

# Year 10

**Subject Selection Guide** 

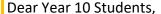
**HSC 2026** 

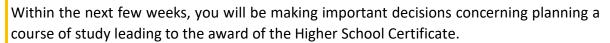
### Contents

Principal's Message	3
Higher School Certificate (HSC) – General Information	4
Year 11 and HSC Courses	4
Unit Value	4
Types of Courses	4
Board Developed Courses	4
Board Endorsed Courses.	4
Vocational Education and Training (eVET) Courses	4
Patterns of Study	4
Extension Courses	5
Assessment and Reporting	5
Subject Selection Guidelines	6
Australian Tertiary Admission Rank (ATAR)	6
Tertiary selection and the ATAR	6
What is the ATAR?	7
To be eligible for an ATAR:	7
What courses can be included in the ATAR?	7
Who gets an ATAR?	7
Other Important Aspects of the ATAR	7
Subjects Offered at Girraween High	8
HSC Board Developed Courses Offered at Girraween High School	8
Board Developed Courses	9
Ancient History	10
Biology	11
Business Studies	12
Chemistry	13
Drama	14
Economics	15
Engineering Studies	16
English - Advanced	17
English – Extensions 1 and 2	18
English – Standard	19
Food Technology	20
French Beginners	21
French Continuers	22
Geography	23

	Health & Movement Science	24
	History - Extension	25
	Investigating Science	26
	Japanese Beginners	27
	Japanese Continuers	28
	Japanese Extension	29
	Legal Studies	30
	Mathematics - Advanced	31
	Mathematics – Extension 1	32
	Mathematics – Extension 2	33
	Modern History	34
	Music 1	35
	Music 2	36
	Music Extension	37
	Physics	38
	Science - Extension	39
	Society and Culture	40
	Software Engineering	41
	Studies of Religion I	42
	Visual Arts	43
В	oard Endorsed Courses	44
	Sport, Lifestyle and Recreation	45

### Principal's Message





In selecting subjects and courses in a pattern of study which suits your own needs, interests and abilities, it is important that you make a fully informed choice.

The timetable and process for subject selection is designed to give you the best chance to make appropriate and realistic choices based on a thorough knowledge and understanding of possible options. Take the time to study the possible choices and be open to considering any advice offered to you.

Wise selection of subjects will contribute to personal satisfaction, academic success, and development of valuable skills that will help you work towards career opportunities. To succeed or achieve any real satisfaction in the senior school, you must also accept responsibility for your own learning. You must actively decide that you want to study for the HSC at Girraween High School and commit yourself to doing your best. Motivation is a very important factor in achieving success.

The rules governing the Higher School Certificate and the courses being offered are outlined in this booklet. It is important for you to make a fully informed choice, as to meet mandatory hours changes to your subjects will not generally be permitted in Year 11 after Week 4 of Term 1.

When making choices for courses of study, you should consider:

- your abilities and interests
- your career intentions
- tertiary entrance requirements and further education needs
- do not choose based upon what you believe are the likely effects of scaling. You can get a high ATAR from just about any subject choice.

Read the booklet in detail. Talk with your teachers, the Year Adviser, the Careers Adviser, the Head Teachers, and your parents.

Courses can only run if enough students choose the subject. Your preference order is very important for the school to prioritise and help meet the choices of the majority of students.

Mr L. Crangle

Principal

### Higher School Certificate (HSC) – General Information

### Year 11 and HSC Courses

The Board of Studies syllabuses are structured in two stages:

- 1. The Year 11 Course which must be satisfactorily completed before a student is eligible to commence study for the Higher School Certificate. In normal circumstances, Year 11 Courses are done in Terms 1, 2 and 3 of Year 11.
- 2. The HSC Course upon which students are assessed and examined for the award of the Higher School Certificate. In normal circumstances, HSC Courses are done in Term 4 of Year 11 and Terms 1, 2 and 3 of Year 12.

### **Unit Value**

- All courses for the Higher School Certificate have a unit value. Subjects have a value of 1 unit or 2 units.
- Most courses are 2 unit.
- Each unit involves class time of approximately 2 hours per week (60 hours per year).
- For the Higher School Certificate, each unit is worth 50 marks. Hence a 2 unit Course is worth 100 marks.

### **Types of Courses**

### **Board Developed Courses.**

These are:

- state-wide courses developed by the NSW Education Standards Authority (NESA)
- internally assessed throughout each course, and examined externally at the end of the HSC course
- used to calculate the Australian Tertiary Admission Rank (ATAR) for each student.

### **Board Endorsed Courses.**

There are two main kinds of Board Endorsed Courses:

- Content Endorsed Courses (CEC) have syllabuses endorsed by the NESA to cater for areas of special interest not covered in the Board Developed Courses
- Courses designed by schools to meet their own students' special needs and have been approved by the NESA.

**Board Endorsed Courses** count towards the Higher School Certificate, but are not examined externally and **do not count towards the ATAR.** 

### **Vocational Education and Training (eVET) Courses.**

- eVET courses are studied at a TAFE college. They are dual-accredited courses they count towards the HSC and students also gain credit for TAFE-related modules.
- There are three kinds of eVET courses:
  - 1. Framework Courses are 2 Unit courses studied in Years 11 and 12. The marks for these courses can be counted towards the ATAR if the student elects to sit for the HSC exam at the end of the course.
  - 2. Non-framework Courses are 2 Unit courses studied in Years 11 and 12 and do not count towards the ATAR.
  - The Board Developed Accounting Course counts towards ATAR.

### Patterns of Study

Candidates for the Higher School Certificate must undertake a program of study consisting of:

- at least 12 units of Year 11 Courses
- at least 10 units of HSC Courses.

Both the Year 11 and HSC patterns of study MUST include:

- at least six units of Board Developed courses
- at least two units of a Board Developed Course in English
- at least three courses which are of two unit value (or greater)
- at least four subjects.

### **Extension Courses**

Extension Courses are extra 1 Unit courses which build upon the content and skills of the corresponding 2 Unit courses. They require students to work beyond the standard of the 2 unit course. Extension Courses are available for the Higher School Certificate in English, Mathematics, Science, History, Music and some Languages.

- The only Extension Courses available in Year 11 are in English and Mathematics. Students may take 2 unit Advanced English and Extension 1 English (ie. 3 units of English in total) and 2 unit Mathematics and Extension 1 Mathematics (ie. 3 units of Mathematics in total).
- In Year 12, students who have successfully completed the Extension 1 Courses in English and/or Mathematics in Year 11 may continue with the HSC Extension 1 Courses, and may also choose to do the additional Extension 2 Courses.
- Extension Courses in History, Music, Science and some Languages are only available in Year 12.
- To take the Science Extension Course in Year 12, students must have studied at least one Science course (Biology, Chemistry, Investigating Science or Physics).
- There is only one History Extension Course, to be studied with Ancient and/or Modern History in Year 12.
- To take the Music Extension Course in Year 12, students must have studied Music Course 2 in Year 11.
- To take the Language Extension Courses in Year 12, students must have studied the Continuers Course in Year 11.

### **Science Subjects**

Students may take **no more than six units** of Science Subjects in Year 11 and seven units in Year 12. In Year 11, students may choose 2 Unit courses in Biology, and/or Chemistry, and/or Investigating Science and/or Physics.

### **Assessment and Reporting**

• School-based assessment tasks will contribute to 50% of your marks at the HSC. Your school assessment mark will be based on your performance in assessment tasks undertaken during each course. You will be given a booklet explaining the procedures, requirements and performance standards of the school assessment program.

**Note**: Assignments and projects developed for assessment in one subject may not be used either partially or in full for assessment in any other subject.

- The other 50% of the marks will be based on your performance in the HSC examination for each subject.
- Your HSC mark for 2 unit courses will be reported on a scale of 0–100. A mark of 50 will represent the minimum standard expected in each subject. There are also six 'Performance Bands' which describe the different levels of achievement in knowledge, skills and understanding for each course. Band 6 (corresponding to a mark of 90–100) is the highest.

- On the satisfactory completion of your Higher School Certificate, you will receive a portfolio containing
- The HSC Testamur the official certificate confirming that you have fulfilled all the requirements for the award of the Higher School Certificate.
- ➤ The Record of School Achievement (ROSA) lists the courses you have successfully completed, as well as the marks and bands you have achieved in each course.
- ➤ Course Reports for every HSC Board Developed Course you will receive a Course Report showing your marks, the Performance Scale and Performance Descriptors of each band, and a graph showing the state-wide distribution of marks in the course.

### **Subject Selection Guidelines**

- English is the ONLY compulsory subject in the senior school.
- Choose subjects based on ABILITY, INTEREST, CAREER ASPIRATIONS and TERTIARY REQUIREMENTS.
- Subjects and courses for Year 11 will only proceed if sufficient numbers of students choose them.
- After the closing date for subject selections, changes will be permitted only if a vacancy exists and a letter of approval is brought from parents. No changes will be permitted after Year 11 Term 1 Week 4.
- Please note that some subjects must charge fees to help provide the materials needed in class
   these fees are compulsory.
- Sport Lifestyle and Recreation Studies is a 1 Unit Board Endorsed Courses that only runs in Year 11.
- All students must do <u>at least 12 units</u> throughout Year 11 Terms 1 3, and <u>at least 11 units</u> in Year 11 Term 4.
- HSC Course subject changes will NOT be considered until Year 12 Term 1 Week 4.
- The school strongly recommends that students do <u>no less than 11 units</u> in their HSC Course and in their HSC Examinations.

### Australian Tertiary Admission Rank (ATAR)

### Tertiary selection and the ATAR

In 2018, 56127 NSW received an ATAR. For the majority of University courses there are more applicants than places. Applicants must be ranked to allow selection to take place.

The first step in the selection process is to check whether applicants have satisfied any and all prerequisites specified for the courses for which they have applied. For example, mandatory courses at USYD have Mathematics as a prerequisite. If you have not met this prerequisite you will not be considered for the course, regardless of your ATAR.

The second step is to rank all applicants who satisfy the prerequisites for that course. For most courses, applicants who are current school leavers are ranked using the ATAR.

Some courses have additional selection criteria, such as a portfolio, interview, audition, questionnaire or test. You can find more details about additional selection criteria and the selection process in the *UAC 2019 Guide*.

### What is the ATAR?

The ATAR is a number between 0.00 and 99.95 (with increments of 0.05). It provides a measure of overall academic achievement in the NSW HSC in relation to other students, and it helps universities rank applicants for selection. It is calculated on behalf of the universities and released by UAC.

The ATAR is a rank, not a mark.

### To be eligible for an ATAR:

A student must complete at least ten units of Board Developed courses including at least two units of English. The Board Developed Courses must include at least three courses of 2 units or greater, and at least four subjects.

### What courses can be included in the ATAR?

The ATAR will be based on an aggregate of scaled marks in ten units of Board Developed courses comprising:

- the best two units of English, and
- the best eight units from the remaining units of Board Developed courses.

### Who gets an ATAR?

HSC students who indicate on their HSC Entry Form that they wish to be notified of their ATAR will receive a ATAR Advice Notice from UAC at about the same time they receive their Higher School Certificate (HSC) results from the NESA.

### Other Important Aspects of the ATAR

- Whereas the HSC serves many purposes, the ATAR serves only one to assist universities in ranking school leaver applicants for tertiary selection in a fair and equitable way. The ATAR should not be used for any other purpose.
- The ranking of students depends solely on their performance in HSC courses in Year 12. This includes both the school Assessment Program and the HSC Examination components of each course.

For further information about the ATAR, ring UAC on (02) 9752 0200, or see the UAC website: www.uac.edu.au

Students are encouraged to speak to their classroom teachers and faculty Head Teachers as the student's suitability to the subject. In addition, the Careers Adviser can answer questions about university requirements.

"Steps to Uni for Year 10 Students" is a booklet for Year 10 students choosing their courses for Year 11 and 12. Its aim is to help students think about the next two years and make the best decision for successful study in senior school and beyond. An online copy is found on: <a href="https://www.uac.edu.au/assets/documents/year-10/year-10-booklet-2023.pdf">https://www.uac.edu.au/assets/documents/year-10/year-10-booklet-2023.pdf</a>

### Subjects Offered at Girraween High

Year 11 2 unit Courses	Year 11 Courses	HSC 2 unit Courses	HSC Courses
(you must do at least 3 courses of 2 units or greater)	(1 unit)	(you must do at least 4 subjects)	(1 unit)
Ancient History		Ancient History	HSC History Extension
Biology		Biology	HSC Science Extension
Business Studies		Business Studies	
Chemistry		Chemistry	HSC Science Extension
Drama		Drama	
Economics		Economics	
Engineering Studies		Engineering Studies	
English Advanced / English Standard	Year 11 English Extension 1	English Advanced / English Standard	HSC English Extension 1 HSC English Extension 2
Enterprise Computing		Enterprise Computing	
Food Technology		Food Technology	
Geography		Geography	
Health and Movement Science		Health and Movement Science	
Information Processes and		Information Processes and	
Technology		Technology	
Investigating Science		Investigating Science	
French Beginners^		French Beginners^	
French Continuers^		French Continuers^	HSC French Extension
Japanese Beginners*		Japanese Beginners*	
Japanese Continuers*		Japanese Continuers*	HSC Japanese Extension
Legal Studies		Legal Studies	
Mathematics Advanced	Year 11 Mathematics Extension 1	Mathematics Advanced	HSC Mathematics Extension 1 HSC Mathematics Extension 2
Modern History		Modern History	
Music 1*		Music 1*	
Music 2*		Music 2*	HSC Music Extension
Physics		Physics	HSC Science Extension
Society and Culture		Society and Culture	
Software Engineering		Software Engineering	
	Studies of Religion I		Studies of Religion I
	Sport, Lifestyle Recreation		
Visual Arts		Visual Arts	

### HSC Board Developed Courses Offered at Girraween High School

Subjects with a \* or a ^ next to their name cannot both be studied together (eg. Japanese Beginners and Continuers). If there are insufficient student numbers to run separate courses such as in Languages or Music, a composite class consisting of students studying Beginners and Continuers may run. (eg. Japanese Beginners and Continuers), or a mix of year groups may be considered. Alternatively, some languages could be studied at the NSW School of Languages (Correspondence courses). It is the student's responsibility to complete the relevant Open High School enrolment information and submit this to the Deputy Principal before the end of Term 4 this year.

THE INITIAL SELECTION OF A COURSE DOES NOT MEAN THAT COURSE WILL RUN. THIS DEPENDS ON OVERALL CHOICES OF STUDENTS, THE SCHOOL TIMETABLE AND STAFFING CONSTRAINTS.

The following subjects have a course fee attached. This is a mandatory fee and is separate from the school fees:

Biology	Chemistry	Dance
Engineering Studies	Food Technology	Music 1
Music 2	Physics	Software Design & Development
Visual Arts	Investigating Science	

# Board Developed Courses

Board Developed Courses are the official Courses offered by NESA. These courses are all examinable through the Higher School Certificate (HSC).

# **Ancient History**

### **Course Number**

11020 Year 11 Ancient History 15020 Year 12 Ancient History.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course provides students with opportunities to develop and apply their understanding of methods and issues involved in the investigation of the ancient past. Students have the opportunity to engage in the study of a range of features, people, places, events and developments of the ancient world.

The Year 12 course provides students with opportunities to apply their understanding of archaeological and written sources and relevant issues in the investigation of the ancient past. Through a core study, students investigate the cities of Pompeii and Herculaneum, and explore issues relating to reconstruction and conservation of the past. They also study the key features and sources of an ancient society, personality and historical period.

### Content

### **Year 11 Course**

The Year 11 course comprises three sections.

- Investigating Ancient History (60 indicative hours including 'The Nature of Ancient History' and 'Case Studies')
- Students undertake at least one option from 'The Nature of Ancient History', and at least two case studies.
- Features of Ancient Societies (40 indicative hours)

Students study at least two ancient societies.

Historical Investigation (20 indicative hours)

Historical concepts and skills are integrated with the studies undertaken in Year 11.

### **Year 12 Course**

The Year 12 course comprises four sections.

- Core Study: Cities of Vesuvius Pompeii and Herculaneum (30 indicative hours)
- One 'Ancient Societies' topic (30 indicative hours)
- One 'Personalities in their Times' topic (30 indicative hours)
- One 'Historical Periods' topic (30 indicative hours)

Historical concepts and skills are integrated with the studies undertaken in Year 12.

### **Course Requirements**

### Year 11

In the Year 11 course, students undertake at least two case studies.

- One case study must be from Egypt, Greece, Rome or Celtic Europe, and
- One case study must be from Australia, Asia, the Near East or the Americas.

### Year 12

The course requires study from at least two of the following areas:

- Egypt
- Near East
- China
- Greece
- Rome.



# Biology

### **Course Number**

11030 Year 11 Biology 15030 Year 12 Biology.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course investigates cellular structure and provides a base for understanding the way in which multicellular organisms transport and absorb nutrients and carry out gas exchange. Exploring variations in the structures and functions of organisms provides an understanding of the effects of the environment on living things and how this leads to biodiversity.

The Year 12 course investigates reproduction, inheritance patterns and the causes of genetic variation in both plants and animals. Applications of this knowledge in biotechnology and various genetic technologies are explored in the light of their uses in the treatment, prevention and control of infectious and non-infectious diseases.

### **Content**

### **Year 11 Course**

The Year 11 course consists of four modules.

- Module 1 Cells as the Basis of Life
- Module 2 Organisation of Living Things
- Module 3 Biological Diversity
- Module 4 Ecosystem Dynamics

### Year 12 Course

The Year 12 course consists of four modules.

- Module 5 Heredity
- Module 6 Genetic Change
- Module 7 Infectious Disease
- Module 8 Non-infectious Disease and Disorders.

### **Course Requirements**

- Students are provided with 15 hours of course time for depth studies in both Year 11 and Year 12. During this time students may undertake an investigation/activity that allows for the further development of one or more scientific concepts.
- A depth study may be one investigation/activity or a series of investigations/activities. Depth studies may be included in one module or across several modules.
- Practical investigations are an essential part of the Year 11 and Year 12 courses and must occupy a minimum of 35 hours of course time each year.
- Fieldwork is also mandated in Year 11 and is an integral part of the learning process.



# **Business Studies**

### **Course Number**

11040 Year 11 Business Studies 15040 Year 12 Business Studies

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

Business activity is a feature of everyone's life. The Business Studies syllabus encompasses the theoretical and practical aspects of business in ways students will encounter throughout their lives. It offers learning from the planning of a small business to the management of operations, marketing, finance and human resource in large businesses.

Contemporary business issues and case studies are embedded in the course to provide a stimulating and relevant framework for students to apply to problems encountered in the business environment. Business Studies fosters intellectual, social and moral development by assisting students to think critically about the role of business and its ethical responsibilities to society.

### Content

### **Year 11 Course**

- Nature of business (20%) the role and nature of business
- Business management (40%) the nature and responsibilities of management
- Business planning (40%) establishing and planning a small to medium enterprise

### **Year 12 Course**

- Operations (25%) strategies for effective operations management
- Marketing (25%) development and implementation of successful marketing strategies
- Finance (25%) financial information in the planning and management of business
- Human resources (25%) human resource management and business performance

### **Course Requirements**

nil



# **Chemistry**

### **Course Number**

11050 Year 11 Chemistry 15050 Year 12 Chemistry.

### Units

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course develops the knowledge, understanding and skills in relation to the properties and structures of matter, the types and drivers of chemical reactions and how we measure the quantities involved in these processes.

The Year 12 course builds on the concepts introduced in Year 11 by examining particular classes of chemicals, processes and a variety of chemical reactions which incorporate organic compounds and acid/base equilibrium reactions. The course challenges students to apply this knowledge to the investigation of a range of methods used in identifying and measuring quantities of chemicals which leads to an understanding of the structure, properties and trends of and between classes of chemicals.

### **Content**

### Year 11 Course

The Year 11 course consists of four modules.

- Module 1 Properties and Structure of Matter
- Module 2 Introduction to Quantitative Chemistry
- Module 3 Reactive Chemistry
- Module 4 Drivers of Reactions

### **Year 12 Course**

The Year 12 course consists of four modules.

- Module 5 Equilibrium and Acid Reactions
- Module 6 Acid/base Reactions
- Module 7 Organic Chemistry
- Module 8 Applying Chemical Ideas

### **Course Requirements**

- Students are provided with 15 hours of course time for depth studies in both Year 11 and Year 12. During this time students may undertake an investigation/activity that allows for the further development of one or more scientific concepts.
- A depth study may be one investigation/activity or a series of investigations/activities. Depth studies may be included in one module or across several modules.
- Practical investigations are an essential part of the Year 11 and Year 12 courses and must occupy a minimum of 35 hours of course time each year.



# **Drama**

### **Course Number**

11090 Year 11 Drama 15090 Year 12 Drama

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

### **Year 11 Course**

Students in Drama study the practices of Making, Performing and Critically Studying. Students engage with these components through collaborative and individual experiences.

Year 11 course content comprises an interaction between the components of Improvisation, Playbuilding and Acting, Elements of Production in Performance and Theatrical Traditions and Performance Styles. Learning comes from practical experiences in each of these areas.

While the course builds on the Stages 4 and 5 Drama course, it also caters for students with less experience in Drama.

### Year 12 Course

Australian Drama and Theatre and Studies in Drama and Theatre involve the theoretical study through practical exploration of themes, issues, styles and movements of traditions of theatre, exploring relevant acting techniques, performance styles and spaces. Learning comes from practical experiences in each of these areas.

The **Group Performance** (3-6 students) involves creating a piece of original theatre (8–12 minutes duration). It provides opportunity for each student to demonstrate his or her performance skills.

For the **Individual Project**, students demonstrate their expertise in a particular area. They choose one project from Critical Analysis **or** Design **or** Performance **or** Script-writing **or** Video Drama.

### **Main Topics include:**

- Australian Drama and Theatre (Core content)
- Studies in Drama and Theatre
- Group Performance (Core content)
- Individual Project

### **Course Requirements**

The Year 11 course informs learning in the HSC course. In the study of theoretical components, students engage in practical workshop activities and performances to assist their understanding, analysis and synthesis of material covered in areas of study.

In preparing for the group performance, the published *Course Prescriptions* include a topic list which is used as a starting point.

The Individual Project is negotiated between the student and the teacher at the beginning of the HSC course. Students choosing Individual Project Design or Critical Analysis must base their work on one of the texts listed in the published text list. This list changes every three years.

Students must ensure that they do not choose a text or topic they are studying in Drama in the written component or in any other HSC course when choosing Individual Projects.

Students selecting Drama are required to keep a log book of the development of each of the components Group Performance and Individual Project.



# **Economics**

### **Course Number**

11110 Year 11 Economics 15110 Year 12 Economics

### Units

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

Economics provides understanding for students about many aspects of the economy and its operation that are frequently reported in the media. It such investigates issues as whv unemployment or inflation rates change and how these changes will impact on individuals in society. **Economics** develops students' knowledge understanding of the operation of the global and Australian economy. It develops the analytical, problem-solving and communication skills of students. There is a strong emphasis on the problems and issues in a contemporary Australian economic context within the course.

## Content

### **Year 11 Course**

- Introduction to Economics the nature of economics and the operation of an economy
- Consumers and Business the role of consumers and business in the economy

- Markets the role of markets, demand, supply and competition
- Labour Markets the workforce and role of labour in the economy
- Financial Markets the financial market in Australia including the share market
- Government in the Economy the role of government in the Australian economy.

### **Year 12 Course**

- The Global Economy features of the global economy and globalisation
- Australia's Place in the Global Economy – Australia's trade and finance
- Economic Issues issues including growth, unemployment, inflation, wealth and management.
- Economic Policies and Management the range of policies to manage the economy.

### **Course Requirements**

Nil



# **Engineering Studies**

### **Course Number**

11120 Year 11 Engineering Studies 15120 Year 12 Engineering Studies

### Units

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

Both Year 11 and HSC courses offer students knowledge, understanding and skills in aspects of engineering that include communication, engineering mechanics/hydraulics, engineering materials, historical/societal influences, engineering electricity/electronics, and the scope of the profession. Students study engineering by investigating a range of applications and fields of engineering.

### Content

### **Year 11 Course**

Students undertake the study of 4 compulsory modules:

- three application modules based on engineering concepts and impacts through the study of engineering products. Engineering concepts and impacts are studied in each of the following categories: engineering fundamentals, engineering products and braking systems
- one focus module relating to the field of Biomedical engineering.

### **Year 12 Course**

Students undertake the study of 4 compulsory modules:

- two application modules relating to the fields of Civil structures and Personal and public transport
- two focus modules relating to the fields of Aeronautical Engineering and Telecommunications Engineering.

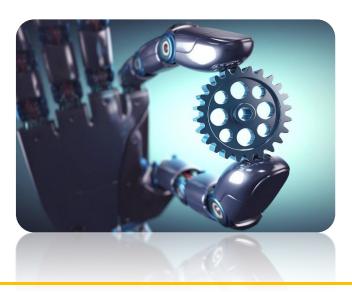
# Course Requirements Engineering Report Year 11 Course

Students are required to produce a component of an engineering report in Engineering application module 3, Braking systems, and then a complete engineering report in Engineering focus module 4, Biomedical engineering.

### **Year 12 Course**

Students are required to produce **one** engineering report from either of the two engineering application modules, and **one** from either of the two engineering focus modules.

One engineering report from the Year 11 course and one engineering report from the HSC course must be the result of collaborative work, reflecting the importance of teamwork for successful engineering projects.



# **English - Advanced**

### **Course Number**

11140 Year 11 English Advanced 15140 Year 12 English Advanced

### Units

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

In the English Advanced Year 11 course, students explore, examine and analyse a range of texts which include prose fiction, drama, poetry, nonfiction, film, digital and media, as well as Australian texts. They explore the ways events, experiences, ideas, values and processes are represented in and through texts and analyse the ways texts reflect different attitudes and values.

In the English Advanced Year 12 course, students further strengthen their knowledge and understanding of language and literature by analysing and evaluating texts and the ways they are valued in their contexts. Students study at least four prescribed texts drawn from: Shakespearean drama; prose fiction; poetry or drama; film or media or nonfiction. In this course, students develop their higher-order thinking skills to enhance their personal, social, educational, and vocational lives.

### **Content**

### **Year 11 Course**

The course has two sections:

- Content common to the English Standard and English Advanced courses is undertaken through a unit of work called *Reading to Write: Transition to* Senior English. Students explore texts and consolidate skills required for senior study.
- Two additional modules: *Critical Study of Literature*, and *Narratives that Shape our World* in which students explore, examine and analyse the ways in which texts and contexts shape and are shaped by different attitudes and values.

### **Year 12 Course**

The course has two sections:

• The HSC Common Content consists of one module Texts and Human Experiences which is common to the HSC Standard, the HSC Advanced and the HSC English Studies courses where students analyse and explore texts and apply skills in synthesis.

 Three additional modules which emphasise particular aspects of shaping meaning and representation, questions of textual integrity, ways in which texts are valued and the demonstration of the effectiveness of texts for different audiences and purposes.

### **Course Requirements**

Across the English Advanced Stage 6 course students are required to study:

- a range of types of texts inclusive of prose fiction, drama, poetry, nonfiction, film, media and digital texts
- texts which are widely regarded as quality literature, including a range of literary texts written about intercultural experiences and the peoples and cultures of Asia
- a range of Australian texts, including texts by Aboriginal and/or Torres Strait Islander authors and those that give insights into diverse experiences of Aboriginal and/or Torres Strait Islander Peoples
- texts with a wide range of cultural, social and gender perspectives.

### Year 11 Course

Students are required to study:

- a range of types of texts drawn from prose fiction, drama, poetry, nonfiction, film, media and digital texts
- a wide range of additional related texts and textual forms.

### Year 12 Course

Students are required to study:

- at least four prescribed texts, one drawn from each
  of the following categories: Shakespearean drama;
  prose fiction; poetry or drama. The remaining text
  may be film or media or a nonfiction text or may be
  selected from one of the categories already used
- at least two additional prescribed texts from the list provided in Module C: The Craft of Writing
- at least one related text in the *Common module: Texts and Human Experiences*.

# **English – Extensions 1 and 2**

### **Course Number**

11150 Year 11 English Extension 15160 Year 12 English Extension 1 15170 Year 12 English Extension 2.(Year 12 Course Only)

### **Prerequisites:**

- (a) English Advanced
- (b) English Extension in Year 11 is a prerequisite for English Extension 1 in Year 12
- (c) English Extension 1 in Year 12 is a prerequisite for English Extension 2 Units

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

In the English Extension Year 11 course, students explore the ways in which aspects and concerns of texts from the past have been carried forward, borrowed from and/or appropriated into more recent culture. They consider how and why cultural values are maintained and changed.

In the English Extension 1 Year 12 course, students explore, investigate, experiment with and evaluate the ways texts represent and illuminate the complexity of individual and collective lives in literary worlds.

In the English Extension 2 Year 12 course, students develop a sustained composition, and document their reflection on this process.

In studying these courses, students will develop skills to work independently to experiment with language forms, features and structures and to engage with complex levels of conceptualisation.

### Content

### **Year 11 Course**

The course has one mandatory module: Texts, Culture and Value as well as a related research project.

### **Year 12 English Extension 1 Course**

The course has one common module, Literary Worlds, with five associated electives. Students must complete one elective chosen from one of the five electives offered for study.

The electives are

- Literary homelands Worlds of upheaval
- Reimagined worlds Literary mindscapes
- Intersecting worlds

In the English Extension 1 course students are required to study:

 at least three prescribed texts for the elective study which must include two extended print texts (as outlined in the English Stage 6 Prescriptions: Modules, Electives and Texts Higher School Certificate 2019–2023 document)

at least TWO related texts.

### **English Extension 2 Course**

The course requires students to undertake a composition process in order to complete a Major Work and Reflection Statement.

### **Course Requirements**

Across Stage 6 the selection of texts should give students experience of the following as appropriate:

- texts which are widely regarded as quality literature, including a range of literary texts written about intercultural experiences and the peoples and cultures of Asia
- a range of Australian texts, including texts by Aboriginal and/or Torres Strait Islander authors and those that give insights into diverse experiences of Aboriginal and/or Torres Strait Islander Peoples
- a range of types of texts drawn from prose fiction, drama, poetry, nonfiction, film, media, multimedia and digital texts.

### **Year 11 Course**

Students are required to:

- examine a key text from the past and its manifestations in one or more recent cultures
- explore, analyse and critically evaluate different examples of such texts in a range of contexts and media
- undertake a related research project.

### Year 12 Course

In the English Extension 2 course students are required to:

Complete a Major Work which involves students undertaking extensive independent investigation involving a range of complex texts during the composition process and document this in their Major Work Journal and Reflection Statement.

Students can choose to compose in ONE of the following forms:

short fiction creative non-fiction poetry critical response script – short film, television, drama podcasts – drama, storytelling, speeches, performance poetry multimedia.

# **English – Standard**

### **Course Number**

11130 Year 11 English Standard 15130 Year 12 English Standard

### Units

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

In the English Standard Year 11 course, students learn about language and literature by exploring and experimenting with the ways events, experiences, ideas and processes are represented in and through texts. Students study a range of texts which include prose fiction, drama, poetry, nonfiction, film, digital and media, as well as Australian texts.

In the English Standard Year 12 course, students further strengthen their knowledge and understanding of language and literature by reflecting on and demonstrating the effectiveness of texts, including their own, for different audiences and purposes. Students study at least three types of prescribed texts drawn from: prose fiction; poetry or drama; film or media or nonfiction texts.

In this course, students will consolidate their English literacy skills in order to enhance their personal, social, educational and vocational lives.

### Content

### **Year 11 Course**

The course has two sections:

- Content common to the English Standard and English Advanced courses is undertaken through a unit of work called Reading to Write: Transition to Senior English. Students explore texts and consolidate skills required for senior study.
- Two additional modules: Close Study of Literature, and Contemporary Possibilities in which students explore and examine texts and analyse aspects of meaning.

### **Year 12 Course**

The course has two sections:

- The HSC Common Content consists of one module Texts and Human Experiences which is common to the HSC Standard, the HSC Advanced and the HSC English Studies courses where students analyse and explore texts and apply skills in synthesis.
- Three additional modules which emphasise particular aspects of shaping meaning and

demonstration of the effectiveness of texts for different audiences and purposes.

### **Course Requirements**

Across the English Standard Stage 6 Course students are required to study:

- a range of types of texts inclusive of prose fiction, drama, poetry, nonfiction, film, media and digital texts
- texts which are widely regarded as quality literature, including a range of literary texts written about intercultural experiences and the peoples and cultures of Asia
- a range of Australian texts, including texts by Aboriginal and/or Torres Strait Islander authors and those that give insights into diverse experiences of Aboriginal and/or Torres Strait Islander Peoples
- texts with a wide range of cultural, social and gender perspectives.

### **Year 11 Course**

Students are required to study:

- one complex multimodal or digital text in Module A (this may include the study of film)
- one substantial literary print text in Module B, for example prose fiction, drama or a poetry text, which may constitute a selection of poems from the work of one poet
- a range of types of texts drawn from prose fiction, drama, poetry, nonfiction, film, media and digital texts
- a wide range of additional related texts and textual forms.

### **Year 12 Course**

Students are required to study:

- at least three types of prescribed text, one drawn from each of the following categories: prose fiction; poetry or drama; film or media or nonfiction texts
- at least two additional prescribed texts from the list provided in Module C: The Craft of Writing
- at least one related text in the Common module: Texts and Human Experiences.



# **Food Technology**

### **Course Number**

11180 Year 11 Food Technology 15180 Year 12 Food Technology

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course will develop knowledge and understanding about food nutrients and diets for optimum nutrition, the functional properties of food, safe preparation, presentation and storage of food, sensory characteristics of food, the influences on food availability and factors affecting food selection. Practical skills in planning, preparing and presenting food are integrated throughout the content areas.

The HSC course involves the study of: sectors, aspects, policies and legislations of the Australian Food Industry; production, processing, preserving, packaging, storage and distribution of food; factors impacting, reasons, types, steps and marketing of food product development; nutrition incorporating diet and health in Australia and influences on nutritional status. Practical experiences in developing, preparing, experimenting and presenting food are integrated throughout the course.

### **Content**

### **Year 11 Course**

- Food Availability and Selection (30%)
- Food Quality (40%)
- Nutrition (30%)

### **Year 12 Course**

- The Australian Food Industry (25%)
- Food Manufacture (25%)
- Food Product Development (25%)
- Contemporary Nutrition Issues (25%)

### **Course Requirements**

There is no prerequisite study for the 2 unit Year 11 course. Completion of the 2 unit Year 11 course is a prerequisite to the study of the 2 unit HSC course. In order to meet the course requirements, students study food availability and selection, food quality, nutrition, the Australian food industry, food manufacture, food product development and contemporary nutrition issues.

It is mandatory that students undertake practical activities. Such experiential learning activities are specified in the 'learn to' section of each strand.



# **French Beginners**

### **Course Number**

11630 Year 11 French Beginners 15650 Year 12French Beginners

### **Exclusions:**

French Continuers; French Extension. Strict eligibility rules apply to the study of this subject.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

In the Year 11 and HSC courses, students will develop the linguistic and intercultural knowledge and understanding, and the speaking, listening, reading and writing skills to communicate in French. **Topics** studied through two interdependent perspectives, the personal world and the French-speaking communities, provide contexts in which students develop their communication skills in French and their knowledge and understanding of language and culture. Students' skills in, and knowledge of French will be developed through tasks associated with a range of texts and text types,

which reflect the topics. Students will also gain an insight into the culture and language of French-speaking communities through the study of a range of texts.

### **Content**

- Family life, home and neighbourhood
- People, places and communities
- Education and work
- Friends, recreation and pastimes
- Holidays, travel and tourism
- Future plans and aspirations.

# **Course Requirements**

Nil



# **French Continuers**

### **Course Number**

11640 Year 11 French Continuers 15680 Year 12 French Continuers

### **Exclusions:**

French Beginners. Strict eligibility rules apply to the study of this subject.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

In the Year 11 and HSC courses, students will develop the linguistic and intercultural knowledge and understanding, and the speaking, listening, reading and writing skills to communicate in French. **Topics** studied through interdependent perspectives, the personal world and the French-speaking communities, provide contexts in which students develop their communication skills in French and their knowledge and understanding of language and culture. Students' skills in, and knowledge of French will be developed through tasks associated with a range

of texts and text types,

which reflect the topics. Students will also gain an insight into the culture and language of French-speaking communities through the study of a range of texts.

### Content

- Family life, home and neighbourhood
- People, places and communities
- Education and work
- Friends, recreation and pastimes
- Holidays, travel and tourism
- Future plans and aspirations.

### **Course Requirements**

Nil

# Geography

### **Course Number**

11190 Year 11 Geography 15190 Year 12 Geography

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course investigates biophysical and human geography and develops students' knowledge and understanding about the spatial and ecological dimensions of geography. Enquiry methodologies are used to investigate the unique characteristics of our world through fieldwork, geographical skills and the study of contemporary geographical issues.

The HSC course enables students to appreciate geographical perspectives about the contemporary world. There are specific studies about biophysical and human processes, interactions and trends. Fieldwork and a variety of case studies combine with an assessment of the geographers' contribution to understanding our environment and demonstrates the relevance of geographical study.

### Content

### **Year 11 Course**

- Biophysical Interactions how biophysical processes contribute to sustainable management.
- Global Challenges geographical study of issues at a global scale.
- Senior Geography Project a geographical study of student's own choosing.

### **Year 12 Course**

- Ecosystems at Risk the functioning of ecosystems, their management and protection.
- Urban Places study of cities and urban dynamics.
- People and Economic Activity geographic study of economic activity in a local and global context.

Key concepts incorporated across all topics: change, environment, sustainability, spatial and ecological dimensions, interaction, technology, management and cultural integration.

### **Course Requirements**

Students complete a Senior Geography Project (SGP) in the Year 11 course and should undertake 12 hours of fieldwork in both the Year 11 and HSC courses.



# **Health & Movement Science**

### **Course Number**

TBA Year 11 HMS TBA Year 12 HMS

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The *Health* and Movement Science 11-12 Syllabus is shaped by the 5 propositions. Year 11 is organised into 2 focus areas: Health for individuals and communities; and The body and mind in motion. Year 12 is organised into 2 focus areas: Health in an Australian and global context; and Training for improved performance. Depth studies are also to be embedded in Years 11 and 12, and a Collaborative Investigation embedded in Year 11. The skills of collaboration, analysis, communication, creative thinking, problem-solving and research underpin the syllabus content. These skills encircle the syllabus structure along with the propositions 'Focus on educative purpose, take a strengths-based approach, value movement, develop health literacy and include a critical inquiry approach.'

### **Content**

### **Year 11 Course**

The Year 11 course comprises 4 components. Students are required to to study all 4 components.

- Health for Individuals and communities
- The body and mind in motion
- Collaborative Investigation
- A minimum of 2 depth studies
  - Includes a total of 20 hours of in class time dedicated to 2 of the above topics.

### **Year 12 Course**

Comprised of 3 components

- Health in an Australian and global context
- Training for improved performance
- A minimum of 2 depth studies
  - A total of 30 hours of in class time allocated in the topics above.

### **Course Requirements**

One depth study must be formally assessed as a school-based assessment task.



# **History - Extension**

### **Course No:**

15280 Year 12 History Extension

**Year 12 Course Only** 

### **Prerequisites:**

Year 11 Ancient History or Modern History is a prerequisite for entry into Year 12 History Extension.

Year 12 Ancient History or Modern History is a corequisite for Year 12 History Extension.

### **Units**

1 unit for Year 12 (HSC).

### **Course Description**

History Extension provides students with opportunities to examine the way history is constructed and the role of historians. Students investigate the nature of history and changing approaches to its construction through sampling the works of various writers, historians and others involved in the practice of history. Students apply their understanding to undertake an individual investigative project, focusing on an area of changing historical interpretation.

### Content

The course comprises two sections.

Constructing History (Minimum 40 indicative hours)

- Key Questions
- Who are historians?
- What are the purposes of history?
- How has history been constructed, recorded and presented over time?
- Why have approaches to history changed over time?
- Case Studies
- Students develop their understanding of significant historiographical ideas and methodologies by exploring one case study, with reference to three identified areas of debate and the key questions.

History Project (Maximum 20 indicative hours)

• Students will undertake an individual investigative project, focusing on an area of changing historical interpretation.

### **Course Requirements**

The course requires students to undertake:

- one case study
- the development of one History Project.



# **Investigating Science**

### **Course Number**

11215 Year 11 Investigating Science 15215 Year 12 Investigating Science

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course focuses on the centrality of observation in initiating the scientific process and examines the human tendency to draw inferences make generalisations and from these observations. Students learn about the development and use of scientific models and the similarities and differences between scientific theories and laws.

The Year 12 course builds on the skills and concepts learnt in Year 11 with students conducting their own scientific investigations and communicating their findings in scientific reports. Students are provided with the opportunity to examine the interdependent relationship between science and technology and apply their understanding and knowledge, scientifically examine a claim. The course concludes with students exploring the ethical, social, economic and political influences on science and scientific research in the modern world.

### **Content**

### **Year 11 Course**

The Year 11 course consists of four modules.

- Module 1 Cause and Effect Observing
- Module 2 Cause and Effect Inferences and Generalisations
- Module 3 Scientific Models
- Module 4 Theories and Laws

### **Year 12 Course**

The Year 12 course consists of four modules.

- Module 5 Scientific Investigations
- Module 6 Technologies
- Module 7 Fact or Fallacy?
- Module 8 Science and Society

### **Course Requirements**

Students are provided with 30 hours of course time for depth studies in both Year 11 and Year 12. During this time students may undertake an investigation/activity that allows for the further development of one or more scientific concepts. A depth study may be one investigation/activity or a series of investigations/activities. Depth studies may be included in one module or across several modules.

Practical investigations are an essential part of the Year 11 and Year 12 courses and must occupy a minimum of 35 hours of course time each year.



# Japanese Beginners

### **Course Number**

11740 Year 11 Japanese Beginners 15820 Year 12 Japanese Beginners

**Exclusions**: Japanese Continuers; Japanese Extension; Japanese In Context; Japanese and Literature.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

In the Year 11 and HSC courses, students will develop the linguistic and intercultural knowledge and understanding, and the speaking, listening, reading and writing skills to communicate in Japanese. Topics studied through two interdependent perspectives, the personal world and the Japanese-speaking communities, provide contexts in which students develop their communication skills in Japanese and their knowledge and understanding of language and culture.

Students' skills in, and knowledge of, Japanese will be developed through tasks associated with a range of texts and text types, which reflect the topics. Students will also gain an insight into the culture and language of Japanese-speaking communities through the study of a range of texts.

### **Content**

- Family life, home and neighbourhood
- People, places and communities
- Education and work
- Friends, recreation and pastimes
- Holidays, travel and tourism
- Future plans and aspirations.

# Course Requirements



# **Japanese Continuers**

### **Course Number**

11750 Year 11 Japanese Continuers 15830 Year 12 Japanese Continuers

**Prerequisites:** 200-400 hours study of the language or equivalent knowledge is assumed.

### **Exclusions:**

Japanese Beginners; Japanese in Context; Japanese and Literature. Strict eligibility rules apply to the study of this subject.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 and HSC courses have, as their organisational focuses, prescribed themes and related mandatory topics. Students' skills in, and knowledge of Japanese will be developed through tasks associated with a range of texts and text types, which reflect the themes and topics. Students will also gain an insight into the culture and language of Japanese-speaking communities through the study of a range of texts.

### Content

Prescribed Themes	Mandatory Topics
The individual	Personal world Daily life Leisure Future plans
The Japanese- speaking communities	Travelling in Japan Living in Japan Cultural life
The changing world	The world of work Current issues

### **Course Requirements**

Student must have completed Stage 5 Japanese.



# **Japanese Extension**

### **Course Number**

15850 Year 12 Japanese Extension

**Prerequisites:** Completion of Year 11 Japanese Continuers

### **Exclusions:**

Japanese Beginners; Japanese in Context; Japanese and Literature. Strict eligibility rules apply to the study of this subject.

### Units

1 unit for Year 12 (HSC).

### **Course Description**

The organisational focus of the Japanese Extension course is the theme: the individual and contemporary society. A number of issues that exemplify aspects of the theme are prescribed for study. Students engage with the issues through the study of a prescribed text and related texts.

### Content

### **Prescribed Issues**

### Connectedness

### For Example:

- People and places
- Traditions and beliefs
- Communications

### Journeys

### For Example:

- Self-discovery
- Making Choices
- Hopes and Dreams

### Impact of the Past

### For Example:

- Memories
- Experiences
- City and country

There are 9 extracts set for study.

- Students need to be familiar with the whole text.
- The prescribed issues are mandatory, the dash points are not. They are suggestions only and are included to give a sense of the scope of the prescribed issues.
- Study of the text prescribed for any Year 12 course may not begin before the completion of the Year 11 course. This exclusion applies to study in the Year 11 Japanese Continuers course and to Year 11 courses in other subjects. It also applies to the study of a prescribed text in another medium, such as the film of a novel.
- Where an extract of a film is included in the external examination, the transcription will be taken directly from the film.

### **Course Requirements**

Student must have completed Japanese Continuers in Year 11.



# **Legal Studies**

### **Course Number**

11220 Year 11 Legal Studies 15220 Year 12 Legal Studies

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course develops students' knowledge and understanding of the nature and functions of law and law-making, the development of Australian and international legal systems, the Australian constitution and law reform. It individual's examines an rights and responsibilities, how disputes are resolved and examines a contemporary issue concerning the individual and technology. Students have the opportunity to investigate issues that illustrate how the law operates in practice. This is achieved by investigating, analysing and synthesising legal information and investigating legal issues from a variety of perspectives.

The HSC course investigates the key areas of law, justice and human rights through a variety of focus studies which consider how changes in societies influence law reform.

### Content

### **Year 11 Course**

- Part I The Legal System (40% of course time)
- Part II The Individual and the Law (30% of course time)
- Part III The Law in Practice (30% of course time) The Law in Practice unit is designed to provide opportunities for students to deepen their understanding of the principles of law covered in the first sections of the course. This section may be integrated with Part I and Part II.

### **Year 12 Course**

- Core Part I: Crime (30% of course time)
- Core Part II: Human Rights (20% of course time)
- Part III: Two options (50% of course time)

Two options are chosen from:

- Consumers
- Global environment and protection
- Family
- Indigenous peoples
- Shelter
- Workplace
- World order.

### **Course Requirements**

Nil



# **Mathematics - Advanced**

### **Course Number**

11255 Year 11 Mathematics Advanced 15255 Year 12 Mathematics Advanced.

### **Units:**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

- The Mathematics Advanced course is a calculus based course focused on developing student awareness of mathematics as a unique and powerful way of viewing the world to investigate order, relation, pattern, uncertainty and generality.
- The Mathematics Extension 1 Year 11 course includes the Mathematics Advanced Year 11 course.
   The Mathematics Extension 1 Year 12 course includes the Mathematics Advanced Year 12 course.
- All students studying the Mathematics Advanced course will sit for an HSC examination.

The study of Mathematics Advanced in Stage 6:

- enables students to develop their knowledge, understanding and skills in working mathematically and in communicating concisely and precisely
- provides opportunities for students to consider various applications of mathematics in a broad range of contemporary contexts through the use of mathematical modelling and use these models to solve problems related to their present and future needs
- provides opportunities for students to develop ways of thinking in which problems are explored through observation, reflection and reasoning
- provides a basis for further studies in disciplines in which mathematics and the skills that constitute thinking mathematically have an important role
- provides an appropriate mathematical background for students whose future pathways may involve mathematics and its applications in a range of disciplines at the tertiary level.

### Content

The Mathematics Advanced Year 11 course content is comprised of five Topics, with the Topics divided into Subtopics. The Mathematics Advanced Year 12 course content includes four of the same Topics and the Topic of Financial Mathematics in place of the Topic of Exponential and Logarithmic Functions. The Topics and Subtopics are:

Year 11	Year 12
Topic: Functions	Topic: Functions
Working with Functions	Graphing Techniques
Topic: Trigonometric Functions  Trigonometry and Measure of Angles Trigonometric Functions and Identities	Topic: Trigonometric Functions  Trigonometric Functions and Graphs
Topic: Calculus • Introduction to Differentiation	<ul><li>Topic: Calculus</li><li>Differential Calculus</li><li>The Second Derivative</li><li>Integral Calculus</li></ul>
Topic: Exponential and	Topic: Financial
Logarithmic Functions	Mathematics
<ul> <li>Logarithms and</li> </ul>	Modelling Financial
Exponentials	Situations
Topic: Statistical	Topic: Statistical
Analysis	Analysis
<ul> <li>Probability and</li> </ul>	Descriptive Statistics
Discrete Probability	and Bivariate Data
Distributions	Analysis
	Random Variables

### **Prerequisites**

The Mathematics Advanced Year 11 course has been developed on the assumption that students have studied the content and achieved the outcomes of the NSW Mathematics Years 7–10 Syllabus and in particular, the content and outcomes of all substrands of Stage 5.1 and Stage 5.2, the following substrands of Stage 5.3:

Algebraic techniques, Surds and indices, Equations Linear relationships, Trigonometry and Pythagoras' theorem, Single variable data analysis

and at least some of the content from the following substrands of Stage 5.3:

Non-linear relationships

Properties of Geometrical Shapes.

# **Mathematics – Extension 1**

### **Course Number**

11250 Year 11 Mathematics Extension 15250 Year 12 Mathematics Extension 1.

### Units

1 unit Year 11 1 unit Year 12

### **Course Description**

- The Mathematics Extension 1 Year 11 course includes the Mathematics Advanced Year 11 course. The Mathematics Extension 1 Year 12 course includes the Mathematics Advanced Year 12 course.
- The Mathematics Extension 2 Year 12 course includes the Mathematics Extension 1 Year 12 course, and therefore also the Mathematics Advanced Year 12 course.
- All students studying the Mathematics Extension 1 course will sit for an HSC examination.

### The study of Mathematics Extension 1 in Stage 6:

- enables students to develop thorough knowledge, understanding and skills in working mathematically and in communicating concisely and precisely
- provides opportunities for students to develop rigorous mathematical arguments and proofs, and to use mathematical models extensively
- provides opportunities for students to develop their awareness of the interconnected nature of mathematics, its beauty and its functionality
- provides a basis for progression to further study in mathematics or related disciplines and in which mathematics has a vital role at a tertiary level
- provides an appropriate mathematical background for students whose future pathways may involve mathematics and its applications in such areas as science, engineering, finance and economics.

### Content

The Mathematics Extension 1 Year 11 course content is comprised of four Topics, with the Topics divided into Subtopics. The Mathematics Extension 1 Year 12 course content includes the Topics Trigonometric Functions and Calculus

continued from Year 11 and introduces three different Topics. The Topics and Subtopics are:

Year 11	Year 12
Topic: Functions	Topic: Proof
<ul> <li>Further Work with</li> </ul>	Proof by
Functions	Mathematical
<ul> <li>Polynomials</li> </ul>	Induction
Topic: Trigonometric	Topic: Vectors
Functions	<ul> <li>Introduction to</li> </ul>
• Inverse	Vectors
Trigonometric	
Functions	
Further	
Trigonometric	
Identities	
Topic: Calculus	Topic: Trigonometric
<ul> <li>Rates of Change</li> </ul>	Functions
	<ul> <li>Trigonometric</li> </ul>
	Equations
Topic: Combinatorics	Topic: Calculus
Working with	Further Calculus
Combinatorics	Skills
	<ul> <li>Applications of</li> </ul>
	Calculus
	Topic: Statistical
	Analysis
	The Binomial
	Distribution

### **Prerequisites**

The Mathematics Extension 1 Year 11 course has been developed on the assumption that students have studied the content and achieved the outcomes of the NSW Mathematics Years 7–10 Syllabus and, in particular, the content and outcomes of all substrands of Stage 5.1, Stage 5.2 and Stage 5.3, including the optional substrands:

- Polynomials
- Logarithms
- Functions and Other Graphs

# **Mathematics – Extension 2**

### **Course Number**

15260 Year 12 Mathematics Extension 2

**Year 12 Course Only** 

### **Units**

1 unit Year 12

### **Course Description**

- The Mathematics Extension 2 Year 12 course includes the Mathematics Extension 1 Year 12 course and the Mathematics Advanced Year 12 course.
- The Stage 6 Mathematics Advanced, Mathematics Extension 1 and Mathematics Extension 2 courses form a continuum.
- All students studying the Mathematics Extension 2 course will sit for an HSC examination.

The study of Mathematics Extension 2 in Stage 6:

- enables students to develop strong knowledge, understanding and skills in working mathematically and in communicating concisely and precisely
- provides opportunities to develop strong mathematical manipulative skills and a deep understanding of the fundamental ideas of algebra and calculus, as well as an awareness of mathematics as an activity with its own intrinsic value, involving invention, intuition and exploration
- provides opportunities at progressively higher levels for students to acquire knowledge, understanding and skills in relation to concepts within areas of mathematics that have applications in an increasing number of contexts
- provides a basis for progression to further study in mathematics or related disciplines and in which mathematics has a vital role at tertiary level
- provides an appropriate mathematical background for students whose future pathways will be founded in mathematics and its

applications in such areas as science, engineering, finance and economics.

### Content

The Mathematics Extension 2 course is comprised of five Topics, with the Topics divided into Subtopics. The Topics and Subtopics are:

Year 12

**Topic: Proof** 

The Nature of Proof

Further Proof by Mathematical Induction

**Topic: Vectors** 

Further Work with Vectors

**Topic: Complex Numbers** 

**Introduction to Complex Numbers** 

**Using Complex Numbers** 

Topic: Calculus

Further Integration

**Topic: Mechanics** 

**Applications of Calculus to Mechanics** 

### **Prerequisites**

The Mathematics Extension 2 Year 12 course has been developed on the assumption that students have studied the content and achieved the outcomes of the Mathematics Advanced Year 11 course and the Mathematics Extension 1 Year 11 course. The Mathematics Extension 2 Year 12 course has also been constructed on the assumption that students are concurrently studying the Mathematics Advanced course and the Mathematics Extension 1 Year 12 course.

### **Exclusions:**

Students may not study the Mathematics Extension 2 course in conjunction with the Mathematics Standard 1 or the Mathematics Standard 2 course.



# **Modern History**

### **Course Number**

11270 Year 11 Modern History 15270 Year 12 Modern History.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course provides students with opportunities to develop and apply their understanding of methods and issues involved in the investigation of modern history. Students have the opportunity to engage in the study of a range of people, ideas, movements, events and developments that have shaped the modern world.

The Year 12 course provides students with opportunities to apply their understanding of sources and relevant issues in the investigation of the modern world. Through a core study, students investigate the nature of power and authority 1919–1946. They also study key features in the history of one nation, one study in peace and conflict and one study of change in the modern world.

### Content Year 11 Course

The Year 11 course comprises three sections.

- Investigating Modern History (60 indicative hours including 'The Nature of Modern History' and 'Case Studies')
- Students undertake at least one option from 'The Nature of Modern History', and at least two case studies.
- Historical Investigation (20 indicative hours)
- The Shaping of the Modern World (40 indicative hours)

Historical concepts and skills are integrated with the studies undertaken in Year 11.

### **Year 12 Course**

The Year 12 course comprises four sections.

- Core Study: Power and Authority in the Modern World 1919–1946 (30 indicative hours)
- One 'National Studies' topic (30 indicative hours)
- One 'Peace and Conflict' topic (30 indicative hours)
- One 'Change in the Modern World' topic (30 indicative hours)

Historical concepts and skills are integrated with the studies undertaken in Year 12.

### **Course Requirements**

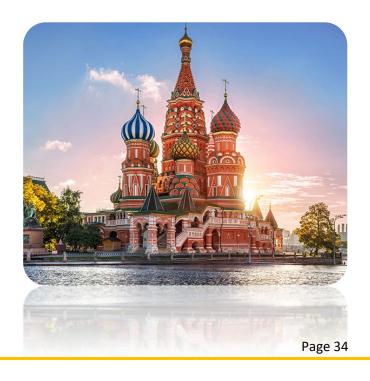
### **Year 11 Course**

In the Year 11 course, students undertake at least two case studies.

- One case study must be from Europe, North America or Australia, and
- One case study must be from Asia, the Pacific, Africa, the Middle East or Central/South America.

### **Year 12 Course**

Students are required to study at least one non-European/Western topic, for example: India 1942–1984, Conflict in the Pacific 1937–1951, The Cultural Revolution to Tiananmen Square 1966–1989.



# Music 1

### **Course Number**

11280 Year 11 Music 1 15290 Year 12 Music 1

**Exclusions:** Music 2 and Music Extension; Projects developed for assessment in one subject are not to be used either in full or in part for assessment in any other subject.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

### **Year 11 Course**

In the Year 11 course, students will study the concepts of music through the learning experiences of performance, composition, musicology and aural within the context of a range of styles, periods and genres.

### **Year 12 Course**

In the HSC course, students will study the concepts of music through the learning experiences of performance, composition, musicology and aural within the context of a range of styles, periods and genres.

### Content

Students study three topics in the Year 11 course. Topics are chosen from a list of 21 topics which covers a broad range of styles, periods and genres. While the course builds on the Stages 4 and 5 Music course, Music 1 provides an alternative course of study to Music 2. The curriculum structure is adaptable enough to meet the needs and interests of students with varying degrees of prior formal and informal learning in music and caters for students with less experience in Music.

Students study three topics in the HSC course which are different from those studied in the Year 11 course or two topics which are different from those studied in the Year 11 course and one topic from the Year 11 course in greater depth exploring new repertoire and including a comparative study. Topics are chosen from a list of 21 topics which covers a broad range of styles, periods and genres.

In addition to core studies in performance, composition, musicology and aural, students select three electives from any combination of performance, composition and musicology. These electives must represent each of the three topics studied in the course.

### **Course Requirements**

In the HSC course, students selecting Music 1 are required to keep a portfolio of the development of each of the components Core Composition and Elective Composition.



# Music 2

### **Course Number**

11290 Year 11 Music 2 15300 Year 12 Music 2

### **Exclusions:**

Music 1; Projects developed for assessment in one subject are not to be used either in full or in part for assessment in any other subject.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

### **Year 11 Course**

In the Year 11 course, students will study the concepts of music through the learning experiences of performance, composition, musicology and aural within the context of a range of styles, periods and genres.

Students study one Mandatory Topic covering a range of content and one Additional Topic in each year of the course.

### **Year 12 Course**

In the HSC course, students will study the concepts of music through the learning experiences of performance, composition, musicology and aural within the context of a range of styles, periods and genres.

Students study one Mandatory Topic covering a range of content and one Additional Topic in each year of the course. The Additional Topic is chosen from a list of eight topics which covers a broad range of styles, periods and genres.

### Content

In the Year 11 course, the Mandatory Topic is Music 1600–1900. The Additional Topic is chosen from a list of six topics which covers a broad range of styles, periods and genres.

While the course builds on the Stages 4 and 5 Music course, it also caters for students with less experience in Music.

In the HSC course, the Mandatory Topic is Music of the Last 25 Years (Australian focus).

### **Course Requirements**

In addition to core studies in performance, composition, musicology and aural, students nominate one elective study in Performance, Composition or Musicology.

Submitted works and performances are required to reflect the mandatory and additional topic studied in the HSC.

The additional topic studied in the HSC must be different to the topic studied in the Year 11 course. Students selecting Composition or Musicology electives will be required to compile a portfolio of work as part of the process of preparing a submitted work.

All students will be required to develop a composition portfolio for the core composition.



# **Music Extension**

### **Course Number**

15310 Year 12 Music Extension

**Year 12 Course Only** 

### **Prerequisites:**

Music 2

Exclusions: Music 1; Projects developed for assessment in one subject are not to be used either in full or in part for assessment in any other subject.

### **Units**

1 unit

### **Course Description**

The Music Extension course builds on Music 2 and assumes a high level of music literacy and aural ability as well as advanced performance or composition or musicology skills.

Students will specialise in performance or composition or musicology and will follow an individual program of study which will be negotiated between the teacher and student.

### **Course Requirements**

Students selecting Performance as their area of specialisation will be required to present an ensemble piece within their performance program. Students selecting Composition or Musicology as their area of specialisation will be required to compile a portfolio of work as part of the process of preparing a submitted work.



# **Physics**

### **Course Number**

11310 Year 11 Physics 15330 Year 12 Physics.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

The Year 11 course develops student's knowledge, understanding and skills relevant to the study of motion, how we describe it and what causes it. The course also examines energy in its different forms and how we describe and measure electricity and magnetism and their interrelated effects.

The Year 12 course provides avenues for students to apply the concepts they were introduced to in Year 11 to motion in two dimensions, electromagnetism, theories of light, the atom and the Universe.

### **Content**

### **Year 11 Course**

The Year 11 course consists of four modules.

- Module 1 Kinematics
- Module 2 Dynamics
- Module 3 Waves and Thermodynamics
- Module 4 Electricity and Magnetism

### **Year 12 Course**

The Year 12 course consists of four modules.

- Module 5 Advanced Mechanics
- Module 6 Electromagnetism
- Module 7 The Nature of Light
- Module 8 From the Universe to the Atom

### **Course Requirements**

Students are provided with 15 hours of course time for depth studies in both Year 11 and Year 12. During this time students may undertake an investigation/activity that allows for the further development of one or more scientific concepts. A depth study may be one investigation/activity or a series of investigations/activities. Depth studies may be included in one module or across several modules.

Practical investigations are an essential part of the Year 11 and Year 12 courses and must occupy a minimum of 35 hours of course time each year.



# Science - Extension

### **Course Number**

15345 Year 12 Science Extension

**Year 12 Course Only** 

### **Units**

1 unit for Year 12 (HSC).

### **Course Description**

Science Extension has a focus on the authentic application of scientific research skills to produce a Scientific Research Report generally acceptable for publication. Students propose and develop a research question, formulate a hypothesis and develop evidence-based responses to create their Scientific Research Report which is supported by a Scientific Research Portfolio. The four modules integrate the skills of Working Scientifically within the course content to form the framework for the Scientific Research Project.

### Content

### Year 12

The Year 12 course consists of four modules.

- Module 1 The Foundations of Scientific Thinking
- Module 2 The Scientific Research Proposal
- Module 3 The Data. Evidence and Decisions
- Module 4 The Scientific Research Report

### **Course Requirements**

- Prerequisite courses for Science Extension Year 12 are one of, or a combination (up to 6 units of study) of, Biology, Chemistry, Earth and Environmental Science, Investigating Science or Physics in Year 11.
- Co-requisite courses for Science Extension Year 12 are one of, or a combination (up to 7 units of study) of, Biology, Chemistry, Earth and Environmental Science, Investigating Science or Physics in Year 12.
- Students must propose and develop a research question, formulate a hypothesis and develop evidence-based responses in the form of a Scientific Research Report, which is supported by a Scientific Research Portfolio.
- The Scientific Research Report is a result of the student's own work and must adhere to the principles and practices of good scholarship, as identified in the HSC: All My Own Work course. While students may collaborate with and draw upon the expertise, knowledge and data held by others in developing their Scientific Research Report and Portfolio, this assistance must be referenced using accepted protocols.
- All scientific research must be sensitive to community expectations and individual school requirements in relation to the question being interrogated. Students must adhere to ethical practices in the collection and analysis of data and the communication of results.



# **Society and Culture**

### **Course Number**

11330 Year 11 Society & Culture 15350 Year 12 Society & Culture

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

Society and Culture develops social and cultural literacy and a clear understanding of the interactions of persons, society, culture, environment and time, and how these shape human behaviour. The course draws on cross-disciplinary concepts and social research methods, and students undertake research in an area of particular interest to them. The research findings are presented for external assessment in the Personal Interest Project (PIP).

### Content

### **Year 11 Course**

- The Social and Cultural World the interactions between persons and groups within societies
- Personal and Social Identity socialisation and the development of personal and social identity in a variety of social and cultural settings
- Intercultural Communication how people in different social, cultural and environmental settings behave, communicate and perceive the world around them

### **Year 12 Course**

### Core

- Social and Cultural Continuity and Change the nature of social and cultural continuity and change as well as application of research methods and social theory to a selected country study
- The Personal Interest Project (PIP) an individual research project

### **Depth Studies**

### Two to be chosen from:

- Popular Culture the interconnection between popular culture, society and the individual
- Belief Systems and Ideologies the relationship of belief systems and ideologies to culture and identity
- Social Inclusion and Exclusion the nature of social inclusion and exclusion as well as implications for individuals and groups in societies and cultures
- Social Conformity and Nonconformity the nature of conformity and nonconformity and its influences on the formation of peoples' attitudes and behaviours.

### **Course Requirements**

Completion of Personal Interest Project.



# **Software Engineering**

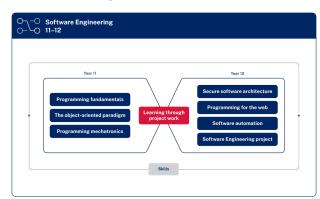
### **Course Number**

11345Year 11 Software Engineering 15365 Year 12 Software Engineering

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**



This is a diagram outlining the organisation content for the Software Engineering 11–12 Syllabus. Content is listed in boxes, Programming fundamentals, The object-oriented paradigm, and Programming mechatronics fall under Year 11 on left. the Secure software architecture. Programming for the web, Software automation and Software Engineering project fall under Year 12 on the right. In the middle is Learning through project work, with lines coming from this box and encircling the content. Surrounding all content of the diagram is a line which is joined at the bottom by a box labelled, Skills. This demonstrates that Skills is being both developed and used in all focus areas.

### **Content**

### **Year 11 Course**

- Programming Fundamentals
- The object Oriented paradigm
- Programming Mechatronics

### **Year 12 Course**

- Secure Software Architecture
- Programming for the Web
- Software Automation
- Software Engineering Project

Study one of the following options:

Programming paradigms

or

• The interrelationship between software and hardware

### **Course Requirements**

The Year 12 course provides students with opportunities to extend their knowledge, understanding and skills in the development of software. A major software engineering project provides students with the opportunity to further develop project management skills.

```
th[i] = date[i];}for (i = frature; strcpy(uv, token_3); index
= temprature + index + humidity
of humidity, and wind speed
day is %f\n\n", average);}higher
prature_comparison[i] = highest;}}
prature_comparison[i] = lowest;})print(
sword_only(){char arr[50], *profile
, "r");fseek(ptr, 0, SEEK_CUR);fgets(
r_name);if (length > 5){return *user_name}
ing_forecast_data(){FILE *ptr_1; char check(size)
'};int temp, index, hum, wind, diff
```

# **Studies of Religion I**

### **Course Number**

11350 Year 11 Studies of Religion I 15370 Year 12 Studies of Religion I

### **Exclusions**

Studies of Religion II

### **Units**

1 unit for each of Year 11 and Year 12 (HSC).

### **Course Description**

Studies of Religion I promotes an understanding and critical awareness of the nature and significance of religion and the influence of beliefs systems and religious traditions on individuals and within society.

### Content

### **Year 11 Course**

- Nature of Religion and Beliefs
- The nature of religion and beliefs including Australian Aboriginal beliefs and spiritualities, as a distinctive response to the human search for meaning in life.
- Two Religious Traditions Studies from:
- Buddhism, Christianity, Hinduism, Islam, Judaism
- Origins
- Principal beliefs
- Sacred texts and writings
- Core ethical teachings
- Personal devotion/expression of faith/observance.

### **Year 12 Course**

- Religion and Belief Systems in Australia post-1945
- Religious expression in Australia's multicultural and multi-faith society since 1945, including an appreciation of Aboriginal spiritualities and their contribution to an understanding of religious beliefs and religious expression in Australia today.
- Two Religious Tradition Depth Studies from:
- Buddhism, Christianity, Hinduism, Islam, Judaism
- Significant people and ideas
- Ethical teachings in the religious tradition about bioethics or environmental ethics or sexual ethics
- Significant practices in the life of adherents.

### **Course Requirements**

There is no prerequisite



# **Visual Arts**

### **Course Number**

11380 Year 11 Visual Arts 15400 Year 12 Visual Arts

### **Exclusions**

Projects developed for assessment in one subject are not to be used either in full or in part for assessment in any other subject.

### **Units**

2 units for Year 11 and Year 12 (HSC).

### **Course Description**

### **Year 11 Course**

Visual Arts involves students in artmaking, art criticism and art history. Students critically and historically investigate artworks, critics, historians and artists from Australia as well as those from other cultures, traditions and times.

The Year 11 course is broadly focused, while the HSC course provides for deeper and more complex investigations.

### **Year 12 Course**

Visual Arts involves students in artmaking, art criticism and art history. Students develop their own artworks, culminating in a 'body of work' in the HSC course. Students critically and historically investigate artworks, critics, historians and artists from Australia as well as those from other cultures, traditions and times.

### Content

Year 11 Course learning opportunities focus on:

- the nature of practice in artmaking, art criticism and art history through different investigations
- the role and function of artists, artworks, the world and audiences in the artworld

- the different ways the visual arts may be interpreted and how students might develop their own informed points of view
- how students may develop meaning and focus and interest in their work
- building understandings over time through various investigations and working in different forms.
- While the course builds on Visual Arts courses in Stages 4 and 5, it also caters for students with less experience in Visual Arts.

HSC Course learning opportunities focus on:

- how students may develop their practice in artmaking, art criticism, and art history
- how students may develop their own informed points of view in increasingly independent ways and use different interpretive frameworks in their investigations
- how students may learn about the relationships between artists, artworks, the world and audiences within the artworld and apply these to their own investigations
- how students may further develop meaning and focus in their work.

### **Course Requirements**

### Year 11 Course

- Artworks in at least two expressive forms and use of a process diary
- a broad investigation of ideas in art making, art criticism and art history.

### **Year 12 Course**

- development of a body of work and use of a process diary
- a minimum of five Case Studies (4–10 hours each)
- deeper and more complex investigations in art making, art criticism and art history.



# Board Endorsed Courses

Girraween High School offers one Board Endorsed Course to ensure students with 11 units of Board Developed Courses meet the Year 11 course requirements of 12 units. This Board Endorsed Courses are only offered in Year 11 and does not continue into Year 12

# **Sport, Lifestyle and Recreation**

# **Board Endorsed Course Exclusions:**

Students studying Board Developed PDHPE must not study CEC modules which duplicate PDHPE modules.

Students will learn about the importance of a healthy and active lifestyle and recognise the need to be responsible and informed decision-makers.

This course enables students to further develop their understanding of and competence in a range of sport and recreational pursuits. They are encouraged to establish a lifelong commitment to being physically active and to achieving movement potential.

Through the course students will develop:

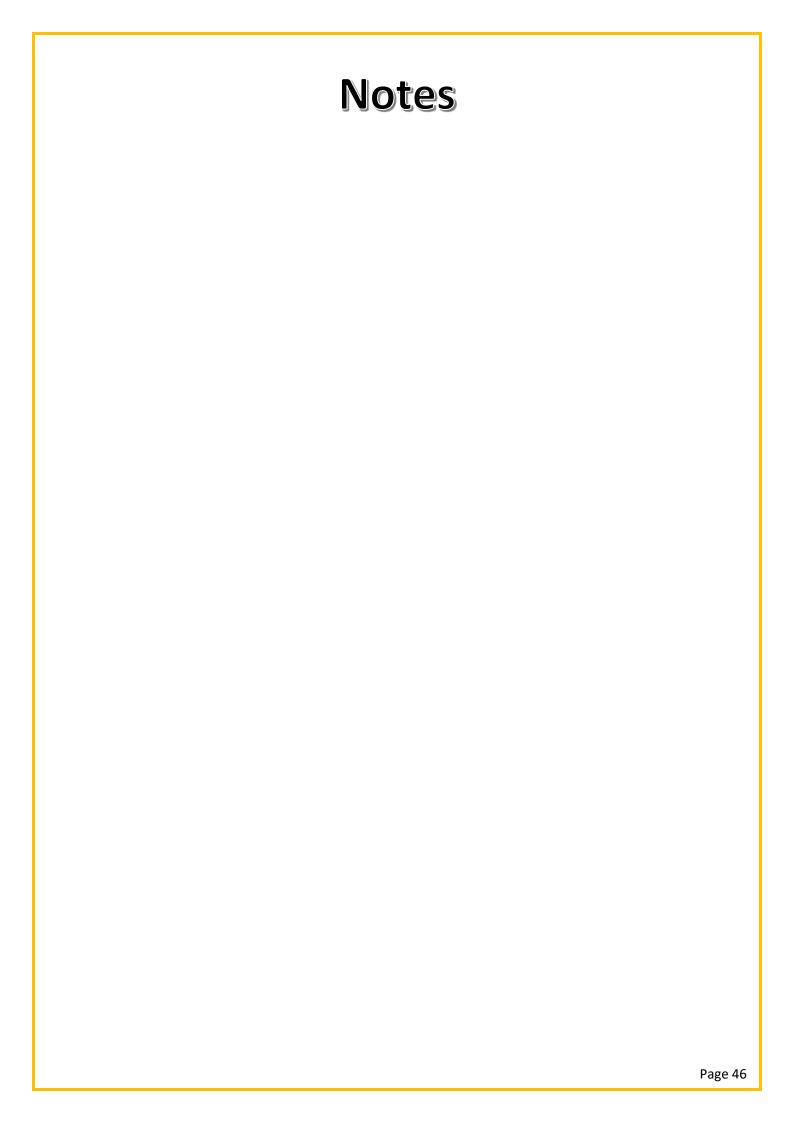
- knowledge and understanding of the factors that influence health and participation in physical activity
- knowledge and understanding of the principles that impact on quality of performance
- an ability to analyse and implement strategies to promote health, activity and enhanced performance
- a capacity to influence the participation and performance of self and others.

The course provides the opportunity to specialise in areas of expertise or interest through optional modules such as:

- Aquatics
- Athletics
- First Aid
- Fitness
- Specific Sports
- Gymnastics
- Outdoor Recreation
- Sports Administration
- Coaching
- Social Perspectives of Sport
- Healthy Lifestyle
- Body Systems
- Nutrition and Physical Activity
- Skill Development.
- 2 3 modules are selected. There is a significant emphasis on practical modules. External Assessment Internal Assessment Examination specifications are not available at the time of printing.

Assessment details to be advised







# Girraween High School

110 Gilba Road, Giirraween NSW 2145 T: 02 9636 7293 girraween-h.school@det.nsw.edu.au www.girraween-h.schools.nsw.edu.au