VCE HANDBOOK

ZENITH

LIGHTHOUSE CHRISTIAN COLLEGE

2017

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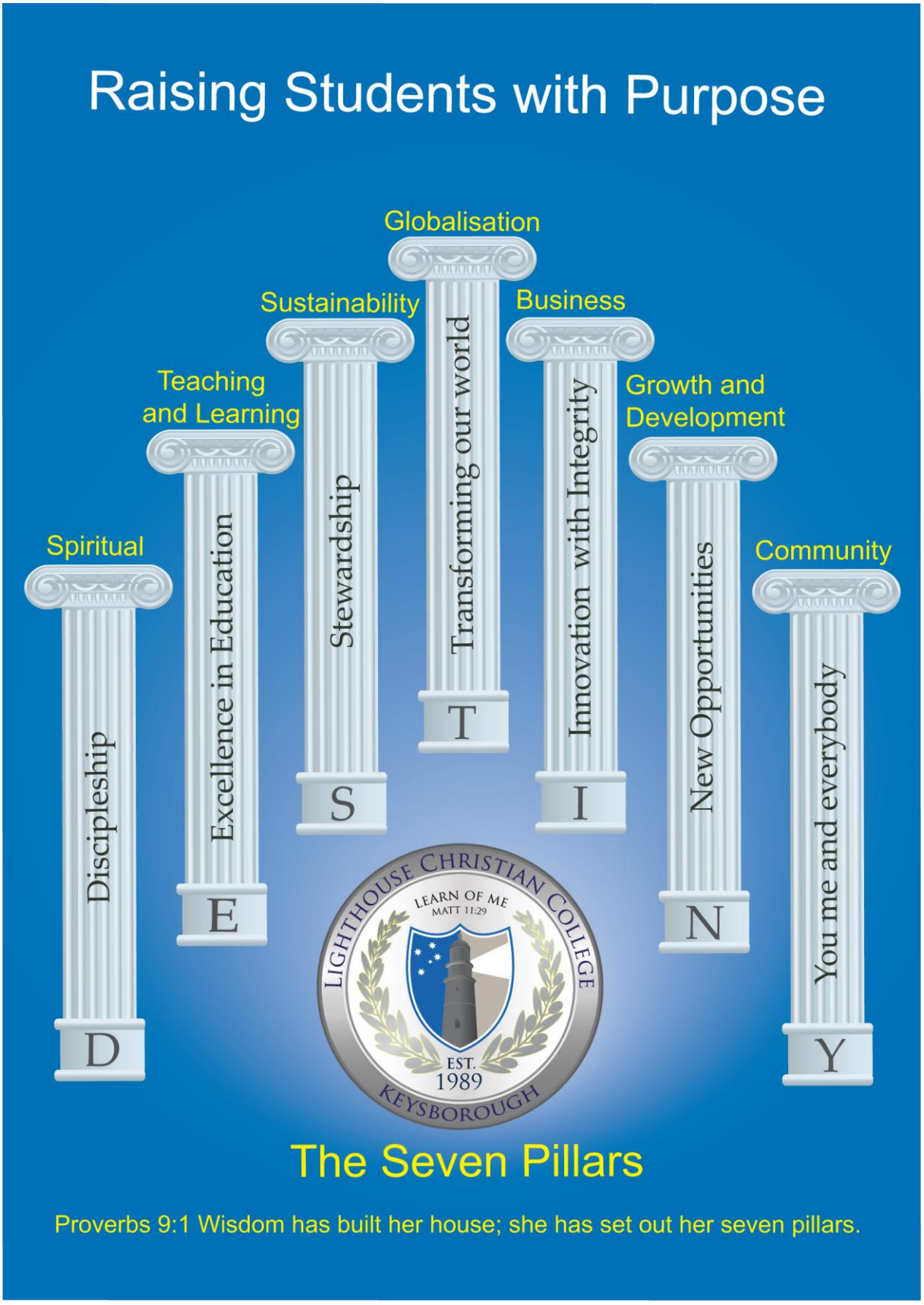
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KEYSBOROUGH
The Seven Pillars
Proverbs 9:1 Wisdom has built her house; she has set out her seven pillars.

8 PEDAGOGICAL STANDARDS

1. We know our students and how they learn.

2. We know the content and how to teach it.

3. We plan for and implement effective Teaching and Learning.

4. We create and maintain effective learning environments.

5. We assess and report on student learning.

6. We engage in professional learning.

7. We engage professionally with colleagues, parents and carers.

8. Implementation of a Christian perspective throughout programs and assessment.

MISSION OF
LIGHTHOUSE CHRISTIAN COLLEGE

The Christian Choice for Excellence in Education

Our Mission and Values:

To assist Christian parents to teach and train their children in a Christian environment, so that they will fulfill God's purposes in their lives and bring an uncompromising Christian influence to our society.

Our Values:

- Integrity
- Community
- Love
- Excellence
- Responsibility
- Respect
- Friendship
- Compassion
- Courage
- Humility

ZENITH (YEARS 11-12) LEADERSHIP TEAM

• College Principal	Mrs Avril Howard
• Deputy Principal	Mr Vernon Clark
• Director of Teaching and Learning	Mrs Margaret Jewell
• Chaplain	Mr Mark Goode
• Zenith Coordinator (Year 11&12)	Mr Paul Donovan

WELCOME TO ZENITH (VCE) AT LIGHTHOUSE CHRISTIAN COLLEGE

A Message from the Principal

I wish to extend a very warm welcome to you and your child as they enter their senior schooling years at Lighthouse Christian College where they will be part of the Zenith sub-school section (VCE). Students you are on the way to shaping your vocational pathways and moving into the adult world.

Since the establishment of the VCE at LCC in 1999 God has given us success in all our endeavors. The scripture the Lord impressed on the founders and which remains a promise for the future is a verse from Zechariah 4:6:

'Not by might nor by power, but by my Spirit,' says the Lord.

Since commencement we have had a 100% academic success rate and alumni are employed in a range of professions and trades. All alumni comment on how quickly the VCE years pass by and how much they enjoyed the Christian community atmosphere at LCC.

Year 12 is essentially only three terms of classes, so we encourage students to invest their time well. We strongly advise students to not commit to a part time job in year 12, or demanding sports/church responsibilities. Their goal must be to use this unique school opportunity to its maximum.

The VCE staff stand with VCE students to enable them to reach their dreams and to move confidently in the direction of their God ordained destiny. We trust that the journey will be enjoyable and characterised by excellence.

Students are encouraged that before they start their days' work, and each night before study, to ask God to help them learn well. Success is built on doing the homework and assignments set and regular revision of topics covered.

The Zenith staff team and I look forward to working with the VCE students to help them attain their goals.

Please do not hesitate to contact me on any educational needs you may have. We are here to help, serve and bless.

Yours in Christ's Service

Avril Howard
Principal

MESSAGE FROM THE DIRECTOR OF TEACHING AND LEARNING

It is always exciting to make plans for the future. You are now at that significant point in your life where you are considering what your post-school options might be - and what your future might look like. Some of you know you need a strong ATAR as the key to your course of choice at university, others will be refining interview and folio skills for entry to T.A.F.E courses and others will be developing resumes and practicing interviews skills for successful entry into the work force. Some of you may be planning a Gap year, a discipleship course, a United Nations Development Project, or a volunteer role overseas perhaps. The possibilities are endless, and the skills you learn through your VCE years; higher order thinking and analysis, self-directedness, communication, creativity, team work, interpersonal skills and curiosity prepare you for them.

Choosing subjects and courses should be interesting and can often be complex. It is important to make decisions that reflect God's gifting and purpose for you, provide maximum flexibility for the future and based on the best information.

This guide provides general information about the VCE, assessment and reporting, tertiary entrance and summaries of the content and assessment of the VCE studies on offer and advice about how to choose the best subjects for you. As a Year 10 student you will use this guide to learn about the VCE and map out a program of study for your final two years at Lighthouse. As a Year 11 student, you will use this guide to re-assess your student program as you move into year 12 and completion of your VCE.

Although this book is a comprehensive guide, your teachers, and other Senior Staff, are available to help you track down the information you need. Please use the resources available to you at Lighthouse, they are provided with you in mind.

Expect to work hard, your VCE years will be busy and challenging because you are being shaped and refined by God for a unique purpose. Take care of you; eat well, sleep well, stay active, take time each day to pray, relax and spend time with the people who love you.

God bless you for the next exciting stage in your journey! We will support you every step of the way!

Margaret Jewell
Director of Teaching and Learning

For I know the plans I have for you" declares the Lord "plans to prosper you and not to harm you, plans to give you hope and a future." (Jeremiah 29:11)

LEADERSHIP OPPORTUNITIES

Students have a number of leadership opportunities while at Lighthouse Christian College. Students are selected for the roles of: Captain, Vice Captain, Performing Arts Captain and House Captains. We provide students opportunities to try out their leadership skills not only during College events but we expect them to problem solve and advocate on behalf of the student body. Student selected for leadership roles have the opportunity to attend leadership conferences where they mingle with other student leaders across the state and refine their ideas about what young leadership involves in our current society. We are proud of the tradition of leadership established at the College and many of our past leaders have gone on to significant roles in their career journey.

CO-CURRICULAR

Students in the VCE have the opportunity to participate in a myriad of activities above and beyond their studies. From the SRC to Chapel band the leadership aspirations and musical talents are well catered for. Students at senior levels have taken part in activities such as our International Food Festival, missions trips, business stalls and running a café. We also have an extensive sporting program beginning with our athletics carnival, which is full of colour and fanfare and culminating in our participation in the Christian Schools Network Sporting events. At these events students get to pit their skills of their contemporaries in badminton, football, soccer and tennis among other sports.

THE VICTORIAN CERTIFICATE OF EDUCATION (VCE)

The rules relating to the VCE are set by the Victorian Curriculum and Assessment Authority (VCAA). To be awarded the VCE students must satisfactorily complete at least 16 units of study. This must include a minimum of:

- An approved combination of three units from the group of English studies which will include English Units One and Two and English Units 3 and 4.

- 3 sequences of Units 3 and 4 studies other than English

Each study consists of four semester length units:

- **Units 1 and 2** may, in some studies be taken separately. Units 1 and 2 are assessed internally

- **Units 3 and 4** must be taken as a sequence. Units 3 and 4 are assessed externally

Lighthouse VCE Program

The VCE program at Lighthouse is designed to provide breadth of study through Units 1 and 2 and depth of study through Units 3 and 4. This will enable students to pursue entry into their preferred tertiary courses. The usual program is for students to undertake 22 units over two years consisting of:

- **Year 11**: 6 VCE units per semester at Unit 1 and 2 OR 6 VCE units per semester which may include one Unit 3 and 4 sequence and:

- **Year 12**: 5 VCE units per semester

Some students undertake extra Unit 1 and 2 studies in Year 10, but it is not necessary to stretch VCE studies over three years or to accumulate extra VCE units.

Planning your studies

A VCE program should contain studies you enjoy and will do well in. It should also contain pre requisite subjects; that is subjects you will need in order to satisfy tertiary entrance requirements in particular courses. To gain entry into tertiary courses, students must have an S (satisfactory completion) in both Units 3 and 4 of their English study. Please refer to page 20 for further information about tertiary entrance.

STUDIES ON OFFER TO YEAR 11 AND 12 STUDENTS AT LIGHTHOUSE CHRISTIAN COLLEGE IN 2016

Unit 1 and 2	**Unit 3 and 4**
Accounting	Accounting
Art	Art
Biology	Biology
Business Management	Business Management
Chemistry	Chemistry
English: • English as an Additional Language	English: • English as an Additional Language
Food and Technology	Food and Technology
Health and Human Development	Health and Human Development
Language Other Than English: • Chinese First Language • Chinese Second Language	Language Other Than English: • Chinese First Language • Chinese Second Language
Legal Studies	Legal Studies
Literature	Literature
Mathematics Studies: • Foundation Mathematics • General Mathematics • Mathematical Methods • Specialist Mathematics	Mathematics Studies: • Further Mathematics • Mathematical Methods • Specialist Mathematics
Music Performance	Music Performance
Physical Education	N/A
Physics	Physics
Psychology	Psychology
Religion and Society	N/A
Theatre Studies	Theatre Studies
Visual Communication and Design	Visual Communication and Design
VET in the VCE: Vetamorphus *A range of options through VET cluster	VET in the VCE: Vetamorphus *A range of options through VET cluster
Victorian Certificate of Applied Learning (VCAL) – depending on student numbers (a minimum of 10 students required)	N/A

VCE units will run subject to a minimum number of students

OTHER EDUCATIONAL OPPORTUNITIES WITHIN THE VCE PROGRAM

VET STUDIES

VET Studies. All VET in the VCE programs have full VCE study status and contribute as units towards the satisfactory completion of the VCE. The qualifications are composed of units of competence. Please speak to the Careers Advisor or Director of Teaching and Learning for further information. Up to 8 of the units of study may be VET unites obtained over two programs.

LANGUAGES OTHER THAN ENGLISH

Languages Other Than English: External Studies through the Victorian School of Languages. Students will attend classes at another location but it is the responsibility of Lighthouse to enrol the student on the VCAA VASS database. Should a student wish to study an external LOTE they should indicate this on the VCE Subject Planning sheet.

DISTANCE EDUCATION

Distance Education. Where there are insufficient numbers for a subject to be taught at the College, or if there is a clash of subjects in the VCE blocks, it may be possible to undertake a subject through Distance Education. Eg History of Revolutions, Economics

Choosing to study through Distance Education does incur additional costs to parents. However, if Distance Education is the best way to resolve a clash on the timetable, then Lighthouse will meet half the cost and the parents meet the other half.

UNIVERSITY ENHANCEMENT STUDIES

University Enhancement Studies. High achieving Year 12 students who have completed a Unit 3 and 4 study in Year 11 may be eligible for enrolment in a University Enhancement study. This enables a student to undertake a first year university subject whilst completing VCE. A university enhancement study counts both as university credit and as a sixth subject in the calculation of the ATAR. Possible enhancement studies include:

- Biology
- Mathematics
- Psychology

UNITS 3 AND 4 STUDIES IN YEAR 11 (ACCELERATION)

When considering subjects for Year 11, some Year 10 students may be eligible to apply to study one accelerated Unit 3 and 4 study. This means that you enter the study without having completed Unit 1 and 2 beforehand. Students whose academic performance in Year 10 indicates that they have developed a high level of skill, knowledge and understanding may be considered.

Acceleration is a serious academic matter and ultimately only for those students who are performing at high academic levels and demonstrating effective time and self-management skills. A student's Semester One report will be a key document in assisting with the decision making process. The Director of Teaching and Learning along with Faculty Coordinators and key VCE staff will oversee acceptance of enrolment in any program involving Unit 3 and 4 studies in Year 11.

Criteria a student must meet:

- Level of performance closest to the one acceleration is being applied for: a minimum of **A** across all areas of assessment.
- Level of performance in Year 10 English: a minimum of a **B+** across all areas of assessment
- Level of performance in other subjects: a minimum of **B** across all areas of assessment.

Other important factors which will be considered:

- Demonstrated evidence of necessary skills, understandings and capabilities to undertake a Unit 3 and 4 sequence.
- Interest and motivation
- Evidence of sound organisational skills and a strong work/study ethic.

Appeal Process

A student who believes they have reasonable grounds to appeal a decision may do so in writing.

The application must include supporting evidence as to why the student should be allowed to accelerate.

An interview which includes parents and the College Principal will form part of this process.

THE LANGUAGE OF THE VCE

The language of the VCE may sound confusing at first. This glossary will help you until the language becomes familiar to you.

Australian Tertiary Admissions Rank: Represents an Australia-wide tertiary admissions rank. The ATAR is an overall percentile ranking calculated in steps of 0.05, reflecting the comparative performance of each successful VCE candidate amongst the relevant age group in that given year.

Authentication: This refers to the process of satisfying the teacher that the work is the work of the student. The student signs a declaration stating that the work is her/his own, works under the supervision of the teacher and confers with the teacher at various stages of completion of the work. He/she acknowledges all sources and types of help received. The Victorian Curriculum and Assessment Authority stipulates authentication procedures and Lighthouse sets policy and procedures accordingly.

CourseLink: A software program available on the VTAC site which allows students to enter their proposed VCE program and to check all the prerequisite subjects for courses in their career interest areas. Year 10 and 11 students should use this program before finalising their subject choices. This is accessed at **www.vtac.edu.au**

Examination: All Unit 3 and 4 VCE studies offered by Lighthouse include one examination. Examinations are set and marked by the Victorian Curriculum and Assessment Authority

General Achievement Test (GAT) All students undertaking one or more Unit 3 and 4 studies are required to sit the General Achievement Test (GAT). This test is designed to help ensure that schools across the state fairly and correctly assess school-assessed tasks and school-assessed coursework, that is, according to certain criteria for various grade levels. It is also used to assess the accuracy of external marking of individual students' examinations. Students should do the best they can on the GAT and familiarise themselves with the instructions and types of questions that may appear. The Victorian Curriculum and Assessment Authority supplies students with their GAT scores at the end of the year.

Graded Assessment. All VCE studies have three graded assessments for each Unit 3 and 4 study.

Level of Performance. For each Unit 1 and 2, students will receive a letter grade indicating the level of performance in various Lighthouse designed assessment tasks. For Units 1 and 2 studies the level of performance is decided by the School. For Units 3 and 4, levels of performance for School Assessed Course work are provided as feedback via letter grades or scores out of a total. **These levels of performance can only be used as a guideline as the Victorian Curriculum and Assessment Authority has responsibility for adjusting the levels of performance in accordance with examination and in some cases GAT scores.**

Prerequisite Studies. These are the studies nominated by Universities and TAFEs as studies which must be satisfactorily completed by ALL applicants seeking admission to their courses. Entry requirements change. Refer ONLY to the relevant VICTER/Tertiary Entrance Guide and Director of Teaching and Learning and Careers Advisor.

'S' or 'N' These letters stand for satisfactorily completed (S) or not satisfactorily completed. (N). Students will receive S or N for each unit of study and for each outcome within each unit.
Students satisfactorily complete a unit if they satisfactorily demonstrate achievement of all outcomes as per the Victorian Curriculum and Assessment Authority study design and if they meet School stipulated attendance requirements.

School Assessed Coursework
During Units 3 and 4 staff will provide graded, descriptive and verbal feedback to students about their on-going performance.

> However the College wishes to draw your attention to the fact that the total scores for coursework assessment tasks may change as a result of Statistical Moderation carried out by the Victorian Curriculum and Assessment Authority.

During Units 3 and 4 in each study staff will give assessment tasks for students to carry out, generally during a timetabled class. If a student is absent for any reason (illness, sport, excursion, holidays, or other personal business) they will be required to carry out another similar coursework assessment task of comparable difficulty at a time specified by the College.

Sequence. A sequence is a Unit 3 followed by Unit 4. Award of the VCE requires that a student successfully completes three Unit 3 and 4 sequences apart from Unit 3 and 4 of English. Students must complete Units 3 and 4 in the one year and obtain an 'S' for both units in order to be given a study score.

Statistical Moderation. Moderation is a process ensuring that the same assessment standards are applied to students from every school doing a particular study. Statistical moderation is a process for adjusting schools' assessments to the same standard, while maintaining the students' rank order given by the school. The Victorian Curriculum and Assessment Authority uses statistical moderation to ensure the coursework assessments given by different schools are comparable throughout the state. Students and parents are provided with details of statistical moderation via briefings and handbooks. Further information is available from the Victorian Curriculum and Assessment Authority (VCAA) website www.vcaa.vic.edu.au

Unit A unit consists of a semester's work and involves 100 hours of study of which 50-60 hours will be class time and the remainder as individual student homework, research and study time. Units 1 and 2 are designed to be "self-contained".

VASS This is the name of the internet based VCE administrative software system used by schools to enter VCE enrolments and results directly onto the VCAA central database.

Victorian Tertiary Admissions Centre. This is the organisation that administers Victoria's joint selection system on behalf of universities, TAFE institutes and some private providers. VTAC's job includes organising the application procedure, receiving and processing applications, forwarding the application to the relevant tertiary institutions, making offers to students on behalf of tertiary institutions and publishing information students will use in planning VCE programs. VTAC is not a selection authority and it does not determine selection criteria.

Vocational Education and Training (VET)
Nationally recognised vocational certificate integrated within the VCE.

THE VCE STUDENT AND HOMEWORK

Homework is intrinsically linked to, and grows out of work done in the classroom. At the VCE level, homework is essential to a student's progress and success.
Homework tends to be task orientated, teacher directed and has a set completion date.

Study tends to be student centred, self-initiated and on-going in nature.

Suggested homework times are:

Year 11	2.5 hours per night on weekdays
	5 hours on weekends
Year 12	3-4 hours per night on weekdays
	6 hours on weekends

Students should complete homework and study each night. Whilst the amount of homework each night may vary, each student should allocate time to complete set tasks as well as study.
Students learn in Year 10 to plan their own homework timetable and use their school diary in a more independent manner. This gives them flexibility and helps them learn self-discipline which is essential for success at the VCE level.

Our Advice for students:

- Set learning and achievement goals for each subject. Write them down
- Use your diary to record and prioritise tasks
- Establish a suitable study environment at home, a quiet, well-lit room. There is no hope of serious study in front of the television or with one eye on *Facebook*.
- Draw up a home-study timetable. Factor in church, work, family commitments and leisure time into the timetable.
- Read, annotate and re read your English texts throughout the year so that they become a part of you.
- Read the opinion section of a newspaper (either online or paper version) EVERY day.
- Identify key passages and quotations-try to avoid using examples in study guides everyone across the state will use these. Make your work rise above.
- Before each study session, set yourself certain simple attainable goals. During that session keep checking that you are really concentrating and that you have grasped the new material studied. When you are confronted with a problem make a note of it and ask your teacher for help the following day.
- Keep refining your notes and arrange your summaries into clear and concise learning guides. The process of summarisation enables the material covered to be consolidated.
- Practice past exam papers.
- Prepare and use Mnemonics to help you remember information

- Prepare revision charts and blu-tack to walls or outside of the shower
- Attend revision lectures-NEAP, School of Excellence and VATE provide excellent ones.
- Practice writing essays gradually building up speed and quality. VCE success is a marathon, not a sprint.
- Drink plenty of water
- Remove electrical devices from your bedroom-they interfere with sleep.

Our Advice for parents

- Encourage and support
- Take an active interest in your child's homework and study
- Ask questions and discuss topics
- Read and discuss English texts
- Assist in the location and understanding of information
- Ensuring your son/daughter's wellbeing- nutrition, hydration, sleep rest and relaxation time
- Notifying the School if the student is suffering problems which could affect study plans

Following Up on Overdue Work

Students are expected to meet due dates set by teachers for the submission of work. Failure to do so affects the on-going learning of the individual and may adversely affect the learning of other students as teachers often feel they need to delay the return and explanation of work to accommodate students who submit work past the due date. Students who submit work past the due date without a note will be issued with a detention.

VCE students

Students undertaking VCE studies are expected to meet VCE attendance and work submission requirements. Students are informed of dates of in-class assessments and due dates for assessment tasks**. If a student is sick on the day of an assessment task, a doctor's certificate is required in order for the assessment task to be re-scheduled. The subject teacher will inform parents in writing if assessment tasks have not been submitted or if an in-class assessment activity has not been undertaken.**

Students must demonstrate satisfactory completion of every learning outcome in order to satisfactorily complete a unit of study. An 'N' (not satisfactory) on any one or more outcome(s) means an 'N' for the assessment in entire unit.

REPORTING

The form of reporting for the VCE is both detailed and informative. Students will receive school based reports for Units 1 and 2, outlining satisfactory completion of learning outcomes and detailing levels of performance in the school assessment tasks. At Units 3 and 4 levels the school will issue a report at the completion of the first semester outlining satisfactory completion of learning outcomes and providing comments regarding the student's overall progress.

The VCAA will provide:

1. A statement of results indicating satisfactory completion (S) or unsatisfactory completion (N) for each unit attempted.

2. A statement of results in the School Assessed Tasks. It is anticipated that they will be graded on a ten-point scale A+ to E, UG (Ungraded) or NA (Not Assessed).

3. A statement of results for the General Achievement Test (GAT).

ATTENDANCE REQUIREMENTS AND THE VCE

The Victorian Curriculum and Assessment Authority is serious about class and School attendance. Work completed during class time is necessary to enhance student understanding and for the teacher to be able to authenticate the student work.
Students are expected to attend 95% of all timetabled classes, devotions, excursions and assemblies and be punctual at all times. In circumstances where students have completed the work but have significantly breeched attendance rules, an 'N' (Not Satisfactory) may be issued. Decisions in relation to school rules are not subject to appeal to VCAA.
If the absence is explained and a SAC has been missed on the day of absence, then for the SAC to be re-scheduled documentary evidence such as a Medical Certificate or a letter from a Psychologist, School Chaplain or other professional must be provided.

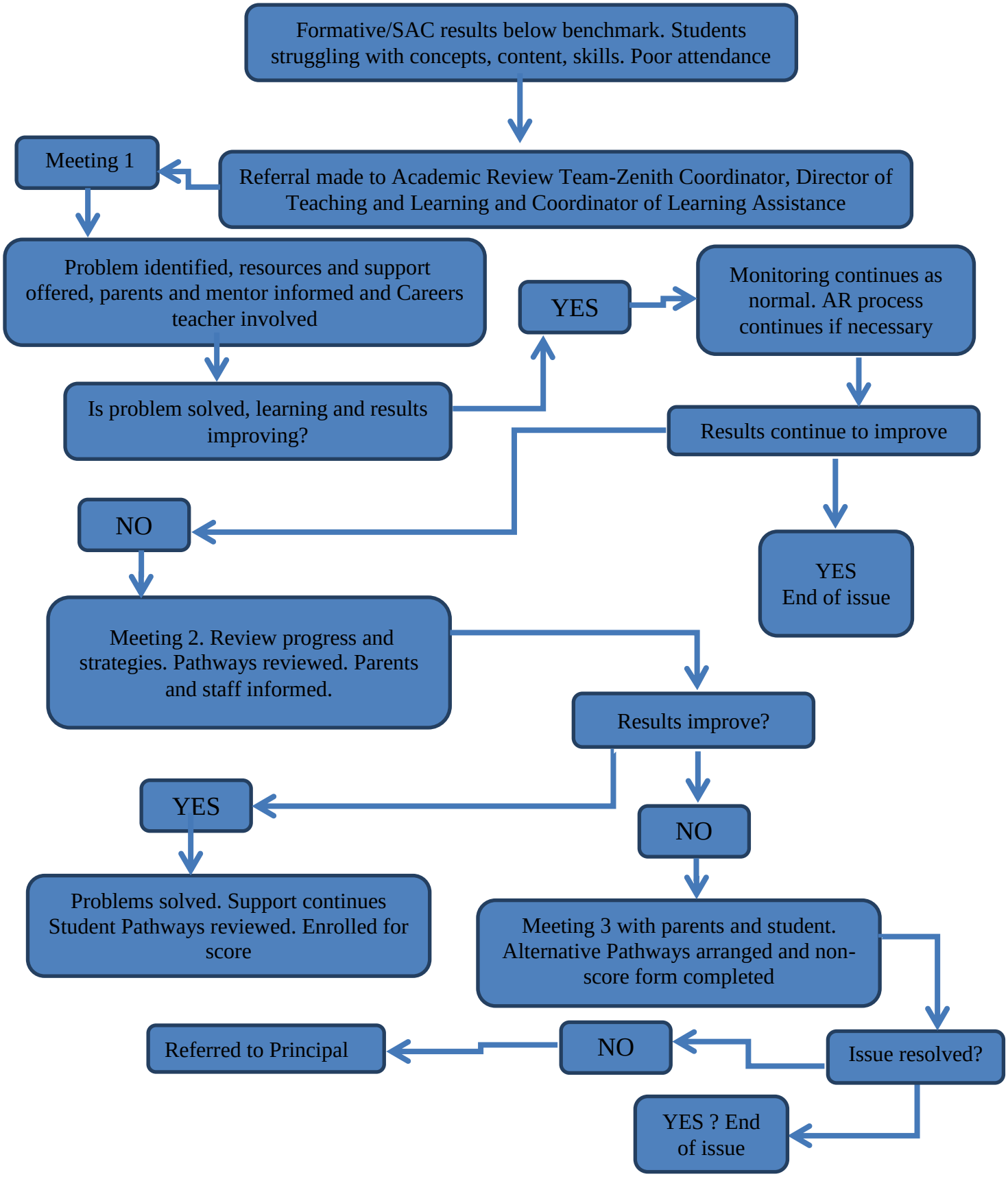
ACADEMIC REVIEW PROCEDURES

To quickly identify learning difficulties that VCE students may experience, to support these students in their learning and to ensure information on academic progress is effectively communicated with parents, a small committee has been established. This Academic Review Committee consists of the following people:

Director of Teaching and Learning	Mrs M Jewell
Zenith Coordinator	Mr P Donovan
Learning Assistance Coordinator	Mrs R Alley
The relevant class teacher	

This committee meets monthly to monitor student progress.

VCE ACADEMIC SUPPORT AND REVIEW FLOWCHART – A PROCESS TO ADDRESS LEARNING DIFFICULTIES AND POOR RESULTS AT THE VCE LEVEL



TERTIARY ENTRANCE

The minimum entrance requirement for all tertiary institutions is the satisfactory completion of the VCE. The Victorian Tertiary Admissions Centre (VTAC) calculates the ATAR and distributes the offers on behalf of tertiary institutions.

Selection into tertiary courses is based on:

- The Australian Tertiary Admissions Rank (ATAR)
- Completion of prerequisite VCE studies, and in some instances a minimum score (relative position)
- Completion of special requirements, such as attendance at an interview or submission of a folio of work.

This information is provided in the current year's VTAC guide and relevant VICTER publication or from the Director of Teaching and Learning and Careers Advisor.

VICTER Guides is a publication which summarises entrance requirements for universities, TAFE institutions and private providers that participate in the VTAC selection system. For students in Year 10, 2015 their Tertiary Entrance Guide is labelled **VICTER 2018. Published in *The Age* and *The Herald Sun*.**

The ATAR is calculated using this formula:

- The Victorian Curriculum and Assessment Authority provides VTAC with each student's study scores (relative position) which indicates that students position in the cohort of students taking that study.
- VTAC adjusts these scores to reflect differences in the cohort of students taking each study compared to the difficulty of other studies. This process is called scaling.
- The scaled study scores are used to calculate the ATAR:
    - The primary four studies- English plus the next best three scaled scores **plus**
    - 10% of the fifth and sixth scaled study scores

University enhancement studies count as the sixth study and students receive a possible bonus of 4.5, 5 or 5.5 points towards the ATAR

VET in the VCE

Students may obtain study scores in approved **VET** in the VCE programs. Students enrolled in a Unit 3 and 4 study of these certificates may include the VCE VET Unit 3 and 4 sequence with a study score in the primary four of the ATAR.

Students who complete Vetamorphus will not receive a study score for the subject and it cannot be counted in the primary four of the ATAR. However, 10% of the primary four will be included in the ATAR against Vetamorphus as a fifth or sixth study.

Students completing Units 3 and 4 studies will receive a criteria-based letter grade from the Victorian Curriculum and Assessment Authority and a study score out of 50 for each study attempted.

Additional Requirements for entry to Health, Medical and Dentistry courses.

- For entry into medical, dentistry and health science courses, students must sit the Undergraduate Medicine and Health Science Admissions Test **(UMAT).** Registrations for the test open in April 2016. More information can be found at: www.umat.acer.edu.au

COSTS ASSOCIATED WITH THE VCE

Students are required to purchase the following items:

- VCE Study guides
- Stationery
- Textbooks

ADDITIONAL UNIFORM ITEMS

- VCE college jumper (subject to size)
- VCE tie
- White shirt (boys only)
- VCE skirt (subject to size)
- VCE socks
- Sports uniform – Polo Shirt and Shorts

VOCATIONAL EDUCATION AND TRAINING COURSES

Parents are responsible for the fees associated with their child undertaking a VET course.

CREATING YOUR VCE PROGRAM

A checklist for Year 10 students

- List your current career aspirations and interests on the VCE Planning sheet found at the back of this book. ☐

- Use a range of career resources to identify the tertiary courses available to enter these career areas. ☐

- Identify any specific tertiary pre requisites subjects for these courses. Refer to the relevant VICTER guide. For **Year 10 students this is VICTER 2018**, for **Year 11 students this is VICTER 2017** ☐

- If you have no specific career area in mind, review the subjects you enjoy and are most interested in at school and possibly explore tertiary courses of a generalist nature eg Arts, Science and Commerce degrees. Please speak to the Director of Teaching and Learning and the Careers Advisor for further guidance. ☐

- You should take note of the current ATAR score required to previously gain entry to these courses. Please note, ATARs change from year to year so the figures you read now act only as guidelines. ☐

- List the tertiary courses you are interested in on your VCE Subject Selection Planning sheet along with the pre requisite Unit 3 and 4 subjects you require. ☐

- Read the descriptions of all VCE studies carefully. Aim for variety in your program by selecting studies that build on your strengths and interests. ☐

- Complete the VCE Subject Selection Planning sheet Year 11 2016 which is at the back of this book. This will include the name of any proposed Unit 3 and 4 subject you want to study in Year 11 and you have met the grade criteria for. This is your proposed program. ☐

- Bring this program to your VCE selection interview where it will be discussed with the Careers Advisor and the Director of Teaching and Learning. ☐

You may make adjustments to the program in response to this interview but only consistent with VCAA enrolment policies.

See over page for typical pathway subject selections that may be helpful when trying to decide which subjects would best suit your career path.

Note carefully when selecting subjects through the portal remember studies are arranged according to Pathways. Choose the block for English last.

TYPICAL OR POPULAR PATHWAY SUBJECTS

Medical:
English, Maths Methods, Chemistry, Specialist Maths (Biology, Physics)

Health/ Nursing:
English, Health and Human Dev, Psychology, General Maths/Further Maths, Physical Education, Biology

Architecture:
English, Physics, Maths Methods, Specialist Maths, Visual Communication

Business/Commerce:
English, Accounting, Business Management, Legal Studies, Maths Methods

Visual Arts:
English, Theatre Studies, Art, Visual Communication, General Maths/Further Maths

Engineering:
English, Physics, Maths Methods, Specialist Maths

Law/ International Relations:
English, Maths Methods, Chinese, Literature

LIGHTHOUSE CHRISTIAN COLLEGE

VCE UNIT DESCRIPTIONS

FOR STUDIES ON OFFER

TO STUDENTS IN 2016

Lighthouse Christian College
927 Springvale Road, Keysborough, VIC, 3173
Tel: 87967373, Fax: 87967374

ACCOUNTING

Thematic Statement
We have to account to God for everything, including the gifts that He is continually blessing us with. Proverbs 3: 9, 10 says, "Honour the Lord with your possessions and with the first fruits of all your increase so your barns will be filled with plenty and your vat will overflow with new wine." The Bible has many verses that deals with how we should handle money and how we have to account to God what is due to God.

Rationale
Small business' need to record and maintain accounting information to be able to make decisions based on their performance. Students will deal with the recording, reporting and providing advice to business owners.

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

ACCOUNTING UNITS 1 & 2

Unit 1

Areas of Study

1. Going into a Business
2. Recording Financial Data and Reporting Accounting Information

Unit 2 – Operating a Business

Areas of Study

1. ICT in Accounting
2. Evaluation of Business Performance

Unit 1 Outcomes	Unit 2 Outcomes
1. Describe the resources and explain and apply the knowledge and skills necessary to set up small business.	1. Record and report financial data and information for a sole trader.
2. Identify, record, report and explain the financial data and information for the owner of a service business, using a combination of manual and ICT methods	2. Record and report financial data and information using accounting software package for a single activity sole trader, and explain and evaluate the role of ICT in the accounting process.
	3. Select and use financial and non-financial information to evaluate a business and suggest strategies that will improve business performance.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of achievement
Individual school decision on levels of achievement.

ACCOUNTING UNITS 3 & 4

Unit 3 – Recording and Reporting for a Trading Business

Areas of Study

1. Recording of Financial Data
2. Balance Day Adjustments and Interpreting Reporting of Accounting Information

Unit 4 – Control and Analysis of Business Performance

Areas of Study

1. Extension of Recording and Reporting.
2. Financial Planning and Decision Making.

Unit 3 Outcomes	Unit 4 Outcomes
1. Record financial data into appropriate accounting records using a double entry accrual-based system for a single activity sole trader, and explain related aspects of this accounting system. 2. Record balance day adjustments, prepare financial reports and explain related aspects of the accounting system.	1. Record and report financial data and information using a double entry accrual-based system for a single activity sole trader, and explain related aspects of this accounting system. 2. Prepare and analyse budgets, evaluate a business using financial and non-financial information and suggest strategies to improve the profitability and liquidity of the business.

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
The student's performance on each outcome should be assessed using one or more of the following tasks: • Structured questions • A folio of exercises (manual and ICT) • A case study (manual and/or ICT) • A test (manual and/or ICT)	The student's performance on each outcome should be assessed using one or more of the following tasks: • Structured questions • A folio of exercises (manual and ICT) • A case study (manual and/or ICT) • A test (manual and/or ICT) End of year Examination

Levels of Achievement

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of VCE Accounting students' level of achievement will be determined by School-assessed Coursework and an end-of-year examination.

ART

UNITS 1 & 2

Unit 1
This unit focuses on artworks as object and examines how formal qualities such as art elements, materials and techniques communicate meaning. Students examine artist in different societies and cultures, and historical periods, and develop their own points of view about the meanings and messages of the studies artwork. They explore the work of artists who have been inspired by ideas relating to personal and cultural identity. In this unit, student will study at least three artists and at least one artwork from each of the selected artists.

Area of Study 1 – Art and Meaning.
This area of study introduces the concept of analytical frameworks to support the interpretation of the meaning and messages of artworks, both as intended by the artist and as interpreted by the viewer. Students learn that the analysis of an artwork's formal qualities using the formal framework can enhance their understanding and interpretation of artworks. They gain an understanding that art may reflect the artist' interest, experiences and thinking through applying the Personal Framework to read possible meanings of artworks. They also develop an understanding that the interpretation of the meanings and messages of art may be a personal response by the viewer. Students examine both historical and contemporary artwork that may be elected from a range of societies and cultures.

Area of Study 2 – Artmaking and Personal Meaning
In this area of study, students are encouraged to develop and apply skills while exploring areas of individual interest to create artworks. Students undertake a range of experiences that offer different ways of working. They build confidence through guided exploration of techniques, materials and processes. Students apply skills of observation and imagination to the development of a folio of visual responses to a selection of set tasks. Students document their thinking as they engage in creative and technical processes. They reflect on their own art making and examine how they have used art elements and principles to develop their visual language. They use the formal framework and the personal framework to analyse the formal qualities in their artworks.

Unit 2
In this unit students become aware that artwork can be created as forms of cultural expression for specific contexts, such as street art, public art, art produced for festival, newspaper cartoons, art prizes, curated exhibitions and performance art. Artworks can celebrate specific events, ideas or beliefs or they can commemorate people, institutions and social movements. They can reinforce a social group's sense of its own power and importance or they can challenge social attitudes and assumptions. Student being to see the importance of an artwork's cultural context and analyse the varying social functions that art can serve. Student use the Formal Framework and the Cultural Framework to examine the different ways artists interpret and present social issues.

Students identify ways in which art expresses and reflects culture. They explore how art is manifested across cultures and examine how art is influenced by time, place, beliefs and traditions. They use the formal Framework and the Cultural Framework to examine the meanings and messages of selected artworks. Students study at least one artwork from at least four artist. In their practical work, student continue to explore techniques and develop personal creative response in their art making. They explore the effects on their own artwork of cultural contexts and social attitudes to art.

Area of Study 1 – Art and Culture.
This area of study focuses on the ways in which art reflects and communicates the values, beliefs, and traditions of the societies for and in which it is created. Students explore and investigate the ways in which the world and the artist have changed over time and the factors that influence these changes. They apply the Formal Framework and the Cultural Framework in their analysis and interpretation of analysis of at least four artists.

Area of Study 2 – Art Making and Cultural Expression.
In this area of study students explore areas of personal interest related to their cultural identification and experiment with visual language to present their ideas. Observations, imagination, ideas or concepts may be starting points for them to experiment with techniques, materials, processes and art forms. Using the Formal Framework, they analyse formal qualities in their artworks and document their creative and technical processes. They reflect on their own art making and examine how cultural aspects are evidenced in their artwork. They use appropriate health and safety practices with respect to the impact of their arts practices upon themselves and their environment.

Unit 1 Outcomes	Unit 2 Outcomes
1. Students analyse a variety of artworks from different time periods using the Formal and Personal Frameworks. 2. Students develop a folio of work where they develop skills and explore ideas in an area of interest that leads to possible resolutions.	1. Students analyse the work of at least four artists using the Cultural and Formal Frameworks. 2. Students produce a folio and artwork exploring areas of personal interest related to their cultural identification.

Unit 1 Assessment Tasks	Unit 2 Assessment Tasks
1. Written response – completed under test conditions in class, due week 7 term one 2. Part A – Exploration of artists. Part B – Exploration of elements and principles due week 8 term one. Part C – Exploration of personal themes due week 1 term 2 Part D – Exploration of materials and techniques due week 3 term 2 Part E – Final piece of art work due week 7 term 2. .	1. Written response to be completed in class, week 5 term three. 2. Part A – Exploration of personal connection to culture, due week 2 term 3. Part B – Exploration of elements and principles due week 6 term 3. Part D – Exploration of materials and techniques due week 10 term 3 Part E – Final piece of art work due week 3 term 4.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of achievement
Individual school decision on levels of achievement.

ART UNITS 3 AND 4

Unit 3

In this unit, students study selected artists who have produced works before 1970 and selected artists who have produced works since 1970. Students use all the analytical frameworks for interpreting and analyzing the meanings of artworks. Applied together, these analytical frameworks help students to appreciate how an artwork may contain different aspects and layers of meaning and to acknowledge the validity of diverse interpretations. They explore ways in which ideas and issues can influence the making and interpretation of art. Students link their growing theoretical understanding of art in Area of Study 1 to their own practice in Area of Study 2. Students apply imagination and creativity to develop their ideas thorough a visual language. Their art making is supported through investigation, exploration and application of a variety of materials and techniques. Students develop confidence in using the language and content of the Analytical Frameworks in their reflection of the formal, personal, cultural and contemporary aspects of their own developing artworks.

Area of Study 1 – Interpreting Art.

In this area of study students respond critically as they interpret the meanings and messages of artworks. They develop, examine, and analyse their and others' opinions and use evidence to support different points of view. Students undertake research to support their analysis. Using appropriate art language, they compare and contrast artworks produced before 1970 with artworks produced since 1970.

Area of Study 2 – Investigation and Interpretation through Art Making.

In this area of study students develop their own art responses inspired by ideas, concepts and observations. They apply imagination and creativity as they explore and develop their visual language through the investigation and experimentation of materials, techniques, processes and art forms. They engage in ongoing exploration, reflection, analysis and evaluation as they progressively develop and refine their ideas. They document and analyse their thinking and working practices throughout this process, using the language and context of selected Analytical Frameworks to guide their reflection.

Unit 4

In unit four students continue to develop personal points of view and informed opinions about art ideas or issues and support them with evidence. They build their learning and conceptual understanding around the discussion and debate of broad themes or issues, such as the role of the artist in society, and consider how themes and issues are communicated through artworks. They discuss and debate how art may affect and change the way people think. They examine and analyse their own viewpoints and the viewpoints of others through commentaries and use this information from visiting artists and speakers, lecturer or guides in galleries, film, pod or podcasts, online programs devoted to specific artists or styles, printed material in newspapers, periodicals, journals, catalogues or texts by art critics or historians.

From this research students choose an art issue to explore. Students select artworks of at least one artist not previously studied in Unit 3, and use these artworks and selected related art commentaries to discuss the chosen art issue.

In relation to their developing artwork students continue to build upon ideas and concepts begun in unit 3. They focus on the development of a body of work that demonstrates creativity and imagination, the evolution of ideas and the realization of appropriate concepts, knowledge and skills. At the end of this unit, students present a body of work and at least one finished artwork accompanied by documentation of thinking and working practices. Students select appropriate analytical frameworks as a structure for the reflection and documentation of their artworks.

Area of Study 1 – Discussing and Debating Art.
Students discuss and debate art issues such as the varying interpretations of the role of art in society. They research, analyse and interpret artworks related to their discussion. They refer to a range of resources and commentaries to examine and debate opinions and arguments, and refer to artists and artworks to support their points of view. They use relevant aspects of the analytical frameworks to provide structure for their analysis.

Area of Study 2 – Realisation and Resolution.
Students continue to develop the body of work begun in unit 3 and work towards resolved ideas and concepts leading to at least one finished artwork other than the work that was completed for unit 3. They reflect on personal concepts and ideas as they progressively develop and refine their artworks. They continue to use the analytical frameworks to reflect on the formal, personal, cultural and contemporary qualities and aspects as appropriate to their artworks. They document their thinking and working practices, reflecting exploration, experimentation and skill. They use and analyse appropriate formal elements and principles, and continue to apply appropriate health and safety practices relevant to their use of materials, techniques and processes.

Unit 3 Outcomes	Unit 4 Outcomes
1. Students compare and contrast artworks, analyse the meanings and messages of artworks, and undertake research to support their opinions about artworks as wells as discussing a variety of opinions expressed about the artworks by the Art world.	1. Students discuss and debate art issues. They research, analyse and interpret artworks related to their discussion. They refer to a range of resources and commentaries to examine and debate opinions and arguments, and refer to artists and artworks to support their points of view. They use relevant aspects of the analytical frameworks to provide structure for their analysis.
2. Students develop their own creative and imaginative art responses inspired by ideas, concepts and observations. They investigate and experiment with materials, techniques, processes and art forms. They engage in ongoing exploration, reflection, analysis and evaluation as they progressively develop and refine their ideas. They document and analyse their thinking and working practices throughout this process.	2. Students develop the body of work begun in unit 3 and work towards resolved ideas and concepts leading to at least one finished artwork other than the work that was completed for unit 3. They reflect on personal concepts and ideas as they progressively develop and refine their artworks. They document their thinking and working practices, reflecting exploration, experimentation and skill. They use and analyse appropriate formal elements and principles.

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
1. Written response due week 7 term one	1. Written response completed during class time week 6 term three.
2. Folio of developmental work – Not formally assessed until Unit 4.	2. Folio of development and resolved artworks due end of term three.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Art students' level of achievement will be determined by School-assessed Coursework and an end-of-year examination. The percentage of each part of the course in relation to the final study score for unit 3 & 4 are as follows:

- Unit 3 School Assessed course work (theory): 10 percent
- Unit 4 School Assessed course work (theory): 10 percent
- Unit 3 & 4 School Assessed Task (practical): 50 percent
- End of year examination: 30 percent

BIOLOGY

God shows special care for all his creatures not just man alone and His care is exercised towards them (Psalm 104:10-23) He has fitted them into His created world in a loving and benevolent way yet they exist in a fallen and sin cursed world as a result of man's transgression. In the study of biology we begin to gain an understanding of the common origins of man and other created creatures (formed out of the ground) and the disunity that occurs between them due to God's separate creation and purpose for different parts of the biological world.
In a Christian study of biology we must recognize man's position under God as ruler of creation and the animal's direct relationship to God, both of which must be considered in unison. Thus, biology becomes an important source of information about the natural world and the place of people within it. As Christians, we must develop increasing awareness within our community of the need to understand and sustain the complex interaction of life on earth.
In particular, we have a need to study the human body, its workings, development and changes and how these interact with the rest of the created order. This should prepare students to evaluate then contribute to discussion on important issues such as medical research, genetics, conservation, etc from a Biblical world view.

Aims of the Course

- To develop an understanding of the beauty, order and complexity of God's creation, leading to an appreciation and worship of God.
- To develop a sense of stewardship and responsibility towards the usage of natural resources. To view natural resources as a gift from God.
- To develop a fear of and a respect for God as students study the wonder of his creation.
- To understand that the Bible is a factual document and that biological facts do not conflict with biblical content, but rather can be used to support it.
- To develop the ability to make reasonable, intelligent and Christian responses to biological issues.
- To develop practical skills to carry out biological study.
- To understand the 'Scientific Method' and design experiments.
- To develop independent work skills and carry our research.
- To collect and analyze data and use suitable methods to present data and draw conclusions.
- To be proficient in the language and major ideas of biology

Entry

There are no prerequisites for entry to Units 1, 2 & 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.

Key Science Skill VCE Biology Units 1 to 4

The development of a set of key science skills is a core component of the study of VCE Biology and applies across Units 1 to 4 in all areas of study. In designing teaching and learning programs and in assessing student learning for each unit, teachers should ensure that students are given the opportunity to develop, use and demonstrated these skills in a variety of contexts when undertaking their own investigations and when evaluating the research of others. As the complexity of key knowledge increases from Units 1 to 4 and as opportunities are provided to undertake investigations, students should aim to demonstrate the key science skills at a progressively higher level. The key science skills are common to all VCE science studies and have been contextualised as listed below for Biology.

Develop Aims and Questions, Formulate Hypotheses and Make Predictions

- Determine aims, hypotheses, questions and predictions that can be tested
- Identify independent, dependent and controlled variables

Plan and Undertake Investigations

- Determine appropriate type of investigation: conduct experiments (including use of controls); solve a scientific or technological problem; use of databases; simulations; access secondary data, including data sourced through the internet that would otherwise be difficult to source as raw or primary data through fieldwork, a laboratory or a classroom.
- Select and use equipment, materials and procedures appropriate to the investigation, taking into account potential sources of error and uncertainty.

Comply with Safety and Ethical Guidelines

- Apply ethical principles when undertaking and reporting investigations.
- Apply relevant occupational health and safety guidelines while undertaking practical investigations, including following relevant bioethical guidelines when handling live materials.

Conduct Investigations to Collect and Record Data

- Work independently and collaboratively as appropriate and within identified research constraints.
- Systematically generate, collect, record and summarise both qualitative and quantitative data.

Analyse and Evaluate Data, Methods and Scientific Models

- Process quantitative data using appropriate mathematical relationships and units.
- Organise, present and interpret data using schematic diagrams and flow charts, tables, bar charts, line graphs, ratios, percentages and calculations of mean.
- Take a qualitative approach when identifying and analysing experimental data with reference to accuracy, precision, reliability, validity, uncertainty and errors (random and systematic).
- Explain the merit of replicating procedures and the effects of sample sizes in obtaining reliable data.
- Evaluate investigative procedures and possible sources of bias, and suggest improvements.
- Explain how models are used to organise and understand observed phenomena and concepts related to biology, identifying limitations of the models.

Draw Evidence-Based Conclusions

- Determine to what extent evidence from an investigation supports the purpose of the investigation, and make recommendations, as appropriate, for modifying or extending the investigation.
- Draw conclusions consistent with evidence and relevant to the question under investigation.
- Identify, describe and explain the limitations of conclusions, including identification of further evidence required.
- Critically evaluate various types of information related to biology from journal articles, mass media and opinions presented in the public domain.
- Discuss the implications of research findings and proposals.

Communicate and Explain Scientific Ideas

- Use appropriate biological terminology, representations and conventions, including standard abbreviations, graphing conventions and units of measurement.
- Discuss relevant biological information, ideas, concepts, theories and models and the connections between them.
- Identify and explain formal biological terminology about investigations and concepts.
- Use clear, coherent and concise expression.
- Acknowledge sources of information and use standard scientific referencing and conventions.

BIOLOGY UNITS 1& 2

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. A student practical investigation related to the survival of an organism or species is undertaken in Area of Study 3. The investigation draws on content from Area of Study 1 and/or Area of Study 2.

Area of Study 1 – How Do Organisms Function?

In this area of study students examine the structure and functioning of cells and how the plasma membrane contributes to survival by controlling the movement of substances into and out of the cell. Although the internal structure of a cell varies, all cells require a relatively stable internal environment for optimal functioning. Whether life forms are unicellular or multicellular, or heterotropic or autotrophic, whether they live in a deep ocean trench, a tropical rain forest, an arid desert or on the highest mountain peak, all individual organisms are faced with the challenge of obtaining nutrients and water, exchanging gases, sourcing energy and having a means of removal of waste products.

Area of Study 2 – How Do Living Systems Sustain Life?

In this area of study students examine the structural, physiological and behavioural adaptations of a range of organisms that enable them to survive in a particular habitat and to maintain a viable population size over time. Students consider the distinction between the external and internal environment of an organism and examine how homeostatic mechanisms maintain the internal environment within a narrow range of values for factors including temperature, blood glucose and water balance. They explore the importance and implications of organising and maintaining biodiversity and examine the nature of an ecosystem in terms of the network of relationships within a community of diverse organisms. Students identify a keystone species, explore an organism's relationship to its habitat and evaluate the impact of abiotic factors on the distribution and abundance of organisms within the community. Factors affecting population size and growth are analysed.

Area of Study 3 – Practical Investigation

Survival requires control and regulation of factors within an individual and often outside the individual. In this area of study students design and conduct a practical investigation into the survival of an individual or species. The investigation requires the student to develop a question, plan a course of action to answer the question, undertake an investigation to collect the appropriate primary qualitative and/or quantitative data, organise and interpret the data and reach a conclusion in response to the question. The investigation is to be related to knowledge and skills developed in Areas of Study 1 and/or 2 and is conducted by the student through laboratory work, fieldwork and/or observational studies.

Unit 2 – How is Inheritance Explained?

In this area of study students build on their understanding of the nature of genes and the use of genetic language to read and interpret patterns of inheritance and predict outcomes of genetic crosses. They gain an understanding that a characteristic or trait can be due solely to one gene and its alleles, or due to many genes acting together, or is the outcome of genes interacting with external environmental or epigenetic factors. Students apply their genetic knowledge to consider the social and ethical implications of genetic applications in society including genetic screening and decision making regarding the inheritance of autosomal and sex-linked conditions.

Area of Study 3 – Investigation of an Issue

The increasing uses and applications of genetics knowledge and reproductive science in society both provide benefits for individuals and populations and raise social, economic, legal and ethical questions. Human cloning, genetic modification of organisms, the use of forensic DNA databanks, assisted reproductive technologies and prenatal and reproductive genetic testing challenge social and ethical norms. In this area of study students apply and extend their knowledge and skills developed in Areas of Study 1 and/or 2 to investigate an issue involving reproduction and/or inheritance. They communicate the findings of their investigation and explain the biological concepts, identify different opinions, outline the legal, social and ethical implications for the individual and/or species and justify their conclusions. Material for the investigation can be gathered from laboratory work, computer simulations and modelling, literature searches, global databases and interviews with experts.

Unit 1 Outcomes	Unit 2 Outcomes
1. On completion of this unit the student should be able to investigate and explain how cellular structures and systems function to sustain life. To achieve this outcome the student will draw on key knowledge outlined in Area of Study 1 and the related key science skills.	1. On completion of this unit the student should be able to compare the advantages and disadvantaged of asexual and sexual reproduction, explain how changes within the cell cycle may have an impact on cellular or tissue system function and identify the role of stem cells in cell growth and cell differentiation and in medical therapies. To achieve this outcome the student will draw on key knowledge outlined in Area of Study 1 and the related key science skills.
2. On completion of this unit the student should be able to explain how various adaptations enhance the survival of an individual organism, investigate the relationships between organisms that form a living community and their habitat, and analyse the impacts of factors that affect population growth. To achieve this outcome the student will draw on key knowledge outlined in Area of Study 2 and the related key science skills.	2. On completion of this unit the student should be able to apply an understanding of genetics to describe patterns of inheritance, analyse pedigree chards, predict outcomes of genetic crosses and identify the implications of the uses of genetic screening and decision making related to inheritance. To achieve this outcome the student will draw on key knowledge outlined in Area of Study 2 and the related key science skills.
3. On completion of this unit the student should be able to design and undertake an investigation related to the survival of an organism or species, and draw conclusions based on evidence from collected data. To achieve this outcome the student will draw on key knowledge outlined in Area of Study 3 and the related key science skills.	3. On completion of this unit the student should be able to investigate and communicate a substantiated response to a question related to an issue in genetics and/or reproductive science. To achieve this outcome the student will draw on key knowledge outlined in Area of Study 3 and the related key science skills.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

BIOLOGY UNITS 3 AND 4

Unit 3 – Signatures of Life

In this unit students consider the molecules and biochemical processes that are indicators of life. They investigate the synthesis of biomolecules and biochemical processes that are common to autotrophic and heterotrophic life forms. Students consider God's blueprint in DNA and investigate its structure; the genes of an organism, as functional units of DNA and code for the production of a diverse range of proteins in an organism.

Students investigate the significant role of proteins in cell functioning; how technological advances have enabled scientists to determine differences in the molecular structure of proteins, how the structure of a protein relates to its function in an organism's tissues, and how technological advances have given rise to applications such as the design of proteins for specific purposes. Students consider advances in proteomics applied, for example, to medical diagnosis and the development of specific proteomic medications, new pharmaceuticals, nutraceuticals and vaccines.

Students investigate God's design in how cells communicate with each other at molecular level in regulating cellular activities; how they recognize 'self' and 'non-self' in detecting possible agents of attack; and how physical barriers and immune responses can protect the organism against pathogens.

Students consider the technological advances that have contributed to man's knowledge and understanding of molecular biology as they come to understand the dynamic nature of science. They investigate how the development of bioinformatics makes it possible to store and analyse large volumes of biological information.

Students apply concepts relating to cell structure and function, the needs of cells and their activities.

Area of Study 1 – Molecules of Life

In this area of study, students investigate the activities of cells at molecular level; the synthesis of biomolecules that form components of cells and the role of enzymes in catalyzing biochemical processes. Students investigate energy transformations in cells and how autotrophs and heterotrophs obtain their energy requirements, particularly through the processes of photosynthesis and cellular respiration.

Students gain an understanding that DNA and proteins are key molecules of life forms, and that units of DNA code for the production of proteins underpins the relationship between changing the code and changing the molecular products of cells. Students explore applications of molecular biology in medical diagnosis and the design of new pharmaceuticals and implications for discerning decision-making from a Christian perspective.

Students undertake practical investigations into the molecular composition of cells and biochemical processes including transformation of energy and enzyme activity.

Area of Study 2 – Detecting and Responding

This area of study focuses on how cells detect biomolecules that elicit particular responses depending on whether the molecules are 'self' or 'non-self'. Students investigate how signaling molecules, such as hormones and neurotransmitters, assist in coordinating and regulating cell activities by binding to specific receptors on membranes of target cells, initiating a series of molecular changes in response.

Students examine God's care in the design of barriers and mechanisms of organisms that protect them from invasion and infection by pathogenic organisms. They investigate mechanisms that control the effectiveness of pathogens, and specific and non-specific immune responses of organisms to antigens.

Students investigate signaling molecules and their role in regulating activities of organisms such as growth hormones in plants and/or action of antibiotics. They investigate how advances in molecular biology have helped to find causes of disorders in cell communication, and how technologies assist in managing disorders that interfere with coordination and regulation.

Unit 4 – Continuity and Change

In this unit students examine the theory of evolution of life forms over time and contrast this to the Biblical perspective of the creative hand of God. Students explore hypotheses that account for suggested changes in species and develop their Christian response to this. In addition to observable similarities and differences between organisms, students explore the universality of DNA, and conservation of genes as evidence for ancestral lines of life that are suggested to have given rise to the present biodiversity of our planet. This is contrasted with the Biblical observations that species are becoming less abundant and diversity is in a downward spiral – a direct result of the fall.

Students investigate how the study of molecular genetics has expanded in genomics – the study of whole sets of genes possessed by an organism. Information obtained by studying genomes and functional genomics has provided insight into gene expression and regulation, and relationships between species.

Students study how genes are transmitted from generation to generation by examining meiosis and patterns of inheritance including pedigree analysis. Students consider the relationship between heritable variations and the environment in accounting for changes to species over time, and for speciation and extinction.

Students examine the interrelationships between biological, cultural and technological 'evolution'. As they consider the historical development of ideas and technological advances that have contributed to our knowledge and understanding of inheritance and evolutionary biology, students come to understand the dynamic nature of science, the human factors that influence developments in science and its increasing reliance on evidence. Students investigate emerging technological applications and the implications of advances in molecular genetics. They consider how developments in bioinformatics assist in collecting and interrogating large volumes of biological data.

The ability to apply technologies that can change the genetic composition of individual organisms and species, including humans, raises controversial issues for individuals and society as a whole and students are encouraged to develop a Christian response to these. Students examine these issues and consider their implications from a variety of perspectives and learn how to defend their faith in a fallen world.

Area of Study 1 – Heredity

This are of study focuses on molecular genetics and the investigation not only of individual units of inheritance, but also of the genomes of individuals and species. Students investigate inheritance in asexually reproducing organisms and the mechanism and patters of transmission of heritable traits in sexually reproducing organisms.

Students examine the process of meiosis in terms in inputs and outputs and, in accounting for variations in offspring, consider the interplay between genotype and environmental factors, the significance of mutations in DNA, and the relationship between alleles.

Students investigate the techniques and technologies that are used to amplify DNA, identify the genetic profile of organisms and manipulate and modify the genomes of organisms. They undertake practical investigations that involve manipulation of DNA and inheritance of traits. They trace patterns of inheritance by analysis of pedigrees.

Area of Study 2 – Change Over Time

This area of study focuses on change to genetic material that occurs over time and the changing nature and reliability of evidence that scientists use to support the concept of evolution of life forms. This is contrasted with Scriptural evidence for creation by an awesome God. Students investigate 'changes' to species and examine the process of natural selection as a mechanism for evolution, developing a Christian world view of natural selection.

Students examine how evolutionary biology has be based upon changes in evidence obtained by accumulation of information over time, changes in interpretation and more recently from molecular

biology. Students consider the current evidence supporting intelligent design – supporting the Biblical account of creation.

Students consider technological advances that appear to support an increased understanding of evolutionary processes and phylogenetic relationships.
Students consider how the interaction between human, cultural and technological evolution m have affected evolutionary processes. They also look at how applying reproductive and gene technologies to develop traits in species for particular purposes may affect processes in the future.
Students consider the applications of gene technologies to genetic screening and profiling of individuals and gene therapies that affect gene lines, and the bioethical, environmental and legal issues these raise. Students are encouraged to develop their Christian world view in these areas.

Unit 3 Outcomes	**Unit 4 Outcomes**
1. On completion of this unit the student should be able to analyse and evaluate evidence from practical investigations related to biochemical processes. To achieve this outcome the student will draw on Key Knowledge outlined in area of study 1 (22), and Key Skills listed in the Biology Study Guide pp 12 ***This outcome will contribute 50 marks out of 100 marks allocated to School-assessed Coursework for Unit 3. It is assessed by two tasks, each of which shall contribute 25 marks, for a total of 50 marks*.**	1. On completion of this unit students should be able to analyse evidence for the molecular basis of heredity, and patterns of inheritance. To achieve this outcome the student will draw on Key Knowledge outlines in area of study 1 (pp27), and Key Skills listed in the Biology Study Guide pp 12 ***This outcome will contribute 50 marks out of the 100 marks allocated to School-based Coursework for Unit 4. It will be assessed by two tasks which will each contribute a total of 25 marks**.*
2. On completion of this unit the student should be able to describe and explain the stimulus-response model in coordination and regulation and how components of the human immune system respond to antigens and provide immunity. To achieve this outcome the student will draw on Key Knowledge outlined in area of study 2 (pp23), and Key Skills listed in the Biology Study Guide pp 12 ***This outcome will contribute 50 marks out of 100 marks allocated to School-assessed Coursework for Unit 3. It will be assessed by two tasks, each of which shall contribute 25 marks, for a total of 50 marks.***	2. On completion of this unit the student should be able to analyse and evaluate evidence for evolutionary change and devolutionary relationships, and describe the suggested mechanisms for change including the effect of human intervention on evolutionary processes. To achieve this outcome the student will draw on Key Knowledge outlines in area of study 2 (pp28), and Key Skills listed in the Biology Study Guide pp 12 ***This outcome will contribute 50 marks out of the 100 marks allocated to School-assessed Coursework for Unit 4. It will be assessed by two tasks which will contribute a total of 25 marks*.**

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
The student's level of achievement in Unit 3 will be determined by school-assessed coursework	The student's level of achievement in Unit 4 will be determined by school-assessed coursework and end-of-year examination.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Biology students' level of achievement will be determined by School-assessed Coursework and an end-of-year examination. The percentage of each part of the course in relation to the final study score for unit 3 & 4 are as follows:

- Unit 3 School Assessed course work: 20 percent
- Unit 4 School Assessed course work: 20 percent
- End of year examination: 60 percent

BUSINESS MANAGEMENT

Thematic Statement

The Bible has numerous verses that discuss the importance of the good management of business or money. In Luke 14, verse 28, Jesus asks the crowd *"would any of you think of building a tower without first sitting down and calculating the cost."* Jesus also told the parable of a man of noble birth, who called 10 of his servants to account for his money. He then rewarded the servants according to how well they managed the money that was given to them. Jesus also told a similar story about three servants and the talents (a denomination of money) they were asked to manage.

Rationale

This study is invaluable for students who want a good understanding of the business world. The business world is made up of a wide variety of organisations that vary in size, ownership, objectives, resources and location. Business Management examines the ways in which people at different levels within a business organisation manage the resources to achieve the objectives of the organisation.

Entry

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

BUSINESS MANAGEMENT UNITS 1 & 2

Unit 1

Area of Study 1 – Business Concepts
The focus of this area is generic business concepts which apply to the management of organisations of varying size, complexity or industry setting.

Area of Study 2 – Small Business
Decision making, planning and operation. This area of study involves a consideration of the range of activities related to the planning and operation of a small business.

Area of Study 3 - Day-to-Day Operations
Introductory accounting, management of staff, legal responsibilities etc.

Unit 2

Area of Study 1 – Communication in Business
This area of study introduces students to the concept of communication in business with an emphasis on its importance and the methods and forms it can take. Communication and its relationship to business objectives and strategy will be considered.

Area of Study 2 – Managing the Marketing Function
This area of study involves an examination of the planning used by management to position its products and services in the marketplace. Students take the fundamental elements of communication covered in area of study 1, but consider these in the context of the marketing function. Students learn the essential characteristics of effective marketing and apply selected market research methods to the business environment.

Area of Study 3 – Managing the Public Relations Function.
This area of study involves an examination of the role management plays in creating and maintaining the image of the business. The public relations function can be considered as an application of fundamental communication processes and strategies.

Unit 1 Outcomes	Unit 2 Outcomes
1. Explain and apply a set of business concepts and relationships to a range of businesses. 2. Apply small business management principles and practices and evaluate their effectiveness in various business situations. 3. Discuss one or more of the day to day operations associated with an ethical and a socially responsible small business, and apply the operation/s to a business situation.	1. Identify and explain a range of effective communication methods used in business. 2. Analyse effective marketing strategies and processes. 3. Apply and analyse effective public relations strategies and tactics.

Unit 1 Assessment Tasks	Unit 2 Assessment Tasks
1. Case study analysis 2. Business research (print and online) 3. Development of a business plan 4. Interview and report of contact with business 5. Business simulation exercise 6. School based short-term business activity 7. Essay 8. Test 9. Computer modelling 10. Business survey and analysis 11. Analytical exercise 12. Mid-year Examination	1. Case study analysis 2. Business research (print and online) 3. Development of a business plan 4. Interview and report of contact with business 5. Business simulation exercise 6. School based short-term business activity 7. Essay 8. Test 9. Computer modelling 10. Business survey and analysis 11. Analytical exercise 12. End of year Examination

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

BUSINESS MANAGEMENT UNITS 3 & 4

Unit 3

Area of Study 1 – Large Scale Organisation in Context
Large-scale organizations are important for the Australian economy in creating employment, wealth and income. Every large-scale organisation operates within a unique context, characterised by its internal and external environment.

Area of Study 2 – Internal Environment of Large Scale Organisations
Large-scale organisations, whether for-profit or not-for-profit, exist to achieve specific objectives. The success in achieving these objectives will be strongly influenced by the successful management of the internal business environment.

Area of Study 3 – The Operations Management Function
Operations management combines the roles of management in order to transform inputs into outputs. The production of the product or service is the core objective of the large-scale organisation. The study of operations management enables students to consider the best and most responsible use of all the available resources for the production of a quality final good or service in a competitive, global environment.

Unit 4

Area of Study 1 – The Human Resource Management Function
In this area of study, students examine the practices and processes of human resource management in large-scale organisations in Australia. A general introduction to human resources is followed by an investigation of the two key aspects of human resources management: the employment cycle and employee relations. Students apply the principles of human resource management to a practical or simulated situation.

Area of Study 2 – The Management of Change
In this area of study, students examine the importance of change management in large-scale organisations. They consider ways in which change can be managed effectively in both theoretical and practical contexts.

Unit 3 Outcomes	Unit 4 Outcomes
1. Identify and discuss major organisational elements and the role of management in large organisations. 2. Describe and analyse major aspects of the internal environment of large scale organisations. 3. Identify and evaluate practices and processes related to operations management.	1. Identify and evaluate major practices and processes related to human resource management. 2. Analyse and critically discuss issues and trends related to the management of change in large scale organisations. 3. End of year examination (Units 3&4)

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
1. Structured questions. 2. Test open book analysis of a case study. 3. Media Analysis.	1. Structured questions. 2. Test open book analysis of a case-study. 3. End of year examination (Units 3 &4)

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Business Management students' level of achievement will be determined by School-assessed Coursework and an end-of-year examination.

CHEMISTRY

Chemistry is a key science in explaining the workings of God's creation through an understanding of the properties and interaction of substances that make up matter. "Through faith we understand that the worlds were framed by the word of God, so that things which are seen were not made of things which do appear" (Hebrews 11:3). Most processes, from the formation of molecules in outer space to the complex biological interactions occurring in cells, can be described by chemical theories. Although there are no sharp boundaries between sciences such as chemistry, physics and biology, chemistry is used to explain natural phenomena at the molecular level, as well as create new materials such as medicines and polymers. The development of modern society has been intimately linked with the successful integration of chemical knowledge into new technologies. This continues with emerging fields such as biotechnology and nanotechnology.

Aims of the Course

This study is designed to enable students to:

- strengthen their faith in our all-wise and all- powerful God by developing their understanding of the language, processes and major ideas of chemistry;
- understand the precision and design of the physical world that God created, through experimental evidence in developing and generating new ideas and knowledge in chemistry;
- develop an appreciation for God's natural gifts, through their understanding of the ways in which chemical knowledge is organised, challenged, revised and extended;
- develop skills in the design and safe conduct of practical investigations including risk assessment, hazard identification and waste management and to use them wisely as a good steward;
- develop the skills and knowledge required to complete experimental processes and procedures and undertake research investigations to learn many truths about God's world;
- assess the quality of assumptions and the limitations of models, data and conclusions that will enable them to see the relation and agreement between God's world and His word, the Bible;
- conduct practical investigations to collect, interpret, and analyse data and evidence, and present conclusions, develop skills in the effective communication of chemical ideas to a range of audiences and be aware of the ethics of scientific research that apply to investigations in chemistry;
- be aware of the social, economic and environmental impacts of current and emerging areas of chemistry and associated technologies.

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 readings. 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.

CHEMISTRY UNITS 1 & 2

Unit 1 – How Can the Diversity of Materials be Explained?

Area of Study 1 – How Can Knowledge of Elements Explain the Properties of Matter?
In this area of study students focus on the nature of chemical elements, their atomic structure and their place in the periodic table. They review how the model of the atom has changed over time and consider how spectral evidence led to the Bohr model and subsequently to the Schrödinger model. Students examine the periodic table as a unifying framework into which elements are placed based upon similarities in their electronic configurations. In this context students explore patterns and trends of, and relationships between, elements with reference to properties of the elements including their chemical reactivity. Students investigate the nature of metals and their properties, including metallic nanomaterials. They investigate how a metal is extracted from its ore and how the properties of metals may be modified for a particular use. Students apply their knowledge of the electronic structures of compounds are formed, explore their crystalline structures and investigate how changing environmental conditions may change their properties. Fundamental quantitative aspects of chemistry are introduced including the mole concept, relative atomic mass, percentage abundance and composition by mass and the empirical formula of an ionic compound.

Areas of Study 2 – How Can the Versatility of Non-Metals be Explained?
In this area of study students explore a wide range of substances and materials make from non-metals including molecular substances, covalent lattices, carbon nanomaterials, organic compounds and polymers. Students investigate the relationship between the electronic configurations of non-metallic atoms and the resultant structures and properties of a range of molecular substances and covalent lattices. They compare how the structures of these non-metallic substances are represented and analyse the limitations of these representations. Students study a variety of organic compounds and how they are grouped into distinct chemical families. They apply rules of systematic nomenclature to each of these chemical families. Students investigate useful materials that are made from non-metals, and the use of carbon-based nanoparticles for specific applications. Student apply quantitative concepts to molecular compounds, including mole concept and percentage composition by mass, and determine the empirical and molecular formulas of given compounds.

Area of Study 3 – Research Investigation
Knowledge of the origin, structure and properties of matter has built up over time through scientific and technological research, including medical research, space research and research into alternative energy resources. As a result, patterns and relationships in structures and properties of substances have been identified, applied and modified, and a vast range of useful materials and chemicals has been produced. This research and development is ongoing and new discoveries are being made at an accelerating rate. In this area of study students apply and extend their knowledge and skills developed in Area of Study 1 and/or Area of Study 2 to investigate a selected question related to materials. They apply critical and creative thinking skills, science inquiry skills and communication skills to conduct and present the findings of an independent investigation into one aspect of the discoveries and research that have underpinned the development, use and modification of useful material or chemicals. Students undertake a research investigation relevant to one of the following ten options. A question from the list under each option may be selected or students may develop their own research question relevant to Area of Study 1 and/or Area of Study 2 in conjunction with their teacher. For the selected questions, students outline, analyse and evaluate the relevant evidence to support their conclusions.

Unit 2 – What Makes Water Such a Unique Chemical?

Area of Study 1 – How do Substances Interact with Water?

In this area of study students focus on the properties of water and the reactions that take place in water including acid-base and redox reactions. Students relate the properties of water to the water molecule's structure, polarity and bonding. They also explore the significance of water's high specific heat capacity and latent heat of vaporization for living systems and water supplies. Students investigate issues associated with the solubility of substances in water. Precipitation, acid-base and redox reactions that occur in water are explored and represented by the writing of balance equations. Students compare acids with bases and learn to distinguish between acid strength and acid concentration. The pH scale is examined and students calculate the expected pH of strong acids and strong bases of known concentration.

Area of Study 2 – How are Substances in Water Measured and Analysed?

In this area of study students focus on the use of analytical techniques, both in the laboratory and in the field, to measure the solubility and concentrations of solutes in water, and to analyse water samples for various solutes including chemical contaminants. Students examine the origin and chemical nature of substances that may be present in a water supply, including contaminants, and outline sampling techniques used to assess water quality. They measure the solubility of substances in water, explore the relationship between solubility and temperature using solubility curves and learn to predict when a solute will dissolve or crystallise out of solution. The concept of molarity is introduced and students measure concentrations of solutions using a variety of commonly used units. Students apply the principles of stoichiometry to gravimetric and volumetric analyses of aqueous solutions and water samples. Instrumental techniques include the use of colorimetry and/or UV-visible spectroscopy to estimate the concentrations of coloured species in solution, atomic absorption spectroscopy data to determine the concentration of metal ions in solution and high performance liquid chromatography data to calculate the concentration of organic compounds in solution.

Area of Study 3 – Practical Investigation

Substances that are dissolved in water supplies may be beneficial or harmful, and sometimes toxic, to humans and other living organisms. They may also form coatings on, or corrode, water pipes. In this area of study students design and conduct a practical investigation into an aspect of water quality. The investigation relates to knowledge and skills developed in Area of Study 1 and/or Area of Study 2 and is conducted by the student through laboratory work and/or fieldwork. The investigation requires the student to develop a question, plan a course of action that attempts to answer the question, undertake an investigation to collect the appropriate primary qualitative and/or quantitative data (which may include collecting water samples), organise and interpret the data and reach a conclusion in response to the question.

Unit 1 Outcomes	Unit 2 Outcomes
1. On completion of this unit the student should be able to relate the position of elements in the periodic table to their properties, investigate the structures and properties of metals and ionic compounds, and calculate mole quantities.	1. On completion of this unit the student should be able to relate the properties of water to its structure and bonding, and explain the importance of the properties and reactions of water in selected contexts.
2. On completion of this unit the student should be able to investigate and explain the properties of carbon lattices and molecular substances with reference to their structures and bonding, use systematic nomenclature to name organic compounds, and explain how polymers can be designed for a purpose.	2. On completion of this unit the students should be able to measure amounts of dissolved substances in water and analyse water samples for salts, organic compounds and acids and bases.
3. On completion of this unit the student should be able to investigate a question related to the development, use and/or modification of a selected material or chemical and communicate a substantiated response to the question.	3. On completion of this unit the student should be able to design and undertake a quantitative laboratory investigation related to water quality, and draw conclusions based on evidence from collected data.

Unit 1 Assessment Tasks	Unit 2 Assessment Tasks
Students will be given tasks selected from the following list: 1. Outcomes 1 & 2 • Annotations of a practical work folio of activities or investigations • A report of a practical activity or investigation • A modelling activity • Media response • Problem-solving involving chemical concepts, skills and/or issues • A reflective learning journal/blog related to selected activities or in response to an issue • Data analysis • A test comprising multiple choice and/or short answer and/or extended response	Students will be given tasks selected from the following list: 1. Outcomes 1 & 2 • Annotations of a practical work folio of activities or investigations • A report of a practical activity or investigation • A modelling activity • Media response • Problem-solving involving chemical concepts, skills and/or issues • A reflective journal/blog related to selected activities or in response to an issue • Data analysis • A test comprising multiple choice and/or short answer and/or extended response

2. Outcome 3 • A report of an independent investigation of a topic selected from Area of Study 1 and/or Area of Study 2, using an appropriate format, for example digital presentation, oral communication or written report. 3. Tests and Examination	2. Outcome 3 • A report of an independent investigation of a topic selected from Area of Study 1 and/or Area of Study 2, using an appropriate format, for example digital presentation, oral communication or written report 3. Tests and Examination

CHEMISTRY UNITS 3 AND 4

Unit 3 – Chemical Pathways

Area of Study 1 – Chemical Analysis
In this area of study students use a variety of analytical techniques to analyse products in the laboratory. They conduct volumetric analyses using acid-base and redox titrations and standard solutions, and carry out gravimetric analyses. They are also introduced to instrumental analytical techniques of spectroscopy and chromatography. Students review and apply their understanding of stoichiometry as they complete calculations related to their practical investigations. Students relate the operation of the analytical techniques and instruments to the chemical reactions and the chemical structures of the materials which are being analysed.

Area of Study 2 – Organic Chemical Pathways
In this area of study students investigate systematic organic chemistry including production of starting materials for particular reaction pathways. Students use molecular models and conduct simple laboratory investigations to observe the properties and reactions of different homologous series and functional groups. Students investigate the use of biochemical fuels. They design reaction pathways to prepare organic compounds from given starting materials. Students investigate how forensic analysis relies on the use of organic chemicals (including DNA) and the role of organic chemicals (including proteins) in the development of medicines.

Unit 4 – Chemistry at Work

Area of Study 1 – Industrial Chemistry
This area of study focuses on the factors that affect the rate and extent of a chemical reaction. Students study energy profiles and how equilibrium law is applied to homogeneous equilibria. They conduct experiments to investigate the effect of temperature, concentration of reagents, pressure and catalysts on the position of equilibrium of a reaction, and apply Le Chatelier's Principle to explain their results. Students explore how factors affecting rate and equilibrium are applied to achieve the optimum reaction conditions in the industrial production of chemicals. One chemical selected from ammonia, ethene, sulphuric acid or nitric acid is studied in detail.

Area of Study 2 – Supplying and Using Energy
This area of study focuses on use of different energy resources. Students evaluate the extent of the reserves of some of these resources, how each resource is used and the advantages and disadvantages of their continued use. Students conduct experiments using calorimeters to measure the energy of chemical reactions. The electrochemical series is a useful tool in the prediction of redox reactions in aqueous solution. Students construct and operate simple galvanic and electrolytic cells and use the electrochemical series to predict and explain their results. They extend their study of stoichiometry with the application of Faraday's laws to solve problems involving quantitative calculations for electrolysis reactions.

Unit 3 Outcomes	Unit 4 Outcomes
1. On completion of this unit the student should be able to evaluate the suitability of techniques and instruments used in chemical analyses. 2. On completion of this unit the student should be able to identify and explain the role of functional groups in organic reactions and construct reaction pathways using organic molecules.	1. On completion of this unit the student should be able to analyse the factors that determine the optimum conditions used in the industrial production of the selected chemical. 2. On completion of this unit the student should be able to analyse chemical and energy transformations occurring in chemical reactions.

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
Students will be given tasks selected from the following list: 1. An extended experimental investigation that can be drawn from either area of study 1 or area of study 2. 2. A written report of one practical activity **(From the area of study NOT used for the extended experimental investigation)** 3. One task selected from the following: • A response to stimulus material in written, oral or visual format • An analysis of first or second-hand data using structured questions • A report in written, oral, multimedia or visual format related to chemical pathways. 4. Tests and Examination	Students will be given tasks selected from the following list: 1. A summary report including annotations of three practical activities drawn from either area of study 1 or area of study 2. 2. A written report of one practical activity **(From the area of study NOT used for the summary report)** 3. One task selected from the following: • A response to stimulus material in written, oral or visual format • An analysis of first or second-hand data using structured questions • A report in written, oral, multimedia or visual format related to chemistry at work. 4. Tests and Examination

Levels of Achievement

- Unit 3 School-assessed coursework: 20 percent
- Unit 4 School-assessed coursework: 20 percent
- End of year examination: 60 percent

ENGLISH

Rationale
Effective participation in Australian society depends on an ability to understand the various uses of the English language and to employ them effectively for a range of purposes.

Lighthouse Christian College seeks to develop the language skills of students to enable them to become responsible, creative and positive members of society, who are able to coherently articulate their faith in Jesus Christ.

The study of English aims to enable all students to develop their critical understanding and control of the English language so that they can use it in a wide range of situations, ranging from the personal and informal to more public occasions, and to develop a level of competence adequate for the demands of post-school employment, further education, and participation in a democratic society.

Students have different social and cultural backgrounds. This study is designed to recognise and value this diversity and to foster self-esteem in all students by enabling them to use the English language confidently.

To emphasise the importance of treating language development as an integrated process, the study promotes classroom activities which integrate the skills of reading, writing, speaking, listening and thinking. It supports a focus on learning situations in which students take increasing responsibility for their language development.

Structure
The study is made up of 4 units.

ENGLISH UNITS 1 & 2

Unit 1
The focus of this unit is the reading of a range of texts, particularly narrative and persuasive texts, in order to comprehend, appreciate and analyse the ways in which texts are constructed and interpreted. Students will develop competence and confidence in creating written, oral and multimodal texts.

Areas of Study
1. Reading and Creating Texts
2. Analysing and Presenting Argument

Unit 2
The focus of this unit is on reading and responding to an expanded range of text types and genres in order to analyse ways in which these are constructed and interpreted, and on the development of competence and confidence in creating written, oral or multimodal texts.

Areas of Study
1. Comparing Texts
2. Analysing and Presenting Argument

Units 1 & 2 Assessment Tasks
1. Produce an analytical and a creative response to a text.
2. Analyse how arguments can position audiences and create texts that position audiences.
3. Compare the presentation of ideas, issues and themes in two texts.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

ENGLISH UNITS 3 & 4

Unit 3
The focus of this unit is on reading and responding both orally and in writing to a range of texts. Analyse how the authors of texts create meaning and the different ways in which texts can be interpreted.

Areas of Study
1. Reading and Responding
2. Analysing Argument
3. Listening to texts (EAL only)

Unit 4
The focus of this unit is on reading and responding in writing to a range of texts in order to analyse their construction and provide an interpretation.

Areas of Study
1. Reading and Responding
2. Creating and Presenting

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
1. Produce an analytical interpretation of a selected text, and a creative response to a different selected text. 2. Analyse and compare the use of argument and persuasive language in texts that present a point of view on an issue currently debated in the media. 3. Show comprehension of a spoken text.	1. Produce a detailed comparison which analyses how two selected texts present ideas, issues and themes. 2. Construct a sustained and reasoned point of view on an issue currently debated in the media.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of English students' level of achievement will be determined by school-assessed coursework and an end-of-year examination. Percentage contributions to the study score in English are as follows:
- Unit 3 school-assessed coursework: 25 percent
- Unit 4 school-assessed coursework: 25 percent
- End of year examination: 50 percent

ENGLISH AS AN ADDITIONAL LANGUAGE

Eligibility for English as an Additional Language (EAL) status at Units 1 and 2 level is a matter for school decision. At Units 3 and 4 level students need to meet the Victorian Curriculum and Assessment Authority criteria for enrolment in EAL. VCE English as an Additional Language is suitable for students who will typically have English language proficiency at a minimum International English Language Testing System (IELTS) 4 level or its equivalent.

Rationale
The English language is central to the way in which students understand, critique and appreciate their world, and to the ways in which they participate socially, economically and culturally in Australian society.

The study of English encourages the development of literate individuals capable of critical and imaginative thinking, aesthetic appreciation and creativity. The mastery of the key knowledge and skills described in this study design underpins effective functioning in the contexts of study and work as well as productive participation in a democratic society in the twenty-first century.

Pre-requisites
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.

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 & 4. In the study of English as an Additional Language students' level of achievement will be determined by school-assessed coursework and an end of year examination.

Percentage contributions to the study score in English as an Additional Language are as follows:

- Unit 3 school-assessed coursework: 25 percent
- Unit 4 school-assessed coursework: 25 percent
- End of year examination: 50 percent

FOOD AND TECHNOLOGY

VCE Food and Technology focuses on the importance of food in our daily lives from both a theoretical and practical point of view. The study enables students to apply their theoretical understanding of the relationship between food and technology as they develop skills in food preparation

Through this study students develop knowledge of the physical, chemical, sensory and functional properties of food and are able to apply this knowledge when using food in a practical situation. They develop and apply the knowledge and skills to prepare food safely and hygienically. Students use the design process, critical thinking and problem-solving skills to develop food products to suit specific situations or to meet the needs of individual consumers and their lifestyles. In this process, they also develop independent and cooperative learning skills.

Career Pathway
The study may provide a foundation for pathways to food science and technology, consumer science, home economics, child care and education, community services and aged care, the hospitality and food manufacturing industries, and nutrition and health studies.

FOOD AND TECHNOLOGY UNITS 1 & 2

Unit 1 – Food Safety and Properties of Food

In this unit students study safe and hygienic food handling and storage practices to prevent food spoilage and food poisoning, and apply these practices in the preparation of food. They consider food preparation practices suitable for use in a small-scale food operation, such as in the home, a school setting or in a small food business.

Unit 2 – Planning and Preparation of Food

In this unit students investigate the most appropriate tools and equipment to produce optimum results, including the latest developments in food technology. Students research, analyse and apply the most suitable food preparation, processing and cooking techniques to optimise the physical, sensory and chemical properties of food.

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

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

FOOD AND TECHNOLOGY UNITS 3 AND 4

Unit 3 – Food Preparation, Processing and Food Controls

In this unit students develop an understanding of food safety in Australia and the relevant national, state and local authorities and their regulations, including the Hazard Analysis and Critical Control Points (HACCP) system. They investigate the causes of food spoilage and food poisoning and apply safe work practices while preparing food.

Students demonstrate understanding of key foods, analyse the functions of the natural components of key foods and apply this information in the preparation of foods. They investigate cooking techniques and justify the use of the techniques they select when preparing key foods. Students develop an understanding of the primary and secondary processes that are applied to key foods, including food processing techniques to prevent spoilage. They also preserve food using these techniques.

Students devise a design brief from which they develop a detailed design plan. Evaluation criteria are developed from the design brief specifications. In preparing their design plan, students conduct research and incorporate their knowledge about key foods, properties of food, tools, equipment, safety and hygiene, preparation, cooking and preservation techniques. They make decisions related to the specifications of the brief. In developing the design plan, students establish an overall production timeline to complete the set of food items (the product) to meet the requirements of the brief for implementation in Unit 4.

Unit 4 – Food Product Development and Emerging Trends

In this unit students develop individual production plans for the proposed four to six food items and implement the design plan they established in Unit 3. In completing this task, students apply safe and hygienic work practices using a range of preparation and production processes, including some which are complex. They use appropriate tools and equipment and evaluate their planning, processes and product.

Satisfactory Completion

Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Food and Technology students' level of achievement will be determined by School-assessed Coursework, a School-assessed Task and an end-of-year examination. Percentage contributions to the study score in Food and Technology are as follows:

- Unit 3 School-assessed Coursework: 18 percent
- Unit 4 School-assessed Coursework: 12 percent
- Units 3 and 4 School-assessed Task: 40 percent
- End-of-year examination: 30 percent.

HEALTH AND HUMAN DEVELOPMENT

Thematic Statement
The study of Health and Human Development provides students with an opportunity to establish a sound Christian foundation in understanding God's plan and purpose for the individual, as well as a corporate responsibility for the well-being of others.

The health and development of the individual are of immense importance to God. God designed us in His image; spirit, soul and body. We are intricately and wonderfully made and every human life has inherent value and is of great worth to God.

However, as flawed individuals, we make decisions that are not always in alignment with God's word. Such decisions do not benefit our health. The impact of sin is widespread and impacts on all humanity. As Christians, not only should we pursue optimum health for our own benefit, we should also be aware of and responsive to the needs of our fellow neighbor on a local and global level.

Our instruction manual for living a healthy life (physically, socially, emotionally, mentally and spiritually) is the Bible, and our model is the life of Jesus.

Rationale
Through the study of VCE Health and Human Development, students investigate health and human development in local, Australian and global communities.

Health is seen to encompass three dimensions: physical, social and mental. Health is a dynamic condition that is influenced by complex interrelationships between individuals and biomedical and behavioural factors, as well as physical and social environments. These interrelationships are reflected in a social view of health that sees health as being created in the settings where people live and work.

The VCE Health and Human Development study approaches the concept of 'development' as a continuum. In Units 1 and 2, development encompasses four dimensions of the individual physical, intellectual, emotional and social development. This notion progresses towards human development at a societal level in Unit 4.

The study of Health and Human Development is based on the premise that health and human development needs to be promoted at an individual level, and within group and community settings at national and international levels, to maximise global development potential. This underpins the structure of the four units of Health and Human Development. The study also promotes the understanding that nutrition plays a major role in influencing both health status and individual human development.

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

HEALTH AND HUMAN DEVELOPMENT UNITS 1 & 2

Unit 1 – The Health and Development of Australia's Youth

Area of Study 1 – Understanding Health and Development
In this area of study students develop an understanding of the concepts of health and individual human development and the interrelationships that exist within and between them. Students become aware of the differing methods for measuring health status. This area of study provides students with the foundation knowledge to explore health and individual human development throughout the unit.

Area of Study 2 – Youth Health and Development
In this area of study students develop an understanding of a range of determinants and their ability to influence youth health and individual human development.
Students explore the importance of nutrition and the developmental functions it performs in the body, including the consequences of nutritional imbalance on the health and individual human development of youth.
Students investigate in detail one health issue relevant to youth. They explore the impact of this health issue on all dimensions of youth health and individual human development. They develop an understanding of how determinants of health act as risk and/or protective factors in relation to their selected health issue. Students form conclusions about personal, community and government strategies and programs designed to influence and promote youth health and individual human development.

Unit 2 – Individual Human Development and Health Issues

Area of Study 1 – Prenatal Health and Individual Development
In this area of study students develop understanding of the health and individual human development of Australia's unborn children. Students study the physical changes that occur from conception to birth.
Students investigate how determinants, including physical environment, biological, behavioural and social, influence prenatal health and individual human development.

Area of Study 2 – Child Health and Individual Development
The focus of this area of study is the development of students' understanding of the health and individual human development of Australia's children. Students study the period from birth to approximately twelve years. They explore the physical, social, emotional and intellectual changes that occur from birth to late childhood.
Students investigate how determinants, including physical environment, biological, behavioural and social, influence child health and development.

Area of Study 3 – Adult Health and Individual Development
The focus of this area of study is the development of students' understanding of the health and individual human development of Australia's adults, including older adults. Students explore the physical, social, emotional and intellectual changes that occur during adulthood. They describe the health status of Australia's adults, including the various determinants that have an impact on health and individual human development.

Unit 1 Outcomes	Unit 2 Outcomes
1. Describe the dimensions of, and the interrelationships within and between, health and individual human development, and analyse the health status of Australia's youth using appropriate measurements. 2. (a) Describe and explain the factors that impact on the health and individual human development of Australia's youth. (b) Outline health issues relevant to Australia's youth and, in relation to a specific health issue, analyse strategies or programs that have an impact on youth health and development.	1. Describe and explain the factors that affect the health and individual human development during the prenatal stage. 2. Describe and explain the factors that affect the health and individual human development of Australia's children. 3. Describe and explain the factors that affect the health and individual human development of Australia's adults.

Unit 1 Assessment Tasks	Unit 2 Assessment Tasks
1. Outcome 1 – SAC 1 2. Outcome 2 – SAC 2 3. Outcome 3 – SAC 3 Possible formats: Concept Map/Poster, Presentation, Multimedia Presentation, Written Report, Written Test	1. Outcome 1 – SAC 1 2. Outcome 2 – SAC 2 3. Outcome 3 – SAC 3 Possible formats: Poster, Presentation, Multimedia Presentation, Written Report, Written Test.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

HEALTH AND HUMAN DEVELOPMENT UNITS 3 & 4

Unit 3 – Australia's Health

Area of Study 1 – Understanding Australia's Health

In this area of study students develop understanding of the health status of Australians by investigating the burden of disease and the health of population groups in Australia. Students use key health measures to compare health in Australia and analyse how determinants of health, including the physical environment, biological, behavioural and social, contribute to variations in health status.

The NHPAs initiative seeks to bring a national health policy focus to diseases and conditions that have a major impact on the health of Australians. The NHPAs represent the disease groups with the largest burden of disease and potential costs (direct, indirect and intangible) to the Australian community.

Students examine the development of the NHPAs and their relationship to burden of disease in Australia. They analyse initiatives designed to promote health relevant to the NHPAs, and come to understand that nutrition is an important factor for a number of the NHPAs.

Area of Study 2 – Promoting Health in Australia

In this area of study students examine different models of health and health promotion. They investigate the roles and responsibilities of governments in addressing health needs and promoting health for all through the provision of a national health system and health promotion initiatives. Students examine the role of government and non-government organisations in providing programs and support for the promotion of healthy eating.

Unit 4 – Global Health and Human Development

Area of Study 1 – Introducing Global Health and Human Development

This area of study explores global health, human development and sustainability. Students identify similarities and differences in the health status between people living in developing countries and Australians, and analyse reasons for the differences. The role of the United Nations' Millennium Development Goals in investigated in relation to achieving sustainable improvements in health status and human development.

Area of Study 2 – Promoting Global Health and Human Development

Students explore the role of international organisations including the UN and WHO in achieving sustainable improvements in health and human development. Students consider strategies designed to promote health and sustainable human development globally, globally, as well as Australia's contribution to international health programs through DFAT and contributions to non-government organisations.

Unit 3 Outcomes	Unit 4 Outcomes
1. Compare the health status of Australia's population with other developed countries, explain variations in health status of population groups in Australia and discuss the role of the National Health Priority Areas in improving Australia's health status.	1. Analyse factors contributing to variations in health status between Australia and developing countries, evaluate progress towards the United Nations' Millennium Development Goals.
2. Discuss and analyse approaches to health and health promotion, and describe Australia's health system and the different roles of government and non-government organisations in promoting health.	2. Describe and evaluate programs implemented by international and Australian government and non-government organisations in promoting health, human development and sustainability.

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
1. Outcome 1 – SAC 1 – 30 mark	1. Outcome 1 – SAC 1 – 30 marks
2. Outcome 1 – SAC 2 – 30 marks	2. Outcome 1 – SAC 2 – 30 marks
3. Outcome 2 – SAC 3 – 40 marks	3. Outcome 2 – SAC 3 – 40 marks
Test conditions in any of the following formats: Written Report, Data Analysis, Case Study or Written Test.	Test conditions in any of the following formats: Written Report, Data Analysis, Case Study or Written Test.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Health & Human Development students' level of achievement will be determined by School-assessed Coursework, a School-assessed Task and an end-of-year examination. Percentage contributions to the study score in Health and Human Development are as follows:

- Unit 3 school assessed coursework: 25 percent
- Unit 4 school assessed coursework: 25 percent
- End of year examination: 50 percent

LANGUAGES OTHER THAN ENGLISH
CHINESE FIRST LANGUAGE

Chinese is offered at more than one level in the VCE. Entry into these levels is governed by eligibility criteria which are published on the VCAA website and in the current VCE and VCAL Administrative Handbook.

Rationale
The study of 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, intercultural learning, cognitive development, literacy and general knowledge. It provides access to the culture of communities which use the language and promotes understanding of different attitudes and values with the wider Australian community and beyond.

The ability to communicate in another language, in conjunction with other skills, may provide opportunities for employment in fields of interpreting, social services, ethnic affairs, the tourism and hospitality industries, international relations, the arts, commerce, technology, science, education etc.

Outcomes
Outcomes define what students will know and be able to do as a result of undertaking the study.

Students demonstrate the achievement of the outcomes based on progressive development of skills in listening, speaking, reading and writing through activities and tasks organised around the areas of study. The areas of study in Units 1-4 focus on the areas of study for language, which are made up of the themes and topics, text types, kinds of writing, vocabulary and grammar. They are common to all four units of the study and are published in the study design. They are tailored to the specific qualities of the language being studied.

CHINESE FIRST LANGUAGE UNITS 1 & 2

Unit 1

Unit 2

Unit 1 Outcomes	Unit 2 Outcomes
1. On completion of this unit the student should be able to establish and maintain a spoken or written exchange related to an issue of interest or concern.	1. On completion of this unit the student should be able to participate in a spoken or written exchange focusing on the resolution of an issue.
2. On completion of this unit the student should be able to listen to, read and reorganise information and ideas from spoken and written texts.	2. On completion of this unit the student should be able to listen to, read, and extract and compare information and ideas from spoken and written texts.
3. On completion of this unit the student should be able to produce a personal response to a fictional text.	3. On completion of this unit the student should be able to produce an imaginative piece in spoken or written form.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

CHINESE FIRST LANGUAGE UNITS 3 & 4

Unit 3

Unit 4

Unit 3 Outcomes	Unit 4 Outcomes
1. On completion of this unit the student should be able to express ideas through the production of original texts. 2. On completion of this unit the student should be able to analyse and use information from spoken texts. 3. On completion of this unit the student should be able to exchange information, opinions and experiences.	1. On completion of this unit the student should be able to analyse and use information from written texts. 2. On completion of this unit the student should be able to respond critically to spoken and written texts which reflect aspects of the language and culture.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
School-assessed coursework and end of year examinations

- Unit 3 school-assessed coursework: 25 percent
- Unit 4 school-assessed coursework: 25 percent
- Examinations:
    - Oral component: 10 percent
    - Written component: 40 percent

LANGUAGES OTHER THAN ENGLISH CHINESE SECOND LANGUAGE

Chinese is offered at more than one level in the VCE. Entry into these levels is governed by eligibility criteria which are published on the VCAA website and in the current VCE and VCAL Administrative Handbook.

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, intercultural learning, cognitive development, literacy and general knowledge. It provides access to the culture of communities which use the language and promotes understanding of different attitudes and values within the wider Australian community and beyond.

The ability to communicate in another language, in conjunction with the other skills, may provide opportunities for employment in the fields of interpreting, social service, ethnic affairs, the tourism and hospitality industries, international relations, the arts, commerce, technology, science, education etc.

Outcomes

Outcomes define what students will know and be able to do as a result of undertaking the study.

Outcomes include a summary statement and the key knowledge and skills that underpin them.

CHINESE SECOND LANGUAGE UNITS 1 & 2

Unit 1

Unit 2

Unit 1 Outcomes	Unit 2 Outcomes
1. On completion of this unit the student should be able to establish and maintain a spoken or written exchange related to personal areas of experience.	1. On completion of this unit the student should be able to participate in a spoken or written exchange related to making arrangements and completing transactions.
2. On completion of this unit the student should be able to listen to, read and obtain information from spoken and written texts and translate from characters into English.	2. On completion of this unit the student should be able to listen to, rea, and extract and use information and ideas from spoken and written texts.
3. On completion of this unit the student should be able to produce a personal response to a text focusing on real or imaginary experience.	3. On completion of this unit the student should be able to give expression to real or imaginary experience in spoken or written form.

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

CHINESE SECOND LANGUAGE UNITS 3 & 4

Unit 3

Unit 4

Unit 1 Outcomes	Unit 2 Outcomes
1. On completion of this unit the student should be able to express ideas through the production of original texts.	1. On completion of this unit the student should be able to analyse and use information from written texts and translate part of the text(s) into English.
2. On completion of this unit the student should be able to analyse and use information from spoken texts.	2. On completion of this unit the student should be able to respond critically to spoken and written texts which reflect aspects of the language and culture of Chinese-speaking communities.
3. On completion of this unit the student should be able to exchange information, opinions and experiences.	

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified for the unit.

Levels of Achievement
School-assessed coursework and end of year examinations

- Unit 3 school-assessed coursework: 25 percent
- Unit 4 school-assessed coursework: 25 percent
- Examinations:
    - Oral component: 12.5 percent
    - Written component: 37.5 percent

LEGAL STUDIES

Thematic Statement
Our Creator, God, is sovereign over all things. As Australians, we have a responsibility to be good stewards of our country. God has put others in authority over us, i.e. The Queen, Prime Minister, The Law , and other heads of government. The Bible teaches us to respect those in authority and to pray for them. Romans13:1-7, 1 Timothy 2:1-4, Titus 3:1.

Rationale
This study is about the way the law relates to and serves both individuals and the community. It focuses on developing an understanding of the way in which law is generated, structured and operates in Australia.

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

LEGAL STUDIES UNITS 1 & 2

Unit 1

Areas of Study

1. Law in Society
2. Criminal Law
3. The Criminal Courtroom

Unit 2

Areas of Study

1. Civil Law.
2. The Civil Law in Action.
3. The Law in Focus.
4. A Question of Rights

Unit 1 Outcomes	Unit 2 Outcomes
1. On completion of this unit the student should be able to explain the need for effective laws and describe the main sources and types of law in society	1. On completion of this unit the student should be able to explain the principles of civil law, law-making by courts, and elements of torts, and apply these to relevant cases
2. On completion of this unit the student should be able to explain the key principles and types of criminal law, apply the key principles to relevant cases, and discuss the impact of criminal activity on the individual and society	2. On completion of this unit the student should be able to explain and evaluate the processes for the resolution of civil disputes
3. On completion of this unit the student should be able to describe the processes for the resolution of criminal cases, and discuss the capacity of these processes to achieve justice	3. On completion of this unit the student should be able to explain one or more area/s of civil law, and discuss the legal system's capacity to respond to issues and disputes related to the selected area/s of law
	4. On completion of this unit the student should be able to describe an Australian case illustrating rights issues, and discuss the impact of the case on the legal system and the rights of individuals.

Unit 1 Assessment Tasks	Unit 2 Assessment Tasks
1. Mock court or role play 2. Assignment 3. Essay 4. Folio and report 5. Case study 6. Test	1. Case study 2. Folio and report 3. Assignment 4. Essay 5. Test

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

LEGAL STUDIES UNITS 3 AND 4

Unit 3

Areas of Study

1. Parliament and the Citizen.
2. The Constitution and the Protection of Rights.
3. Role of the Courts in Law Making

Unit 4

Areas of Study

1. Dispute Resolution Methods.
2. Court Processes and Procedures and Engaging in Justice.

Unit 3 Outcomes	Unit 4 Outcomes
1. Describe the role of the law-making bodies, the need for change and the ways in which change can be influenced. 2. Explain the role of the Commonwealth Constitution, and its effectiveness in protecting democratic and human rights. 3. Describe and evaluate the effectiveness of the courts in law making and their relationship with parliament.	1. Describe and appraise the effectiveness of institutions for dispute resolution. 2. Evaluate the processes and procedures for the resolution of criminal and civil cases and evaluate the effectiveness of the legal system.

Satisfactory Completion

School assessed coursework and an end-of-year examination

Levels of Achievement

The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Legal Studies students' level of achievement will be determined by School-assessed Coursework and an end-of-year examination.

Percentage contributions to the study score in Legal Studies are as follows:

- Unit 3 School-assessed Coursework: 25 percent
- Unit 4 School-assessed Coursework: 25 percent
- End-of-year examination: 50 percent.

LITERATURE

Rationale

The study of Literature focuses on the enjoyment and appreciation of reading that arises from discussion, debate and the challenge of exploring the meaning within literary texts. Students reflect on their interpretations and on those of others.

The study is based on the premise that meaning is derived from the relationship between the text, the context in which it was produced and the experience of life and literature that reader brings to the texts. Accordingly, the study encompasses texts that vary in form and range and from past to contemporary social and cultural contexts. Students learn to understand that texts are constructions, to consider the complexity of language and to recognise the influence of contexts and form. The study of literature encourages independent and critical thinking in students' analytical and creative responses to texts, which will assist students greatly in the workforce and in future academic study.

Outcomes

Outcomes define what students will know and be able to do as a result of undertaking the study.

Outcomes include a summary statement and the day knowledge and skills that underpin them. Only the summary statements have reproduced below and must be read in conjunction with the key knowledge and skills published in the study design.

Entry

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

LITERATURE UNITS 1 & 2

Unit 1

This unit focuses on the ways literary texts represent human experience and the reading practices students develop to deepen their understanding of a text. Students respond to a range of texts personally, critically and creatively. This variety of approaches to reading invites questions about the ideas and concerns of the text. While the emphasis is on students' close engagement with language to explore texts, students also inform their understanding with knowledge of the conventions associated with different forms of text, for example poetry, prose, drama and/or non-print text.

Unit 2

The focus of this unit is on students' critical and creative responses to texts. Students deepen their understanding of their responses to aspects of texts such as the style of narrative, the characters, the language and structure of the text. They understand the ways their own culture and the cultures represented in the text can influence their interpretations and shape different meanings. Students make comparisons between texts and identify some of the relationships that exist through features such as the language, characterisation and ideas.

Unit 1 & 2 Outcomes
1. **Reading Practices** Respond to a range of texts and reflect on influences shaping these responses.
2. **Ideas and Concerns in Text** Analyse the ways in which a selected text reflects or comments on the ideas and concerns of individuals and particular groups in society.
3. **The Texts, The Reader and Their Contexts** Analyse and respond critically and creatively to the ways a text from a past era and/or a different culture reflect or comment on the ideas and concerns of individuals and groups in that context.
4. **Exploring Connections Between Texts** Compare texts considering the dialogic nature of texts and how they influence each other.

Satisfactory Completion

Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement

Individual school decision on levels of achievement.

LITERATURE UNITS 3 & 4

Unit 3
This unit focuses on the ways writers construct their work and how meaning is created for and by the reader. Students consider how the form of text, (such as poetry, prose, drama, non-print or combinations of these) affects meaning and generates different expectations in readers, the ways texts represent views and values and comment on human experience, and the social, historical and cultural context of literary works.

Unit 4
This unit focuses on students' creative and critical responses to texts. Students consider the context of their re-created or adapted work.

In their responses, students develop an interpretation of a text and learn to synthesise the insights gained by their engagement with various aspects of a text into a cogent, substantiated response.

Unit 3 & 4 Outcomes
1. **Adaptations and Transformations** Analyse the extent to which meaning changes when a text is adapted to a different form. 2. **Creative Responses to Texts** Respond creatively to a text and comment on the connections between the text and the response. 3. **Literary Perspectives** Produce an interpretation of a text using different literary perspectives to inform their view. 4. **Close Analysis** Analyse features of texts and develop and justify interpretations of texts.

Satisfactory Completion
School assessed coursework and an end-of-year examination

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In Literature the students' level of achievement will be determined by school-assessed coursework and an end of year examination. Percentage contributions to the study score in Literature are as follows:

- Unit 3 school-assessed coursework: 25 percent
- Unit 4 school-assessed coursework: 25 percent
- End of year examination: 50 percent

MATHEMATICS

Rationale

God created man in His image and likeness and put him in charge of the earth to manage it (Gen 1: 27-28; Psalm 8: 6-8). This responsibility has been the genesis of mankind's orientation to mathematical knowledge, its discovery and application. Evidences of mathematical relationships are to be found everywhere: in number, form, design and symmetry, and in the constancy, which God has created, and which we describe in terms of laws governing existence and the harmonious working of all things. Thus Mathematics is the study of functions and patterns in number, logic, space, and structure. Note that every decision, design and construction we make has an element of mathematics in it. We therefore cannot escape mathematics in life. Students are therefore encouraged to study Mathematics at the highest level they are capable of for as long as they can.

Aims

This study enables students to:

1. Develop mathematical concepts, knowledge and skills
2. 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
3. Use technology effectively as a tool for working mathematically

Structure

The study of VCE Mathematics is made up of the following units:

- Foundation Mathematics Units 1 and 2*
- 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 Methods Units 3 and 4

New subjects offered in 2016

Entry

There are no prerequisites for entry to Foundation Mathematics or General Mathematics Units 1 and 2. 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. 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.

Enrolment in Specialist Mathematics Units 3 and 4 assumes a current enrolment in, or previous completion of, Mathematical Methods Units 3 and 4. There are no restrictions on the number of units students may obtain credit towards satisfactory completion of the VCE.

Units 3 and 4 of a study are designed to be taken as a sequence. Students must undertake Unit 3 of a study before entering Unit 4 of that study.

Grade Boundaries:

Foundation Mathematics Units 1 & 2:	None.
General Mathematics Units 1 & 2:	None.
Mathematical Methods Units 1 & 2:	Achieving 75% in Year 10 Advanced Maths.
Specialist Mathematics Units 1 & 2:	Achieving 75% in Year 10 Advanced Maths and must be concurrently studying or have studied Mathematical Methods Units 1 & 2.
Further Mathematics Units 3 & 4:	None.
Mathematical Methods Units 3 & 4:	Achieving 75% in Mathematical Methods 1 & 2.
Specialist Mathematics Units 3 & 4:	Achieving 75% in Mathematical Methods 1 & 2 or Mathematical Methods 3 & 4 and 75% in Specialist Mathematical 1 & 2.

Common paths of study in VCE Mathematics at LCC from Units 1 & 2 to Units 3 & 4

From Units 1 & 2 (Prerequisites)	Into Units 3 & 4
1. Foundation Maths 1 and 2	1. No Mathematical Study
2. General Maths 1 and 2	2. No Mathematical Study
3. General Maths 1 and 2	3. Further 3 and 4
4. Methods 1 and 2	4. Further 3 and 4
5. Methods 1 and 2	5. Methods 3 and 4
6. Methods and Specialist 1 and 2	6. Specialist Maths 3 and 4

FOUNDATION MATHEMATICS UNITS 1 & 2

Foundation Mathematics Units 1 and 2 are completely prescribed and provide for the continuing mathematical development of students entering VCE. In general, these students would not intend to undertake Unit 3 and 3 studies in VCE Mathematics in the following. However, students who do well in these units and undertake some supplementary study of selected topics could proceed to Further Mathematics Units 3 & 4.

In Foundation Mathematics there is a strong emphasis on the use of mathematics in practical contexts encountered in everyday life in the community, at work and at study. The areas of study for Unit 1 and 2 of Foundation Mathematics are 'Space, shape and design', 'Patterns and number', 'Data' and 'Measurement'. All four areas of study are to be completed over the two units. The content should be developed using contexts present in students' other studies, work and personal or other familiar situations. 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, 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. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, is to be incorporated throughout each unit as applicable.

Unit 1 & 2

Area of Study 1 – Space, Shape and Design
In this area of study students cover the geometric properties of lines and curves, and shapes and objects, and their graphical and diagrammatic representation with attention to scale and drawing conventions used in domestic, societal, industrial and commercial plans, map and diagrams.

Area of Study 2 – Patterns and Number
In this area of study students cover estimation, the use and application of different forms of numbers and calculations, and the representation of patterns and generalisations in number including formulas and other algebraic expressions in everyday contexts.

Area of Study 3 – Data
In this area of study students cover estimation, the use and application of different forms of numbers and calculations, and the representation of patterns and generalisations in number including formulas and other algebraic expressions in everyday contexts.

Area of Study 4 – Measurement
In this area of study students cover the use and application of the metric system and related measurement in a variety of domestic, social, industrial and commercial contexts, including consideration of accuracy.

Unit 1 & 2 Outcomes
1. On completion of this unit the student should be able to use and apply a range of mathematical concepts, skills and procedures from the areas of study to solve problems based on a range of everyday and real live contexts. 2. On completion of this unit the student should be able to use and apply mathematical procedures to solve practical problems in both familiar and new but accessible contexts, and communicate their results. 3. On completion of this unit the student should be able to select and use technology to solve problems in practical contexts.

Unit 1 & Unit 2 Assessment Tasks
1. **Outcome 1:** to be based on the student's performance on a selection of the following assessment tasks: • Investigations and projects • Assignments • Tests • Summary or review notes 2. **Outcome 2:** to be based on the student's performance on a selection of the following assessment tasks: • Investigations and projects • Assignments • Tests • Summary or review notes 3. **Outcome 3:** to be based on the student's performance on aspects of tasks completed in demonstrating achievement of Outcomes 1 and 2 that incorporate opportunity for the effective and appropriate use of technology in contexts related to the content of the areas of study.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

GENERAL MATHEMATICS UNITS 1 & 2

This study in General Mathematics is designed to suit a broad range of students. It caters mainly for those intending on studying Further Mathematics. It is also achievable for students not intending to do any mathematical studies in Year 12 as well as those who take this study along with Mathematical Methods 1 and 2 to strengthen their base for Specialist Mathematics.

Unit 1 – This Unit Covers Area of Study 1, Area of Study 3 and Area of Study 3

Area of Study 1 – Algebra and Structure
In this area of study students cover representation and manipulation of linear relations and equations, including simultaneous linear equations, and their applications in range of contexts.

- Linear relations and equations

Area of Study 2 – Arithmetic and Number
In this area of study students cover mental, by-hand and technology assisted computation with rational numbers, practical arithmetic and financial arithmetic, including estimation, order of magnitude and accuracy.

- Computation and practical arithmetic
- Financial arithmetic

Area of Study 3 – Discrete Mathematics
In this area of study students cover matrices, graphs and networks, and number patterns and recursion, and their use to model practical situations and solve a range of related problems.

- Matrices
- Number patterns and recursion

Unit 2 - This Unit Covers Area of Study 4 and Area of Study 6

Area of Study 4 – Geometry, Measurement and Trigonometry
In this area of study students cover shape, measurement and trigonometry and their application to formulating and solving two- and three-dimensional problems involving length, angle, area and surface area, volume and capacity, and similarity and the application of linear scale factors to measurement.

- Shape and measurement
- Applications of trigonometry

Area of Study 6 – Statistics
In this area of study students cover representing, analysing and comparing data distributions and investigating relationships between two numerical variables, including an introduction to correlation.

- Investigating and comparing data distribution
- Investigating relationships between two numerical variables

Unit 1 & 2 Outcomes
4. On completion of each unit the student should be able to define and explain key concepts as specified in the content from the areas of study, and apply a range of related mathematical routines and procedures. 5. On completion of each unit the student should be able to select and apply mathematical facts, concepts, models and techniques from the topics covered in the unit to investigate and analyse extended application problems in a range of contexts. 6. On completion of each unit the student should be able to select and use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modeling or investigative techniques or approaches

Unit 1 & Unit 2 Assessment Tasks
1. **Outcome 1:** to be based on the student's performance on a selection of the following assessment tasks: • Assignments • Tests • Summary or review notes. 2. **Outcome 2:** to be based on the student's performance on a selection of the following assessment tasks: • Modelling tasks • Problem-solving tasks • Mathematical investigations 3. **Outcome 3:** to be based on the student's performance on aspects of tasks completed in demonstrating achievement of Outcomes 1 and 2 that incorporate opportunity for the effective and appropriate use of technology.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

FURTHER MATHEMATICS UNITS 3 & 4

This study is intended to be widely accessible to students to provide general preparation for employment or further study, in particular, where data analysis is important. The assumed knowledge and skills for Further Mathematics Units 3 and 4 are drawn from General Mathematics Units 1 and 2. Students who have done only Mathematical Methods Units 1 and 2 will also have had access to assumed knowledge and skills to undertake Further Mathematics.

Unit 3 – This Unit Covers Area of Study 1

Area of Study 1 – Core

- **Data Analysis**
  - Investigating data distributions
  - Investigating associations between two variables
  - Investigating and modeling linear associations
  - Investigating and modeling time series data
- **Recursion and Financial Modelling**
  - Depreciation of assets
  - Compound interest investments and loans
  - Reducing balance loans (compound interest loans with period repayments)
  - Annuities and perpetuities (compound interest investments with periodic payments made from the investment)

Unit 4 – This Unit Covers Area of Study 2

Area of Study 2 – Applications (2 Modules)

- **Matrices**
  - Matrices and their applications
  - Transition matrices
- **Geometry and Measurement**
  - Measurement and trigonometry
  - Spherical geometry

Unit 3 Outcomes	Unit 4 Outcomes
1. On completion of this unit the student should be able to define and explain key concepts and apply related mathematical techniques and models as specified in Area of Study 1 in routine contexts.	1. On completion of this unit the student should be able to define and explain key concepts as specified in the content from the two selected modules, and apply related mathematical techniques and models in routine contexts.
2. On completion of this unit the student should be able to select and apply the mathematical concepts, models and techniques as specified in Area of Study 1 in a range of contexts of increasing complexity.	2. On completion of this unit the student should be able to select and apply the mathematical concepts, models and techniques from the two selected modules in a range of contexts of increasing complexity.
3. On completion of this unit the student should be able to select and appropriately use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.	3. On completion of this unit the student should be able to select and appropriately use numerical, graphical, symbolic and statistical functionalities of technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.

Successful Completion
School assessed coursework and two end-of-year examinations

Levels of Achievement
The VCAA will supervise the assessment of all students undertaking Units 3 and 4. The student's levels of achievement will be assessed through school assessed coursework and examination as follows:

- Unit 3 school assessed coursework: 20 per cent
  - Outcome 1:
    Application task – 10 marks
    Modelling or problem-solving task 1 – 5 marks
  - Outcome 2:
    Application task – 20 marks
    Modelling or problem-solving task 1 – 10 marks
  - Outcome 3:
    Application task – 10 marks
    Modelling or problem-solving task 1 – 5 marks
- Unit 4 school assessed coursework: 14 per cent
  - Outcome 1:
    Modelling or problem-solving task 2 – 5 marks
    Modelling or problem-solving task 3 – 5 marks
  - Outcome 2:
    Modelling or problem-solving task 2 – 10 marks
    Modelling or problem-solving task 3 – 10 marks

- Outcome 3:
  Modelling or problem-solving task 2 – 5 marks
  Modelling or problem-solving task 3 – 5 marks

- Unit 3 and 4 examination 1: 33 per cent
  This examination comprises multiple-choice questions covering both Areas of Study 1 and 2. The examination is designed to assess students' knowledge of mathematical concepts, models and techniques and their ability to reason, interpret, and apply this knowledge in a range of contexts.
- Unit 3 and 4 examination 2: 33 per cent
  This examination comprises written response questions covering both Areas of Study 1 and 2. The examination is designed to assess students' ability to select and apply mathematical facts, concepts, models and techniques to solve extended application problems in a range of contexts.

MATHEMATICAL METHODS UNITS 1 & 2

This study is designed for those students with a general interest in mathematics as well as providing a sound base for those students intending to undertake studies in the science and engineering fields. The concepts of functions and graphs and calculus form the major part of the material covered. This course also provides a good introduction to Mathematical Methods and Specialist Mathematics which are taken at Units 3 and 4 level. The areas of study are 'Functions and Graphs, Algebra, Calculus plus Probability and Statistics'.

Students should be averaging a minimum of 75% in Year 10 Advanced Mathematics to enroll in Mathematical Methods Units 1 and 2.

Unit 1

Area of Study 1 – Functions and Graphs
This area of study covers the graphical representation of polynomial and power functions of a single real variable and their key features. The behaviour of functions and their graphs is explored in a variety of modeling contexts and theoretical investigations. The approximation $\text{Sin}(x) \approx x$ for small values of x is considered.

Area of Study 2 – Algebra
This area supports students' work in the Functions and Graphs, Calculus and Probability and Statistics areas of study. The algebra of polynomial functions of low degree and transformation of the plane is considered to generalize and analyze properties of functions and their graphs.

Area of Study 3 – Calculus
This area of study introduces an intuitive understanding of constant, average and instantaneous rate of change through familiar situations, and through a graphical and numerical approach to the measurement of rates of change.

Area of Study 4 – Probability and Statistics
Students cover the concepts of event, frequency, probability, sample space; impossible, complementary, mutually exclusive, conditional and independent events involving one, two, or three events, and rules for computation of probabilities for compound events.

Unit 2

Area of Study 1 – Functions and Graphs
This area of study covers the graphical representation of functions of a single real and the key features such as axial intercepts, domain, co-domain and range, asymptotic behaviour, of such graphs. This study also focuses on simple trigonometric and exponential functions.

Area of Study 2 – Algebra
This area focuses of the algebra of some simple transcendental functions and transformations of the plane. Students will study functions such as linear, quadratic, cubic and quartic functions to generalize and analyse their properties and their graphs.

Area of Study 3 – Calculus
In this area, students will cover first principles of differentiation, differentiation and anti-differentiation of polynomial and power functions by rule, and related applications including the analysis of graphs.

Area of Study 4 – Probability
This area of study covers introductory counting principles and techniques (combinatorics) and their applications to probability and the law of total probability in the case of two events.

Unit 1 & 2 Outcomes
1. On completion of each unit the student should be able to define and explain key concepts in relation to the topics from the selected areas of study, and apply a range of related mathematical routines and procedures. 2. On completion of each unit the student should be able to apply mathematical processes in non-routine contexts, and analyse and discuss these applications of mathematics in at least three areas of study. 3. On completion of each unit the student should be able to use technology to produce results and carry out analysis in situations requiring problem-solving, modeling or investigative techniques or approaches in at least three areas of study.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

MATHEMATICAL METHODS UNITS 3 & 4

The areas of study of Math Methods 3 & 4 consist of 'Functions and Graphs, Calculus, Algebra, plus Probability and Statistics'. This study is designed for those students with a keen interest in mathematics, and provides a sound base for studies in mathematics at tertiary level. Students should be averaging a minimum of 75% in Mathematical Methods Units 1 and 2 to enroll in Mathematical Methods Units 3 and 4.

Units 3 & 4

Area of Study 1 – Functions and Graphs (Coordinate Geometry)
Students will cover transformations of the plane and the behaviour of some relations and functions (of a single variable) including key features of their graphical representations plus their application in practical situations.

Area of Study 2 – Algebra
This area covers the algebra of functions, identification of appropriate solution processes for solving equations and system of simultaneous equations. Students will also use inverse operations, graphical and numerical approaches to solve equations to desire accuracy.

Area of Study 3 – Calculus
This area covers graphical treatment of limits, continuity and differentiability of one variable functions; differentiation, anti-differentiation and integration of one variable functions. The material will be linked to applications in practical situations.

Area of Study 4 – Probability
Students will cover discrete and continuous random variables, their representation using tables and probability functions; the calculation of measures of center and spread; statistical inference for sample proportions. This study will also focus on understanding the notion of a random variable, related parameters, properties and application and interpretation in context for a given probability distribution.

Satisfactory Completion
School assessed coursework and two end-of-year examinations

Level of Achievement
The VCAA will supervise the assessment of all students undertaking Units 3 and 4. The student's levels of achievement will be assessed through school assessed coursework and examination as follows

- Unit 3 School Assessed coursework: 20 per cent
- Unit 4 School Assessed coursework: 14 per cent
- Unit 3 and 4 Written Examination 1 (No technology or notes): 33 per cent
- Unit 3 and 4 Written Examination 2 (Technology enabled): 33 per cent

SPECIALIST MATHEMATICS UNITS 1 & 2

Specialist Mathematics Units 1 and 2 comprise a combination of prescribed and selected non-calculus based topics and provide courses of study for students interested in advanced study of mathematics, with a focus on mathematical structure and reasoning. They incorporate topics that, in conjunction with Mathematical Methods Units 1 and 2, provide preparation for Specialist Mathematics Units 3 and 4 and cover assumed knowledge and skills for those units.

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'.

For Units 1 and 2, to suit the range of students entering the study, and cover the four prescribed topics, content will 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
- Each unit must include two of the prescribed topics: Number Systems and Recursion, Vectors in the Plane, Geometry in the Plane and Proof and Graphs of Non-Linear Relations
- Other topics can be selected from those included in the areas of study for Specialist Mathematics Units 1 and 2 and/or General Mathematics Units 1 and 2.
- Course intended as preparation for study at the Units 3 and 4 level should include selection of content from areas of study that provide a suitable background for these studies
- 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, real and complex arithmetic, sets, lists and tables, diagrams and geometric constructions, algebraic manipulations, 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. The use of numerical, graphical, geometric, symbolic and statistical functionality of technology for teaching and learning mathematics, for working mathematically, and in related assessment, will be incorporated throughout each unit as applicable.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

SPECIALIST MATHEMATICS UNITS 3 & 4

Specialist Mathematics Unit 3 and 4 consists of the areas of study 'Functions and Graphs, Algebra, Calculus, Vectors, Mechanics, plus Probability and Statistics.
This study is designed for those students with a strong interest in mathematics and those intending to pursue mathematics at tertiary level. The course has a definite focus towards the mathematics required for engineering and science engineering and as such students should be averaging a minimum of 75% in Mathematical Methods Units 1 and 2 to enroll in Specialist Maths 3 & 4.

Units 3 & 4

Area of Study 1 – Functions and Graphs
This area of study covers inverse circular functions, reciprocal functions, rational functions, absolute value functions; their graphical representations and analyses of their key features such as intercepts, asymptotic behaviour, nature and location of stationary points, points of inflection, periodicity and symmetry.

Area of Study 2 – Algebra
This area covers the expression of simple rational functions as the sum of partial fractions; the arithmetic and algebra of complex numbers, including polar form; points and curves in the complex plane; introduction to factorization of polynomial functions over the complex plane and an informal treatment of the fundamental theorem of algebra.

Area of Study 3 – Calculus
Students will cover advanced calculus techniques for analytic and numeric differentiation and integration of a range of functions; combinations of functions; application of calculus techniques to practical situations, including curve sketching, evaluation of arc length, area and volume; differential equations and kinematics.

Area of Study 4 – Vectors
Students will cover the arithmetic and algebra of vectors, conditions for linear dependence and independence of a set of vectors; proof of geometric results using vector; vector representation of curves in the plane and vector kinematics in one, two and three dimensions.

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

Area of Study 6 – Probability and Statistics
In this area, students will cover statistical inference related to the definition and distribution of sample means, simulations and confidence interval; linear combinations of random variables; simple means; confidence intervals for means.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Level of Achievement
The VCAA will supervise the assessment of all students undertaking Units 3 and 4. The student's levels of achievement will be assessed through school assessed coursework and examination as follows

- Unit 3 School Assessed coursework: 14 percent
- Unit 4 School Assessed coursework: 20 percent
- Unit 3 and 4 Written Examination 1 (No technology or notes): 33 percent
- Unit 3 and 4 Written Examination 2 (Technology enabled): 33 percent

MUSIC PERFORMANCE

Rationale

Music is an integral part of all cultures and societies, both contemporary and historical. The study of music develops students' understanding of artistic processes and contributes to the development of the aesthetic, cognitive, psychomotor and affective domains.

VCE Music Performance offers students opportunities to engage in the practice of performing, creating and studying music that is representative of diverse genres, styles and cultures. Students can specialise in one or more approaches to the study of music, depending on their VCE program overall and the post-VCE pathways they may be interested in following.

Students develop knowledge of stylistic, aesthetic and expressive qualities and characteristics of music and develop their ability to communicate their understanding through music making: performing, composing, arranging and/or improvising; and musicianship: aural perception, analysis and music language.

VCE Music offers students opportunities for personal development and to make an ongoing contribution to the culture of their community through participation in life-long music making.

Entry

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

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

In this unit students build their performance and musicianship skills. They present performances of selected group and solo music works using one or more instruments. Students study the work of other performers through listening and analysis and use specific strategies to optimize their own approach to performance. They also study strategies for developing technical and expressive performance skills. They identify technical, expressive and stylistic challenges relevant to works they are preparing for performance and practice related technical work. They develop skills in performing previously unseen music and study specific concepts to build their musicianship knowledge and skills. Students also devise an original composition or improvisation.

Satisfactory Completion

Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement

Individual school decision on levels of achievement.

MUSIC PERFORMANCE UNITS 3 & 4

Rationale

Music is an integral part of all cultures and societies, both contemporary and historical. The study of music develops students' understanding of artistic processes and contributes to the development of the aesthetic, cognitive, psychomotor and affective domains.

VCE Music offers students opportunities to engage in the practice of performing, creating and studying music that is representative of diverse genres, styles and cultures. Students can specialise in one or more approaches to the study of music, depending on their VCE program overall and the post-VCE pathways they may be interested in following.

Students develop knowledge of stylistic, aesthetic and expressive qualities and characteristics of music and develop their ability to communicate their understanding through music making: performing, composing, arranging and/or improvising; and musicianship: aural perception, analysis and music language.

Unit 3

This unit prepares students to present convincing performances of group and solo works. In this unit student select a program of group and solo works representing a range of styles and diversity of character for performance. They develop instrumental techniques that enable them to interpret the works and expressively shape their performances. They also develop an understanding of performance conventions they can use to enhance their performances. Students develop skills in an unprepared performance, aural perception and comprehension, transcription, music theory and analysis. The focus for analysis in Area of Study 3 is works and performances by Australian musicians.

Unit 4

In this unit students refine their ability to present convincing performances of group and solo works. Students select group and solo works that complement works selected in Unit 3. They further develop and refine instrumental and performance techniques that enable them to expressively shape their performance and communicate their understanding of the music style of each work. Students continue to develop skills in aural perception and comprehension, transcription, theory, analysis and unprepared performance. Students continue to study ways in which Australian performers interpret works that have been created since 1910 by Australian composers/songwriters.

Satisfactory Completion

Demonstrated achievement of the set outcomes specified for the unit.

Level of Achievement

The VCAA will supervise the assessment of all students undertaking Units 3 and 4. The student's levels of achievement will be assessed through school assessed coursework and examination as follows

- Units 3 & 4 School Assessed coursework: 30 percent
- External End-of-Year Performance Examination: 50 percent
- External End-of-Year Aural and Written Examination: 20 percent

PHYSICAL EDUCATION

Rationale

VCE Physical Education examines the biological, physiological, psychological, social and cultural influences on performance and participation in physical activity. It focuses on the interrelationship between motor learning and psychological, biomechanical, physiological and sociological factors that influence physical performances, and participation in physical activity. The study of physical activity and sedentary behaviour is significant for the understanding of health, wellbeing and performance of people.

The study enables the integration of theoretical knowledge with practical application through participation in physical activities. There are opportunities for students to apply theoretical concepts and reflect critically on factors that affect all levels of performance and participation.

This VCE study is suitable for students with a wide range of aspirations, including those who wish to pursue further formal study at tertiary level or in vocational education and training settings. The study prepares students for such fields as the health sciences, exercise science and education, as well as providing valuable knowledge and skills for participating in their own sporting and physical activity pursuits to develop as critical practitioners and lifelong learners.

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.

PHYSICAL EDUCATION UNITS 1 & 2

Unit 1 – Bodies in Motion
In this unit students explore how the body systems work together to produce movement and analyse this motion using biomechanical principles. Through practical activities students explore the relationships between the body systems and physical activity. They are introduced to the aerobic and anaerobic pathways utilised to provide the muscles with the energy required for movement and the basic characteristics of each pathway.

Students apply biomechanical principles to improve and refine movement. They use practical activities to demonstrate biomechanical principles and how the correct application of biomechanics can lead to improved performance in sport and physical activity.

In Area of Study 3, there are two detailed studies: Technological advancements from a biomechanical perspective and Injury prevention and rehabilitation, which will expand and build on the knowledge and skills introduced in Areas of Study 1 and 2. Students select one of these detailed studies to explore in greater depth.

Unit 2 – Sports Coaching and Physically Active Lifestyles
This unit explores a range of coaching practices and their contribution to effective coaching and improved performance of an athlete. The way in which a coach influences an athlete can have a significant effect on performance. The approach a coach uses, the methods applied and the skills used will have an impact on the degree of improvement experienced by an athlete. By studying various approaches and applying this knowledge to a practical session, students gain a practical insight into coaching.

Students are introduced to physical activity and the role it plays in the health and wellbeing of the population. Through a series of practical activities, students gain an appreciation of the level of physical activity required for health benefits and investigate how participation in physical activity varies across the lifespan. They explore a range of factors that influence participation in regular physical activity, and collect data to identify perceived barriers and the ways in which these barriers can be overcome.

In Area of Study 3, there are two detailed studies: Decision making in sport and Promoting active living, which will expand and build on the knowledge and skills introduced in Areas of Study 1 and 2. Students select one of these detailed studies to explore in greater depth.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

PHYSICS

Rationale

Physics is a natural science based on observations, experiments, measurements and mathematical analysis, finding quantitative explanations for phenomena occurring throughout the Universe. While much scientific understanding in physics has stood the test of time, many areas continue to evolve. In undertaking this study, students develop their understanding of systematic experimentation and modelling in the development of theories and laws. They undertake practical activities and apply physics principles to explain natural and constructed phenomena.

In VCE Physics students develop a range of inquiry skills, analytical skills, and communication skills. Students use scientific skills and understanding to analyse contemporary physics issues and to communicate informed views.

VCE Physics provides for continuing study pathways and leads to a range of careers. Physicists undertake research and development in specialist areas including acoustics, astrophysics, atmospheric physics, computational physics, education, engineering, instrumentation, lasers and photonics, medical physics, nuclear science, optics, pyrotechnics and radiography and in cross-disciplinary areas such as bushfire research, climate science, forensic science, geology, materials science, neuroscience, and sports science.

Scope of Study

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

VCE Physics provides students with opportunities to explore the natural and constructed world. The study explores areas including mechanics, thermodynamics, electricity, fields, atomic physics, quantum physics, and waves. Options also include astrophysics, bioelectricity, electronics, flight, medical physics, biomechanics, nuclear energy, nuclear physics, optics, sound and sports science.

Students examine classical and contemporary models to understand how knowledge in physics has evolved in response to new evidence and discoveries. Students learn to appreciate the interconnectedness of areas within physics, and across other sciences.

An important feature of VCE science is self-designed inquiry. Students develop key science skills and investigate the link between theory and practice. Methodologies can include laboratory experimentation, local and remote data logging, simulations, animations and literature reviews. Students learn to work collaboratively, pose questions, formulate hypotheses and analyse interpret data. Knowledge of the safety consideration is integral to any physics investigation.

Students also develop capacities that enable them to critically assess the strengths and limitations of science and gain a greater awareness of the context of scientific endeavours.

Entry

There are no prerequisite studies for Units 1, 2 & 3.

PHYSICS UNITS 1 & 2

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 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 changes since the origins of the Universe.

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

Area of Study 1 – How can Thermal Effects be Explained?
Area of Study 2 – How do Electric Circuits Work?
Area of Study 3 – What is Matter and How is it Formed?

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.

Students investigate the ways in which forces are involved both in moving objects and in keeping objects stationary. Students choose to study an option from one of:

- Astrobiology,
- Astrophysics
- Bioelectricity
- Biomechanics
- Electronics
- Flight
- Medical physics
- Nuclear energy
- Optics
- Sound
- Sports science

A student-designed practical investigation then relates to content drawn from Area of Study 1 or 2.

Area of Study 1 – How Can Motion be Described and Explained
Area of Study 2 – Option (chosen from the above list)
Area of Study 3 – Student Designed Practical Investigation

Satisfactory Completion

Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement

Individual school decision on levels of achievement.

PHYSICS UNIT 3 & 4

Unit 3

Unit 3 consists of two prescribed areas of study: Motion in one and two dimensions; and Electronics and photonics. A detailed study is to be chosen in either Unit 3 or Unit 4 from one of six detailed studies: Einstein's special relativity, Materials and their use in structures, further electronics, synchrotron and its applications, photonics, and sound.

This unit focuses on the ideas that underpin much of the technology found in areas such as communications, engineering, commerce and industry. Motion in one and two dimensions is introduced and applied to moving objects on Earth and in space. Circuit models are applied to further aspects of electricity and electronics, and the operation and use of photonic devices are introduced. The detailed studies offer examples of theoretical and practical applications of these technologies.

Students continue to have regular experience in experimental investigation in the laboratory. They design and carry out an extended practical investigation. They collect accurate data, evaluate the quality of data and measurement processes, and make conclusions based on the data.

Mathematical modelling, including calculations, is applied to all areas of study to organise first-hand and second-hand data, make predictions and link concepts. Students analyse and solve more complex qualitative and quantitative problems.

Computer and/or graphics calculator programs are used to collect and analyse first-hand and second-hand data, and to present investigation findings.

Unit 4

Unit 4 consists of two prescribed areas of study: Electric power and Interactions of light and matter; and a third area of study to be chosen from one of three detailed studies: Synchrotron and its applications, Photonics, and Sound.

This unit focuses on the development and limitations of models in explaining physical phenomena. A field model of electromagnetism is applied to the generation of electricity, and the development of models that explain the complex interactions of light and matter are considered. The detailed studies provide examples of innovative technologies used for research and communication.

Students continue to undertake extensive and regular experimental work in the laboratory. They design and carry out investigations, collect accurate data, evaluate the quality of data and measurement processes and make conclusions based on the data.

Mathematical modelling, including calculations, continues to be used to organise first-hand and second-hand data, to link concepts, to make predictions and to identify trends. Students analyse and solve more complex qualitative and quantitative problems.

Computer and/or graphical calculator programs are used to collect and analyse first-hand and second-hand data, and to present investigation findings.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Physics students' level of achievement will be determined by School-assessed Coursework and an end-of-year examination. Percentage contributions to the study score in Physics are as follows:

- Unit 3 School-assessed Coursework: 16 percent
- Unit 4 School-assessed Coursework: 24 percent
- End-of-year examination: 60 percent

PSYCHOLOGY

Thematic Statement

Biblical truth states that human beings are created in the 'image of God' (Genesis 1: 26-27). To obtain an understanding of humans we need to obtain an understanding of God, who He is and how He works. Our entire being, spirit, soul and body, is a reflection of the character of God. When we respond to and/or imitate God's character we experience the peace and balance that God designed us to so that He is 'glorified.' The Christian perspective of psychology will therefore be applied throughout this unit.

Whole classical psychology seeks to analyse the mind independent of spiritual considerations, contemporary research is now acknowledging the validity of study of such phenomena. There are many examples of successful and acclaimed Christian psychologists.

Rationale

Psychology is the systematic study of thoughts, feelings and behaviour. As a science, psychology aims to describe, explain and predict behaviour; in doing so it relies on empirical procedures rather than intuition. The application of research methods in psychology allows students to develop useful skills in analytical and critical thinking and in making inferences.

It helps them to understand their own behaviour and the behaviour of others and it supports a variety of career paths in both business and the profession.

Entry

There are no prerequisites for entry in Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4. However, students who enter the study at unit 3 may need to undertake preparatory work.

PSYCHOLOGY UNITS 1 & 2

Unit 1 – How are Behaviour and Mental Processes Shaped?
In this unit students investigate the structure and functioning of the human brain and the role it plays in the overall functioning of the human nervous system. Students explore brain plasticity and the influence that brain damage may have on a person's psychological functioning. They consider the complex nature of psychological development, including situations where psychological development may not occur as expected. Students examine the contribution that classical and contemporary studies have made to an understanding of the human brain and its functions, and to the development of different psychological models and theories used to predict and explain the development of thoughts, feelings and behaviours.

Unit 2 – How do External Factors Influence Behaviour and Mental Processes
In this unit students investigate how perception of stimuli enables a person to interact with the world around them and how their perception of stimuli can be distorted. They evaluate the role social cognition plays in a person's attitudes, perception of themselves and relationships with others. Students explore a variety of factors and contexts that can influence the behaviour of an individual and groups. They examine the contribution that classical and contemporary research has made to the understanding of human perception and why individuals and groups behave in specific ways.

Research methods are integrated within the different approaches to psychology and students learn to make evaluations of the appropriateness of each model. Consideration of ethical principles in the conduct of psychological research and practice is included.

Unit 1 Outcomes	Unit 2 Outcomes
1. Students should be able to describe how understanding of brain structure and function has changed over time, explain how different areas of the brain coordinate different functions, and explain how brain plasticity and brain damage can change psychological functioning.	1. Students should be able to compare the sensations and perceptions of vision and taste, and analyse factors that may lead to the occurrence of perceptual distortions.
2. Students should be able to identify the varying influences of nature and nurture on a person's psychological development, and explain different factors that may lead to typical or atypical psychological development.	2. Students should be able to identify factors that influence individuals to behave in specific ways, and analyse ways in which others can influence individuals to behave differently.
3. Students should be able to investigate and communicate a substantiated response to a question related to brain function and/or development, including reference to at least two contemporary psychological studies and/or research techniques.	3. Students should be able to design and undertake a practical investigation related to external influences on behaviour, and draw conclusions based on evidence from collected data.

Unit 1 Assessment Tasks	Unit 2 Assessment Tasks
1. Annotated Poster 2. Test 3. Report on Research Investigation	1. Reflective Journal 2. Test 3. Empirical Research Activity

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

PSYCHOLOGY UNITS 3 AND 4

Unit 3 – The Conscious Self

This unit focuses on the study of the relationship between the brain and the mind through examining the basis of consciousness, behaviour, cognition and memory. Students study the structure and functioning of the human brain and nervous system, and explore the nature of consciousness and altered states of consciousness including sleep. Students consider the function of the nervous system in memory and investigate the ways in which information is processed, stored and utilised. They apply different theories of memory and forgetting to their everyday learning experiences.

Research methods are integrated within the different approaches to psychology and students learn to make evaluations of the appropriateness of each model. Consideration of ethical principles in the conduct of psychological research and practice is included.

Unit 4 – Brain, Behaviour and Experience

This unit focuses on the interrelationship between learning, the brain and its response to experiences, and behaviour. Students investigate learning as a mental process that leads to the acquisition of knowledge, development of new capacities and changed behaviours.

Students build on their conceptual understanding of learning to consider it as one of several important facets involved in a biopsychosocial approach to the analysis of mental health and illness. They consider different concepts of normality, and learn to differentiate between normal responses such as stress to external stimuli, and mental disorders.

Research methods continue to be integrated within the different methodological approaches to psychology. The application and understanding of ethical principles in the conduct of psychological research and practice is extended.

Unit 3 Outcomes	Unit 4 Outcomes
1. Explain the relationship between the brain, states of consciousness including sleep, and behaviour, and describe the contribution of selected studies and brain research methods to the investigation of brain function.	1. Explain the neural basis of learning, and compare and contrast different theories of learning and their applications.
2. Compare theories that explain the neural basis of memory and factors that affect its retention, and evaluate the effectiveness of techniques for improving and manipulating memory.	2. Differentiate between mental health and mental illness, and use a biopsychosocial framework to explain the causes and management of stress and a selected mental disorder.

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks Unit 4
• Visual Presentation • Empirical Research Activity • Test	• Folio • Visual Presentation • Essay

Satisfactory Completion
Demonstrated achievement of the set of outcomes specified in the unit.

Levels of Achievement
The Victorian Curriculum and Assessment Authority will supervise the assessment of all students undertaking Units 3 and 4. In the study of Psychology students' level of achievement will be determined by School-assessed Coursework and an end-of-year examination. Percentage contributions to the study score in Psychology are as follows:

- Unit 3 School-assessed Coursework: 20 percent
- Unit 4 School-assessed Coursework: 20 percent
- End-of-year examination: 60 percent.

RELIGION AND SOCIETY

Rationale

The beliefs, values and ideas of religious traditions can play an important part in shaping and maintaining culture. Religious beliefs about the nature of existence and the purpose of human life provide a frame of reference for understanding the world and for guiding daily personal and communal action.

Structure

The study is made up of four units:

Unit 1: Religion in Society
Unit 2: Ethics and Morality
Unit 3: The Search for Meaning
Unit 4: Challenge and Response

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.

RELIGION AND SOCIETY UNITS 1 & 2

Unit 1: Religion in Society

In this unit students explore the origins of religion, identifying the nature and purpose of religion past and present. They investigate the contribution of religion to the development of human society and then focus on the role of religious traditions in shaping personal and group identity. Students examine how religious traditions are affected and changed by individuals and groups. The unit provides the opportunity for students to understand the often complex relationships that exist between individuals, groups, religious traditions and the society in which they live.

Throughout this unit at least two religious traditions should be studied. Different religious traditions may be selected for each area of study. Religious traditions to be studied are to be chosen from more than one of the following groups:

- Religions of ancient civilisations (for example, Mesopotamian, Babylonian, Egyptian, Canaanite, Roman, Greek)
- Primal religions (for example, Australian Aboriginal religions, religions of the Pacific Islands)
- Asian religions (for example, Buddhism, Hinduism, Chinese religions)
- Abrahamic religions (for example, Judaism, Christianity and Islam)

Unit 2: Ethics and Morality

Choosing which values to live by in principle and in practice is fundamental to being human. Ethics is a discipline that investigates the various methods for making ethical decisions; it involves reflection on what is 'right' and 'wrong', and 'good' and 'bad' and mean when applied to human decisions and actions. Ethics is concerned with the justification for moral choices – identifying the arguments and analysing the reasoning behind them. Ethical questions are raised at the personal, family, local, wider community, national and global level.

Unlike morality, ethics is not just a matter of individual awareness and personal decision making. Family, community and traditional connections tie people together and provide an ethical background to guide what individuals do, supporting some choices and disapproving of others. This background is enmeshed with the dominant religious and philosophical traditions of the times. Today, religious and philosophical traditions compete with powerful alternative sources of moral values represented in the media and popular culture. Nevertheless, society still relies on cultural heritages that contain a variety of ethical perspectives as well as numerous values centred on human dignity and basic justice. These various values remain fundamental to legal and social systems, and constitute the everyday categories of ethical discourse in the modern world. They are taken by the individual and groups that hold them to be the starting pint and common ground for ethical discussion in pluralist society.

In this unit student survey various approaches to ethical decision-making and then explore at least two religious traditions in detail. They explore contemporary ethical issues in the light of their investigations into ethical decision-making and ethical perspectives, and moral viewpoints in religious traditions.

Satisfactory Completion

Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement

Individual school decision on levels of achievement.

THEATRE STUDIES

Thematic Statement

As Christians engaged in the dramatic arts we must connect with God's purpose on our lives as His chosen stewards and image bearers of the Christian faith. Through Theatre Studies students develop skills that aid them in building confidence, public speaking, creativity and technical skill, while strengthening their God given gifts to communicate and engage with the community around them. Students explore current issues and develop an understanding of Christian values including courage, integrity, humility and creativity, at the same time as exploring the importance of their lives for God.

Rationale

Theatre Studies focuses on the interpretation of play scripts and the production of plays from the pre-modern era to the present day. Students apply stagecraft including acting, to study the nature, diversity and characteristics of theatre as an art form. Throughout the study, students work with play scripts in both their written form and in performance. They learn about the times, places and cultures of key theatrical developments and develop awareness of the traditions and histories of theatre.

This knowledge is applied through use of stagecraft to collaboratively interpret play scripts in performance. Through contribution to the production of plays and performance of a monologue, students also develop knowledge and understanding of theatrical styles. This knowledge and understanding is further developed by analysis and evaluation of their own productions and productions by professional theatre practitioners.

Theatre Studies provides students with pathways to further studies in fields such as theatre production and theatre design, script writing and studies in theatre history.

Entry

There are no pre-requisites for entry into Units 1, 2 and 3. Students must undertake Unit 3 prior to undertaking Unit 4.

THEATRE STUDIES UNITS 1 & 2

Unit 1

Area of Study 1 – Pre-modern Theatre
This area of study focuses on an exploration of play scripts from the pre-modern era of theatre that is works prior to the 1880s. Students study play scripts from at least three distinct theatrical periods from this era. Through practical workshops students learn about contexts, cultural origins, theatrical styles, use of stagecraft and performance possibilities for each of the selected play scripts.

Area of Study 2 – Interpreting Play Scripts
This area of study focuses on the presentation of play scripts from the pre-modern era of theatre. Students learn how acting and other stagecraft can be informed by different theatrical styles and contexts. Through rehearsals and performance students learn about developing character, the effect of the audience on performance, and the use of acting skills to enhance text interpretation.

Area of Study 3 – Analysing a Play in Performance
This area of study focuses on an analysis of a professional performance of a play script from the pre-modern era. Students explore the nature of theatrical analysis including theatrical styles, audience perspective, acting skills, use of other stagecraft and the ways in which the contexts of a play script have been interpreted through performance.

Unit 2

Area of Study 1 – Modern Theatre
This area of study focuses on an exploration of play scripts from the modern era of theatre, that is, works written between 1880s and the present. Students study at least three distinct theatrical movements from this era including play script/s associated with each movement. Students learn about the contexts, origins, theatrical styles, production processes, use of stagecraft and performance possibilities of each play script. Through practical workshops involving the application of stagecraft, students gain knowledge of how each movement has shaped and contributed to the world of modern theatre.

Area of Study 2 – Interpretation through Stagecraft
In this area of study students apply stagecraft to realise play scripts from at least three distinct theatrical movements from the modern era. They also learn how stagecraft is informed by and contributes to the development of different theatrical styles, and consider ways the application of stagecraft is itself shaped by the contexts of the play scripts. Through working collaboratively, students gain an understanding of how stagecraft is applied in a production process to interpret play scripts.

Area of Study 3 – Analysing a Play in Performance
This area of study focuses on an analysis and evaluation of a professional performance of a play script from the modern era. Students explore the nature of theatrical analysis and production evaluation including the application of stagecraft and its effect on an audience

Unit 1 Outcomes	Unit 2 Outcomes
1. On completion of this unit the student should be able to identify and describe the distinguishing features of play scripts from the pre-modern era. 2. On completion of this unit the student should be able to apply acting and other stagecraft to interpret play scripts from the pre-modern era. 3. On completion of this unit the student should be able to analyse a performance of a play script from the pre-modern era in performance.	1. On completion of this unit the student should be able to identify and describe the distinguishing features of play scripts from the modern era of theatre. 2. On completion of this unit the student should be able to apply stagecraft to interpret play scripts from the modern era. 3. On completion of this unit the student should be able to analyse and evaluate stagecraft in a performance of a play script from the modern era.

Unit 1 Assessments Tasks	Unit 1 Assessments Tasks
1. A folio with annotated visual reports and interpretation of play script/s 2. Performance of play scripts from the pre-modern era. 3. Oral presentations. 4. Analysis of a performance of a play script from the pre-modern era. 5. Semester Examination.	1. A folio with annotated visual reports and interpretation of play script/s 2. Practical application of stagecraft to interpret play scripts from the pre-modern era. 3. Oral presentations 4. Written analysis and evaluation of stagecraft in a performance of a play script from the modern era. 5. Semester Examination.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

THEATRE STUDIES UNITS 3 & 4

Unit 3

Area of Study 1 – Production Process
This area of study focuses on the development of skills which contribute to the interpretation of a play script. Students work collaboratively to contribute to the development of a production. The students undertake practical exercises and tasks as a member of the production team in the development of a play script through the four stages of production including production planning, production development, production season, and production evaluation.

Area of Study 2 – Stagecraft Influence
This area of study focuses on documentation and analysis of the influence of stagecraft on the production of a play script by the students in area of study 1. Students study the background, contexts, language and theatrical possibilities of a play script as a way of informing the development of an appropriate interpretation for the production. They document and analyse the influence of their two chosen stagecraft elements influenced and contributed to the production during the four stages of production.

Area of Study 3 – Production Analysis
This area of study focuses on the analysis and evaluation of an interpretation of a play script in a production from the prescribed *Theatre Studies Unit 3 Playlist*. Students analyse and evaluate the relationship between the written play script and its interpretation on stage. This includes the decisions that have been made when interpreting the play script, for example decisions pertaining to design, direction and acting. In doing so students study ways the interpretation on stage draws on and/or changes the historical, cultural and social contexts in the play script.

Unit 4

Area of Study 1 – Monologue Interpretation
This area of study focuses on the interpretation of a monologue from a play script selected from the monologue list. Students select a monologue from the list and study the text of the monologue, the prescribed scene in which it is embedded and the play script from which the scene is derived. Students interpret the monologue through the application of acting, and other stagecraft and theatrical style/s.

Area of Study 2 – Scene Interpretation
Students outline an interpretation of the scene focusing on the ways in which the scene could be approached as a theatrical performance.

Area of Study 3 – Performance Analysis
This area of study focuses on the analysis and evaluation of the acting in a production selected from the prescribed *Theatre Studies Unit 4 Playlist*. Students attend a production selected from the prescribed playlist. They analyse and evaluate how actor/s interpret the play script in the performance. In doing so students study the character/s in the play and how the actor/s interpreted them on stage

Unit 3 Outcomes	Unit 4 Outcomes
1. Apply stagecraft to interpret a play script for performance to an audience and demonstrate understanding of the stages of the production process (folio).	1. Perform an interpretation of a monologue from a play script.
2. Analyse the use of stagecraft in the development of a play script for production, incorporating the specifications appropriate for each stage of the production process	2. Develop a theatrical brief that presents an interpretation of a scene.
3. Analyse and evaluate ways in which a written play script selected from the prescribed playlist is interpreted in its production to an audience	3. Analyse and evaluate acting in a production from the prescribed playlist.

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
1. Apply acting and set design in all stages of the production process and demonstrate understanding through interactions with other members of the production team and decisions made in relation to application of acting and set design to interpret a selected play script in performance to an audience.	1. A theatrical brief presented as a written report that outlines ways in which a prescribed scene selected from the *Theatre Studies Performance Examination* (monologue list) could be approached as a theatrical performance.
2. Develop and present a production folio that analyses application of costume and stage management during all stage of the production process.	2. A written report that analyses and evaluates acting in a production selected from the *Theatre Studies Unit 4 Playlist*.
3. Responses to structured questions about decisions that have been made when interpreting a play script selected from the *Unit 3 Theatre Studies Playlist*.	3. Performance Examination (monologue).
	4. Written Examination.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
School assessed coursework, performance exam and an end-of-year examination.

- Unit 3 school-assessed coursework: 30 per cent
- Unit 4 school-assessed coursework: 15 per cent
- End-of-year performance examination: 25 per cent
- End-of-year written examination: 30 per cent

VISUAL COMMUNICATION AND DESIGN

UNITS 1 & 2

Unit 1
Students will develop an understanding of instrumental drawing methods and freehand drawing including drawing from direct observation. They study of a range of drawing methods, including relevant Australian Standards conventions. Students develop practical skills in the application of appropriate drawing methods, design elements and principles, and information and communications technology. The unit also introduces the role of the design process in visual communication production.

Area of Study 1 – Instrumental Drawing
This area of study focuses on instrumental drawing to show objects and their relationship to each other in space – two dimensionally and three dimensionally. Manual and/or electronic drawing methods are used to draw objects using paraline projections, including isometric, oblique, planometric and third-angle orthogonal projections. Australian Standards conventions are used appropriately in the communication of visual information and in the completion of finished designs.

Area of Study 2 – Freehand Drawing and Rendering
This area of study focuses on freehand drawing from direct observation, including one-point and two-point perspective and rendering. A range of media is used in drawing to represent objects, depicting surface features and to describe form, space, light, shade, shadow and texture. A variety of rendering techniques may be applied to enhance the form of represented objects and to communicate realistic scale and proportion of objects in relation to one another.

Area of Study 3 – Design Elements and Design Principles
This area of study focuses on the experimentation, exploration and application of design elements and principles through manual freehand drawing, the use of information and communications technology and, where appropriate, other methods of electronic image generation such as photography and photocopying. Design elements, including colour, shape, line, tone, texture, form, letterform and point, and principles, including balance, contrast, cropping, hierarchy, figure–ground, scale, proportion and pattern, are used to produce visual communications that satisfy a stated purpose. Experimentation and exploration occur throughout the development of ideas in the testing and reviewing of the relationship between applied elements and principles and the requirements specified in the stated purpose.

Area of Study 4 – Design process
This area of study focuses on components of the design process and how it is applied in the production of visual communications. The design process initially involves identification of a visual communication need establishing the purpose of the visual communication. Information is then researched and ideas generated in order to establish how the visual communication need could be best satisfied through the production of visual communications. Materials, methods, media, design elements and principles are trialed and tested throughout the design process prior to the completion of final presentations.

Unit 2: Communication in Context

Students learn to develop and refine practical skills by generating images and developing them through freehand drawing, instrumental drawing and the use of information and communications technology. Students will develop an awareness of how the design process facilitates exploration and experimentation and how information and ideas are communicated.

Area of Study 1 – Representing and Communicating Form

This area of study focuses on developing skills in communicating visual information and in developing images through freehand and instrumental drawing. The representation of form, scale and relationships should be achieved through the appropriate selection of drawing methods including two-dimensional and three-dimensional representations. Australian Standards conventions should be applied to indicate correct dimensioning, cross-sectioning and for the representation of circles in two-dimensional drawing. In drawing three-dimensional objects, the appropriate representation of circular features should be shown. The conversion of two-dimensional drawings to three-dimensional representations and vice versa should be clearly depicted.

Area of Study 2 – Developing Imagery

This area of study focuses on the application of freehand drawing and rendering and the methods of application that effectively represent form. Both one-point and two-point perspective drawing is used in the development of imagery, which depicts the surface details of an object, including materials and texture. Similarly, the effects of light and shadow on the features of an object are illustrated and a range of media, design elements and principles are applied. In the depiction of selected images, design principles such as scale and hierarchy are applied to illustrate the relationships that exist between objects on a picture plane.

Area of Study 3 – Developing Visual Communication Solutions

This area of study focuses on applying the design process in the development of visual communication solutions to set tasks. The tasks may vary in their purpose, context, target audience, materials to be trialed, media and design elements and principles to be explored. Freehand and instrumental drawing together with information and communications technology and, where appropriate, other methods of electronic image generation such as photography and photocopying are used to express varied concepts and to develop solutions. Following the analysis of material and research related to the set task, the proposal of solutions and refinement of ideas occur during the application of the design process.

Area of Study 4 – Visual communication in Context

This area of study focuses on how cultural and historical factors influence the communication of information and ideas in both contemporary and historical visual communications. The influence of materials, methods, media, design elements, design principles and final presentations on the visual communication within these contexts is also considered. The influences of historical styles and movements on contemporary visual communications are also analysed. In the discussion of examples of both contemporary and historical visual communications, the influence of social factors such as changes in fashion, social values and current issues would be analysed. Visual communication terminology is used throughout the analysis of examples of visual communications.

Unit 1 Outcomes	Unit 2 Outcomes
1. Students learn how to produce orthogonal and paraline drawings according to standards and conventions. 2. Students create form through observational drawing and render it to show light and surface qualities of a variety of objects using a range of media. 3. Students explore the use of the design elements and principles, through drawing and computers and apply them to the development of their ideas. 4. Students learn about the stages of the design process and how they are used to create design solutions.	1. Students learn to draw cross sections, circular forms, and represent scale through orthogonal and paraline drawings. 2. Students learn to use perspective drawing to represent scale relationships between objects, and to show form, and shadow. 3. Students learn to us the design process to produce visual communication solutions. 4. Students compare and contrast the features of different historical design styles.

Unit 1 Assessment Tasks	Unit 2 Assessment Tasks
1. Folio of instrumental drawings due Week 4 term one. 2. Folio of freehand drawing and rendering due week 9 term one. 3. Folio of developmental work and final presentation due Week 7 term two. 4. Written presentation due week 3 term two.	1. Folio of instrumental drawings due week 6 term four. 2. Folio of developmental work Due week two term three. 3. Outcome 3 folio and visual communication solutions due week 5 term three. 4. Written presentation Due week 9 term three.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
Individual school decision on levels of achievement.

VISUAL COMMUNICATION AND DESIGN UNITS 3 & 4

Unit 3 – Visual Communication
Students will develop an understanding of visual communication production through the application of the design process. They consider existing visual communication and analyse and evaluate examples. Students will also investigate the production of visual communications in a professional setting and examine the nature of professional practice.

Area of Study 1 – Visual Communication Design
This area of study focuses on the application of the design process to satisfy a stated visual communication need. In response to this defined need, research provides material for analysis and manual drawing is used to generate concepts and ideas relevant to the original visual communication need. Design elements, principles, media and materials are applied in the development of design alternatives. Freehand and instrumental drawing, featuring Australian Standards conventions where required, are also applied in the generation and development of ideas related to the original need.

Instrumental drawing, using manual or electronic methods, including third-angle orthogonal, paraline and perspective drawing, are used to demonstrate form and, where appropriate, function relevant to the communication need. Throughout the application of the design process, ongoing evaluation occurs, demonstrating the selection and refinement of concepts appropriate to the visual communication need. The development and refinement of ideas using a range of image generation methods including information and communications technology, culminates in a final presentation.

Area of Study 2 – Visual Communication Analysis
This area of study focuses on the analysis and evaluation of examples of visual communication. It includes the audiences and purposes of visual communication and the ways in which information is communicated to a desired audience. The use of the materials, methods, media, design elements, design principles and final presentations in visual communication is described and the application of design elements and principles evaluated.

Area of Study 3 – Professional Practice in Visual Communication
This area of study focuses on the relationship between the clients, professional designers and, where appropriate, specialist professional personnel in a professional setting. In the design and production stages of the design process, client initiated design briefs are used by professional designers and, where appropriate, specialist professional personnel to prepare solutions to fulfill the requirements of the brief. In preparing these solutions decisions are made about materials, methods, media, design elements and principles that are the most appropriate and related to the requirements of the design brief. In this area of study, the term ‘brief’ can be understood as one or more briefs.

Unit 4: Designing to a Brief
The main purpose of this unit is to enable students to apply their knowledge of the components of the design process in the preparation of one design brief. Students apply their practical skills to the development and production of two distinct final visual communication presentations through application of the design process and based on the requirements of the brief.

Area of Study 1 – The Brief
This area of study focuses on the preparation of a brief that proposes and defines the communication need of a client. The brief identifies the need of the client (including two possible distinct final presentations on two presentation formats), identifies the audience/s, purposes and contexts, and specifies any related constraints and expectations.

Area of Study 2 – Developmental Work

This area of study focuses on the application of the design process to produce developmental work consistent with the requirements of the brief. The design process initially involves researching and analysing information related to the brief. Initial concepts based on this analysis are then developed and refined. This part of the design process involves experimentation with materials, methods (including freehand drawing), media, design elements, design principles and presentation formats in order to develop imaginative solutions for the proposed two distinct final visual communication presentations. The selection of the preferred options for final presentations involves the production of mock-ups. Throughout the design process the developmental work (including mock-ups) is evaluated to ensure client need/s, intended purpose/s and audience/s are being satisfied. Final creative and technical decisions are made about the developmental work in order to satisfy the requirements of the brief.

Area of Study 3 – Final Presentations

This area of study focuses on the final phase of the design process. Two distinct final visual communication presentations are produced on two presentation formats. These are in addition to the work completed as part of the developmental work for Outcome 2. Each final presentation should be based on the content of the brief, and the approach taken and solutions developed during the design process in the application of materials, methods, media, design elements and principles. The final presentations should reflect technical competence in the methods developed and refined during the design process and be consistent with Australian Standards conventions, where appropriate.

Unit 3 Outcomes	Unit 4 Outcomes
1. Students produce a Folio of work including technical and observational drawings and use of the design process as well as a final solution.	1. Students write a design brief that clearly defines the communication need.
2. Students complete a design analysis identifying audience characteristics, use of elements and principles to effectively communicate.	2. Students produce a folio of developmental work that utilises design process and a variety of materials, processes and elements and principles etc.
3. Students discuss and evaluate how professional designers operate in the real world.	3. Students create 2 final presentations that meet the need explained the design brief.

Unit 3 Assessment Tasks	Unit 4 Assessment Tasks
1. Folio and final presentation Due week 7 term two (this project runs for the whole semester). 2. Written Analysis to be completed week 9 term one in class. 3. Written short answer task completed term 2 week 3 during class time.	1. Folio of development work and two distinct final presentations due at the end of term three.

Satisfactory Completion
Demonstrated achievement of the set outcomes specified for the unit.

Levels of Achievement
School assessed coursework and an end-of-year examination.

- Unit 3 school-assessed coursework: 33 percent
    - Outcome 1 – 60 marks
    - Outcome 2 – 20 marks
    - Outcome 3 – 20 marks
- Unit 4 school-assessed coursework: 33 percent
- End-of-year written examination: 34 percent

VCE VET SPORT AND RECREATION

UNITS 1 TO 4

VCE VET programs lead to nationally recognised qualifications and offer students the opportunity to gain both the VCE and a nationally recognised Vocational Education and Training (VET) certificate. They are fully recognised within the Units 1 to 4 structure of the Victorian Certificate of Education (VCE) and have equal status with other VCE units

AIMS
The VCE VET Sport and Recreation program aims to:

- Provide participants with the knowledge and skills to achieve competencies that will enhance their employment prospects in the sport and recreation or related industries
- Enable participants to gain a recognised credential and to make a more informed choice of vocation or career path.

Note: The Units 3 and 4 sequence of VCE VET Sport and Recreation is not designed as a stand-alone study. Students are strongly advised against undertaking the Units 3 and 4 sequence without first completing Units 1 and 2.

The following qualifications are available in the VCE VET Sport and Recreation program.

- SIS20210 Certificate II in Outdoor Recreation
- SIS20310 Certificate II in Sport and Recreation
- SIS30510 Certificate III in Sport and Recreation

ATAR Contribution
Students wishing to receive an ATAR contribution for the Units 3 and 4 sequence must undertake scored assessment for the purposes of gaining a study score

Scored Assessment
The study score can contribute directly to the primary four or as a fifth or sixth study. Students wishing to receive a study score for VCE VET Sport and Recreation must undertake scored assessment in the Units 3 and 4 sequences of either:

- SRC20206 Certificate II in Community Recreation with selected units of competence from Certificate III
- SRO20206 Certificate II in Outdoor Recreation with selected units of competence from Certificate III

Scored assessment consists of three coursework tasks, worth 66% of the overall study score and an end of year examination, worth 34% of the overall study score.

VCE VET VETAMORPHUS

UNITS 1 TO 4

VCE VET programs lead to nationally recognised qualifications and offer students the opportunity to gain both the VCE and a nationally recognised Vocational Education and Training (VET) certificate. They are fully recognised within the Units 1 to 4 structure of the Victorian Certificate of Education (VCE) and have equal status with other VCE units

Vetamorphus is **Certificate 3 in Christian Ministry and Theology**. It provides a rich and multi-faceted opportunity for students to explore their faith. The course complements what many students are already doing in service at their local church and in mission work (including our year 11 Missions Trip to Fiji).

There are 6 core areas of Vetamorphus:

Peer Group (a small group which runs during class time):
A student led small group where students inspire each other to grow, whilst being supported and encouraged by their Peer Group Supervisor. This supervisor facilitates a growing environment where students are equipped with knowledge and given the opportunity to apply that knowledge to their life.
Time commitment: 28 weeks x 1.5 hrs per week = 42 hrs

Ministry Practice
Developing the discipline of service and becoming a servant; discovering and growing gifts, whilst being apprenticed to a more experienced leader. Ministry Practice can consist of serving in a team on a regular basis throughout the program (kids club, youth group, school program, community project or any other regular ministry), and or a Live-in-mission: (leading on a camp, mission trip etc.).
Time commitment: 56 hrs

Private Bible Study
Students engage in a reading plan that covers two thirds of the New Testament and requires them to reflect on and journal their readings. Private study also includes the preparation and application of Learning Exercises, Ministry Exercises, Seminars and "Creatives", which are worked through and discussed in the peer group time.
Time commitment: Reading & Journaling:
30 mins per day x 3 times a week x 28 weeks per year = 42 hrs
3 seminar papers x 10 hrs = 30 hrs
16 learning and ministry exercises x 1 hrs = 16 hrs

Mentoring
Students participate in a mentoring relationship with a mature Christian on a regular basis. Students will explore their personal journey with Christ and draw on the wisdom and experience of someone they look up to and respect.
Time commitment: 10 meetings x 1 hr per meeting = 10 hrs

Retreats
The goal of our retreats is to equip and inspire. We take 3 weekends over the program and give students opportunity to connect with peers from across the state. On these weekends students will receive intensive training as well as opportunity to reflect and have fun with others.
Time Commitment: 3 retreats = 30 hrs

Christian Community
During the program students commit to journeying with a community of faith, discovering what it means to be the Church instead of just going to church. Students reflect on this regular experience individually and as a peer group.
Time Commitment: 14 gatherings x 1 hr = 14 hrs

TOTAL COURSE TIME COMMITMENT = 240 HRS

VICTORIAN CERTIFICATE OF APPLIED LEARNING (VCAL)

The Victorian Certificate of Applied Learning (VCAL) is a 'hands-on' option for students in Years 11 and 12.

Like the VCE, the VCAL is a recognised senior secondary qualification. Unlike the VCE, which is widely used by students as a pathway to university, the VCAL focuses on 'hands-on learning'. Students who do the VCAL are more likely to be interested in going on to training at TAFE, doing an apprenticeship, or getting a job after completing Year 12.

The VCAL's flexibility enables students to design a study program that suits their interests and learning needs. Students select accredited curriculum components from VCE studies, Vocational Education and Training (VET) qualifications, Further Education (FE) and VCAL units. There are four compulsory strands in VCAL:

- Literacy and Numeracy Skills
  Your VCAL learning program must include literacy and numeracy subjects, such as VCE English and Maths or other accredited studies such as literacy and numeracy modules from the Certificate in General Education for Adults.
- Work Related Skills
  In order to develop 'employability skills', VCAL gives you the choice of undertaking:
    - Structured Workplace Learning
    - A School-based or Part-time Apprenticeship/Traineeship, or
    - Part-time work.

You can also study units and modules that will help prepare you for work, for example occupational health and safety or job interview skills.

- Industry Specific Skills
  Your VCAL learning program must include Vocational Education and Training (VET) units of competency. However, you are not required to focus on or complete any single VET qualification. For example, you can choose to undertake various units of competency from a range of VET qualifications to meet the VCAL requirements, and gain experience in a range of vocational areas. The range of VET options is extensive with recognised training packages available from industries including automotive, engineering, building and construction, hospitality and retail, agriculture, horticulture, warehousing and hair and beauty.
- Personal Development Skills.
  As part of your VCAL learning program, you must participate in community-based projects, voluntary work and/or structured activities that will help develop your self-confidence, teamwork skills and other skills important for life and work.

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

A certificate and Statement of Results will be issued to students who successfully complete their VCAL.

For further information please contact the Director of Teaching and Learning or the Deputy Principal. In order for the VCAL Certificate to run, a minimum number of students (10) is required.

VCE (Year 11) Subject Selection Plan 2016

Complete the grid below to indicate the subjects and the corresponding units selected for 2016.
Student's Name (Please print): ……

The usual program for students to take is:

- 6 VCE units per semester in Year 11 (Unit 1 and 2), or
- 6 VCE units per semester in Year 11 (including one 3 and 4 sequence if eligible) and
- 5 VCE units per semester in Year 12

The compulsory studies have been listed for you.

Current Career Aspirations:

1._____ 2._____

3._____ 4._____

Year 11		Year 12	
Semester 1	**Semester 2**	**Semester 1**	**Semester 2**
English 1	English 2	English 3	English 4

Proposed Tertiary Courses Tertiary Prerequisites

-
-
-
-

Are you eligible to study a Unit 3 and 4 sequence in Year 11? If so, list your preference here.

1_____ 2_____

** *Please submit a copy of your Semester 1 report*

Do you wish to study a VET course or external LOTE in 2016? If so, list your choice here

_____

Student's Signature---------- **Date**----------

Parent's Signature:……… **Date:……..**……