SUBJECT SELECTION

At the end of Term 2 in Year 9, students are expected to have made a preliminary choice on one unit 1&2 VCE subject they wish to study in Year 10. The same subject sequence will then be carried through to Year 11 where the student will compete the subject as Unit 3&4 and sit for the final exam. This subject will contribute to the student’s Year 12 studies and ATAR.

At the end of Term 2 in Year 10, students are expected to have made a preliminary choice on the VCE subjects they wish to study in Year 11 and 12. The final course and subject selection decision is made by the College depending on subject availability and ability of student in that subject.

The final subject selection decision is made by the College depending on subject availability and ability of student in that subject. Students will not be permitted to change subject selections after the first four weeks of the commencement of the Year 11 subject. Even then, both subject teachers and the VCE Co-ordinator must approve changes. Change of subject after the specified date is not allowed.

Students should first find out the pre-requisite requirements of the University courses of study for which they intend to seek admission before making subject selections for year 11. After satisfying prerequisite requirements, students should base their subject selection on two factors – ability and interest.

VOCATIONAL EDUCATION AND TRAINING (VET) SUBJECTS

In addition to normal VCE subjects the College will be offering a VCE VET program. VCE VET programs are VET qualifications approved by the VCAA following consultation with schools, industry and training providers.

VCE VET programs lead to nationally recognised qualifications, thereby offering students the opportunity to gain both the VCE and a VET qualification. All VCE VET programs provide credit towards the VCE.

SCHOOL-ASSESSED COURSEWORK

School-assessed coursework (SACs) are appropriate learning activities, which enable students to develop the knowledge and skills described in the set of outcomes for each unit.

The activities are tasks that a student would be expected to be doing in relation to what they are studying. These activities may include: practical work, written reports, essays, oral presentations, poster and multimedia presentations, assignments, folio of exercises, modelling activities, use of computer software and/or applications, tests, etc.

At year 11 all students, carry out School Assessed Coursework. At Al Siraat semester examinations are also considered to be SACs.

All SACs are graded and a piece of work that fails to meet the minimum acceptable standard will be reported as 'N' (Not satisfactory). If the work is not completed or submitted 'NA' (Not Assessed) will appear on the report.

Students will be provided with a list of all SACs for each study and the due dates at the start of each semester.
## USEFUL WEBSITES FOR STUDENTS

<table>
<thead>
<tr>
<th>Website</th>
<th>URL</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTAC</td>
<td><a href="http://www.vtac.edu.au">www.vtac.edu.au</a></td>
<td>The Victorian Tertiary Admissions Centre provides information related to university entrance such as ATAR scores, subject scaling report, subject prerequisites for university courses, electronic version of VTAC guide, and VICTER for Year 10 students.</td>
</tr>
<tr>
<td>VCAA</td>
<td><a href="http://www.vcaa.vic.edu.au">www.vcaa.vic.edu.au</a></td>
<td>The Victorian Curriculum Assessment Authority provides information related to the Study Designs and Assessment, along with electronic version of past VCE examinations and answers (excellent for revision).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students will also find the ‘Where to now?’ booklet to download. Where to Now? is a guide for students about the options available for the last two years of secondary school, with information about the VCE and VCE VET studies, the VCAL and school-based apprenticeships and traineeships.</td>
</tr>
<tr>
<td>Course Camel</td>
<td><a href="http://www.coursecamel.com">www.coursecamel.com</a></td>
<td>This website allows you to search and find information about TAFE and University courses and careers. The search gives you information on what courses need to be studied for a desired career and the ATAR and pre-requisite subjects that the Tertiary Institution requires you to study to be admitted into the course. Students should create a free login that allows them to save their search and access a wide range of information to suit their needs.</td>
</tr>
<tr>
<td>My Future</td>
<td><a href="http://www.myfuture.edu.au">www.myfuture.edu.au</a></td>
<td>Through this website find out how interests can lead to a job, discover what you're really good at, get help finding work experience and search careers and information about TAFE, Apprenticeships and University courses.</td>
</tr>
<tr>
<td>Elevate Education</td>
<td><a href="http://www.elevateeducation.com">www.elevateeducation.com</a></td>
<td>Useful website for students to download a range of study resources, practice papers and study tips providing additional support and information on Study Skills.</td>
</tr>
</tbody>
</table>
You are required to select a study program from the studies offered by the College. Before making your selection, make sure that you have carried out the necessary research. Refer to the VICTER for the entrance requirements for university and TAFE courses. The Guide to the VCE and the VTAC guide will provide you with information to help you plan your program. Feel free to ask subject teachers questions about specific studies.

The careers teacher and VCE Co-ordinator, and Head of Senior School will be available to help you make your selection. Make use of all the available resources to ensure that you make the right decisions for your future aspirations.

To help you with the decision-making process, ask yourself the following key questions:

• What are my aspirations after leaving school?
• What type of job am I interested in?
• What level of education do I need for that job?
• What courses am I interested in?
• Where are these courses offered?
• What are the prerequisites for these courses?
• Are there any special entry schemes for these courses?
• What was the ATAR score for last year?
• Are my career aspirations realistic in relation to my academic abilities?

When making your selection, you should remember to choose studies:

• Which you enjoy or have an interest in.
• In which you have achieved well.
• That you may need for future study or work.

The following examples provide an indication of subjects offered at Al Siraat that should be considered in relation to some course areas.

<table>
<thead>
<tr>
<th>COURSE AREAS</th>
<th>RELATED SUBJECTS TO CONSIDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts, Humanities, Social Sciences</td>
<td>LOTE, History, Economics</td>
</tr>
<tr>
<td>Administration, Business, Economics</td>
<td>Accounting, Business Management, Economics, Legal Studies, Computing</td>
</tr>
<tr>
<td>Engineering</td>
<td>Mathematics, Physics, Chemistry, Computing</td>
</tr>
<tr>
<td>Building, Planning</td>
<td>Visual Communication &amp; Design, Physics, Mathematics, Computing</td>
</tr>
<tr>
<td>Science</td>
<td>Biology, Physics, Chemistry, Psychology, Mathematics</td>
</tr>
</tbody>
</table>
It is recommended that when choosing a program of study you consider the different combinations and the pathways leading to them.

- In Year 10 students select one Unit 1&2 subject to study.
- In Yr. 11 students select 5 VCE subjects in addition to completing the Unit 3&4 subject selected in Yr. 10.
- In Year 12 students continue to study the 5 subjects selected in Year 11.
- At the end of Year 12 students have completed 6 subjects that contribute towards their ATAR.

Here are some examples to help you complete your selection.

### A. Maths/Science

<table>
<thead>
<tr>
<th>Year 10</th>
<th></th>
<th>Biology 1</th>
<th>Biology 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 11</td>
<td></td>
<td>Math Meth 1</td>
<td>Chem 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psych 1</td>
<td>Biology 3</td>
</tr>
<tr>
<td>Year 12</td>
<td></td>
<td>Math Meth 2</td>
<td>Chem 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psych 2</td>
<td>Biology 4</td>
</tr>
</tbody>
</table>

### B. Humanities / Arts

<table>
<thead>
<tr>
<th>Year 10</th>
<th></th>
<th>Legal Studies 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 11</td>
<td></td>
<td>Math Meth 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business Man 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comp 1</td>
</tr>
<tr>
<td>Year 12</td>
<td></td>
<td>Math Meth 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Business Man 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Comp 2</td>
</tr>
</tbody>
</table>

### C. Creative arts

<table>
<thead>
<tr>
<th>Year 10</th>
<th></th>
<th>VET Sport &amp; Recreation 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 11</td>
<td></td>
<td>Math VCD 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psych 1</td>
</tr>
<tr>
<td>Year 12</td>
<td></td>
<td>Math VCD 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Psych 2</td>
</tr>
</tbody>
</table>

Course and Career outcomes are extremely wide and varied and would include health sciences, engineering, building professions, defence forces, manufacturing.

Course and Career outcomes: business (excluding some Commerce areas), legal, teaching, media and many more.

Course and Career outcomes: visual arts, graphic design, architecture, media and journalism, multi-media.
PATHWAYS AND THE VCE

Consult the Careers Advisor about information on Pathways

YEAR 11

TAFE COURSES
CERTIFICATES
PREPARATORY COURSES

YEAR 12

VCE

PART-TIME
STUDY AT A
TAFE

UNIVERSITY
OR
PRIVATE COLLEGE
DIPLOMA OR
BACHELOR
DEGREE

TAKE
ASSOCIATE
DIPLOMAS
ADVANCED
CERTIFICATES
SUBJECTS THAT MAY BE OFFERED IN YEAR 10 2017

**Subject availability is subject to student numbers**

**VCE SUBJECTS**

- Accounting 1 & 2
- Biology 1 & 2
- Business Management 1 & 2
- Geography 1 & 2
- Health & Human Development 1 & 2
- Legal Studies 1 & 2
- Media 1 & 2
- Psychology 1 & 2

**VET SUBJECTS**

- Business 1 & 2
- Integrated Technologies 1 & 2
- Laboratory Skills 1 & 2
- Sports and Recreation 1 & 2

SUBJECTS THAT MAY BE OFFERED IN YEAR 11 2017

- **English 1&2 (compulsory)**

- Accounting 1 & 2
- Biology 1 & 2 or **Biology 3 & 4**
- Business Management 1 & 2
- Chemistry 1 & 2
- Geography 1 & 2
- General Maths 1 & 2 or **Further Maths 3&4**
- Health & Human Development 1 & 2
- Legal Studies 1 & 2
- Media 1 & 2
- Math Methods 1 & 2
- Physics 1 & 2
- Psychology 1 & 2
- Visual Communication & Design 1 & 2

**VET SUBJECTS**

- Business 1 & 2
- Integrated Technologies 1 & 2
- Laboratory Skills 1 & 2
- Sports and Recreation 1 & 2 or Sports and Recreation 3 & 4
PLEASE NOTE:
The following rules apply to Year 11 Subject Selection

1. All Year 11 must choose English + 5 other subjects

2. If you completed a Unit 1&2 subject in Year 10 you must choose that subject as the 3&4 sequence in Year 11
   For example:
   - Biology 1 & 2 becomes Biology 3 & 4
   - General Maths 1 & 2 becomes Further Maths 3 & 4
   - Sports and Rec. 1 & 2 becomes Sports and Rec 3 & 4

3. If you choose Math Methods 1 & 2 you must also Choose General maths 1 & 2

A CHART FOR YOUR YEAR 11 STUDY PROGRAM

Use the chart below to plan your study program of VCE subjects for year 11

<table>
<thead>
<tr>
<th>Year 11</th>
<th>English 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- At year 11, VCE students must select 6 subjects offered as Unit 1 & 2 (or five subjects at Unit 1&2 and one subject at Unit 3&4 if a VCE subject was commenced in Year 10)
- At year 12, VCE students may choose to drop one subject or they have completed one subject
- By the end of year 12, VCE students should have completed a total of 5 or 6 VCE subjects.
ENGLISH: UNIT 1 & 2

VCAA Code: EN011 & EN012

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

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

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

UNIT 1

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

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

School Assessed Coursework:
Outcome 1:
On completion of this unit the student should be able to produce analytical and creative responses to texts.

Outcome 2:
On completion of this unit the student should be able to analyse how argument and persuasive language can be used to position audiences, and create their own texts intended to position audiences.

Written Examination

UNIT 2

Areas of Study:
In this unit students compare the presentation of ideas, issues and themes in texts. They analyse arguments presented and the use of persuasive language in texts and create their own texts intended to position audiences.

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

School Assessed Coursework:
Outcome 1:
On completion of this unit the student should be able to compare the presentation of ideas, issues and themes in two texts.

Outcome 2:
On completion of this unit the student should be able to identify and analyse how argument and persuasive language are used in text/s that attempt to influence an audience, and create a text which presents a point of view.

Written Examination
ACCOUNTING

Unit 1: Establishing and operating a service business
Unit 2: Accounting for a trading business

Accounting is the process of recording, reporting, analysing and interpreting financial data and accounting information which is then communicated to internal and external users of this information. It plays an integral role in the successful operation and management of businesses.

VCE Accounting focuses on small business. Unit 1 begins with a small service business, allowing students to develop knowledge and skills in accounting without the complexities of accounting for trading businesses or large organisations. Units 2, 3 and 4 then focus on a single activity trading business where students build on and extend their accounting skills. Many students who study VCE Accounting will go on to further studies and careers in business and finance.

UNIT 1
Establishing an operating a service business.

This unit focuses on the establishment of a small business and the accounting and financial management of the business. Students are introduced to the processes of gathering and recording financial data and the reporting and analysing of accounting information by internal and external users. The cash basis of recording and reporting is used throughout this unit. Using single entry recording of financial data and analysis of accounting information, students examine the role of accounting in the decision-making process for a sole proprietor of a service business.

Areas of study
1. Going into business
2. Recording financial data and reporting accounting information

School Assessed Coursework

Outcome 1
To describe the resources required, and explain and discuss the knowledge and skills necessary, to set up a small business.

Outcome 2
Identify and record the financial data, and report and explain accounting information, for a sole proprietor of a service business.

Written Examination

UNIT 2: Accounting for a trading business

This unit extends the accounting process from a service business and focuses on accounting for a sole proprietor of a single activity trading business. Students use a single entry recording system for cash and credit transactions and the accrual method for determining profit. They analyse and evaluate the performance of the business using financial and non-financial information. Using these evaluations, students suggest strategies to the owner on how to improve the performance of the business. Students develop their understanding of the importance of ICT in the accounting process by using a commercial accounting software package to establish a set of accounts, record financial transactions and generate accounting reports.

Areas of study
1. Recording financial data and reporting accounting information
2. ICT in accounting
3. Evaluation of business performance

School Assessed Coursework

Outcome 1
On completion of this unit the student should be able to record financial data and report accounting information for a sole trader.

Outcome 2
On completion of this unit the student should be able to record financial data and report accounting information for a single activity sole trader using a commercial accounting software package, and discuss the use of ICT in the accounting process.

Outcome 3
On completion of this unit the student should be able to select and use financial and non-financial information to evaluate the performance of a business and discuss strategies that may improve business performance.

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

In VCE Biology students develop their inquiry, analytical and communication skills. They apply critical and creative thinking to analyse contemporary biology-related issues, and communicate their views from an informed position.

**UNIT 1**

How do living things stay alive?

In this unit students explain what is needed by an organism to stay alive. They are introduced to some of the challenges for organisms in sustaining life. Students examine the cell as the structural and functional unit of life and the requirements for sustaining cellular processes in terms of inputs and outputs. Types of adaptations that enhance the organism’s survival in a particular environment are analysed, and the role that homeostatic mechanisms play in maintaining the internal environment is studied. Students consider how the planet’s biodiversity is classified and investigate the factors that affect population growth. A student 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.

**Areas of Study:**
1. How do organisms function?
2. How do living systems sustain life?
3. Practical Investigation

**School Assessed Coursework:**

**Outcome 1:**
Investigate and explain how cellular structures and systems function to sustain life.

**Outcome 2:**
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.

**Outcome 3:**
Design and undertake an investigation related to the survival of an organism or species, and draw conclusions based on evidence from collected data.

**Written examination**

**UNIT 2**

How is continuity of life maintained?

In this unit students focus on asexual and sexual cell reproduction and the transmission of biological information from generation to generation. The role of stem cells in the differentiation, growth, repair and replacement of cells in humans is examined, and their potential use in medical therapies is considered. Students explain the inheritance of characteristics, analyse patterns of inheritance, interpret pedigree charts and predict outcomes of genetic crosses. They consider the role of genetic knowledge in decision-making about the inheritance of various genetic conditions. In this context the uses of genetic screening and its social and ethical issues are examined. A student investigation into, and communication of, an issue related to genetics and/or reproductive science is undertaken in Area of Study 3. The investigation draws on content from Area of Study 1 and/or Area of Study 2.

**Areas of Study:**
1. How does reproduction maintain the continuity of life?
2. How is inheritance explained?

**School Assessed Coursework:**

**Outcome 1:** Compare the advantages and disadvantages 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.

**Outcome 2:** Apply an understanding of genetics to describe patterns of inheritance, analyse pedigree charts, predict outcomes of genetic crosses and identify the implications of the uses of genetic screening and decision making related to inheritance.

**Written examination**
VCE Business Management examines the ways businesses manage resources to achieve objectives. The VCE Business Management study design follows the process from the first idea for a business concept, to planning and establishing a business, through to the day-to-day management of a business. It also considers changes that need to be made to ensure continued success of a business. Students develop an understanding of the complexity of the challenges facing decision makers in managing these resources. A range of management theories is considered and compared with management in practice through contemporary case studies drawn from the past four years. Students learn to propose and evaluate alternative strategies to contemporary challenges in establishing and maintaining a business.

UNIT 1

Areas of study:
1. The business idea
2. External Environment
3. Internal Environment

Outcome 1: On completion of this unit the student should be able to describe how and why business ideas are created and developed, and explain the methods by which a culture of business innovation and entrepreneurship may be fostered in a nation.

Outcome 2: On completion of this unit the student should be able to describe the external environment of a business and explain how the macro and operating factors within it may affect business planning.

Outcome 3: On completion of this unit the student should be able to describe the internal business environment and analyse how factors from within it may affect business planning.

Assessment:
Suitable tasks for assessment may be selected from the following:
- a case study analysis
- a business research report
- development of a business plan and/or feasibility study
- an interview and a report on contact with business
- a school-based, short-term business activity
- a business simulation exercise
- an essay
- a business survey and analysis
- a media analysis.

Written Examination

UNIT 2

Areas of study:
1. Legal requirements and financial considerations
2. Marketing a business.

Outcome 1: On completion of this unit the student should be able to explain the importance when establishing a business of complying with legal requirements and financial record keeping, and establishing effective policies and procedures.

Outcome 2: On completion of this unit the student should be able to explain the importance of establishing a customer base and a marketing presence to achieve the objectives of the business, analyse effective marketing and public relations strategies and apply these strategies to business-related case studies.

Outcome 3: On completion of this unit the student should be able to discuss the staffing needs for a business and evaluate the benefits and limitations of management strategies in this area from both an employer and an employee perspective.

Assessment:
Suitable tasks for assessment may be selected from the following:
- a case study analysis
- a business research report
- development of a business plan and/or feasibility study
- an interview and a report on contact with business
- a school-based, short-term business activity
- a business simulation exercise
- an essay
- a business survey and analysis
- a media analysis.

Written Examination
CHEMISTRY (VCE)
UNIT 1: How can the diversity of materials be explained?
UNIT 2: What makes water such a unique chemical?

VCE Chemistry enables students to examine a range of chemical, biochemical and geophysical phenomena through the exploration of the nature of chemicals and chemical processes. In undertaking this study, students apply chemical principles to explain and quantify the behaviour of matter, as well as undertake practical activities that involve the analysis and synthesis of a variety of materials. In VCE Chemistry students develop a range of inquiry skills involving practical experimentation and research specific to the knowledge of the discipline, analytical skills including critical and creative thinking, and communication skills. Students use scientific and cognitive skills and understanding to analyse contemporary chemistry-related issues, and communicate their views from an informed position.

UNIT 1
In this unit students investigate the chemical properties of a range of materials from metals and salts to polymers and nanomaterials. Using their knowledge of elements and atomic structure students explore and explain the relationships between properties, structure and bonding forces within and between particles that vary in size from the visible, through nanoparticles, to molecules and atoms. Students examine the modification of metals, assess the factors that affect the formation of ionic crystals and investigate a range of non-metallic substances from molecules to polymers and giant lattices and relate their structures to specific applications. Students are introduced to quantitative concepts in chemistry including the mole concept. They apply their knowledge to determine the relative masses of elements and the composition of substances. Throughout the unit students use chemistry terminology including symbols, formulas, chemical nomenclature and equations to represent and explain observations and data from experiments, and to discuss chemical phenomena. A research investigation is undertaken in Area of Study 3 related to one of ten options that draw upon and extend the content from Area of Study 1 and/or Area of Study 2.

Areas of Study:
1. How can knowledge of elements explain the properties of matter?
2. How can the versatility of non-metals be explained?
3. Research Investigation

School Assessed Coursework:
Outcome 1: relate the position of elements in the periodic table to their properties, investigate the structures and properties of metals and ionic compounds, and calculate molar quantities.
Outcome 2: 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.
Outcome 3: 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.

UNIT 2
In this unit students explore the physical and chemical properties of water, the reactions that occur in water and various methods of water analysis. Students examine the polar nature of a water molecule and the intermolecular forces between water molecules. They explore the relationship between these bonding forces and the physical and chemical properties of water. In this context students investigate solubility, concentration, pH and reactions in water including precipitation, acid-base and redox. Students are introduced to stoichiometry and to analytical techniques and instrumental procedures, and apply these to determine concentrations of different species in water samples, including chemical contaminants. They use chemistry terminology including symbols, units, formulas and equations to represent and explain observations and data from experiments, and to discuss chemical phenomena. Students explore the solvent properties of water in a variety of contexts and analyse selected issues associated with substances dissolved in water. A practical investigation into an aspect of water quality is undertaken in Area of Study 3. The investigation draws on content from Area of Study 1 and/or Area of Study 2.

Areas of Study:
1. How do substances interact with water?
2. How are substances in water measured and analysed?
3. Practical Investigation

School Assessed Coursework:
Outcome 1: Relate the properties of water to its structure and bonding, and explain the importance of the properties and reactions of water in selected contexts.
Outcome 2: Measure amounts of dissolved substances in water and analyse water samples for salts, organic compounds and acids and bases.
Outcome 3: Design and undertake a quantitative laboratory investigation related to water quality, and draw conclusions based on evidence from collected data.
VCE Geography enables students to examine natural and human phenomena, how and why they change, their interconnections and the patterns they form across the Earth’s surface. In doing so, they develop a better understanding of their own place and its spaces and those in other parts of the world. These spatial perspectives, when integrated with historical, economic, ecological and cultural perspectives, deepen understanding of places, environments and human interactions with these.

**UNIT 1**

In this unit students undertake an overview of hazards before investigating two contrasting types of hazards and the responses to them by people. Hazards include a wide range of situations including those within local areas, such as fast moving traffic or the likelihood of coastal erosion, to regional and global hazards such as drought and infectious disease. Students examine the processes involved with hazards and hazard events, including their causes and impacts, human responses to hazard events and interconnections between human activities and natural phenomena. This unit investigates how people have responded to specific types of hazards, including attempts to reduce vulnerability to, and the impact of, hazard events.

**Areas of study:**

1. Characteristics of hazards
2. Response to hazards and disasters

**School Assessed Coursework**

**Outcome 1:** Analyse, describe and explain the nature of hazards and impacts of hazard events at a range of scales.

**Outcome 2:** Analyse and explain the nature, purpose and effectiveness of a range of responses to selected hazards and disasters.

**Written Examination**

**UNIT 2**

In this unit students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed and continues to change and its impacts on people, places and environments. The study of tourism at local, regional and global scales emphasizes the interconnection within and between places. There is an interconnection between places tourists originate from and their destinations through the development of communication and transport infrastructure, employment, together with cultural preservation and acculturation. The growth of tourism at all scales requires careful management to ensure environmentally sustainable and economically viable tourism. Students undertake fieldwork in this unit and report on fieldwork using the structure provided.

**Areas of study:**

1. Characteristics of tourism
2. Impact of tourism

**Outcome 1:** analyse, describe and explain the nature of tourism at a range of scales.

**Outcome 2:** analyse and explain the impacts of tourism on people, places and environments and evaluate the effectiveness of strategies for managing tourism.

**Written Examination**
HEALTH AND HUMAN DEVELOPMENT

UNIT 1: The health and development of Australia's youth
UNIT: Individual human development and health issue

This subject provides students with the skills and knowledge to make informed decisions about their own health and to recognise the importance of health in society. In undertaking this study, they will be able to actively participate in making appropriate choices that allow for good health and be able to seek appropriate advice. Health and Human Development enables students to understand the current ideologies of health and human development in contemporary society. Students critically evaluate the health and development of the individual across the lifespan in the context of both Australia’s and global health and human development.

<table>
<thead>
<tr>
<th>UNIT 1 Areas of Study:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understanding youth health and human development</td>
</tr>
<tr>
<td>2. Youth issues</td>
</tr>
</tbody>
</table>

School Assessed Coursework:
Outcome 1
Describe the dimensions of, and the inter-relationships within and between, youth health and individual human development, and analyse the health status of Australia’s youth using appropriate measurements

Outcome 2
Describe and explain the factors that have an impact on the health and individual human development of Australia’s youth, 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.

Assessment:
Includes a combination of any of the following:
Case study analysis
Data analysis
Visual presentation, such as a concept/mind map, poster or presentation file
Multimedia presentation, using more than two data types (for example, text, still or moving images, sound or numeric) and involving some form of interaction such as hyperlinks
An oral presentation, such as a debate or podcast (audio or visual)
Blog
Test
Written response, such as a research assignment

UNIT 2
Areas of Study:
1. Prenatal health and individual development
2. Child health and individual development
3. Adult health and individual development

School Assessed Coursework:
Outcome 1
Describe and explain factors that affect the health and individual human development during the prenatal stage.

Outcome 2
Describe and explain factors that affect the health and individual human development of Australia’s children.

Outcome 3
Describe and explain the factors that affect the health and individual human development of Australia’s adults.

Assessment:
Includes a combination of any of the following:
Case study analysis
Data analysis
Visual presentation, such as a concept/mind map, poster or presentation file
Multimedia presentation, using more than two data types (for example, text, still or moving images, sound or numeric) and involving some form of interaction such as hyperlinks
An oral presentation, such as a debate or podcast (audio or visual)
Blog
Test
Written response e.g. a research assignment or written report

Written Examination
LEGAL STUDIES

UNIT 1: Criminal Law in Action

UNIT 2: Issues in Civil Law

VCE Legal Studies investigates the ways in which the law and the legal system relate to and serve individuals and the community. This knowledge is central to understanding the workings of contemporary Australian society.

Legal Studies examines the processes of law-making, dispute resolution and the administration of justice in Australia. Students develop an understanding of the impact of the legal system on the lives of citizens, and the implications of legal decisions and outcomes on Australian society. The study provides students with an appreciation of how individuals can be involved in decision-making within the legal system, encouraging civic engagement and helping them to become more informed and active citizens.

Students develop an understanding of the complexity of the law and the legal system and the challenges faced by our law-makers and dispute resolution bodies. They investigate the workings of the Australian legal system and undertake comparisons with international structures and procedures. Students are encouraged to question these systems and develop informed judgments about their effectiveness, as well as consider reforms to the law and the legal system.

Legal Studies also focuses on the development of skills. Students develop an ability to identify, collect and process information from a range of sources and engage in its interpretation and analysis. Skills for independent inquiry, critical thinking and legal reasoning to solve legal problems are also fostered. Students are required to apply legal reasoning and decision-making to contemporary cases and issues. They engage in analysis and evaluation of existing legal processes and form opinions about the operation of the legal system.

UNIT 1

Areas of study:
1. Law in society
2. Criminal Law
3. The criminal courtroom

School assessed coursework
Outcome 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.

Outcome 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.

Outcome 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.

Written Examination

UNIT 2

Areas of study:
1. Civil Law
2. The civil law in action
3. The law in focus
4. A question of rights

School assessed coursework
Outcome 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.

Outcome 2:
On completion of this unit the student should be able to explain and evaluate the processes for the resolution of civil disputes.

Outcome 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.

Outcome 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.

Written Examination
MATHEMATICS
UNIT 1: GENERAL MATHEMATICS
UNIT 2: GENERAL MATHEMATICS

Provide for a range of courses of study involving non-calculus based topics for a broad range of students and may be implemented in various ways to reflect student interests in, and applications of, mathematics. They incorporate topics that provide preparation for various combinations of studies at Units 3 and 4 and cover assumed knowledge and skills for those units.

UNIT 1 & 2

Areas of Study:

1. Algebra and structure
2. Arithmetic and number
3. Discrete mathematics
4. Geometry, measurement and trigonometry
5. Graphs of linear and non-linear relations
6. Statistics

School Assessed Coursework:

Outcome 1: Define and explain key concepts as specified in the selected content from the areas of study, and apply a range of related mathematical routines and procedures.

Outcome 2: 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.

Outcome 3: 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, modelling or investigative techniques or approaches.

Assessment:
Tasks for this unit are selected from the following:
• Assignments;
• Tests;
• Summary or review notes.
• Projects;
• Short written responses;
• Problem-solving tasks;
• Modelling tasks.

Written Examination
MATHEMATICS (VCE)
UNIT 1: MATHEMATICAL METHODS (CAS)
UNIT 2: MATHEMATICAL METHODS (CAS)

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

UNIT 1 & 2

Areas of study
1. Functions and Graphs
2. Algebra
3. Calculus
4. Probability and Statistics

School Assessed Coursework

Outcome 1: 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.

Outcome 2: Apply mathematical processes in non-routine contexts, including situations requiring problem-solving, modelling or investigative techniques or approaches, and analyse and discuss these applications of mathematics.

Outcome 3: 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.

Assessment:
Tasks for this unit are selected from the following:
Assignments;
Tests;
Summary or review notes.
Projects
Short written responses
Problem-solving tasks
Modelling tasks.

Written Examination
MEL

MEDIA

Unit 1: Representation and technologies of representation
Unit 2: Media production and the media industry

VCE Media provides students with the opportunity to analyse media products and concepts in an informed and critical way. Students consider media texts, technologies and processes from various perspectives, including an analysis of structure and features. They examine industry production and distribution context, audience reception and the media’s contribution to and impact on society. This aspect of the study is integrated with the individual and collaborative design and production of media representations and products.

VCE Media supports students to develop and refine their analytical, critical, creative thinking and expression. Students strengthen their communication skills and technical knowledge. This study is relevant for students who wish to pursue further formal study at tertiary level or in vocational education and training settings. The study provides knowledge and skills in creative thinking, planning, analysis, creative expression and communication valuable for participation in and contribution towards contemporary society.

UNIT 1

Areas of Study:
1. Representation
2. Technologies of representation
3. New Media

Outcome 1:
On completion of this unit the student should be able to describe the construction of specific media representations and explain how the process of representation reproduces the world differently from direct experience of it.

Outcome 2:
On completion of this unit the student should be able to construct media representations in two or more media forms and compare these representations that are produced by the application of different media technologies.

Outcome 3:
On completion of this unit the student should be able to discuss creative and cultural implications of new media technologies for the production and consumption of media products.

Assessment:
Assessment tasks for this unit are selected from the following:
- radio or audio sequences
- audio-visual or video sequences
- photographs
- print layouts
- multimedia sequences or presentations
- posters
- tests
- written responses
- oral reports.

UNIT 2

Areas of study:
1. Media production
2. Media industry production
3. Australian media organisations

Outcome 1:
On completion of this unit the student should be able to demonstrate specialist production skills within collaborative media productions, and explain and reflect on the media production process.

Outcome 2:
On completion of this unit the student should be able to discuss media industry issues and developments relating to the production stages of a media product, and describe specialist roles within the media industry.

Outcome 3:
On completion of this unit the student should be able to describe characteristics of Australian media organisations and discuss the social, cultural and industrial framework within which such organisations operate.

Assessment:
Assessment tasks for this unit are selected from the following:
- radio or audio sequences
- audio-visual or video sequences
- photographs
- print layouts
- multimedia sequences or presentations
- posters
- tests
- written responses
- oral reports.
PHYSICS

UNIT 1: Physics as a human endeavour
UNIT 2: The application of models to more complex phenomena

Physics is a theoretical and empirical science, which contributes to our understanding of the physical universe from the minute building blocks of matter to the unimaginably broad expanses of the Universe. This understanding has significance for the way we understand our place in the Universe.

This study is designed to enhance the scientific literacy of students in the specialised area of physics. Scientifically literate physics students demonstrate interest in and understanding of the Universe, engage in debates about the nature of evidence, theories and models, and appreciate the value of physics in society. They can describe and use theories and models, propose and investigate hypotheses, collect data, analyse the limitations of that data, draw conclusions, make recommendations, and select and use a range of appropriate technologies and mathematical techniques.

UNIT 1
This unit focuses on Physics as a human endeavour. Observations and ideas about the physical world related to aspects of energy are organised and explained through the use of conceptual models. The detailed studies provide opportunities to explore the application of energy concepts and models in nuclear energy, sustainable energy sources, flight, space and medical contexts.

Students undertake regular experimental work in the laboratory starting with simple observations and measurements. A quantitative investigation involving the collection and analysis of sufficient data points for at least one independent variable will be undertaken. The investigation should be at least partly student designed.

Areas of Study
1. Nuclear physics and radioactivity
2. Electricity
3. Detailed Study

School Assessed Coursework
Outcome 1: Be able to explain and model relevant physics ideas to describe the sources and uses of nuclear reactions and radioactivity and their effects on living things, the environment and in industry.

Outcome 2: To investigate and apply a basic DC circuit model to simple battery operated devices, car and household (AC) electrical systems, and describe the safe and effective use of electricity by individuals and the community.

UNIT 2
This unit focuses on the application of models to more complex phenomena – motion and light – developed within contexts that are familiar to students and relevant to their experiences. Newtonian ideas of motion are extended to include a range of movements and more abstract ideas, while the wave and particle models of light provide a framework for exploring light phenomena in real world applications. The detailed studies provide opportunities to explore motion and/or light in nuclear, sustainable energy, flight, space and medical contexts.

Areas of Study
1. Motion
2. Wave-like properties of light
3. Detailed Study

School Assessed Coursework
Outcome 1: To investigate, analyse and mathematically model motion of particles and bodies in terms of Aristotelian, Galilean and Newtonian theories.

Outcome 2: To describe and explain the wave model of light, compare it with the particle model of light and apply it to observed light phenomena in practical investigations
PSYCHOLOGY
UNIT 1: How are behaviour and mental processes shaped?
UNIT 2: How do external factors influence behaviour and mental processes?

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

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.

Areas of study:
1. How does the brain function?
2. What influences psychological development?
3. Student-directed research investigation.

School assessed coursework

Outcome 1: 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.
Outcome 2: 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.
Outcome 3: 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.

Written Examination

UNIT 2
How do external factors influence behaviour and mental processes?
A person’s thoughts, feelings and behaviours are influenced by a variety of biological, psychological and social factors. In this unit students investigate how perception of stimuli enables a person to interact with the world around them and how their perception of stimuli can be distorted. They evaluate the role social cognition plays in a person’s attitudes, perception of themselves and relationships with others. Students explore a variety of factors and contexts that can influence the behaviour of an individual and groups.

Areas of study:
1. What influences a person’s perception of the world?
2. How are people influenced to behave in particular ways?
3. Student-directed practical investigation

School assessed coursework

Outcome 1: Compare the sensations and perceptions of vision and taste, and analyse factors that may lead to the occurrence of perceptual distortions.
Outcome 2: identify factors that influence individuals to behave in specific ways, and analyse ways in which others can influence individuals to behave differently.
Outcome 3: Design and undertake a practical investigation related to external influences on behaviour, and draw conclusions based on evidence from collected data.

Written Examination
VISUAL COMMUNICATION AND DESIGN

UNIT 1: INTRODUCTION TO VISUAL COMMUNICATION
UNIT 2: APPLICATIONS OF VISUAL COMMUNICATION DESIGN

Unit 1 focuses on using visual language to communicate messages, ideas and concepts. Students practise their ability to draw what they observe and use visualisation-drawing methods to explore their own ideas and concepts. They will be introduced to the design process and develop and understanding of the diversity of visual communication. Unit 2 focuses on the application of visual communication design knowledge; design thinking skills and drawing methods to create visual communications to meet specific purposes in designated design fields. Students use presentation-drawing methods that incorporate the use of technical drawing conventions to communicate information and ideas associated with the environmental or industrial fields of design.

UNIT 1

Areas of Study:
1. Drawing as a means of communication
2. Design Elements and Design Principles
3. Visual communication design in context

School Assessed Coursework:

Outcome 1: Create drawings for different purposes using a range of drawing methods, media and materials.

Outcome 2: Select and apply design elements and design principles to create visual communications that satisfy stated purposes.

Outcome 3: Describe how visual communication has been influenced by past and contemporary practices, and by social and cultural factors.

Assessment tasks are selected from the following:
- Folio of observational, visualisation and presentation drawings created using manual and/or digital methods
- Final presentations created using manual and/or digital methods
- Written report of a case study
- Annotated visual report of a case study
- Oral report of a case study supported by written notes and/or visual materials

Visual and Written examination

UNIT 2

Areas of Study:
1. Technical drawing in context
2. Type and imagery
3. Applying the design process

School Assessed Coursework:

Outcome 1: Create presentation drawings that incorporate relevant technical drawing conventions and effectively communicate information and ideas for a selected design field.

Outcome 2: Manipulate type and images to create visual communications suitable for print and screen-based presentations, taking into account copyright.

Outcome 3: Engage in stages of the design process to create visual communications appropriate to a given brief.

Assessment tasks are selected from the following:
- Folio of typography and image ideas and concepts created using manual and digital methods
- Folio of technical drawings created using manual and/or digital methods
- Written and/or oral descriptions and analysis of historical and contemporary design examples
- Folio demonstrating the design process created using manual and/or digital methods
- Final presentations visual communications

Visual and Written examination
OTHER SUBJECT OPTIONS

LOTE: ARABIC
UNIT 1: THE ARABIC SPEAKING COMMUNITIES
UNIT 2: THE CHANGING WORLD

This study is offered to students who are fluent in Arabic and is designed to extend students knowledge and skills in understanding, speaking and writing in a range of contexts. Students develop the ability to understand and respond to the language demands of transactional and social contracts as well as providing an insight into the countries where Arabic is spoken.

In Units 1 and 2 students study a variety of texts related to the individual, Arab speaking communities and the changing world, grammar and kinds of writing.

UNIT 1

Areas of Study:
1. The individual (personal identity)
2. The individual (family and friends)
3. Arabic-speaking communities (culture and traditions)

School Assessed Coursework:

Outcome 1: Establish and maintain a spoken or written exchange related to personal areas of experience.
• Informal conversation or a reply to personal letter/email/fax.

Outcome 2: Listen to, read and obtain information from written and spoken texts.
• Read written texts to obtain information to complete notes, charts or tables in Arabic or English.

Outcome 3: Produce a personal response to a text focusing on real or imaginary experience.
• Oral presentation or review or article.

UNIT 2

Areas of Study:
1. The individual (education and aspiration)
2. The changing world (the natural world)
3. Arabic-speaking communities

School Assessed Coursework:

Outcome 1: Participate in a spoken or written exchange related to making arrangements and completing transactions.
• Writing: formal letter, fax or email.

Outcome 2: Listen to, read and extract and use information and ideas from spoken and written texts.
• Listen to spoken texts and reorganize information and ideas in a different text type and;
• Read written texts and reorganize information and ideas in a different text type.

Outcome 3: Give expression to real or imaginary experience in written or spoken form.
• Journal entry
• Personal account or short story
UNIT 1: THE INDIVIDUAL  
UNIT 2: THE CHANGING WORLD

This study is offered to students who are fluent in Turkish and is designed to extend students knowledge and skills in understanding, speaking and writing in a range of contexts. Students develop the ability to understand and respond to the language demands of transactional and social contracts as well as providing an insight into the countries where Turkish is spoken.

In Units 1 and 2 students study a variety of texts related to the Individual, the Turkish speaking community and the changing world.

<table>
<thead>
<tr>
<th>UNIT 1</th>
<th>UNIT 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Areas of Study:</strong></td>
<td><strong>Areas of Study:</strong></td>
</tr>
<tr>
<td>1. Personal identity</td>
<td>1. Reasons for migration</td>
</tr>
<tr>
<td>2. Leisure</td>
<td>2. Problems faced by Turkish migrants</td>
</tr>
<tr>
<td>4. Cultural diversity in Australia</td>
<td></td>
</tr>
</tbody>
</table>

**School Assessed Coursework:**

**Outcome 1:** Establish and maintain a spoken or written exchange related to personal areas of experience.
- Informal conversation or reply to a personal letter/e-mail

**Outcome 2:** Listen to spoken texts and obtain information to complete notes, charts or tables in Turkish.
- Read written texts to obtain information to complete notes, charts or tables in Turkish.

**Outcome 3:** Produce a personal response to a text focusing on real or imaginary experience.
- Oral presentation or review or article

**School Assessed Coursework:**

**Outcome 1:** Participate in a spoken or written exchange related to making arrangements and completing transactions.
- Formal letter or email

**Outcome 2:** Listen to, read and extract and use information and ideas from spoken and written texts.
- Read written texts and reorganize information and ideas in a different text type.

**Outcome 3:** Give expression to real or imaginary experience in written or spoken form.
- Journal entry or personal account or a short story
SPORT AND RECREATION
SIS30510 Certificate III in Sport and Recreation

Certificate III in Sport and Recreation provides students with the skills and knowledge to work in the Sport and Recreation industry in areas such as maintaining grounds and playing surfaces, providing customer service, housekeeping or administrative service. Possible job outcomes for a student with this qualification may include the provision of sport and recreation programs, grounds and facilities maintenance and working in the service industry in locations such as a fitness centre, outdoor sporting ground or aquatic centres.

Program 3 consists of a minimum of 15 units of competency:

- Units 1 and 2: six compulsory units plus a minimum of 30 hours of elective units
- Units 3 and 4: six compulsory units plus a minimum of 40 hours of elective units.

On successful completion of Program 3, students are eligible for:

- the award of SIS30510 Certificate III in Sport and Recreation
- recognition of up to two units at Units 1 and 2 level and a Units 3 and 4 sequence.

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.
- Certificate III in Sport and Recreation provides students with the skills and knowledge to work in the Sport and Recreation industry in areas such as maintaining grounds and playing surfaces, providing customer service, housekeeping or administrative service. Possible job outcomes for a student with this qualification may include the provision of sport and recreation programs, grounds and facilities maintenance and working in the service industry in locations such as a fitness centre, outdoor sporting ground or aquatic centres. Program 3 consists of a minimum of 15 units of competency:
- Units 1 and 2: six compulsory units plus a minimum of 30 hours of elective units
### Program 3: SIS30510 Certificate III in Sport and Recreation

Students undertaking Program 1: SIS30510 Certificate III in Sport and Recreation are eligible for up to two units at Units 1 and 2 level and a Units 3 and 4 sequence. Students will obtain VCE VET units following the completion of:

- 90 nominal hours for a Unit 1
- 90 nominal hours for a Unit 3
- 90 nominal hours for a Unit 2
- 90 nominal hours for a Unit 4.

#### Program 3: SIS30510 Certificate III in Sport and Recreation

<table>
<thead>
<tr>
<th>Code</th>
<th>Unit title</th>
<th>Nominal hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Units 1 and 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compulsory:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSBWOR301A</td>
<td>Organise personal work priorities and development</td>
<td>30</td>
</tr>
<tr>
<td>HLTFA301B</td>
<td>Apply first aid</td>
<td>18</td>
</tr>
<tr>
<td>ICAICT203A</td>
<td>Operate application software packages</td>
<td>60</td>
</tr>
<tr>
<td>SISXCCS201A</td>
<td>Provides customer service</td>
<td>15</td>
</tr>
<tr>
<td>SISXEMR201A</td>
<td>Respond to emergency situations</td>
<td>18</td>
</tr>
<tr>
<td>SISXCHS101A</td>
<td>Follow occupational health and safety policies</td>
<td>10</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>151</td>
</tr>
<tr>
<td><strong>Electives:</strong></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>These can be selected from either the Sport and Recreation Elective Bank (pages 10 and 11), the Outdoor Recreation Elective Bank (pages 7-9) or the Program 3 electives (page 13).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Minimum total for Units 1 and 2** 181

#### Units 3 and 4

<table>
<thead>
<tr>
<th>Code</th>
<th>Unit title</th>
<th>Nominal hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compulsory:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SISSSPT303A</td>
<td>Conduct basic warm-up and cool-down programs</td>
<td>30</td>
</tr>
<tr>
<td>SISXCAI303A</td>
<td>Plan and conduct sport and recreation sessions</td>
<td>20</td>
</tr>
<tr>
<td>SISXCAI306A</td>
<td>Facilitate groups</td>
<td>25</td>
</tr>
<tr>
<td>SISXIND403A</td>
<td>Analyse participation patterns</td>
<td><strong>20</strong></td>
</tr>
<tr>
<td>SISXFES301A</td>
<td>Provide public education on the use of resources</td>
<td>25</td>
</tr>
<tr>
<td>SISXSK301A</td>
<td>Undertake risk analysis of activities</td>
<td>20</td>
</tr>
<tr>
<td><strong>Subtotal for Units 3 and 4</strong></td>
<td></td>
<td>140</td>
</tr>
<tr>
<td><strong>Electives:</strong></td>
<td></td>
<td>40</td>
</tr>
</tbody>
</table>

Select a minimum of **40 hours** from the list of electives on page 13.

**Minimum total for Units 3 and 4** 180

**Total minimum for VCE VET program** 361
VET BUSINESS

BSB30115 Certificate III in Business

For the award of BSB30115 Certificate III in Business, students must achieve twelve units of competency:

one core unit of competency
eleven elective units of competency which must include:

- seven prescribed elective units
- four units from the prescribed elective units in the qualification or from any currently endorsed Training Package or accredited course at the same qualification level. One elective unit may be selected from a certificate II qualification and two electives maybe selected from certificate IV qualification.

Program structures
The VCE VET Business program offers two distinct programs:

Program 1: BSB20115 Certificate II in Business
Program 1 comprises 12 units of competency: one compulsory unit and a minimum of eleven elective units.
On successful completion of Program 1, students will be eligible for:

the award of BSB20115 Certificate II in Business
recognition of up to four VCE units at Units 1 and 2 level.

Program 2: BSB30115 Certificate III in Business
It is recommended that students complete Unit 1 and 2 with a minimum of 10 units of competency: one compulsory and nine electives from Program 1: BSB20115 Certificate II in Business prior to undertaking Program 2.
Program 2 comprises 5 compulsory units of competency selected from BSB30115 Certificate III in Business.
On successful completion of Program 2, students will be eligible for:
a statement of attainment towards the completion of BSB30115 Certificate III in Business
a VCE Units 3 and 4 sequence.
Program duration

The VCE VET Business program has a minimum nominal hour duration of:

<table>
<thead>
<tr>
<th>Program</th>
<th>Qualification</th>
<th>Nominal hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program 1</td>
<td>BSB20115 Certificate II in Business</td>
<td>240</td>
</tr>
<tr>
<td>Program 2</td>
<td>BSB30115 Certificate III in Business</td>
<td>195</td>
</tr>
</tbody>
</table>

This program may be completed over two or three years. To access a study score, the scored Units 3 and 4 sequence in Program 2 must be delivered and assessed in a single enrolment year.

The nominal hours attached to each unit of competency are calculated by the Victorian Department of Education and Training, as an indicator of the training time required to become competent. They are a guide only, and the actual duration of the training is affected by students’ readiness to be assessed for the particular unit of competency.

It is important to note that the allocation of nominal hours for each unit of competency is intended to cover both delivery and assessment.

Sequence

A range of delivery sequences is possible; however, the selected delivery schedule should take into account the linkages between the units of competency.

Study score

From 2016, a study score will be available for the revised VCE VET Business program. To be eligible for a study score students must:

- satisfactorily achieve all the units of competency designated as the scored Units 3 and 4 sequence
- be assessed in accordance with the tools and procedures specified in the VCE VET Assessment Guide.
- Undertake a written examination in the end-of-year examination period based on the compulsory units of competency in the Units 3 and 4 sequence.

VCE VET Unit entitlement

Program 1: BSB20115 Certificate II in Business

Students who complete BSB20115 Certificate II in Business will be eligible for up to four units of credit towards their VCE at Units 1 and 2 level.

Program 2: BSB30115 Certificate III in Business

Students who complete the scored compulsory units in Program 2 drawn from BSB30115 Certificate III in Business will be eligible for a Units 3 and 4 sequence.

Students who are able to undertake further training to complete BSB30115 Certificate III in Business may be eligible for further credit at Units 3 and 4 level.
## VCE VET Business program structure

### Program 1: BSB20115 Certificate II in Business

<table>
<thead>
<tr>
<th>Code</th>
<th>Unit of competency</th>
<th>Nominal hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Units 1 and 2</strong></td>
<td></td>
</tr>
<tr>
<td>Core unit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSBWHS201</td>
<td>Contribute to health and safety of self and others</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Elective units:</strong> Select eleven electives from Elective Bank 1 and 2. Electives may be chosen entirely from Elective Bank 1 or a combination of both Elective banks. A maximum of two units may be chosen from Elective Bank 2.</td>
<td></td>
</tr>
<tr>
<td>Elective Bank 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSBCUS201</td>
<td>Deliver a service to customers</td>
<td>40</td>
</tr>
<tr>
<td>BSBCM201</td>
<td>Communicate in the workplace</td>
<td>40</td>
</tr>
<tr>
<td>BSBIND201*</td>
<td>Work effectively in a business environment</td>
<td>30</td>
</tr>
<tr>
<td>BSBINM201</td>
<td>Process and maintain workplace information</td>
<td>30</td>
</tr>
<tr>
<td>BSBINM202</td>
<td>Handle mail</td>
<td>15</td>
</tr>
<tr>
<td>BSBINN201</td>
<td>Contribute to workplace innovation</td>
<td>35</td>
</tr>
<tr>
<td>BSBITU201</td>
<td>Produce simple word processed documents</td>
<td>60</td>
</tr>
<tr>
<td>BSBITU202</td>
<td>Create and use spreadsheets</td>
<td>30</td>
</tr>
<tr>
<td>BSBITU203</td>
<td>Communicate electronically</td>
<td>20</td>
</tr>
<tr>
<td>BSBSMB201*</td>
<td>Identify suitability for micro business</td>
<td>20</td>
</tr>
<tr>
<td>BSBUS201</td>
<td>Participate in environmentally sustainable work practices</td>
<td>20</td>
</tr>
<tr>
<td>BSBWOR202</td>
<td>Organise and complete daily work activities</td>
<td>20</td>
</tr>
<tr>
<td>BSBWOR203</td>
<td>Work effectively with others</td>
<td>15</td>
</tr>
<tr>
<td>BSBWOR204*</td>
<td>Use business technology</td>
<td>20</td>
</tr>
<tr>
<td>FNSACC301</td>
<td>Process financial transactions and extract interim reports</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td><strong>Elective Bank 2:</strong> A maximum of two units may be chosen</td>
<td></td>
</tr>
<tr>
<td>FNSFLT203*</td>
<td>Develop knowledge of debt and consumer credit</td>
<td>25</td>
</tr>
<tr>
<td>FSKWTG09</td>
<td>Write routine workplace texts</td>
<td>15</td>
</tr>
<tr>
<td>FSKWTG06</td>
<td>Write simple workplace information</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal:</strong> 220-390</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total number of hours providing credit at Units 1 and 2 level:</strong> 240-410</td>
<td></td>
</tr>
</tbody>
</table>

*BSBSS00055 Small Business Operations Preparatory Skill Set (4 units)*
VCE VET INTEGRATED TECHNOLOGIES

Aims
The VCE VET Integrated Technologies program aims to provide learners with the skills required by industries which broadly encompass electro-technology, telecommunications, information technology and security systems to:

• continue vocational training
• gain work and further training through an apprenticeship, traineeship or cadetship
• find employment in fields such as electronics, entertainment, wireless and security systems, technical support for computer and electronic equipment, energy generation, sustainability, computer-controlled applications, electronic equipment, computer network support or communications applications.

Completion requirements for the qualification
The following information needs to be read in conjunction with the course accreditation document for 22289VIC Certificate II in Integrated Technologies.

22289VIC Certificate II in Integrated Technologies
For the award of 22289VIC Certificate II in Integrated Technologies, students must achieve:

six core units of competency
elective units of competency equivalent to a minimum of 170 nominal hours from at least two streams as outlined in the qualification.

Program structures
The VCE VET Integrated Technologies program consists of:

Units 1 and 2: three compulsory units of competency and a minimum of 110 nominal hours of electives.
Units 3 and 4: three compulsory units of competency and a minimum of 60 nominal hours of electives.

Program duration
The VCE VET Integrated Technologies program has a minimum nominal duration of 400 hours: This program may be completed over two or three years. To access a study score, the scored Units 3 and 4 sequence must be delivered and assessed in a single enrolment year.
The nominal hours attached to each unit of competency are calculated by the Victorian Department of Education and Training, as an indicator of the training time required to become competent. They are a guide only, and the actual duration of the training is affected by students’ readiness to be assessed for the particular unit of competency.
It is important to note that the allocation of nominal hours for each unit of competency is intended to cover both delivery and assessment.

Sequence
A range of delivery sequences is possible; however, the selected delivery schedule should take into account the linkages between the units of competency.
Study score
From 2017, a study score will be available for the revised VCE VET Integrated Technologies program. To be eligible for a study score students must:

- satisfactorily achieve all the units of competency designated as the scored Units 3 and 4 sequence
- be assessed in accordance with the tools and procedures specified in the *VCE VET Assessment Guide*.

VCE VET Unit entitlement
On successful completion of the VCE VET Integrated Technologies program students are eligible for:

- the award of 22289VIC Certificate II in Integrated Technologies
- recognition of up to two units at Units 1 and 2 level and a Units 3 and 4 sequence.

<table>
<thead>
<tr>
<th>Code</th>
<th>Unit of competency</th>
<th>Nominal hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Units 1 and 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compulsory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEM13014A</td>
<td>Apply principles of occupational health and safety in the work environment</td>
<td>10</td>
</tr>
<tr>
<td>VU21701 *</td>
<td>Carry out an integrated technology project</td>
<td>60</td>
</tr>
<tr>
<td>VU21702</td>
<td>Prepare for working in the integrated technology sector</td>
<td>20</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select electives equivalent to a minimum of 110 nominal hours from the Elective Bank on pages 5 and 6 of this extract.</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td><strong>Total for Units 1 and 2:</strong></td>
<td></td>
<td><strong>200</strong></td>
</tr>
<tr>
<td><strong>Units 3 and 4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compulsory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VU21703 *</td>
<td>Work in an integrated technology environment</td>
<td>40</td>
</tr>
<tr>
<td>VU21704 *</td>
<td>Use electrotechnology skills in integrated technology work</td>
<td>80</td>
</tr>
<tr>
<td>VU21705 *</td>
<td>Use software applications in integrated technology work</td>
<td>20</td>
</tr>
<tr>
<td><strong>Elective units</strong></td>
<td></td>
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<tr>
<td>Select electives equivalent to a minimum of 60 nominal hours from the Elective Bank on pages 5 and 6 of this extract.</td>
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<tr>
<td><strong>Total Units 3 and 4:</strong></td>
<td></td>
<td><strong>200</strong></td>
</tr>
<tr>
<td><strong>Total for Units 1 to 4:</strong></td>
<td></td>
<td><strong>400</strong></td>
</tr>
<tr>
<td><strong>Pre-requisites</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VCE VET Laboratory Skills program

The VCE VET Laboratory Skills program will provide students with the necessary knowledge and skills associated with the day-to-day operation of a laboratory and associated technical tasks such as sampling and testing.

AIMS
The VCE VET Laboratory Skills program aims to:

• provide participants with the knowledge and skills to achieve competencies that will enable them to perform a specific range of laboratory operations across a range of industries
• enable participants to gain a recognised credential and to make a more informed choice of vocation or career path.

PROGRAM STRUCTURE
The VCE VET Laboratory Skills program offers MSL30109 Certificate III in Laboratory Skills and consists of thirteen units of competence:

• Units 1 and 2: six compulsory units, two elective units
• Units 3 and 4: four compulsory units, one elective unit.

On successful completion of the VCE VET Laboratory Skills program students are eligible for:

• the award of MSL30109 Certificate III in Laboratory Skills
• recognition of up to four units at the Units 1 and 2 level and a Units 3 and 4 sequence.

PROGRAM DURATION
The VCE VET Laboratory Skills program has a total nominal hour duration of between 480 and 600 hours which may be completed over two or three years. The Units 3 and 4 sequence must be delivered and assessed in a one-year period.

The nominal hours attached to each unit of competence are calculated by Skills Victoria as an indicator of the training time required to become competent. They are a guide only, and the actual duration of the training is affected by students’ readiness to be assessed for the particular unit of competence.

It is important to note that the allocation of nominal hours for each unit of competence is intended to cover both delivery and assessment.
### MSL30109 CERTIFICATE III IN LABORATORY SKILLS

<table>
<thead>
<tr>
<th>Unit code</th>
<th>Unit of competence title</th>
<th>Nominal hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Units 1 and 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compulsory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSAENV272A</td>
<td>Participate in environmentally sustainable work practices</td>
<td>30</td>
</tr>
<tr>
<td>MSL913001A</td>
<td>Communicate with other people</td>
<td>40</td>
</tr>
<tr>
<td>MSL913002A</td>
<td>Plan and conduct laboratory/field work</td>
<td>40</td>
</tr>
<tr>
<td>MSL922001A</td>
<td>Record and present data</td>
<td>40</td>
</tr>
<tr>
<td>MSL943002A</td>
<td>Participate in laboratory/field workplace safety</td>
<td>40</td>
</tr>
<tr>
<td>MSL933001A</td>
<td>Maintain the laboratory fit for purpose</td>
<td>30</td>
</tr>
<tr>
<td><strong>Electives: Select two electives:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSL953001A</td>
<td>Receive and prepare samples for testing</td>
<td>30</td>
</tr>
<tr>
<td>MSL973001A</td>
<td>Perform basic tests</td>
<td>60</td>
</tr>
<tr>
<td>MSL973005A</td>
<td>Assist with fieldwork</td>
<td>40</td>
</tr>
<tr>
<td>MSL954001A</td>
<td>Obtain representative samples in accordance with sampling plan</td>
<td>40</td>
</tr>
<tr>
<td>MSL974004A</td>
<td>Perform food tests</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total for Units 1 and 2</strong></td>
<td></td>
<td>290–380</td>
</tr>
<tr>
<td><strong>Units 3 and 4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compulsory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSL933002A</td>
<td>Contribute to the achievement of quality objectives</td>
<td>30</td>
</tr>
<tr>
<td>MSL973004A</td>
<td>Perform aseptic techniques</td>
<td>40</td>
</tr>
<tr>
<td>MSL973002A</td>
<td>Prepare working solutions</td>
<td>50</td>
</tr>
<tr>
<td>MSL973007A</td>
<td>Perform microscopic examination</td>
<td>40</td>
</tr>
<tr>
<td><strong>Electives: Select one elective:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSL973003A</td>
<td>Prepare culture media</td>
<td>30</td>
</tr>
<tr>
<td>MSL914001A</td>
<td>Prepare practical science classes and demonstrations</td>
<td>60</td>
</tr>
<tr>
<td>MSL974008A</td>
<td>Capture and manage scientific images</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total for Units 3 and 4</strong></td>
<td></td>
<td>190–220</td>
</tr>
<tr>
<td><strong>Total for VCE Units 1 to 4</strong></td>
<td></td>
<td>480–600</td>
</tr>
</tbody>
</table>
UNIT 3: HOW DO CELLS MAINTAIN LIFE?

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

In this unit students investigate the workings of the cell from several perspectives. They explore the importance of the insolubility of the plasma membrane in water and its differential permeability to specific solutes in defining the cell, its internal spaces and the control of the movement of molecules and ions in and out of such spaces. Students consider base pairing specificity, the binding of enzymes and substrates, the response of receptors to signaling molecules and reactions between antigens and antibodies to highlight the importance of molecular interactions based on the complementary nature of specific molecules.

Students study the synthesis, structure and function of nucleic acids and proteins as key molecules in cellular processes. They explore the chemistry of cells by examining the nature of biochemical pathways, their components and energy transformations. Cells communicate with each other using a variety of signaling molecules. Students consider the types of signals, the transduction of information within the cell and cellular responses. At this molecular level students study the human immune system and the interactions between its components to provide immunity to a specific antigen.

A student practical investigation related to cellular processes and/or biological change and continuity over time is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4, and is assessed in Unit 4, Outcome 3. The findings of the investigation are presented in a scientific poster format.

AREA OF STUDY 1
HOW DO CELLULAR PROCESSES WORK?

In this area of study students focus on the cell as a complex chemical system. They examine the chemical nature of the plasma membrane to compare how hydrophilic and hydrophobic substances move across it. They model the formation of DNA and proteins from their respective subunits. The expression of the information encoded in a sequence of DNA to form a protein is explored and the nature of the genetic code outlined. Students use the lac operon to explain prokaryotic gene regulation in terms of the ‘switching on’ and ‘switching off’ of genes.

Students learn why the chemistry of the cell usually takes place at relatively low, and within a narrow range of, temperatures. They examine how reactions, including photosynthesis and cellular respiration, are made up of many steps that are controlled by enzymes and assisted by coenzymes. Students explain the mode of action of enzymes and the role of coenzymes in the reactions of the cell and investigate the factors that affect the rate of cellular reactions.
Outcome 1
On completion of this unit the student should be able to explain the dynamic nature of the cell in terms of key cellular processes including regulation, photosynthesis and cellular respiration, and analyse factors that affect the rate of biochemical reactions.

Area of Study 2
How do cells communicate?

In this area of study students focus on how cells receive specific signals that elicit a particular response. Students apply the stimulus-response model to the cell in terms of the types of signals, the position of receptors, and the transduction of the information across the cell to an effector that then initiates a response. Students examine unique molecules called antigens and how they elicit an immune response, the nature of immunity and the role of vaccinations in providing immunity. They explain how malfunctions in signaling pathways cause various disorders in the human population and how new technologies assist in managing such disorders.

Outcome 2
On completion of this unit the student should be able to apply a stimulus-response model to explain how cells communicate with each other, outline human responses to invading pathogens, distinguish between the different ways that immunity may be acquired, and explain how malfunctions of the immune system cause disease.

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

In this unit students consider the continual change and challenges to which life on Earth has been subjected. They investigate the relatedness between species and the impact of various change events on a population’s gene pool. The accumulation of changes over time is considered as a mechanism for biological evolution by natural selection that leads to the rise of new species. Students examine change in life forms using evidence from palaeontology, biogeography, developmental biology and structural morphology. They explore how technological developments in the fields of comparative genomics, molecular homology and bioinformatics have resulted in evidence of change through measurements of relatedness between species. Students examine the structural and cognitive trends in the human fossil record and the interrelationships between human biological and cultural evolution. The biological consequences, and social and ethical implications, of manipulating the DNA molecule and applying biotechnologies is explored for both the individual and the species. A student practical investigation related to cellular processes and/or biological change and continuity over time is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4, and is assessed in Unit 4, Outcome 3. The findings of the investigation are presented in a scientific poster.

Area of Study 1
How are species related?
In this area of study students focus on changes to genetic material over time and the evidence for biological evolution. They investigate how changes to genetic material lead to new species through the process of natural selection as a mechanism for evolution. Students examine how evolutionary biology and the relatedness of species is based upon the accumulation of evidence. They learn how interpretations of evidence can change in the light of new evidence as a result of technological advances, particularly in molecular biology. The human fossil record is explored to identify the major biological and cognitive trends that have led to a complex interrelationship between biology and culture.
Outcome 1
On completion of this unit the student should be able to analyse evidence for evolutionary change, explain how relatedness between species is determined, and elaborate on the consequences of biological change in human evolution.

Area of Study 2

How do humans impact on biological processes?
In this area of study students examine the impact of human culture and technological applications on biological processes. They apply their knowledge of the structure and function of the DNA molecule to examine how molecular tools and techniques can be used to manipulate the molecule for a particular purpose. Students describe gene technologies used to address human issues and consider their social and ethical implications. Scientific knowledge can both challenge and be challenged by society. Students examine biological challenges that illustrate how the reception of scientific knowledge is influenced by social, economic and cultural factors.

Outcome 2
On completion of this unit the student should be able to describe how tools and techniques can be used to manipulate DNA, explain how biological knowledge is applied to biotechnical applications, and analyse the interrelationship between scientific knowledge and its applications in society.

Area of Study 3 Practical investigation

A student-designed or adapted investigation related to cellular processes and/or biological change and continuity over time is undertaken in either Unit 3 or Unit 4, or across both Units 3 and 4. The investigation is to relate to knowledge and skills developed across Units 3 and 4 and may be undertaken by the student through laboratory work and/or fieldwork. The investigation requires the student to identify an aim, develop a question, formulate a hypothesis and plan a course of action to answer the question and that complies with safety and ethical guidelines. The student then undertakes an experiment that involves the collection of primary qualitative and/or quantitative data, analyses and evaluates the data, identified limitations of data and methods, links experimental results to science ideas, reaches a conclusion in response to the question and suggests further investigations which may be undertaken. The results of the investigation are presented in a scientific poster format

Outcome 3
On the completion of this unit the student should be able to design and undertake an investigation related to cellular processes and/or biological change and continuity over time, and present methodologies, findings and conclusions in a scientific poster.

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

Unit 3 School-assessed Coursework: 16 per cent
Unit 4 School-assessed Coursework: 24 per cent
End-of-year examination: 60 per cent.
Further Mathematics consists of two areas of study, a compulsory Core area of study to be completed in Unit 3 and an Applications area of study to be completed in Unit 4. The Core comprises ‘Data analysis’ and ‘Recursion and financial modelling’. The Applications comprises two modules to be completed in their entirety, from a selection of four possible modules: ‘Matrices’, ‘Networks and decision mathematics’, ‘Geometry and measurement’ and ‘Graphs and relations’. ‘Data analysis’ comprises 40 per cent of the content to be covered, ‘Recursion and financial modelling’ comprises 20 per cent of the content to be covered, and each selected module comprises 20 per cent of the content to be covered. Assumed knowledge and skills for the Core are contained in the General Mathematics Units 1 and 2 topics: ‘Computation and practical arithmetic’, ‘Investigating and comparing data distributions’, ‘Investigating relationships between two numerical variables’, ‘Linear graphs and modelling’, ‘Linear relations and equations’, and ‘Number patterns and recursion’. For each module there are related topics in General Mathematics Units 1 and 2.

Area of Study 1 – Unit 3

Core

- Data analysis
- Recursion and financial modelling

Outcomes – Unit 3

For this unit the student is required to demonstrate achievement of three outcomes. As a set these outcomes encompass Area of Study 1.

Outcome 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.

Outcome 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.

Outcome 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.

Area of Study 2 – Unit 4 Applications

Students must complete two modules selected from the following four modules.

- Matrices
- Networks and decision mathematics
• Geometry and measurement
• Graphs and relations

Outcomes – Unit 4

For this unit the student is required to demonstrate achievement of three outcomes. As a set these outcomes encompass the two selected modules from Area of Study 2, Applications.

**Outcome 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.

**Outcome 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.

**Outcome 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.

**Assessment**

Unit 3 School-assessed Coursework: 20 per cent
Unit 4 School-assessed Coursework: 14 per cent
Units 3 and 4 Examination 1: 33 per cent
Units 3 and 4 Examination 2: 33 per cent
MY YEAR 10 SUBJECT SELECTION SHEET

Once you have read through all the information and decided what subject you would like to study as a Year 11 2017 subject fill in the following page.

Return to Mrs Maha by: FRIDAY 17TH JUNE 2016

STUDENT NAME: _______________________________ DATE: ______________

1. WHAT ARE 3 COURSES YOU WOULD LIKE TO STUDY AFTER YEAR 12?

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>LIST THE UNIVERSITIES / TAFE WHERE COURSE IS OFFERED</th>
<th>ATAR NEEDED TO GET INTO COURSE FOR EACH INSTITUTION</th>
<th>PRE-REQUISITE SUBJECTS / EXTRA REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. WHAT IS THE SUBJECT THAT YOU WOULD LIKE TO STUDY IN YEAR 10 2017

* Tick 1 subject only as your 1st preference

VCE SUBJECTS
- Accounting 1 & 2
- Biology 1 & 2
- Business Management 1 & 2
- Geography 1& 2
- Health & Human Development
- Legal Studies 1 & 2
- Media 1 & 2
- Psychology 1 & 2

VET SUBJECTS
- Business 1 & 2
- Interactive Digital Media 1 & 2
- Laboratory Skills 1 & 2
- Sports and Recreation 1&2

* Tick 1 subject only as your 2nd preference

- Psychology 1 & 2

VCE SUBJECTS
- Accounting 1 & 2
- Biology 1 & 2
- Business Management 1 & 2
- Geography 1& 2
- Health & Human Development
- Legal Studies 1 & 2
- Media 1 & 2

VET SUBJECTS
- Business 1 & 2
- Interactive Digital Media 1 & 2
- Laboratory Skills 1 & 2
- Sports and Recreation 1&2
MY YEAR 11 SUBJECT SELECTION SHEET

Once you have read through all the information and decided what subjects you would like to study in Year 11 2017 fill in the following page.

Return to Mrs Maha by: FRIDAY 17TH JUNE 2016

STUDENT NAME: __________________________ DATE: ______________

1. WHAT ARE 3 COURSES YOU WOULD LIKE TO STUDY AFTER YEAR 12?

<table>
<thead>
<tr>
<th>COURSE TITLE</th>
<th>LIST THE UNIVERSITIES / TAFE WHERE COURSE IS OFFERED</th>
<th>ATAR NEEDED TO GET INTO COURSE FOR EACH INSTITUTION</th>
<th>PRE-REQUISITE SUBJECTS / EXTRA REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. WHAT ARE THE SUBJECTS THAT YOU NEED TO STUDY IN YEAR 11 2017

* Tick 5 subjects only OTHER THAN ENGLISH

VCE SUBJECTS

- [ ] ENGLISH
  - Accounting 1 & 2
  - Biology 1 & 2
  - BIOLOGY 3&4
  - Business Management 1 & 2
  - FURTHER MATHS 3 & 4
  - General Maths 1 & 2
  - Geography 1& 2
  - Health & Human Development
  - Legal Studies 1 & 2
  - Math Methods 1&2
  - Media 1 & 2
  - Physics 1 & 2
  - Psychology 1 & 2
  - Visual Communication & Design 1&2

VET SUBJECTS

- [ ] Business 1 & 2
- [ ] Interactive Digital Media 1 & 2
- [ ] Laboratory Skills 1 & 2
- [ ] Sports and Recreation 1&2
- [ ] Sports and Recreation 3&4
Al Siraat College