VCE HANDBOOK 2016

A GUIDE FOR

YEAR 11

STUDENTS

IN VCE COURSE SELECTION
This Handbook is the first of two VCE at Mac.Rob booklets to be distributed to current Year 11 students and their parents. It contains information on the courses to be offered at this school and descriptions of each of the VCE studies.

A second booklet, the VCE Student Guide will be distributed to all Year 12 students at the start of 2016. The VCE Student Guide contains information useful to students once their VCE course has begun.

For more general information, The Macrob GUIDE FOR PARENTS & STUDENTS is available on the student portal and school website.

**Senior School: 2015**

<table>
<thead>
<tr>
<th>Head of Senior School</th>
<th>Mr Marcus Sharp</th>
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<tbody>
<tr>
<td>Year 12 Coordinators</td>
<td>Mrs Michele Dean, Ms Anne Tinney</td>
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<td>Year 11 Coordinators</td>
<td>Mr David Page, Mr Simon Maaser</td>
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<tr>
<td>Careers Counsellors</td>
<td>Ms Irene Serpless, Ms Susy Puszka</td>
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<tr>
<td>VET/VCAL Coordinator</td>
<td>Ms Julia Trenchard-Smith</td>
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<tr>
<td>VCE/VASS Coordinator</td>
<td>Ms Barbara Chandler (VCE administrative procedures, including external enrolments)</td>
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**Important dates 2015-2016**

**2015 Course submission deadline (online)**

Monday 24 August, 2015

There will be course change opportunities offered in term Four 2015
A final course change opportunity will be offered early Term 1, 2016

(please be aware that these will be limited opportunities and dependent on available spaces in classes.)
VCE HANDBOOK 2016

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Introduction

Welcome to Units 3 & 4 exclusively!

This Handbook is to help you understand the Victorian Certificate of Education as it is taught at Mac.Rob. It will also guide you in choosing a program that will prepare you for employment, or for further education and training at a university or TAFE.

The handbook is made up of two sections:

Section 1   The VCE Program at Mac.Rob

Section 2   Descriptions of VCE Studies currently offered at Mac.Rob

SECTION 1 - THE VCE PROGRAM AT MACROB

How do you submit your course, and when?

Students will submit their course selection for 2016 online (deadline: 24 August). Closer to that date, we will provide a guide to entering your online selection.

What if you change your mind?

You can request limited changes for your Year 12 course at these times:

1. At the end of Year 11 classes before Unit 3/4 exams – one day only
2. At the end of the VCE Orientation Program – one day only
3. Week one Term 1, 2016 (again, one day only)

In each case, there will be limitations caused by timetable, staffing and availability of space in classes, so it is important that you consider your course very carefully as we approach 24 August this year.

Notes:
What must you do to graduate with your VCE?

The Victorian Curriculum and Assessment Authority (VCAA) sets these requirements.

You must **satisfactorily complete** at least 16 units. Regardless of how many you do altogether, you must also satisfactorily complete:

- at least 3 units of the English Group
  
  | English Units 1 to 4 |
  | English as an Additional Language (EAL) Units 3 and 4 |
  | English Language Units 1 to 4 |
  | Literature Units 1 to 4 |

Of these minimum 3 units, at least one must be from Units 3 and 4.

(Special important note: to obtain an ATAR, you must have a Unit 3/4 sequence from this group)

- Three sequences of **Units 3 and 4** studies in addition to meeting the English requirement. These can be from VCE studies and/or VCE VET programs.

**Studies and units**

A full list of all VCE studies available in Victoria is found in the VCAA’s booklet *Where to now?* or on the VCAA’s website [www.vcaa.vic.edu.au](http://www.vcaa.vic.edu.au). A list of studies available at Mac.Rob is found on page 10 of this booklet.

**What is VCAL?**

VCAL stands for Victorian Certificate of Applied Learning

VCAL is an alternative to the usual VCE if you are interested in a more employment-related course.

The key features of VCAL:

- It involves applied learning – a hands-on approach
- The exact balance between VCE Studies and VCAL studies will be negotiated on an individual basis
- you can undertake a School Based Apprenticeship or Traineeship – involving 15 hours of paid work per week - in fields such as these:
  
  | Retail |
  | Hospitality |
  | Sports Administration |
  | *(there are more...)* |
  | or |
  | undertake a VET study |

- your course involves **fewer VCE studies** BUT it is still possible to graduate with a conventional VCE Certificate and obtain an ATAR.

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All questions about VCAL studies should be addressed to Ms Serpless or Ms Puszka.
What should you consider in choosing your 2016 course?

The range of studies listed on page 10 is very wide and we expect that there will be at least one class in each of these subjects in 2016. However, if the number of students choosing a particular subject is too small, then some changes may be made to the list.

Mac.Rob, the VCAA and VTAC are unanimous in advising you to choose subjects that:

- you enjoy, and interest you;
- you are good at;
- reflect what you are interested in studying at tertiary level, and will develop the skills that will help you in those studies;
- help provide you with more career options if you are undecided

Think of...

1. **A broad course.** The flexibility of the VCE encourages all students to take a variety of studies, while providing them with the ability to specialise in a particular area. You may decide to specialise in Music, Language, Science studies, but it is very important that you should also be able to prepare for a wide variety of career options.

   **Don't choose subjects that may limit or narrow your choices.** For instance, planning on just one or two possible careers is not advisable.

   Remember that most subjects develop skills rather than simply a body of knowledge. These skills help you to develop qualities which are important in higher level study - and for this reason, it's important that you consider many subject options.

2. **Interest.** Choose studies that you will enjoy. Most students perform better in these subjects. Beware of choosing subjects because you have heard about the impact of scaling in calculating the ATAR, and NEVER choose subjects simply because they are ‘scaled up’, or because well-meaning people advise you to do so.

   VTAC’s *Choice!* makes it very clear that such a practice is unwise and may actually disadvantage you when you choose studies in which you are not strong!

3. **Be realistic!** If you found certain subjects difficult and have trouble grasping and understanding topics in Year 11, remember that the subject will become more complex at Units 3 and 4 level, not less so! Hard work alone cannot guarantee success in each area. You need to take your abilities into account. Semester 1 reports will have provided good information for you – read these carefully.

4. **Research!** Find out about all the various studies - read all of the unit descriptions, and talk to teachers about them. Try also to talk to current VCE students. Make use of course counsellors, such as Year-Level Coordinators, Director of Senior School and Careers advice staff. (Ms Sepless/Ms Puszka)

5. **Do you need 1/2 as background studies for Units 3/4?** It is possible to enter most VCE studies at Unit 3/4 level without having previously studied Units 1 or 2. Some subjects do not have a Unit 1/2 equivalent. In some cases, however, preparatory units are recommended if you are planning to take the Units 3 and 4 that follow. Also, in some, background definitely is required (e.g. Maths, LOTE). Discuss this with course counsellors if it affects your choice or if you are unsure.

6. **Consider your time management skills.** Think carefully before choosing more than two subjects in the Arts category within your course (e.g. Drama, Music Performance, Art/Studio Arts, Visual Communication Design, Media) – these all have intense periods of work/preparation for assessment. You will be fine if you are well organised and can plan things ahead.
7. **This is your choice!** The choice of subjects you make may ultimately determine your career, and how you will spend a large proportion of your life.

Make sure you are aiming for a future that will satisfy you, rather than friends or family, however well-meaning they may be.

8. **Tertiary Prerequisites.** Be aware of VCE prerequisites for tertiary courses, listed in *Tertiary Entry 2017*. These prerequisites will apply to tertiary and TAFE courses in 2017. Do not rely on other years’ prerequisites (e.g. for 2013, 2014 or 2015) – these are not ‘your year’! Also, be wary of advice about prerequisites from past students or friends and relatives – things may have changed! Check your 2017 information carefully, and ask Ms Serpless if in doubt.

A commercially published version of the university and TAFE entrance requirements for 2017 is prepared by VTAC, and is correctly known as *VICTER 2017* and is available on the VTAC website [www.vtac.edu.au](http://www.vtac.edu.au).

*Notes:*
Can I study external VCE units?

VCE subjects

Yes! Provided that the subject is NOT offered at Mac.Rob.

Please keep in mind that if a subject is offered at Mac.Rob, you are expected to take that subject here at school.

Students gain credit for any VCE studies that are satisfactorily completed at an approved VCE Provider. Many of our students have already undertaken the study of a VCE Language Other Than English (LOTE) at weekend schools, and many will continue with that study next year. A small number of students have taken other VCE Units that are not offered at this school (e.g. Dance, Sociology).

Students who choose to include their external study within their program must study at an approved VCE provider.

Please write the details of this subject on your hard copy Course Selection form, along with your course for Mac.Rob.

These providers may be Victorian School of Languages (VSL) schools, independent LOTE schools or TAFE providers. If you think this may apply to you, please see the VCE Coordinator Ms Chandler, who coordinates external enrolments.

**Students will be required to attend MGHS in a full time capacity** (normally 6 studies - 12 units - in Year 11, and at least 4 studies - 8 units - in Year 12). For all students, an external study at evening or weekend school **will be an addition to their full course** here at MGHS.

**VET studies** may be studied at another campus, but as you are enrolled in these studies within the cluster of schools to which Mac.Rob belongs, these are considered to be **internal studies**.

**Plan your course for Year 12 carefully IF you have already completed two Unit 3/4 studies in Year 11. You must take 4 subjects in Year 12, and we will expect all four to be at Mac.Rob.**

**Studies at university level while in Year 12**

They enable students to add a first year university subject to their normal VCE (Year 12 only) course, and are available to exceptional students on the Principal’s recommendation.

Successful completion of a full year of the Extension Program can be used as a fifth or sixth study in the calculation of your ATAR. Depending on the mark you achieve, between three and five points will be added to your ATAR aggregate (the score that is used to calculate your final ATAR).

You will be required to take **Four Unit 3/4 studies at Mac.Rob during Year 12**, so a University study will be **additional** to that minimum course.

More information will be given to eligible students at the end of Year 11 (2015).
Other Sources of information on courses:

- The **Careers Room** is open at lunchtimes and most recesses. Any student who wishes to make a time for an individual appointment with the Careers Counsellor should not hesitate to do so.
- You should take advantage of any career/course- related opportunities that arise. You will be notified of these on the daily bulletin, the weekly newsletter and at your form assembly. There is a continuing program of **lunchtime speakers** which this year has included speakers from the defence forces, engineering, accountancy, architecture and planning.
- Make use of the **Careers pages on the Mac.Rob Intranet**. These contain many useful links. Read the Careers Newsletter that is emailed to every student each week.

**Notes:**
# VCE STUDIES OFFERED AT Mac.Rob in 2016

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<thead>
<tr>
<th>STUDY GROUP</th>
<th>STUDY</th>
<th>UNITS 3/4</th>
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<tr>
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<td>HEALTH SCIENCE</td>
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<td>Physical Education</td>
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<td>HUMANITIES &amp; ARTS</td>
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SECTION 2 - UNIT DESCRIPTIONS FOR VCE STUDIES

ACCOUNTING

Unit 3: Recording and reporting for a trading business (double entry)
Areas of study:

1. **Recording of financial data.**
Record financial data using a double entry system for a single activity sole trader, and explain selected aspects of this accounting system.

2. **Balance day adjustments and reporting and interpreting of accounting information.**
Record balance day adjustments and prepare and interpret accounting reports.

Unit 4: Control and analysis of business performance
Areas of study:

1. **Extension of recording and reporting**
Record financial data using double entry accounting and report accounting information using an accrual based system for a single activity sole trader, and explain selected aspects of this accounting system.

2. **Financial planning and decision making**
Prepare budgets and variance reports, evaluate the performance of a business using financial and non-financial information and suggest strategies to improve the profitability and liquidity of the business.

BIOLOGY

Biology is the study of life. It helps us to understand the world we live in, how our bodies work and how living things interact. From the study of the smallest molecules inside our cells, to the study of complex multicellular organisms in an ecosystem, the study of Biology helps us to understand the observable phenomenon of the world. Together with the other sciences, such as physics and chemistry, biology gives students an understanding of how new medicines are developed and new materials developed.

Throughout all four units of biology students are expected to develop key skills in scientific investigation by planning, carrying out, and reporting on practical investigations (students should be aware that this may include compulsory dissection work). They should also become adept at applying theory to new contexts and use these skills to analyse scientific information presented in the public domain. The study of biology prepares students for continuing studies in biosciences and medical sciences.

Unit 3: Signatures of Life
This unit focuses on the complex molecules that make up life, and how they interact to facilitate complex biochemical processes and responses in the whole organisms. This includes detailed study of the human immune system, how we recognise foreign cells in our system, and how we respond to the challenges our bodies face on a day-to-day basis. The application of this study of molecules to develop medicines targeted to interfere with a specific biochemical pathway gives students insight into the forefront of biomedical sciences.

Unit 4: Continuity and Change
Our genes make us who we are, controlling the formation of our bodies and our ability to respond to the natural world. In this unit students examine the molecule DNA in depth and how it is able to exert its effect upon every living thing. We also consider inheritance of characteristics and the importance of inheritance in relation to variation in the natural world, genetic disorders and evolution. By looking at the interaction of genetics and environment students consider the basis for change over time and the formation of new species. As our understanding of DNA develops so does our ability to manipulate it, student look at some of the practical implications of these technologies and the ethical issues it raises for our society.
CHEMISTRY

Chemistry is a key science in explaining the workings of our universe through an understanding of the properties and interaction of substances that make up matter. 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 four underpinning concepts of chemistry that ‘spiral’ through the entire Units 1-4 course, and which students will come back to repeatedly, are: Structure and bonding, Reactions, Energy, and Skills chemists’ use. In each Unit, students are also required to demonstrate skills at a progressively higher level as their complexity of knowledge increases. It is hoped that all Chemistry students become more informed, responsible decision-making citizens, able to use chemical knowledge and scientific arguments in their everyday lives and to evaluate and debate important contemporary issues such as the future of our environment and its management.

Unit 3: Chemical pathways

Students review and apply their understanding of stoichiometry to complete calculations related to volumetric and gravimetric practical activities. Instrumental analysis techniques of spectroscopy and chromatography are also studied as tools for investigating the identity of useful chemicals. By studying the structure and systematic naming of organic molecules, students design reaction pathways to prepare organic compounds, as well as medicines, from given starting materials.

Unit 4: Chemistry at work

Students explore how factors affecting rate and equilibrium are applied to achieve optimum reaction conditions in the industrial production of chemicals as well as investigating the energy changes associated with thermo-chemical reactions. Energy resources are compared with respect to environmental sustainability. Students further extend their understanding of stoichiometry with the application of Faraday’s laws to electrolysis reactions.

DRAMA

Drama involves a combination of research for devising (creating) performance work, learning about different theoretical approaches to performance and individual and group performances. The approach to drama at VCE level is that in order to improve on performance ability, it is necessary to ground all performance in dramatic theory. Students will have the opportunity to explore the development of theatre across time and cultures, devising and performing their own scripts and those of published playwrights.

Units 3 & 4

This is an exciting and rewarding course, which will suit anyone who is creative, analytical, loves performing and who works well in group situations.

Units 3 & 4 Drama focuses dually on performance making and performance analysis and evaluation. In terms of performance making, students will be required to devise, script, direct, and perform in dramatic presentations, both individually and in groups of varying sizes.

Unit 3 focuses specifically on Ensemble performance. It challenges students to work cohesively and effectively within group situations in order to produce a substantial original contemporary performance work based on the performance styles of various Drama practitioners. Students will then be asked to reflect on the success of the performance – both in terms of the creative elements and the group work. Students will also watch a number of professional performances, one of which is to be analysed in depth.
Unit 4 then explores solo performance – the single student working concurrently as actor, researcher, director and writer. Students will also be required to write about their performance and process.

All performance work in Units 3 & 4 demands an understanding of different performance practitioners and their work in the development of theatre. It is a great opportunity to explore theatre traditions across time and cultures, using these ideas to stimulate the performance making process. This is a richly rewarding course that promises to challenge and engage students interested in drama and performance.

Performance assessment involves the writing, directing and performing of an ensemble piece, and a performance exam for which you will devise and perform a solo piece. Written assessment includes personal analytical reflections on your performance work, an end of year written exam, and a review of a professional play in performance.

ECONOMICS

Unit 3: Economic Activity and Objectives
This Unit focuses on economic activity in Australia and the factors that affect the achievement of the objectives of the Australian economy.

Areas of Study:
1. Economic Activity in Australia
2. Economic objectives and performance in Australia

The meaning and measurement of the economic objectives of the Australian government including: economic growth, price stability, full employment, equity in the distribution of income and wealth between individuals, external stability, efficiency in resource allocation.

Unit 4: Economic Management
This Unit focuses on management of the Australian economy, which concentrates on budgetary, monetary and microeconomic policy used by the Australian Government.

Areas of Study:
1. The nature, operation and evaluation of macroeconomic policies
   Students will study:
   - Budgeting / fiscal policy
   - Monetary policy
   - The ways these policies affect economic problems
   - The effectiveness of these policies
   - The government's policy mix in the use of these tools
2. The nature, operation and evaluation of microeconomic reform policies
   This is a supply-side element and focuses on long-term efficiency and competitiveness. The following will be examined:
   - Rationale for microeconomic reform
   - Key policies
   - The ways these policies operate
   - The effectiveness of these policies
   - The role of these reforms in the policy mix
   - Examination of conflicts between microeconomic reform and macroeconomic policies

Assessment: school assessed coursework includes research essay, problem-solving exercises, data investigation and analysis, examination.
ENGLISH

All units of English have three areas in common:

- Reading and Responding
  In each of the Units 1 - 4, students will study a set text, with at least one each year being either a novel or form of prose. Students will discuss the characters, themes and ideas of each text; analyse how authors present certain views; examine how authors use structures, features and conventions to convey meaning; present their own responses to the texts both orally and in writing.

- Creating and Presenting
  In each of the Units 1 - 4, students will read or view a set text, using the ideas presented by these texts and other support material as catalysts for various types of writing. They will examine the structures, features and conventions of a range of texts created for different purposes; discuss how form, context, audience and purpose affect style and language; learn the metalanguage necessary to discuss structures, features and forms of their own writing; present their own writing in various forms based on the ideas presented by the texts.

- Using Language to Persuade
  In Units 1 - 4, students will examine various forms of persuasive texts in order to critically analyse the language used in the presentation of a point of view and to construct their own persuasive texts. They will learn to recognise and discuss the features of effective persuasive text; use appropriate metalanguage to identify and discuss persuasive techniques of both visual and print material; plan and construct a coherent and reasoned point of view both orally and in writing.

Unit 3

The focus of this Unit is on reading and responding both orally and in writing to a range of texts. Students analyse how the authors of texts create meaning and the different ways in which texts can be interpreted. They develop competence in creating written texts by exploring ideas suggested by their reading within the chosen Context, and the ability to explain choices they have made as authors. A list of prescribed Contexts will be published annually in the VCAA Bulletin.

Students must demonstrate the following Outcomes:
1. Be able to analyse, either orally or in writing, how a selected text constructs meaning, conveys ideas and values, and is open to a range of interpretations.
2. Be able to draw on ideas and/or arguments suggested by a chosen Context to create written texts for a specified audience and purpose; and to discuss and analyse in writing their decisions about form, purpose, language, audience and context.
3. Be able to analyse the use of language in texts that present a point of view on an issue currently debated in the Australian media, and to construct, orally or in writing, a sustained and reasoned point of view on the selected issue.

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. Students create written texts suggested by their reading within the chosen Context and explain creative choices they have made as authors in relation to form, purpose, language, audience and context.

Students must demonstrate the following Outcomes:
1. Be able to develop and justify a detailed interpretation of a selected text.
2. Be able to draw on ideas and/or arguments suggested by a chosen Context to create written texts for a specified audience and purpose; and to discuss and analyse in writing their decisions about form, purpose, language, audience and context.

The exam in November requires students to write on one text (Reading & Responding), one text (Creating & Presenting) and to analyse written and visual language (Using Language to Persuade).
This subject is available only at Units 3/4 level at Mac.Rob. Students must meet VCAA criteria which relate to the number of years of education in English and years of residence in an English-speaking country. English as an Additional Language follows the course outlined for English. The difference is that in Unit 3 Area of Study, Using language to Persuade, English as an Additional Language students are required to present a sustained and reasoned point of view on a selected issue in a written or oral form only. Whether it is written or oral is determined each year by the teachers of Year 12 English/English as an Additional Language. Language analysis, whilst not assessed in Unit 3, is assessed in the exam in Unit 4. Unit 4 has the same requirements as Unit 4 English. The assessment criteria for English as an Additional Language for all SACs take into account the fact that students are studying English as a second language and are accordingly modified by VCAA. Additional time may be given for the conduct of each of the SACs. The exam in November requires that students write on one text (Reading & Responding), one text (Creating & Presenting) and do a note-form summary and analysis of written and visual material (Using Language to Persuade).

ENGLISH LANGUAGE

This English study looks at the way we use English Language in our interactions with others to achieve particular effects. It examines the nature of language in different social contexts and teaches students to be more competent writers and speakers.

Units 3 & 4

Unit 3: Language Variation and Social Purpose
Unit 3 looks at English in the Australian social setting along the continuum of informal and formal language registers. Students look at the stylistic features of different registers, how contextual elements and purpose are reflected in our language choices across the subsystems, and how formal and informal language can be used to achieve a particular social purpose. Students examine how texts are shaped by situational and cultural contexts, and how language choices can indicate something about the nature of the relationship between participants. This Unit also focuses on how language, in the written and spoken modes, communicates information, ideas, attitudes, prejudices, and ideological stances. The following areas are studied:

- Informal language
- Formal language

Unit 4: Language Variation and Identity
Unit 4 focuses on the role that language plays in establishing, reflecting, and challenging different identities. A variety of texts are analysed to examine how different identities are constructed through language. Students explore how our sense of who we are is constantly evolving and responding to the situations in which we find ourselves, and is determined not only by how we see ourselves, but by how others see us. Students will also look at the range of Australian accents and explore how the age, ethnicity, social status, interests, occupations, and genders of groups and individuals in Australian society are reflected in their use of language. The following areas are studied:

- Language variation in Australian society
- Individual and group identities
ENVIROMENTAL SCIENCE

VCE Environmental Science is an interdisciplinary subject that applies scientific methodology to the study of environmental issues. This Unit 3/4 subject crosses the boundaries of the more traditional subjects including biology, chemistry, physics, mathematics, and the social sciences. The investigation of environmental issues from a variety of perspectives allows students to develop a broad understanding of the complexities of these issues and the exploration of appropriate management options.

The subject suits students who have an interest in current issues and enjoy applying scientific method to the investigation of environmental topics. Important skills required by students undertaking the subject include critical and analytical thinking; the application of simple statistical calculations to analyse data; synthesis of information from a variety of sources; and an ability to evaluate the costs and benefits of various management strategies. Learning tasks include: problem solving, decision-making, data analysis, factual recall, individual research, field-work and group work.

Students will require a scientific calculator for use during classes in addition to the end-of-year examination.

Unit 3:
Area of Study 1:
Explores the concept of energy and the consequences of its use by society; the principles of energy; different energy resources used by humans; the causes and impacts of the enhanced greenhouse effect; and the management strategies developed to address environmental issues arising from energy use.

Area of Study 2:
Explores the concept of biodiversity, its role in sustaining species and the ecological services, biological resources and social benefits they provide for humans. Investigates processes that threaten biodiversity, and the scientific principles applied in managing biodiversity; examines a selected endangered species and strategies implemented to secure its conservation.

Unit 4:
Area of Study 1:
Explores the relationship between pollution and the health of humans and the environment; the characteristics of selected pollutants; the evaluation of management options for reducing the risk of a pollutant affecting the health of the environment and humans.

Area of Study 2:
Explores the application of principles of ecologically sustainable development and methods used in environmental management; an in-depth study of a selected environmental science project.

Students can complete Unit 3 and 4 Environmental Science without completing Unit 1 and 2 (and we do not offer Unit 1 and 2 at Mac.Rob).

EXTENDED INVESTIGATION

Extended Investigation enables students to develop, refine and extend knowledge and skills in independent research and carry out an investigation that focuses on a rigorous research question. Students conduct a review of relevant literature and develop research project management knowledge and skills and ways of effectively presenting and communicating research findings.

Students are introduced to a broad range of research methods and explore their comparative suitability for the investigation of particular questions. Through this study, students develop their capacity to explore, justify and defend their research findings to a general audience in both oral and written forms.

The skills that students develop in this study are transferable to any higher education course or vocational education and training program.

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Unit 3:  
Area of study 1 - Designing a research question  
Students devise a research question that requires a detailed inquiry and that is of significance. They set the parameters for their research and examine a range of research methods.

Area of study 2 - Planning and commencing the investigation  
In this area of study students learn about the practical components of planning and undertaking research, methods of research and their application, establishing timelines and milestones and the general principles of research project management.

Area of study 3 - Critical thinking  
This area of study provides students with the opportunity to apply critical thinking skills to their research.

Unit 4:  
Area of study 1 - Presenting the final research report  
In this area of study students complete their Extended Investigation and write the final report (4000 words) that provides their response to the research question.

Area of study 2 - Defending research findings  
In this area of study students shape their research and findings into presentation format. They present their investigation to a non-specialist panel and respond to questions and challenges (15-20 minutes).

FOOD TECHNOLOGY  
This subject 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. Students consider the importance of environmental issues and sustainability practices in food production, as well as the important role of technology in food product development and the way food is produced, processed, packaged and marketed. Students use the design process, critical thinking and problem-solving skills to develop food products that suit specific situations or that meets the needs of individual consumers and their lifestyles.

Unit 1 : Food Safety and Properties of Food  
Explores how food is classified, the physical and chemical properties of food and the way these properties influence food preparation, presentation and storage. This knowledge is applied to use tools and equipment to safely and hygienically produce quality outcomes in food production. Ethical considerations in food selection such as fair trade and intensive farming practices are also considered.

Unit 2 : Planning and Preparation of Food  
Investigating the most appropriate tools and equipment to produce optimum results, including the latest developments in food technology. The design process is used to respond to challenges of preparing food safely and hygienically for a variety of contexts and consumers, taking into account nutritional considerations social and cultural influences and resource availability.

Unit 3 : Food Preparation, Processing and Food Controls  
Food preparation and processing techniques for key foods are investigated including primary and secondary food processing, components of key foods and cooking techniques. Food manufacturing systems are compared and their suitability to different products is justified. The roles and responsibilities of and the authorities that govern food laws and standards to maintain food safety in Australia including the production and labelling of manufactured products. Students apply a range of cooking, food preparation, processing and preservation techniques of key foods, while following food safety and hygiene requirements. Production plans are developed.
**Unit 4: Food product development and emerging trends**

Implementation of a design brief and evaluating the outcome of the product against the brief. This will cover food preparation, properties of food, safety and hygiene requirements. Product development will be examined with process development and marketing being analysed. Environmental issues in the food industry, plant breeding and genetic modification are also covered. An analysis of the driving forces related to food product development, new and emerging food products and the development and marketing of foods.


**GEOGRAPHY**

Geography is a structured way of exploring, analysing and understanding the world. Geographers are interested in key questions concerning places and geographic phenomena: What is it? Where is it? What are the effects of it being there? How is it changing over time, and how could, or should, it change in the future? How are places and phenomena connected and how do they differ? Students explore these phenomena through fieldwork and a wide range of secondary sources. This allows students to appreciate the complexity of the interconnections between environments, economies and cultures. Adopting a spatial perspective to phenomena regarding the physical world and the people who inhabit it is a unique aspect of Geography.

The subject suits students who have an interest in topical issues, people and places, and the diversity of cultures and environments on Earth. Important skills required by students undertaking the subject include the ability to interpret and present information in a variety of formats; analyse and describe data to identify trends and spatial patterns; discuss the factors which contribute to the development of phenomena; identify impacts and extrapolate and predict future outcomes; and evaluate how people respond to phenomena. The learning tasks students are required to complete include short and extended written responses and the presentation of data in a variety of formats.

**Please note**, students can study Units 3 and 4 without having completed Unit 1 and/or Unit 2.

**Unit 3: Changing the land**

People have changed the land to produce a diversity of different land uses across the landscape. In Area of Study 1 students look at one local example of where there has been such change, and through fieldwork investigate why it has changed, and how these changes have impacted on the environment as well as the social conditions and economic activity.

The world supports a diversity of natural land cover due to differences in the biophysical environment, such as climate and topography, as well as the influence of human activities. Land cover includes biomes such as forest, tundra and deserts. In Area of Study 2, students investigate changes to land cover through deforestation, desertification and glacier and ice melt over geological time scales, as well as in recent decades. Students investigate the causes and impacts of these changes on a global scale, in addition to local and national examples, and how they have been managed.

**Unit 4: Human population – trends and issues**

Students explore various aspects of the world’s population and their pattern of change over time and space, and how these changes are being managed in different parts of the world. They learn about various aspects of population dynamics, including birth rates, infant mortality and life expectancy, and how these aspects transition as countries develop economically. They investigate the major causes of changes in population dynamics since the Industrial Revolution and more recently, and the role of population movement in the changing pattern of population distribution. They examine some of the challenges resulting from major trends in the demographic profile of different places, contrasting places experiencing rapid population growth with those experiencing a decline in birthrates leading to an ageing population.
GLOBAL POLITICS

Global Politics is the study of the political, social, cultural and economic forces that shape interactions between state and non-state actors in the twenty-first century. It examines the interconnectedness of twenty-first century global citizens and the impact of globalisation on culture, language, human rights and the environment. It examines the nature and effectiveness of key global actors in the twenty-first century and global challenges, including human rights, people movements, development issues and weapons proliferation. It explores the nature of global crises such as environmental degradation, war and terrorism, and the effectiveness of responses and proposed solutions by key global actors.

Unit 3
Area of Study 1 – Global Actors

This area of study is designed to provide the foundations for examining the global political arena and the key actors within global politics, for example, states, intergovernmental organisations such as the United Nations, and non-governmental organisations such as Greenpeace. Students must investigate the following for each of the global actors: their aims and objectives, the role they perform, from where their power stems and the extent of their influence. This culminates in an examination of the extent to which each global actor is able to achieve its aims.

Area of Study 2 – Power in the Asia-Pacific

This area of study focuses on the use of power by one Asia-Pacific state, China, within the region. Students investigate the use of power and foreign policy instruments, and evaluate the effectiveness of these in achieving the state’s national interest.

Students are expected to know that a type of power can take many different forms; for example, military power can be exercised through the firing of missiles, increasing one’s military budget or the strategic placement of armaments. Students investigate the advantages and disadvantages of different forms of power and foreign policy instruments when comparing and contrasting the effectiveness of these different types of power and foreign policy instruments in achieving a state’s national interest.

Unit 4
Area of Study 1 – Ethical Issues and Debates

This area of study focuses on the analysis of a range of perspectives and the evaluation of the effectiveness of states, the United Nations and NGOs. Emphasis should be placed on the ability of institutions of global governance, for example, the United Nations or the International Criminal Court, to uphold international laws and indict actors who flout them.

The following are examples of the ethical issues that can be examined:

- **Human rights**: the rights of women in fundamentalist Islamic states, the rights of the child in developing states, the use of torture in combating terrorism, the ‘Responsibility to Protect’ in Libya and Darfur.
- **People movement**: The rights of refugees and asylum seekers versus the national security and economic interests of states.

Area of Study 2 – Global Crises

In this area of study students investigate the nature of our crisis-prone world. They focus on the identification of characteristics and evaluation of responses to two global crises. The two global crisis that we focus on will be based on student interest. Below are some examples of global crisis that may be examined:

- **Armed conflict**: civil war in Darfur, civil war in Chad, war in South Ossetia, war in Afghanistan.
- **Terrorism**: Islamist insurgency in Xinjiang, al-Qaeda, Iran as a terror sponsoring state, Tamil Tigers in Sri Lanka.
HEALTH AND HUMAN DEVELOPMENT

Unit 3: Australia’s health
Australians generally enjoy good health and are among the healthiest people in the world when compared to other developed countries. The health status of Australians can be measured in many ways, such as consideration of burden of disease, health adjusted life expectancy, disability adjusted life years (DALYs), life expectancy, under-five mortality rate, mortality and morbidity rates, incidence and prevalence of disease. Despite Australia’s good health status, there is still potential for improvements. The National Health Priority Areas (NHPAs) initiative provides a national approach that aims to improve health status in the areas that contribute most of the burden of disease in Australia. Regardless of how health is measured, health is not shared equally by all Australians. Different levels of health are experienced by different groups, which can be attributed to biological, behavioural and social determinants of health.

Funding for the Australian health system involves a combination of both government and non-government sources. The Australian Government makes a significant contribution to the health system through the funding of Medicare. Both government and non-government organisations play an important role in the implementation of a range of initiatives designed to promote health in Australia.

Unit 4: Global health and human development
This unit takes a global perspective on achieving sustainable improvements in health and human development. In the context of this unit human development is about creating an environment in which people can develop to their full potential and lead productive, creative lives in accord with their needs and interests. It is about expanding people’s choices and enhancing capabilities (the range of things people can be and do), having access to knowledge, health and a decent standard of living, and participating in the life of their community and decisions affecting their lives (adapted from the United Nations Development Programme, 1990). ‘Sustainability refers to meeting the needs of the present without compromising the ability of future generations to meet their own needs’ (United Nations, 1992).

The United Nations (UN) human development work is encapsulated in the Millennium Development Goals, where the world’s countries have agreed to a set of measurable goals and targets for combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women. A significant focus of the Millennium Development Goals is reducing the inequalities that result in human poverty and lead to inequalities in health status and human development.

The World Health Organization (WHO) is the directing and coordinating authority for international health within the United Nations. Both the WHO and the UN have a range of strategies aimed at reducing global burdens of disease and promoting human development through the achievement of the Millennium Development Goals. The Australian Agency for International Development (AusAID) manages the Australian Government’s overseas aid program. AusAID aims to reduce poverty in developing countries and improve human development, with a focus on assisting developing countries to achieve the Millennium Development Goals. Non-government organisations also play a role in promoting sustainable human development.
HISTORY: REVOLUTIONS

Units 3 and 4 only

Revolutions are the dramatic means by which societies can break with their past; they occur in societies which are no longer functioning and where there is support for social and political transformation. By their very nature, revolutions involve destruction and rebuilding, depression and liberation, turmoil, bloodshed and hope for a better future. They may also lead to civil war, terror, repression and may produce colourful and dynamic leaders.

History: Revolutions 3 & 4 examines two revolutions which had a far-reaching influence on subsequent world history. At Mac.Rob we study two Revolutions:

Unit 3: The French Revolution 1774 - 1795

Unit 4: The Russian Revolution 1894 - 1927

For each revolution there are two Areas of Study:

Area of Study One: Causes of revolution

• What were the significant causes of revolution?

• How did the actions of popular movements and particular individuals contribute to triggering a revolution?

• To what extent did social tensions and ideological conflicts contribute to the outbreak of revolution?

Area of Study Two: Creating a new society

• How did the consequences of revolution shape the new order?

• How did the new regime consolidate its power?

• How did the revolution affect the experiences of those who lived through it?

• To what extent was society changed and revolutionary ideas achieved?

IT APPLICATIONS

Unit 3

The focus of Unit 3 is the World Wide Web and how it supports the information needs of individuals, communities and organisations. In Area of Study 1, students investigate the design and technical underpinnings of different types of websites that support the varying needs of online communities. Students use web authoring software to create prototype websites for particular online Communities, taking into account both technical and non-technical constraints.

Unit 4

In this unit students focus on how ICT is used by organisations to solve ongoing information problems and on the strategies used to protect the integrity and security of data and information. In Area of Study 1 either a relational database management system (RDBMS) or spreadsheet software is selected and used to create solutions to information problems. In addition, students use web authoring or multimedia authoring software to produce onscreen user documentation. When creating solutions to ongoing information problems, students apply all stages of the problem-solving methodology.
IT Software Development

Unit 3

Unit 3 focuses on programming as a strategy for solving problems for specific users in a networked environment. Students develop knowledge and skills in the use of a programming language. The programming language selected will be studied for both Units 3 and 4. When programming in Unit 3, students are expected to have an overview of the problem-solving methodology and a detailed understanding of the stages of analysis, design and development.

Unit 4

This unit focuses on how the information needs of individuals, organisations and society are and can be met through the creation of purpose-designed solutions in a networked environment. Students continue to study the programming language selected in Unit 3. In this unit students are required to engage in the design, development and evaluation stages of the problem-solving methodology.

LEGAL STUDIES

Unit 3: Law Making
This unit explores the effectiveness of the Parliamentary system and the role that individuals and groups can play in bringing about legal change. A comparative study is made of the way Human Rights are protected in countries with and without a Constitution. The role played by the courts, especially the High Court, in law making is studied.

Unit 4: Resolution and Justice
This unit explores the effectiveness of methods of dispute resolution within the Australian legal system. Reforming the legal system to improve its operation is a major focus.

LITERATURE

Literature offers students an opportunity to read poetry, novels and plays with depth and sophistication. Students will learn about grand, philosophical, ideas, study the craft of writing and learn to critique literature.

Unit 3

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 contexts of literary works.

There are three Areas of study:

1. Adaptations and Transformations
2. Views, values and contexts
3. Considering alternative viewpoints

Outcomes:

Students should be able to:

1. Analyse how meaning changes when the form of a text changes
2. Analyse, interpret and evaluate the views and values of a text in terms of the ideas, social conventions and beliefs that the text appears to endorse, challenge or leave unquestioned
3. Evaluate views of a text and make comparisons with their own interpretation
Unit 4

This Unit focuses on students’ creative and critical responses to texts. Students consider the context of their responses to texts as well as the concerns, the style of the language and the point of view in their re-created work. In their responses, students develop an interpretation of the text and learn to synthesise the insights gained by their engagement with various aspects of a text into a cogent, substantiated response.

Outcomes:
Students should be able to:

1. Respond imaginatively to a text, and comment on the connections between the text and the response.
2. Analyse critically features of a text, relating them to an interpretation of the text as a whole.

LOTE

FRENCH, GERMAN, INDONESIAN, JAPANESE

Units 1 to 4 will be offered in each of these Languages Other Than English. Normally students will have completed the relevant LOTE study at Middle School level before undertaking VCE LOTE study.

The VCE LOTE courses are designed to enable the students to develop and expand the receptive, productive and interactive use of the language.

New language structures will be introduced in the context of topics or themes which enable the student to develop and practise all aspects of language ability. A large variety of texts will be presented and discussed, and students are expected to produce various pieces of written work in the language, using different text types and kinds of writing.

Students are encouraged to use the language in conversations and discussions, presentations of topics, situational role-plays, and oral performances.

The Assessment Tasks in Units 1 - 4 are based on the development of the principles of language learning, namely the development of listening, speaking, reading and writing competence.

Units 1 - 4 encourage a stronger focus on the cultural aspects and background studies. Unit 3 & 4 students have access to a native speaker conversation assistant.

The study of most Languages other than English in the VCE attracts a bonus of 5 points to Study Scores (at the level of the ATAR scaled mean).

MATHEMATICS

Unit 3/4 Mathematics Subjects

Some important guidelines in choosing Mathematics units:

- Students should select Mathematics subjects on the basis of interest, ability and tertiary course pre-requisites.
- Mac.Rob strongly discourages students taking both Specialist Mathematics and Further Mathematics within their VCE course. In preparing for tertiary courses and careers, it is much better to take a wider variety of subjects.
Units 3/4 Further Mathematics
- course covers topics including: Data Analysis, Financial Modelling, plus two modules selected from Matrices, Networks, Geometry and Measurement or Graphs and Relations.
- units 1/2 Further Mathematics is the recommend prerequisite for this subject and offers the best preparation.
- may be taken alone or with Units 3/4 Mathematical Methods.
- may be used for employment and general tertiary purposes- you should check the VTAC website.

Units 3/4 Mathematical Methods
- course covers topics including: Functions and Graphs, Algebra, Calculus, Probability and Statistics.
- units 1/2 Mathematical Methods is the prerequisite for this subject.
- may be taken alone or with either Units 3/4 Specialist Mathematics or Units 3/4 Further Mathematics.
- this subject is a prerequisite for many tertiary courses including Science, Business and Health Sciences.

Units 3/4 Specialist Mathematics
- course covers topics including: Functions and Graphs, Algebra, Calculus, Vectors, Mechanics, Probability and Statistics.
- units 1/2 Specialist Mathematics and Units 1/2 Mathematical Methods are prerequisites for this subject.
- must be taken alongside Units 3/4 Mathematics Methods.
- this subject is a prerequisite for many science and engineering tertiary courses – check the VTAC website.

MEDIA

VCE Media is a subject that enables students to explore how meaning is produced by the media, and how production and story elements in media texts work together to engage audiences. There is a focus on the way in which specific media texts embody and reflect the social values specific to contemporary society as well as an exploration of the way in which the values of the past influenced the construction of representations in texts from the other historical periods. Students also look at the implications of technology on the construction and consumption of media products.

In addition, there is a practical element to this subject, in which students take on the roles and responsibilities of media personnel and plan, design and produce their own media products such as a short film, a magazine or a multimedia production. Students use various technical equipment and software programs to make this product.

Unit 3: Narrative and Media Production Design
This Unit examines various production and story elements, with a focus on the significance of narrative organisation in fictional media texts. The practical element of this Unit consists of short exercises using technical equipment and the design plan for the media product – the script and storyboard for a short film or the design, layout and content of a magazine or website.
Unit 4: Media Process, influence and society’s values
In this Unit, students will develop practical skills through their production and realisation of a media product. There is also a theoretical part of this Unit in which students analyse the way a discourses, value or attitude impacts on the construction of representations in a range of media texts. Students also explore of the role and influence of the media in society.

Students taking this subject should be aware of the commitment it entails, which includes production sessions outside of normal school hours, as most filming/photographic shoots are likely to be undertaken outside of school.

It is also useful if students enter this Unit have an idea of the product they wish to make, plus a knowledge of how to use the equipment (e.g. digital camera, colour printer) and computer programs (e.g. Premiere, Photoshop, Flash, InDesign)

MUSIC INVESTIGATION

These units build on knowledge developed in Music Performance Units 1-4.

In this subject, students select a performance work from either the relevant instrument Prescribed list of solo works, or the Prescribed list of group works, both published annually by the VCAA. Students use this work as a starting point to design their own specific focus area of music: Investigation, Composition/Arrangement/Improvisation and Performance.

Focus Area examples: Virtuosity in improvised guitar solos 1965- to present day, performing

Baroque music on the modern flute, influence of baroque music on 20th Century Composition etc.

Unit 3:
In this unit students select a Focus Area to work on based on a work from the prescribed lists. Students select, rehearse and perform works that relate to the Focus Area and compile a folio of compositions/arrangements/improvisations that draws on the musical characteristics of their Focus Area. They develop knowledge of performance practices used by relevant leading musicians and develop skills in aural awareness, theory and analysis. They listen critically to recordings of performances and examine musical scores and use musical terminology to discuss characteristics of works.

School Assessed Coursework Unit 3 (contributes 25 percent to the final assessment)

Investigation: Demonstrate understanding of performance practices, context/s and influences on music works. 20%

Performance: Present a performance of music works that communicates understanding of the Focus Area 5%

Unit 4:
In this unit students continue exploring the Focus Area they commenced in Unit 3. Students prepare program notes for their end of year recital, prepare, rehearse and perform works that relate to the Focus Area and create a composition/arrangement/improvisation to perform that draws on the musical characteristics of their Focus Area. They apply advanced performance conventions and instrumental techniques and continue to develop skills in aural awareness, theory and analysis.

School Assessed Coursework Unit 4 (contributes 25 percent to the final assessment)

Composition/Improvisation/Arrange: Present a composition, improvisation or arrangement of a music work based on Focus Area and report on how the work is representative of their Focus Area 20%

Performance: Demonstrate artistic intent and understanding of the Focus Area in a cohesive and engaging performance of music works 5%
End of year Performance Examination (contributes 50 percent to the final assessment).

An external exam, a maximum of 25 mins solo performance or 25-40 minutes group performance, held in October/November.
Students will present a live performance of at least 4 contrasting works relating to the Focus Area. At least 1 work must come from the Prescribed List of Works (Solo or Group) published by the VCAA. Students will complete a Focus Statement outlining the chosen Focus Area and how each work relates to this.

MUSIC PERFORMANCE

Music Performance can include both solo and group performance but in Units 3 & 4 students are to select either solo or group performance as their focus.
Music Performance is designed to enable students to perform a program of selected works in both solo and group contexts, develop technical skills on their main instrument, skills in aural perception, music theory and analysis, and learn to compose and improvise music using music they learn and analyse. Students will complete parts of this course in their instrumental or vocal music lessons as well as in scheduled music performance classes.

Unit 3:
This Unit focuses on the preparation and presentation of solo and group works. Students develop instrumental/vocal techniques to develop their interpretation of works in a range of styles. If choosing to focus on solo performance they work with their instrumental teacher to select and prepare a program of solo works. The works selected for study must be selected from the Prescribed List of Notated Solo Works 2015 or the Prescribed List of Group Works 2015 (as appropriate to student focus area) published on the VCAA website. Aural comprehension and musicianship skills are developed and aural analysis of the expressive characteristics of an Australian work created after 1910 is undertaken.

Classes will cover the following components of the course:

1. Performance: performance conventions, strategies for rehearsal and practise, expressive elements, stylistic characteristics, roles of instruments in ensembles, approaches to interpretation by performers.
2. Performance technique: strategies to develop effective practice routines, instrumental techniques, rehearsal techniques and strategies, physical and psychological wellbeing for performers, technical considerations to sound production and reinforcement appropriate to styles.
3. Musicianship: singing, notating, naming and identifying: scales, intervals, chords, melody, rhythm, chord progressions and expressive elements of music

School Assessed Coursework Unit 3 (contributes 20 percent to the final assessment)

- Performance of a study or a work with a technical focus; demonstration of prepared technical work and exercises (5 - 10 mins); performance of unprepared material (sight reading - 1 - 2 mins) and report on how the technical work supports the student's development as an instrumentalist or vocalist and their preparation of their performance works. 10%
- Test on musicianship and aural skills. 10%

Unit 4:
This Unit focuses on the preparation and presentation of solo and group works. Students develop instrumental/ vocal techniques to develop their interpretation of works in a range of styles. With their instrumental teacher, students will select and prepare a program of solo works. The works selected for study must be selected from the Prescribed List of Notated Solo Works 2015 or the Prescribed List of Group Works 2015 (as appropriate to student focus area) published on the VCAA website. Aural comprehension and musicianship skills are developed and aural analysis of the expressive characteristics of an Australian work created after 1910 is undertaken.
Classes will cover the following components of the course:

1. **Performance**: performance conventions, strategies for rehearsal and practise, expressive elements, stylistic characteristics, roles of instruments in ensembles, approaches to interpretation by performers.

2. **Performance technique**: strategies to develop effective practice routines, instrumental techniques, rehearsal techniques and strategies, physical and psychological wellbeing for performers, technical considerations to sound production and reinforcement appropriate to styles.

3. **Musicianship**: singing, notating, naming and identifying: scales, intervals, chords, melody, rhythm, chord progressions and expressive elements of music in Australian works post 1910.

**School Assessed Coursework Unit 4 (contributes 10 percent to the final assessment)**

- Performance of a study or a work with a technical focus; demonstration of prepared technical work and exercises (5 - 10 mins); performance of unprepared material (sight reading - 1 - 2 mins) and report on how the technical work supports the student’s development as an instrumentalist or vocalist and their preparation of their performance works. 10%

**End of year Performance Examination (contributes 50 percent to the final assessment).**

An external exam, a maximum of 25 mins solo performance or 25-45 minutes group performance, held in October/November.

Students will present a program of solo or group works from the Prescribed List of Group works/ Notated Solo Works. For solo performance other than piano and guitar the use of a professional accompanist is recommended.

**End of year Aural and Written Examination (1½ hrs, November), contributes 20 per cent to the final assessment.**

The examination will cover units 3 and 4 Outcome 3 including aural and musicianship skills and aural analysis of Australian works post 1910.

**PHILOSOPHY**

Philosophy is concerned with issues that go to our most fundamental beliefs about ourselves, the world and our place in it. It deals with big and important questions in a way that is rigorous and disciplined. The course is designed to provide intellectual challenge for students and to develop their thinking/reasoning skills and their ability to communicate complex ideas.

Philosophy introduces the types of argument and analysis used by philosophers in response to fundamental questions that have intrigued humans for thousands of years. Students develop knowledge of key philosophical ideas and engage in philosophical debate about contemporary issues and contemporary life.

**Unit 3: The good life:**
The Unit has three areas of study and three outcomes.

**Area of Study 1** - **Critical analysis of philosophical views on the good life.**
This Area of Study focuses on the analysis and evaluation of the set texts. The historical and philosophical context of the set texts is a component of the key knowledge for Outcome 1.

**Area of Study 2** - **Critical comparison of philosophical views on the good life**
Students undertake a critical comparison of the similarities and differences between the arguments and viewpoints related to the good life in the set texts.
**Area of Study 3** - Analysis and critical comparison of philosophical and other ways of thinking about the good life.
The focus of this Area of Study is critical analysis and evaluation of viewpoints and arguments on the good life occurring in sources beyond the set texts. It includes using the set texts, outside sources, personal experience and contemporary debates to develop critical reflections on the good life. It also requires students to use the set texts to inform responses to debates on the good life occurring in sources beyond the set texts.

Unit 4: Mind, science and knowledge:
There are two Areas of Study and two Outcomes for the Unit.

**Area of Study 1 - The nature of mind and body**
The key knowledge and skills explicitly include criticism, historical and contemporary contexts, critical comparison of set texts and analysis and evaluation in the context of contemporary debates.

**Area of Study 2 - Knowledge, belief and science**
The key knowledge and skills explicitly include criticism, relevant historical and contemporary contexts, a study of inductive and deductive reasoning and analysis and evaluation of arguments concerning the nature of knowledge in the context of contemporary debate.

**PHYSICAL EDUCATION**

Unit 3: Physiological and participatory perspectives of physical activity.
This unit introduces students to an understanding of physical activity from a physiological perspective. The contribution of energy systems to performance in physical activity is explored, as well as the physiological effects of muscular fatigue and recovery. Students also examine the health benefits to be gained from participation in regular physical activity. They study and apply various models to identify strategies that will be effective in promoting participation in physical activity.

**Area of Study 1: Monitoring and promotion of physical activity.**
Students use subjective and objective methods to monitor their own and population groups' activity levels. They investigate physical activity promotion and evaluate strategies that promote adherence to the National Physical Activity Guidelines.

**Area of Study 2: Physiological requirements of physical activity.**
Students examine the way in which energy for activity is created through oxygen and food supplies. They also consider the physiological effects of muscular fatigue and recovery times.

Assessment: There are four written assessment tasks for Unit 3, one of which is based on a practical laboratory activity.

Unit 4: Enhancing physical performance.
This unit focuses on improvements in performance based on assessment of the specific energy and fitness needs of a particular sport or activity. Students consider the manner in which fitness can be improved by the application of training principles and methods, and participation in activity data collection, fitness testing and training. Students also identify dietary strategies that combine with appropriate recovery and risk management systems to enhance performance and recovery.

**Area of study 1: Planning, implementing and evaluating a training program**
This area of study focuses on the components of fitness and assessment of fitness from a physiological perspective. Students consider the manner in which fitness can be improved by the application of appropriate training principles and methods. Students conduct an activity analysis of an elite athlete to determine the fitness requirements of a selected sport. They participate in fitness testing and an individual training program and evaluate this from a theoretical perspective.
Area of Study 2: Strategies for enhancing sports performance.
Students examine a range of factors, both physical and psychological, and strategies that influence performance and limit performance in physical activities. Strategies such as appropriate training implementation, recovery regimes, dietary procedures and risk management are examined. While the focus of performance enhancing practices is on legal strategies, students consider the ethical considerations of both legal and illegal practices.

Assessment: There are four written assessment tasks for Unit 4, two of which are based on the students’ practical involvement in activity data collection, fitness testing and training.

PHYSICS

Physics is a human endeavour in which observations and ideas about the physical world are organised and explained. Students learn about the use of conceptual models to describe and explain observed physical phenomena. These models are developed within the contexts that are familiar to students and relevant to their experiences.

Unit 3

1. **Motion in one and two dimensions** – the Newtonian model will be used in the contexts of transport and safety on Earth, and motion in space. The students will use this model in one and two dimensions to describe and explain transport motion and related aspects of safety, and motion in space.

2. **Electronics and photonics** – devices and systems in domestic and industrial contexts will be examined so that students can compare and explain the operation of these devices and analyse their use in domestic and industrial systems.

3. **Detailed study: Investigating structures and materials** – the context of construction and design will be used so that students can compare and contrast the properties of construction materials, and model the effects on structures and materials of forces and loads.

Unit 4:

1. **Interactions of light and matter** – evidence about the interactions of light and matter in the contexts of models and explanations will be used. The students will then use wave and photon models to explain interactions of light and matter and the quantised energy levels of atoms.

2. **Electric power** – evidence and models of electrical, magnetic and electromagnetic effects will be used in order to apply and explain in the contexts of electric motors, alternators and transformers, and electric power transmission and distribution.

PSYCHOLOGY

Psychology is the scientific study of mental processes and behaviour in humans. It is designed to enable students to develop an understanding of biological, behavioural, cognitive and socio-cultural approaches that psychologists use. It also enables students to develop skills in research methods and to gain an appreciation of ethical considerations.

There are two assessment tasks for each unit and an end-of-year exam.

Units 3 and 4

The Course includes two semesters. The focus for each semester is listed below. Throughout all areas of study students will develop the skills of research investigation. This will involve learning about different methods and aspects of research and undertaking psychological experiments in class to discover how we carry out experiments in psychology. The ethical aspects of research are also studied.
Unit 3:
The role of the brain and biology in Psychology – the human nervous system, including the structure of the brain and how different areas of the brain are responsible for different behaviours. The study includes brain research methods and investigation of brain injury and its consequences.

States of Consciousness – what happens to us when we are awake and asleep; dreams, nightmares and sleep problems.

Memory – What is memory? Are there different types of memory? The course investigates how memories are processed, stored and retrieved as well as the theories of how and why we forget.

Unit 4:
Learning – We investigate the different types of learning (classical conditioning and Pavlov’s dogs; operant conditioning and Skinner’s rats and pigeons; observational learning and Bandura’s Bobo doll experiments).

Mental Health and Mental Illness – students will investigate the meaning of mental health and the systems of classification of mental conditions and disorders. There will be specific study of mental illnesses concerned with stress, anxiety, phobias, depression, addiction and schizophrenia.

THEATRE STUDIES

Unit 3: Production development
This unit focuses on an interpretation of a playscript through the four designated stages of production: planning, production development, production season, and production evaluation. Students specialise in two areas of stagecraft, working collaboratively in order to realise the production of a playscript. They analyse the influence of stagecraft on the shaping of the production. Students also attend a performance selected from the prescribed Theatre Studies Unit 3 Playlist published annually in the VCAA Bulletin, and analyse and evaluate the interpretation of the playscript in the performance.

Unit 4: Performance interpretation
In this unit students study a scene and associated monologue from the Theatre Studies Performance Examination (monologue list) published annually by the Victorian Curriculum and Assessment Authority, and develop a theatrical brief that includes the creation of a character by an actor, stagecraft possibilities, and appropriate research. Students interpret a monologue from within a specified scene through acting and other appropriate areas of stagecraft. Students attend a performance selected from the prescribed Theatre Studies Unit 4 Playlist published annually in the VCAA Bulletin and analyse and evaluate acting in the production.

VISUAL ARTS:

ART, STUDIO ARTS
Please note:
Studio Arts Units 3 and 4 are offered only if student numbers permit. Otherwise, students will study Art.

ART
VCE Art is designed to encourage artistic development through personal and independent exploration. It encourages students to explore ideas and to demonstrate effective working methods and a range of technical skills through a process of investigation and experimentation. Students may work in one or more of the following studio forms – photography, painting, printmaking, computer arts.

The study also aims to equip students with the ability to respond to art in an informed and articulate manner by applying the Analytical Frameworks – namely, the Formal, Personal, Cultural and Contemporary Frameworks as set out in the Art Study Design.

With the acquisition of technical and analytical skills, personal involvement and critical study, students should build an ability to interpret art and to discuss and debate the ideas and issues which it raises.
Unit 3:
Area of Study 1: Interpreting Art
Area of Study 2: Investigation and Interpretation through Artmaking

Unit 4:
Area of Study 1: Discussing and Debating Art
Area of Study 2: Realisation and Resolution

In each of these Units, students prepare a folio, final artworks and an essay or report. Units 3 and 4 also include a written end of year examination. Further detail of each of the tasks in the Units is available from the Art Department.

STUDIO ARTS
VCE Studio Arts allows students to specialize in a particular form of studio production (such as photography, painting, printmaking or computer arts) and establishes a framework for the establishment of effective art practices through an understanding and application of the design process. Students generate, explore and communicate ideas through specific studio forms and develop and use specialized skills in a range of media and techniques. The theoretical component of the study informs students’ practice through an investigation of how selected studio forms have developed an examination of artists’ working methods and a study of professional practices and art industry issues.

Unit 3: Studio Production and Professional Art Practices
Area of Study 1: Exploration Proposal
Area of Study 2: Design Process
Area of Study 3: Professional Art Practices and Styles

Unit 4: Studio Production and Art Industry Contexts
Area of Study 1: Folio of Artworks
Area of Study 2: Focus, Reflection and Evaluation
Area of Study 3: Art Industry Contexts

In Units 1 and 2, students prepare folios and written presentations.

In Unit 3, students prepare a work brief, a developmental folio and a written report; In Unit 4, a folio of finished art works and a written report form the unit’s assessment. Units 3 and 4 also have an end of year examination requiring written responses.

Please Note: This course is designed specifically for students who have advanced skills in their chosen medium and who wish to apply for practical arts courses.

VISUAL COMMUNICATION DESIGN
The study of Visual Communication Design can provide pathways to training and tertiary study in design and design-related studies, including graphic design, industrial and architectural design, landscape architecture, interior design, fashion design, costume, film and theatre production design and communication design.

These units provide the opportunity for students to focus on an aspect of design of their own choice.

Visual Communication uses text and image in either two- or three-dimensional form to communicate messages to audiences. Such information can be presented in imaginative and original ways while conforming to conventions or accepted rules. This study is intended to assist students in the understanding, use and interpretation of a range of visual communications. It involves a study of the vocabulary and grammar of visual communication, which includes an understanding of drawing conventions, design elements, and principles and the function of design in communication. The study also provides the opportunity to develop an informed, critical and discriminating approach to visual communications encountered in everyday life.
Unit 3: Design thinking and practice

In this unit students gain an understanding of the process designers employ to structure their thinking and communicate ideas with clients, target audiences, other designers and specialists. Through practical investigation and analysis of existing visual communications, students gain insight into how the selection of methods, media, materials and the application of design elements and design principles can create effective visual communications for specific audiences and purposes. They investigate and experiment with the use of manual and digital methods, media and materials to make informed decisions when selecting suitable approaches for the development of their own design ideas and concepts.

Students use their research and analysis of visual communication designers to support the development of their own work. They establish a brief and apply design thinking skills through the design process. They identify and describe a client, two distinctly different needs of that client, and the purpose, target audience, context and constraints relevant to each need.

Design from a variety of historical and contemporary design fields is considered by students to provide directions, themes or starting points for investigation and inspiration for their own work. Students use observational and visualisation drawings to generate a wide range of design ideas and apply design thinking strategies to organise and evaluate their ideas. The brief and investigation work underpin the developmental and refinement work undertaken in Unit 4.

Unit 4: Design development and presentation
The focus of this unit is the development of design concepts and two final presentations of visual communications to meet the requirements of the brief. This involves applying the design process twice to meet each of the stated needs. Having completed their brief and generated ideas in Unit 3, students continue the design process by developing and refining concepts for each need stated in the brief. They utilise a range of digital and manual two- and three-dimensional methods, media and materials. They investigate how the application of design elements and design principles creates different communication messages with their target audience. As students revisit stages to undertake further research or idea generation when developing and presenting their design solutions, they develop an understanding of the iterative nature of the design process. Ongoing reflection and evaluation of design solutions against the brief assists students with keeping their endeavours focused. Students refine and present two visual communications within the parameters of the brief. They reflect on the design process and the design decisions they took in the realisation of their ideas. They evaluate their visual communications and devise a pitch to communicate their design thinking and decision making to the client.