functions and other simple quotient functions, the absolute value function, graphical representation of these functions, and the analysis of key features of their graphs including intercepts, asymptotic behaviour and the nature and location of stationary points, points of inflection, periodicity, and symmetry.

Area of Study 2 - Algebra - In this area of study students cover the expression of simple rational functions as a sum of partial fractions; the arithmetic and algebra of complex numbers, including polar form; points and curves in the complex plane; introduction to factorisation of polynomial functions over the complex field; and an informal treatment of the fundamental theorem of algebra.

Area of Study 3 - Calculus - In this area of study students cover advanced calculus techniques for analytic and numeric differentiation and integration of a range of functions, and combinations of functions; and their application in a variety of theoretical and practical situations, including curve sketching, evaluation of arc length, area and volume, differential equations and kinematics.

Area of Study 4 - Vectors - In this area of study students cover the arithmetic and algebra of vectors, linear dependence and independence of a set of vectors, proof of geometric results using vectors, vector representation of curves in the plane and vector kinematics in one and two dimensions..

Area of Study 5 - Mechanics - In this area of study students cover an introduction to Newtonian mechanics, for both constant and variable acceleration.

Area of Study 6 - Probability and Statistics - In this area of study students cover statistical inference related to the definition and distribution of sample means, simulations and confidence interval.

Entry

Students undertaking Mathematical Methods Units 1 and 2 or Specialist Mathematics Units 1 and 2 are assumed to have a sound background in number, algebra, function, geometry, probability and statistics. Students must undertake Unit 3 prior to undertaking Unit 4. There are no restrictions on the number of units students may obtain credit towards satisfactory completion of the VCE.

Satisfactory Completion

Units 1 & 2

Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 & 4

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Further Mathematics - Units 3 & 4		**Maths Methods & Specialist Maths - Units 3 &4**	
Unit 3 School-assessed Coursework:	**20 %**	**Unit 3 School-assessed Coursework:**	**17 %**
Unit 4 School-assessed Coursework:	**14 %**	**Unit 4 School-assessed Coursework:**	**17 %**
Units 3 and 4 Examination 1:	**33 %**	**Units 3 and 4 Examination 1:**	**22 %**
Units 3 and 4 Examination 2:	**33 %**	**Units 3 and 4 Examination 2:**	**44 %**

MEDIA

Scope of study
The media is ubiquitous in today's world. Working on a personal, local, national and global level, media is deeply embedded within life and culture. It entertains, teaches, informs, and shapes audiences' perception of their lives and the worlds in which they live.

Stories in all their forms are at the heart of the media and its relationship with audiences. Through stories narratives are constructed that engage, and are read, by audiences. Representations of ideas, realities and imagination are constructed and deconstructed, remixed and reimagined with ever increasing technological sophistication, ease and speed to engage audiences.

Developments in technologies have transformed media at a rapid pace. The interplay between print and broadcast media and multinational-networked database platforms has enabled creative communication opportunities and reworked notions of key media concepts including audiences, forms and products, storytelling, influence, institutions and industries.

Media audiences are no longer constrained by physical, social and political boundaries. Audiences are consumers, users, creative and participatory producers and product. This has created a dramatic increase in communicative, cultural and creative possibilities. The greater involvement of audiences has generated enormous changes in the media economy and issues of content control. Students examine how and why the media constructs and reflects reality and how audiences engage with, consume, read, create and produce media products.

Rationale
This study provides students with the opportunity to examine the media in both historical and contemporary contexts while developing skills in media design and production in a range of media forms. VCE Media provides students with the opportunity to analyse media concepts, forms and products in an informed and critical way. Students consider narratives, technologies and processes from various perspectives including an analysis of structure and features. They examine debates about the media's role in contributing to and influencing society. Students integrate these aspects of the study through the individual design and production of their media representations, narratives and products.

VCE Media supports students to develop and refine their planning and analytical skills, critical and creative thinking and expression, and to strengthen their communication skills and technical knowledge.

Students gain knowledge and skills in planning and expression valuable for participation in and contribution to contemporary society. This study leads to pathways for further theoretical and/or practical study at tertiary level or in vocational education and training settings; including screen and media, marketing and advertising, games and interactive media, communication and writing, graphic and communication design, photography and animation.

Structure
The study is made up of four units.
Unit 1: Media forms, representations and Australian stories
Unit 2: Narrative across media forms
Unit 3: Media narratives and pre-production
Unit 4: Media production and issues in the media

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 and Unit 4 as a sequence. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

Safety & Wellbeing
Students should seek permission from the relevant authority before filming or recording in public locations. The selection of content and media products for study across Units 1 to 4 is a school decision and should be appropriate and acceptable for the specific school culture and environment.

Unit 1: Media Forms, Representations and Australian Stories
The relationship between audiences and the media is dynamic and changing. Audiences engage with media products in many ways. They share a common language with media producers and construct meanings from the representations within a media product. In this unit students develop an understanding of audiences and the core concepts underpinning the construction of representations and meaning in different media forms. They explore media codes and conventions and the construction of meaning in media products.

Students analyse how representations, narrative and media codes and conventions contribute to the construction of the media realities audiences engage with and read. Students gain an understanding of audiences as producers and consumers of media products. Through analysing the structure of narratives, students consider the impact of media creators and institutions on production. They develop research skills to investigate and analyse selected narratives focusing on the influence of media professionals on production genre and style.

Students develop an understanding of the features of Australian fictional and non-fictional narratives in different media forms. Students work in a range of media forms and develop and produce representations to demonstrate an understanding of the characteristics of each media form, and how they contribute to the communication of meaning.

Unit 2: Narrative Across Media Forms
Fictional and non-fictional narratives are fundamental to the media and are found in all media forms. Media industries such as journalism and filmmaking are built upon the creation and distribution of narratives constructed in the form of a series of interconnected images and/or sounds and/or words, and using media codes and conventions. New media forms and technologies enable participants to design, create and distribute narratives in hybrid forms such as collaborative and user-generated content, which challenges the traditional understanding of narrative form and content. Narratives in new media forms have generated new modes of audience engagement, consumption and reception.

In this unit students further develop an understanding of the concept of narrative in media products and forms in different contexts. Narratives in both traditional and newer forms include film, television, sound, news, print, photography, games, and interactive digital forms. Students analyse the influence of developments in media technologies on individuals and society, examining in a range of media forms the effects of media convergence and hybridisation on the design, production and distribution of narratives in the media and audience engagement, consumption and reception.

Students undertake production activities to design and create narratives that demonstrate an awareness of the structures and media codes and conventions appropriate to corresponding media forms.

Unit 3: Media Narratives and Pre-production
In this unit students explore stories that circulate in society through media narratives. They consider the use of media codes and conventions to structure meaning, and how this construction is influenced by the social, cultural, ideological and institutional contexts of production, distribution, consumption and reception. Students assess how audiences from different periods of time and contexts are engaged by, consume and read narratives using appropriate media language.

Narratives are defined as the depiction of a chain of events in a cause and effect relationship occurring in physical and/or virtual space and time in non-fictional and fictional media products. Students use the pre-production stage of the media production process to design the production of a media product for a specified audience.

They investigate a media form that aligns with their interests and intent, developing an understanding of the media codes and conventions appropriate to audience engagement, consumption and reception within the selected media form. They explore and experiment with media technologies to develop skills in their selected media form, reflecting on and documenting their progress.

Students undertake pre-production processes appropriate to their selected media form and develop written and visual documentation to support the production and post-production of a media product in Unit 4.

Unit 4: Media Production and Issues in the Media
In this unit students focus on the production and post-production stages of the media production process, bringing the media production design created in Unit 3 to its realisation. They refine their media production in response to feedback and through personal reflection, documenting the iterations of their production as they work towards completion.

Students explore the relationship between the media and audiences, focusing on the opportunities and challenges afforded by current developments in the media industry. They consider the nature of communication between the media and audiences, explore the capacity of the media to be used by governments, institutions and audiences, and analyse the role of the Australian government in regulating the media.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on whether the student has demonstrated the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Unit 3 School-assessed Coursework: 10 per cent
Unit 4 School-assessed Coursework: 10 per cent
School-assessed Task: 40 per cent
End-of-year examination: 40 per cent.

MUSIC PERFORMANCE

Scope of study
VCE Music is based on active engagement in, and considered response to, all aspects of music. Students develop and refine musicianship skills and critical awareness of their relationship with music as listener, performer, composer, consumer and user of music technologies. Students explore, reflect on, and respond to the music they listen to, create and perform and consider its contexts, associations and interactions.

Students study music styles and genres from diverse cultures, times and locations. They analyse and evaluate live and recorded performances and learn to incorporate, adapt and interpret musical elements and ideas from the work of leading practitioners. Students study and practise ways of effectively communicating and expressing musical ideas to an audience as performer and/or composer.

Students build fundamental musicianship skills by developing and refining their use of the rhetorical, technical and theoretical language of music through studies in aural and written analyses of performed, recorded and notated music. They use this knowledge and understanding to describe, define and express in music the intricacies and nuances of musical form and style. The practical application of this knowledge also assists students to compose, arrange, interpret, reimagine, improvise and critique music in an informed and a creative manner. Students develop competence in the use of digital music technologies and equipment as creative tools, broadening their versatility as music practitioners.

Rationale
Music is an integral part of all cultures from the earliest of times, expressing and reflecting human experience. Music exists in a myriad of forms, each able to elicit an array of intellectual and emotional responses from its audience. A study of music enables students to strengthen their own relationship with music and to be personally enriched as they develop greater control of their own musical expression.

Music learning requires students' active engagement in the practices of listening, performing and composing. As they learn in music, students apply critical and creative thinking skills to analyse and critique the work of contemporary and historical practitioners and develop their understanding of the diverse ways in which music ideas can be shaped to communicate artistic and expressive intent. Students also develop insights into the music traditions of contemporary and historical global cultures and form understandings of ways in which music can interact with other arts forms and fields of endeavour.

When students perform the works of other musicians, they develop skills in communicating and in working cooperatively and communally to achieve creative outcomes. Through analysing and responding to the work of other musicians, students develop knowledge of music, skills in critical thinking and greater confidence in written and oral expression. Students use communications and music technologies to achieve considered musical outcomes.

VCE Music equips students with personal and musical skills that enable them to follow pathways into tertiary music study or further training in a broad spectrum of music related careers. VCE Music also offers students opportunities for personal development and encourages them to make an ongoing contribution to the culture of their community through participation in life-long music making.

Music Performance
Music Performance Units 1 to 4 aims to broaden and enrich students' musical experience, to assist students to develop personal awareness of the expressive and aesthetic qualities of music and to encourage a life-long engagement with music and music making.

Music performance involves synthesis of knowledge of the music work/s being performed including their structure, style and context and their expressive qualities. Performance also requires the use of an instrument to interpret and realise the work, and knowledge and understanding of how to use an instrument/s to produce and manipulate sound. Performers use musicianship skills along with instrumental techniques to present musically engaging performances.

Through research and analysis of performances by leading practitioners, students become aware of ways that performance conventions, musical nuance and effective communication between performers and audience can facilitate engaging, exciting and meaningful performances. Students expand their musical vocabulary and develop language to articulate their awareness and understanding of the impact that interpretative decisions have on the music they perform, listen to and analyse.

Music Performance Units 1 - 2

Unit 1
This unit focuses on building performance and musicianship skills. Students present performances of selected group and solo music works using one or more instruments. They study the work of other performers and explore strategies to optimise their own approach to performance.

They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and practise technical work to address these challenges. They also develop skills in performing previously unseen music. Students study aural, theory and analysis concepts to develop their musicianship skills and apply this knowledge when preparing and presenting performances.

Unit 2
This unit focuses on building performance and musicianship skills. Students present performances of selected group and solo music works using one or more instruments and take opportunities to perform in familiar and unfamiliar venues and spaces. They study the work of other performers and refine selected strategies to optimise their own approach to performance. They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and endeavour to address these challenges. Students develop their listening, aural, theoretical and analytical musicianship skills and apply this knowledge when preparing and presenting performances.

Music Performance Units 3 - 4

Unit 3
This unit focuses on building and refining performance and musicianship skills. Students focus on either group or solo performance and begin preparation of a performance program they will present in the end-of-year examination. As part of their preparation, students will also present performances of both group and solo music works using one or more instruments and take opportunities to perform in familiar and unfamiliar venues and spaces.

They study the work of other performers and refine selected strategies to optimise their own approach to performance. They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and endeavour to address these challenges. Students develop their listening, aural, theoretical and analytical musicianship skills and apply this knowledge when preparing and presenting performances

Unit 4
This unit focuses on further development and refinement of performance and musicianship skills. Students focus on either group or solo performance and continue preparation of a performance program they will present in the end-of-year examination. All students present performances of both group and solo music works using one or more instruments and take opportunities to perform in familiar and unfamiliar venues and spaces.

Through analyses of other performers' interpretations and feedback on their own performances, students refine their interpretations and optimise their approach to performance. They continue to address challenges relevant to works they are preparing for performance and to strengthen their listening, aural, theoretical and analytical musicianship skills.

Assessment

Satisfactory Completion

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

Levels of Achievement

Units 1 and 2

Procedures for the assessment of levels of achievement in Units 1 and 2 are school assessed:

- Solo Performance 50%
- Aural Skills exam 25%
- Written Report 25%

Units 3 and 4

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Music are as follows:

VCE Music Performance Units 3 and 4

- **Units 3 and 4 School-assessed Coursework: 30 per cent**
- **External end-of-year performance examination: 50 per cent**
- **External end-of-year aural and written examination: 20 per cent**

PHYSICAL EDUCATION

Scope of study
VCE Physical Education explores the complex interrelationships between anatomical, biomechanical, physiological and skill acquisition principles to understand their role in producing and refining movement, and examines behavioural, psychological, environmental and sociocultural influences on performance and participation in physical activity.

The assimilation of theoretical understanding and practice is central to the study of VCE Physical Education. Students participate in practical activities to examine the core concepts that underpin movement and that influence performance and participation in physical activity, sport and exercise.

Through integrated physical, written, oral and digital learning experiences, students apply theoretical concepts and reflect critically on factors that affect all levels of performance and participation in sport, exercise and physical activity.

Rationale
The study of VCE Physical Education enables students to integrate a contemporary understanding of the theoretical underpinnings of performance and participation in physical activity with practical application. Through engagement in physical activities, VCE Physical Education enables students to develop the knowledge and skills required to critically evaluate influences that affect their own and others' performance and participation in physical activity.

This study equips students with the appropriate knowledge and skills to plan, develop and maintain their involvement in physical activity, sport and exercise across their lifespan and to understand the physical, social, emotional and cognitive health benefits associated with being active. The study also prepares students for employment and/or further study at the tertiary level or in vocational education and training settings in fields such as exercise and sport science, health science, education, recreation, sport development and coaching, health promotion and related careers.

Structure
The study is made up of four units:
Unit 1: The human body in motion
Unit 2: Physical activity, sport and society
Unit 3: Movement skills and energy for physical activity
Unit 4: Training to improve performance
Each unit contains between two and four areas of study.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary 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.

Unit 3: Movement Skills and Energy for Physical Activity
This unit introduces students to the biomechanical and skill acquisition principles used to analyse human movement skills and energy production from a physiological perspective. Students use a variety of tools and techniques to analyse movement skills and apply biomechanical and skill acquisition principles to improve and refine movement in physical activity, sport and exercise. They use practical activities to demonstrate how correct application of these principles can lead to improved performance in physical activity and sport.

Students investigate the relative contribution and interplay of the three energy systems to performance in physical activity, sport and exercise. In particular, they investigate the characteristics of each system and the interplay of the systems during physical activity. Students explore the causes of fatigue and consider different strategies used to postpone fatigue and promote recovery.

Unit 4: Training to Improve Performance
In this unit students analyse movement skills from a physiological, psychological and sociocultural perspective, and apply relevant training principles and methods to improve performance within physical activity at an individual, club and elite level. Improvements in performance, in particular fitness, depend on the ability of the individual and/ or coach to gain, apply and evaluate knowledge and understanding of training. Students analyse skill frequencies, movement patterns, heart rates and work to rest ratios to determine the requirements of an activity. Students consider the physiological, psychological and sociological requirements of training to design and evaluate an effective training program.

Students participate in a variety of training sessions designed to improve or maintain fitness and evaluate the effectiveness of different training methods. Students critique the effectiveness of the implementation of training principles and methods to meet the needs of the individual, and evaluate the chronic adaptations to training from a theoretical perspective.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Physical Education are as follows:
- **Unit 3 School-assessed Coursework: 25 per cent**
- **Unit 4 School-assessed Coursework: 25 per cent**
- **End-of-year examination: 50 per cent.**

PHYSICS

Scope of study
Physics seeks to understand and explain the physical world. It examines models and ideas used to make sense of the world and which are sometimes challenged as new knowledge develops. By looking at the way matter and energy interact through observations, measurements and experiments, physicists gain a better understanding of the underlying laws of nature.

VCE Physics provides students with opportunities to explore questions related to the natural and constructed world. The study provides a contextual approach to exploring selected areas within the discipline including atomic physics, electricity, fields, mechanics, thermodynamics, quantum physics and waves. Students also have options for study related to astrophysics, bioelectricity, biomechanics, electronics, flight, medical physics, nuclear energy, nuclear physics, optics, sound and sports science. Students examine classical and contemporary research, models and theories to understand how knowledge in physics has evolved and continues to evolve in response to new evidence and discoveries. An understanding of the complexities and diversity of physics leads students to appreciate the interconnectedness of the content areas both within physics, and across physics and the other sciences.

An important feature of undertaking a VCE science study is the opportunity for students to engage in a range of inquiry tasks that may be self-designed, develop key science skills and interrogate the links between theory and practice. In VCE Physics inquiry methodologies can include laboratory experimentation, local and remote data logging, simulations, animations and literature reviews. Investigation in physics is diverse and may take many forms including the design, building, testing and evaluation of a device; the investigation of the operation of a device; creating a solution to a scientific or technological problem; and the investigation of a physical phenomenon. Students work collaboratively as well as independently on a range of tasks. They pose questions, formulate hypotheses and collect, analyse and critically interpret qualitative and quantitative data. They analyse the limitations of data, evaluate methodologies and results, justify conclusions, make recommendations and communicate their findings. Students investigate and evaluate issues, changes or alternative proposals by considering both shorter and longer term consequences for the individual, environment and society. Knowledge of the safety considerations associated with physics investigations is integral to the study of VCE Physics.

As well as an increased understanding of scientific processes, students develop capacities that enable them to critically assess the strengths and limitations of science, respect evidence-based conclusions and gain an awareness of the ethical, social and political contexts of scientific endeavours.

Rationale
Physics is a natural science based on observations, experiments, measurements and mathematical analysis with the purpose of finding quantitative explanations for phenomena occurring from the subatomic scale through to the planets, stellar systems and galaxies in the Universe. While much scientific understanding in physics has stood the test of time, many other areas continue to evolve. In undertaking this study, students develop their understanding of the roles of careful and systematic experimentation and modelling in the development of theories and laws. They undertake practical activities and apply physics principles to explain and quantify both natural and constructed phenomena.

In VCE Physics students develop a range of inquiry skills involving practical experimentation and research, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary physics-related issues and to communicate their views from an informed position.

Structure
The study is made up of four units:
Unit 1: What ideas explain the physical world?
Unit 2: What do experiments reveal about the physical world?
Unit 3: How do fields explain motion and electricity?
Unit 4: How can two contradictory models explain both light and matter?
Each unit contains three areas of study.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Students entering Unit 3 without Units 1 and/or 2 may be required to undertake additional preparation as prescribed by their teacher.

Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

Unit 1: What Ideas Explain the Physical World?
Ideas in physics are dynamic. As physicists explore concepts, theories evolve. Often this requires the detection, description and explanation of things that cannot be seen. In this unit students explore how physics explains phenomena, at various scales, which are not always visible to the unaided human eye.

They examine some of the fundamental ideas and models used by physicists in an attempt to understand and explain the world. Students consider thermal concepts by investigating heat, probe common analogies used to explain electricity and consider the origins and formation of matter.

Students use thermodynamic principles to explain phenomena related to changes in thermal energy. They apply thermal laws when investigating energy transfers within and between systems, and assess the impact of human use of energy on the environment.

Students examine the motion of electrons and explain how it can be manipulated and utilised. They explore current scientifically accepted theories that explain how matter and energy have changed since the origins of the Universe.

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

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 investigate a variety of phenomena by making their own observations and generating questions, which in turn lead to experiments.

Students make direct observations of physics phenomena and examine the ways in which phenomena that may not be directly observable can be explored through indirect observations.

In the core component of this unit students investigate the ways in which forces are involved both in moving objects and in keeping objects stationary. Students choose one of twelve options related to astrobiology, astrophysics, bioelectricity, biomechanics, electronics, flight, medical physics, nuclear energy, nuclear physics, optics, sound and sports science. The option enables students to pursue an area of interest by investigating a selected question.

Unit 3: How Do Fields Explain Motion And Electricity?
In this unit students explore the importance of energy in explaining and describing the physical world. They examine the production of electricity and its delivery to homes. Students consider the field model as a construct that has enabled an understanding of why objects move when they are not apparently in contact with other objects.

Applications of concepts related to fields include the transmission of electricity over large distances and the design and operation of particle accelerators. They explore the interactions, effects and applications of gravitational, electric and magnetic fields. Students use Newton's laws to investigate motion in one and two dimensions, and are introduced to Einstein's theories to explain the motion of very fast objects.

They consider how developing technologies can challenge existing explanations of the physical world, requiring a review of conceptual models and theories. Students design and undertake investigations involving at least two continuous independent variables.

Unit 4: How can two contradictory models explain both light and matter?
A complex interplay exists between theory and experiment in generating models to explain natural phenomena including light. Wave theory has classically been used to explain phenomena related to light; however, continued exploration of light and matter has revealed the particle-like properties of light. On very small scales, light and matter – which initially seem to be quite different – have been observed as having similar properties.

In this unit, 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 explore its limitations in describing light behaviour. Students further investigate light by using a particle model to explain its behaviour. A wave model is also used to explain the behaviour of matter which enables students to consider the relationship between light and matter. Students learn to think beyond the concepts experienced in everyday life to study the physical world from a new perspective.

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.

Assessment
Satisfactory completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score are as follows:
Unit 3 School-assessed Coursework: 21 per cent
Unit 3 School-assessed Coursework: 19 per cent
End-of-year examination: 60 per cent.

PRODUCT DESIGN AND TECHNOLOGY

Scope of Study
Product design is a response to changing needs and to improve quality of life by designing creative, innovative and sustainable products. Product design is enhanced through knowledge of social, technological, economic, historical, ethical, legal, environmental and cultural factors. These factors influence the aesthetics, form and function of products. Central to VCE Product Design and Technology is design thinking, which is applied through the product design process providing a structure for creative problem solving.

The design process involves identification of a real need, problem or opportunity that is then articulated in a design brief. The need, problem or opportunity is investigated and informed by research to aid the development of solutions that take the form of physical, three-dimensional products. Development of these solutions requires the application of technology and a variety of cognitive and physical skills, including design thinking, drawing and computer-aided design, testing processes and materials, planning, construction, fabrication and evaluation.

For VCE Product Design and Technology students assume the role of a designer-maker. In adopting this role, they develop and apply knowledge of factors that influence design and address the design factors relevant to their design situation.

The knowledge and use of resources is integral to product design. These resources include a range of materials, and the tools, equipment and machines needed to safely transform these materials into products. Increasingly, the importance of sustainability is affecting product design and development, and so is at the forefront throughout the product life cycle.

Rationale
Designers play an important part in our daily lives. They determine the form and function of the products we use and transform ideas into drawings and plans for the creation of products that fulfil human needs and wants. Students also consider sustainability issues.

Students consider the consequences of product design choices, and develop skills to critically analyse existing products and develop their own creative solutions. VCE Product Design and Technology offers students a range of career pathways in design in fields such as industrial, transport, service, interior and exhibition, engineering, fashion, furniture, jewellery, textile and ceramics, at both professional and vocational levels. Moreover,

VCE Product Design and Technology informs sustainable behaviours and develops technical skills enabling students to present multiple solutions to everyday life situations. It contributes to developing creative problem solvers and project managers well-equipped to deal with the multidisciplinary nature of modern workplaces.

Structure
The study is made up of four units:
Unit 1: Sustainable product redevelopment
Unit 2: Collaborative design
Unit 3: Applying the product design process
Unit 4: Product development and evaluation

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education. All VCE studies are benchmarked against comparable national and international curriculum.

Unit 1: Sustainable Product Redevelopment
This unit focuses on the analysis, modification and improvement of a product design with consideration of 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. Where possible, materials and manufacturing processes used should be carefully selected to improve the overall sustainability of the redeveloped product.

Unit 2: Collaborative Design
In this unit students work in teams to design and develop an item in a product range or contribute to the design, planning and production of a group product. They focus on factors including end-user/s' needs and wants; function, purpose and context for product design; aesthetics; materials and sustainability; and the impact of these factors on a design solution.

Teamwork encourages communication between students and mirrors professional design practice where designers often work within a multi-disciplinary team to develop solutions to design problems. Students also use digital technologies to facilitate teams to work collaboratively online.

In this unit students gain inspiration from an historical or a contemporary design movement or style and its defining factors such as ideological or technological change, philosophy or aesthetics.

Unit 3: Applying the Product Design Process
In this unit students are engaged in the design and development of a product that addresses a personal, local, or global problem (such as humanitarian issues), or that meets the needs and wants of a potential end-user/s. The product is developed through a design process and is influenced by a range of factors including the purpose, function and context of the product; user-centred design; innovation and creativity; design elements and principles; sustainability concerns; economic limitations; legal responsibilities; material characteristics and properties; and technology.

Design and product development and manufacture occur in a range of settings. An industrial setting provides a marked contrast to that of a one-off situation in a small cottage industry or a school setting. Although a product design process may vary in complexity or order, it is central to all of these situations regardless of the scale or context. This unit examines different settings and takes students through the product design process as they design for an end-user/s. Students identify methods which could be used in a low-volume or mass/high-volume production setting to manufacture a similar product to their design.

In the initial stage of the product design process a design brief is prepared, outlining the context or situation around the design problem and describing the needs and requirements in the form of constraints or considerations.

Unit 4: Product Development and Evaluation
In this unit students engage with an end-user/s to gain feedback throughout the process of production. Students make comparisons between similar products to help evaluate the success of a product in relation to a range of product design factors.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on whether the student has demonstrated the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.
Percentage contributions to the study score are as follows:
Unit 3 School-assessed Coursework: 12 per cent
Unit 4 School-assessed Coursework: 8 per cent
School-assessed Task: 50 per cent
End-of-year examination: 30 per cent.

PSYCHOLOGY

Scope of study
Psychology is a broad discipline that incorporates both the scientific study of human behaviour through biological, psychological and social perspectives and the systematic application of this knowledge to personal and social circumstances in everyday life.

VCE Psychology enables students to explore how people think, feel and behave through the use of a biopsychosocial approach. As a scientific model, this approach considers biological, psychological and social factors and their complex interactions in the understanding of psychological phenomena. The study explores the connection between the brain and behaviour by focusing on several key interrelated aspects of the discipline: the interplay between genetics and environment, individual differences and group dynamics, sensory perception and awareness, memory and learning, and mental health. Students examine classical and contemporary research and the use of imaging technologies, models and theories to understand how knowledge in psychology has evolved and continues to evolve in response to new evidence and discoveries. An understanding of the complexities and diversity of psychology leads students to appreciate the interconnectedness between different content areas both within psychology, and across psychology and the other sciences.

An important feature of undertaking a VCE science study is the opportunity for students to engage in a range of inquiry tasks that may be self-designed, develop key science skills and interrogate the links between theory, knowledge and practice. In VCE Psychology inquiry can include laboratory experimentation, observational studies, self-reports, questionnaires, interviews, rating scales, simulations, animations, examination of case studies and literature reviews. Students work collaboratively as well as independently on a range of tasks. They pose questions, formulate research hypotheses, operationalise variables, and collect, analyse and critically interpret qualitative and quantitative data.

They analyse the limitations of data, evaluate methodologies and results, justify conclusions, make recommendations and communicate their findings. Students investigate and evaluate issues, changes and alternative proposals by considering both shorter and longer term consequences for the individual, environment and society. A working knowledge of the safety considerations and the ethical standards and guidelines that regulate psychological research is integral to the study of VCE Psychology.

As well as an increased understanding of scientific processes, students develop capacities that enable them to critically assess the strengths and limitations of science, respect evidence-based conclusions and gain an awareness of the ethical, social and political contexts of scientific endeavours.

Rationale
VCE Psychology provides students with a framework for exploring the complex interactions between biological, psychological and social factors that influence human thought, emotions and behaviour. In undertaking this study, students apply their learning to everyday situations including workplace and social relations. They gain insights into a range of psychological health issues in society.

In VCE Psychology students develop a range of inquiry skills involving practical experimentation and research, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary psychology-related issues, and communicate their views from an informed position.

VCE Psychology provides for continuing study pathways within the discipline and leads to a range of careers. Opportunities may involve working with children, adults, families and communities in a variety of settings such as academic and research institutions, management and human resources, and government, corporate and private enterprises. Fields of applied psychology include educational, environmental, forensic, health, sport and organisational psychology. Specialist fields of psychology include counselling and clinical contexts, as well as neuropsychology, social psychology and developmental psychology. Psychologists also work in cross-disciplinary areas such as medical research or as part of on-going or emergency support services in educational, institutional and industrial settings.

Structure
The study is made up of four units:
Unit 1: How are behaviour and mental processes shaped?
Unit 2: How do external factors influence behaviour and mental processes?
Unit 3: How does experience affect behaviour and mental processes?
Unit 4: How is wellbeing developed and maintained?

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

Unit 1: How are Behaviour and Mental Processes Shaped?
Human development involves changes in thoughts, feelings and behaviours. In this unit students investigate the structure and functioning of the human brain and the role it plays in the overall functioning of the human nervous system.

Students explore brain plasticity and the influence that brain damage may have on a person's psychological functioning. They consider the complex nature of psychological development, including situations where psychological development may not occur as expected.

Students examine the contribution that classical and contemporary studies have made to an understanding of the human brain and its functions, and to the development of different psychological models and theories used to predict and explain the development of thoughts, feelings and behaviours.

Unit 2: How Do External Factors Influence Behaviour and Metal Processes?
A person's thoughts, feelings and behaviours are influenced by a variety of biological, psychological and social factors. In this unit students investigate how perception of stimuli enables a person to interact with the world around them and how their perception of stimuli can be distorted.

They evaluate the role social cognition plays in a person's attitudes, perception of themselves and relationships with others.

Students explore a variety of factors and contexts that can influence the behaviour of an individual and groups. They examine the contribution that classical and contemporary research has made to the understanding of human perception and why individuals and groups behave in specific ways.

Unit 3: How Does Experience Affect Behaviour and Metal Processes?
The nervous system influences behaviour and the way people experience the world. 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.

A student practical investigation related to mental processes and psychological functioning is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4.

Unit 4: How Is Wellbeing Developed and Maintained?
Consciousness and mental health are two of many psychological constructs that can be explored by studying the relationship between the mind, brain and behaviour. 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 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.

A student practical investigation related to mental processes and psychological functioning is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4, and is assessed in Unit 4.

Assessment
Satisfactory completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score in VCE Psychology are as follows:
- **Unit 3 School-assessed Coursework: 16 per cent**
- **Unit 4 School-assessed Coursework: 24 per cent**
- **End-of-year examination: 60 per cent.**

STUDIO ARTS

Scope of study
VCE Studio Arts introduces students to the role and practices of artists in society. Students develop an understanding of the way artists work in a range of cultures and periods of time, the artists' perceptions, beliefs and actions and their relationship with the viewer.

Student research focuses on critical, reflective and creative thinking, the visual analysis of artworks and the investigation of how artists have interpreted sources of inspiration and influences in their art making. Students examine how artists develop their practice and have used materials, techniques and processes to create aesthetic qualities in artworks.

They study how artists have developed style and explored their cultural identity in their artwork. Students use this knowledge to inform their own studio practice and to support art making. Visiting a variety of art exhibition spaces is integral to the student's artistic and creative development. Students also consider the ways in which artists work to develop and resolve artworks, including their use of inspiration and their creative process.

The role of artists in society includes their relationships with others in the art industry and the presentation and exhibition of artworks in art galleries and exhibition spaces. Students research aspects of the art industry including the presentation, conservation and marketing of artworks.

Rationale
The creative nature of the visual arts provides individuals with the opportunity for personal growth, the expression of ideas and a process for examining identity. Exhibitions of artworks offer an insight into the diverse interpretations of life and experiences of artists. Engagement with artworks facilitates creative thinking and the development of new ideas; it also supports connection and exchange within local, national and global communities.

VCE Studio Arts encourages and supports students to recognise their individual potential as artists and develop their understanding and development of art making.

VCE Studio Arts broadens students' understanding of, and ability to engage with, artworks. It equips students with the knowledge and skills to pursue an art studio practice and follow tertiary and industry pathways in fine art, research and education.

The study also offers students opportunities for personal development and encourages them to make an ongoing contribution to society and the culture of their community through lifelong participation in the making and viewing of artworks.

Structure
The study is made up of four units:
Unit 1: Studio inspiration and techniques
Unit 2: Studio exploration and concepts
Unit 3: Studio practices and processes
Unit 4: Studio practice and art industry contexts
Each unit contains between two and four areas of study.

Entry
There are no prerequisites for entry to Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. Units 1 to 4 are designed to a standard equivalent to the final two years of secondary education.

Unit 1: Studio Inspiration and Techniques
In this unit students focus on developing an individual understanding of the stages of studio practice and learn how to explore, develop, refine, resolve and present artworks. Students explore sources of inspiration, research artistic influences, develop individual ideas and explore a range of materials and techniques related to specific art forms. Using documented evidence in a visual diary, students progressively refine and resolve their skills to communicate ideas in artworks.

Students also research and analyse the ways in which artists from different times and cultures have developed their studio practice to interpret and express ideas, source inspiration and apply materials and techniques in artworks.

The exhibition of artworks is integral to Unit 1 and students are encouraged to visit a variety of exhibition spaces throughout the unit, reflect on the different environments and examine how artworks are presented to an audience.

Unit 2: Studio Exploration and Concepts
In this unit students focus on establishing and using a studio practice to produce artworks. The studio practice includes the formulation and use of an individual approach to documenting sources of inspiration, and experimentation with selected materials and techniques relevant to specific art forms. Students explore and develop ideas and subject matter, create aesthetic qualities and record the development of the work in a visual diary as part of the studio process.

Through the study of art movements and styles, students begin to understand the use of other artists' work in the making of new artworks. Students also develop skills in the visual analysis of artworks. Artworks made by artists from different times and cultures are analysed to understand developments in studio practice. Using a range of art periods, movements or styles, students develop a broader knowledge about the history of art. Analysis is used to understand the artists' ideas and how they have created aesthetic qualities and subject matter. Comparisons of contemporary art with historical art styles and movements should be encouraged.

The exhibition of artworks is integral to Unit 2 and students are encouraged to visit a variety of exhibition spaces throughout the unit, reflect on the different environments and examine how artworks are presented to an audience.

Unit 3: Studio Practices and Processes
In this unit, students focus on the implementation of an individual studio process leading to the production of a range of potential directions. Students develop and use an exploration proposal to define an area of creative exploration. They plan and apply a studio process to explore and develop their individual ideas. Analysis of these explorations and the development of the potential directions is an intrinsic part of the studio process to support the making of finished artworks in Unit 4.

For this study, the exploration proposal supports the student to identify a direction for their studio process. The student determines the studio process. This process records trialling, experimenting, analysing and evaluating the extent to which art practices successfully communicate ideas presented in the exploration proposal. From this process students progressively develop and identify a range of potential directions. Students will select some of these potential directions from which to develop at least two artworks in Unit 4.

The study of artists and their work practices and processes may provide inspiration for students' own approaches to art making. Students investigate and analyse the response of artists to a wide range of source material and examine their use of materials and techniques. They explore professional art practices of artists from different historical and cultural contexts in relation to particular artworks and art forms.

The exhibition of artworks is integral to Unit 3 and students are expected to visit a variety of exhibitions throughout the unit, reflect on the different environments where artworks are exhibited and examine how artworks are presented to an audience. Students are expected to visit at least two different exhibitions and study specific artworks displayed in these exhibitions during their current year of study.

Unit 4: Studio Practice and Art Industry Contexts
In this unit students focus on the planning, production and evaluation required to develop, refine and present artworks that link cohesively according to the ideas resolved in Unit 3. To support the creation of artworks, students present visual and written evaluation that explains why they selected a range of potential directions from Unit 3 to produce at least two finished artworks in Unit 4.

The development of these artworks should reflect refinement and skillful application of materials and techniques, and the resolution of ideas and aesthetic qualities discussed in the exploration proposal in Unit 3. Once the artworks have been made, students provide an evaluation about the cohesive relationship between the artworks.

This unit also investigates aspects of artists' involvement in the art industry, focusing on a least two different exhibitions, that the student has visited in the current year of study with reference to specific artworks in those exhibitions. Students investigate the methods and considerations of the artist and/or curator involved in the preparation, presentation and conservation of artworks displayed in exhibitions in at least two different galleries or exhibitions.

Students examine a range of environments for the presentation of artworks including public galleries and museums, commercial and private galleries, university art galleries, artist-run spaces, alternative art spaces and online gallery spaces.

Assessment
Satisfactory Completion
The award of satisfactory completion for a unit is based on a decision that the student has demonstrated achievement of the set of outcomes specified for the unit. This decision will be based on the teacher's assessment of the student's performance on assessment tasks designated for the unit.

Levels of Achievement
Units 1 and 2
Procedures for the assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 and 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score are as follows:
- **Unit 3 School-assessed Coursework: 5 per cent**
- **Unit 4 School-assessed Coursework: 5 per cent**
- **Units 3 and 4 School-assessed Task: 60 per cent**
- **End-of-year examination: 30 per cent.**

VISUAL COMMUNICATION DESIGN

Scope of study

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

Students employ a design process to generate and develop visual communications. The design process provides a structure to organise design thinking and is shaped by considerations of aesthetics and functionality, as well as social, cultural, environmental and economic factors. Students develop the skills to communicate ideas through manipulation and organisation of design elements, design principles, selected media, materials and methods of production. Creative, critical and reflective thinking supports students to progress through the design process. Throughout the study students explore manual and digital methods to develop and refine presentations.

Structure

Unit 1: Introduction to visual communication design
Unit 2: Applications of visual communication within design fields
Unit 3: Visual communication design practices
Unit 4: Visual communication design development, evaluation and presentation

Unit 1: Introduction to Visual Communication Design

This unit focuses on using visual language to communicate messages, ideas and concepts. This involves acquiring and applying design thinking skills as well as drawing skills to create messages, ideas and concepts, both visible and tangible. Students practise their ability to draw what they observe and they use visualisation drawing methods to explore their own ideas and concepts. Students develop an understanding of the importance of presentation drawings to clearly communicate their final visual communications.

Through experimentation and exploration of the relationship between design elements and design principles, students develop an understanding of how they affect the visual message and the way information and ideas are read and perceived. Students review the contextual background of visual communication through an investigation of design styles. This research introduces students to the broader context of the place and purpose of design. Students are introduced to the importance of copyright and intellectual property and the conventions for acknowledging sources of inspiration.

In this unit students are introduced to four stages of the design process: research, generation of ideas, development of concepts and refinement of visual communications.

Unit 2: Applications of Visual Communication within Design Fields

This unit focuses on the application of visual communication design knowledge, design thinking and drawing methods to create visual communications to meet specific purposes in designated design fields.

Students use presentation drawing methods that incorporate the use of technical drawing conventions to communicate information and ideas associated with the environmental or industrial fields of design. They also investigate how typography and imagery are used in these fields as well as the communication field of design. They apply design thinking skills when exploring ways in which images and type can be manipulated to communicate ideas and concepts in different ways in the communication design field. Students develop an understanding of the design process as a means of organising their thinking about approaches to solving design problems and presenting ideas. In response to a brief, students engage in the stages of research, generation of ideas and development and refinement of concepts to create visual communications.

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

Students use their research and analysis of the process of visual communication designers to support the development of their own designs. They establish a brief for a client and apply design thinking through the design process. They identify and describe a client, two distinctly different needs of that client, and the purpose, target audience, context and constraints relevant to each need.

Design from a variety of historical and contemporary design fields is considered by students to provide directions, themes or starting points for investigation and inspiration for their own work. Students use observational and visualisation drawings to generate a wide range of design ideas and apply design thinking strategies to organise and evaluate their ideas. The brief and research underpin the developmental and refinement work undertaken in Unit 4.

Unit 4: Visual Communication Design Development, Evaluation and Presentation
The focus of this unit is on the development of design concepts and two final presentations of visual communications to meet the requirements of the brief. This involves applying the design process twice to meet each of the stated communication needs.

Having completed their brief and generated ideas in Unit 3, students continue the design process by developing and refining concepts for each communication need stated in the brief. They utilise a range of digital and manual two- and three-dimensional methods, media and materials. They investigate how the application of design elements and design principles creates different communication messages and conveys ideas to the target audience.

As students revisit stages to undertake further research or idea generation when developing and presenting their design solutions, they develop an understanding of the iterative nature of the design process. Ongoing reflection and evaluation of design solutions against the brief assists students with keeping their endeavours focused.

Levels of Achievement
Units 1 & 2
All assessments at Units 1 and 2 are school-based. Procedures for assessment of levels of achievement in Units 1 and 2 are a matter for school decision.

Units 3 & 4
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4 in School-assessed Coursework and an end of year exam.

Percentage contributions to the study score are as follows:
- **Unit 3 School-assessed Coursework: 25 per cent**
- **Units 3 and 4 School-assessed Task: 40 per cent**
- **End-of-year examination: 35 per cent.**