



# Macquarie Fields High School

## COURSE OUTLINES

2021

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## COURSE OUTLINES

### Creative and Performing Arts

Music 1  
Visual Arts  
Drama  
Visual Design  
Ceramics

### English

English Studies  
English Standard  
English Advanced  
English Extension 1

### Social Sciences

Business Studies  
Geography  
Economics  
Society and Culture

### History/ Languages

Aboriginal Studies  
Ancient History  
Legal Studies  
Modern History  
Studies of Religion I  
Studies of Religion II  
Japanese (Beginners)  
Japanese (Continuers)

### Mathematics

Mathematics Standard  
Mathematics Advanced  
Mathematics Extension 1

### Personal Development. Health & Physical Education

PDHPE  
Sport Lifestyle and Recreation (SLR) 1unit  
Sport Lifestyle and Recreation (SLR) 2unit

### Sciences

Biology  
Chemistry  
Earth and Environmental Science  
Investigating Science  
Physics

### Technologies

Community & Family Studies  
Design and Technology  
Engineering Studies  
Food Technology  
Industrial Technology - Timber or Graphics  
Software Design and Development

### VET COURSES

Hospitality Food and Beverage (240 hrs)

**TAFE VET Courses and SBAT information – see Mrs Buckler for further details**

### Mrs Karen Metcalfe

Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Content Endorsed Course 1 unit  
Content Endorsed Course 1 unit

### Ms Catherine Nielsen

Revised Course 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 1 unit

### Mr Perry Celestino

Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit

### Mr Troy Neale

Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 1 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit

### Mr Geoff Plowes

Category A 2 unit  
Category A 2 unit  
Category A 1 unit

### Miss Nicole Boyles (Relieving)

Category A 2 unit  
Content Endorsed Course 1 unit  
Content Endorsed Course 2 unit

### Mr Bill Matchett

Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit

### Mr Grant Byrne

Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit  
Category A 2 unit

### Mrs Judy Buckler

Category B 2 unit

## Music 1

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**

**Exclusions:** Music 2

**Desirable:** Read Music and play an instrument or sing.

### Course Description:

In the Preliminary and HSC courses, students 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.

### Main Topics Covered:

Students study three topics in each year of the course. Topics are chosen from a list of 21 which cover a range of styles, periods and genres. Examples include popular music, music for film, TV, radio and multimedia and small ensembles.

### Particular course requirements:

#### HSC course

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.

Students selecting Composition electives will be required to compile a portfolio of work as part of the process of preparing a submitted work. The portfolio may be requested by the Board of Studies to validate authorship of the submitted work.

## Summary of external and internal HSC assessment

External examination	Mark	Internal assessment	Weighting
Written examination – Aural Skills Four short-answer questions	30	Performance Core	10
		Composition Core	10
Practical examination – Core Performance	20*	Musicology Core	10
		Aural Core	25
Electives	60*	Elective 1	15
		Elective 2	15
		Elective 3	15
	<b>100</b>		<b>100</b>

\*The marks for Core Performance and the Electives will be converted to a mark out of 70, giving a total mark out of 100 for the examination.

# Visual Arts

## 2 units for each of Preliminary (120hrs) and HSC (120hrs)

**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

### Course Description:

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.

The Preliminary course is broadly focused, while the HSC course provides for deeper and more complex investigations. While the course builds on Visual Arts courses in Stages 4 & 5, it also caters for students with more limited experience in Visual Arts.

### Main Topics Covered:

#### 1. Preliminary Course focuses 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.

#### 2. HSC Course focuses on:

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

### Particular Course Requirements:

#### 1. Preliminary 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

#### 2. HSC Course

- development of a body of work and use of a process diary. The body of work can be developed using a range of art making techniques including painting, ceramics, digital media, animation, drawing and sculpture
- a minimum of five Case Studies (4–10 hours each)
- deeper and more complex investigations in art making, art criticism and art history.

### Assessment overview:

Section / Part	Marks	Component	Weighting
<b>Section I</b> There are three short-answer questions. Each question may consist of parts. These are normally weighted 5, 8 and 12 marks.	25	<b>Preliminary Course</b>	
		Artmaking	50
		Art criticism and art history	50
			<b>100</b>
<b>Section II</b> There will be six questions: two questions on each of practice, the conceptual framework and frames. Students attempt one question <b>ONLY</b> , with an expected length of response of around eight examination writing booklet pages (approximately 1000 words).	25	<b>HSC Course</b>	
		Artmaking	50
		Art critics and art history	50
			<b>100</b>
Body of Work	50		
	<b>100</b>		

## Drama

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**

### Course Description:

Preliminary Drama includes an interaction between Improvisations, Play building and Acting, Elements of Production in Performance and Theatrical Traditions and Performance Styles. Learning comes from practical experiences in each of these areas.

**HSC Drama** includes Australian Drama and Theatre and Studies in Drama and Theatre involves the theoretical study through practical exploration of themes, issues, styles and movements of traditions of theatre, exploring relevant acting techniques, performance styles and spaces.

The **Group Performance** groups of 3-6 students create a piece of original theatre (8 to 12 minutes duration) with each student demonstrating his or her performance skills.

For the **Individual Project**, students demonstrate their expertise in one area from Critical Analysis **or** Design **or** Performance **or** Script-writing **or** Video Drama. Projects developed for assessment in one subject are not to be used either in full or in part for assessment in any other subject

### Main Topics Covered:

#### 1. Preliminary Course

Improvisation, Play building, Acting, Elements of Production in Performance Theatrical Traditions and Performance Styles

#### 2. HSC Course

Australian Drama and Theatre (Core content), Studies in Drama and Theatre , Group Performance (Core content), *and*, an Individual Project

### Particular Course Requirements:

The Preliminary builds to the learning in the HSC course. In preparing for the group performance a topic list 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 should base their work on one of the texts listed in the published text list. This list changes every two years.

External examination	Mark	Internal assessment	Weighting
<b>Written examination</b> <i>Section I – Australian Drama and Theatre</i> One extended response question	20	Making	40
<i>Section II – Studies in Drama and Theatre</i> Candidates answer one extended response question	20	Performing	30
<b>Group Performance</b>	30	Critically Studying	30
<b>Individual Project</b>	30		<b>100</b>
	<b>100</b>		

# Visual Design

1 Unit Content Endorsed Course ( Non ATAR ) Preliminary (60hrs) HSC (60hrs)

## Course Description:

Visual Design provides opportunities for students to pursue their abilities and interests in design fields that offer a wide range of tertiary courses and work opportunities.

Visual Design Stage 6 is designed to enable students to gain an increasing accomplishment and independence in their representation of ideas in different fields of design and to understand and value how graphic, wearable, product and interior/exterior design invite different interpretations and explanations.

## Main Topics Covered:

Modules include:

- **Graphic Design :**
  - ✓ GD1 Publications and Information
  - ✓ GD2 Illustration and Cartooning
  - ✓ GD3 Interactive and Multimedia
- and/or**
- **Wearable Design**
  - ✓ WD1 Clothing and Image
  - ✓ WD2 Jewellery and Accessories
  - ✓ WD3 Textiles
- and/or**
- **Product Design**
  - ✓ PD1 Packaging
  - ✓ PD2 Furniture
  - ✓ PD3 Industrial
- and/or**
- **Interior/Exterior Design**
  - ✓ IED1 Structures and Environments
  - ✓ IED2 Stage Sets and Props
  - ✓ IED3 Interiors
- and/or**
- **General**
  - ✓ GM Individual /Collaborative Design Project
- and**
- **Mandatory**
  - ✓ MM Work Health and Safety

## Course Requirements

Students are required to keep a diary over the duration of the course. The diary may include a sketch book, folder, notepads, computers disks, CD's, videotape and combinations of these. The diary, in conjunction with other work produced, will form a part of the assessment program.

Students are encouraged to develop a portfolio of their work over the course. The portfolio should contain works that are accomplished, conceptually strong and well-resolved and that demonstrate students' learning in the selected modules.

## Assessment Components, Weightings and Tasks

Component	Weighting %
Designing and making	70%
Critical and Historical Studies	30%

# Ceramics

**1 Unit Content Endorsed Course ( Non ATAR ) Preliminary (60hrs) HSC (60hrs)**  
**40 hour Core plus one 20 hour module.**

**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

## Course Description:

Ceramics Stage 6 is designed to enable students to:

Gain an increasing accomplishment and independence in their representation of ideas in ceramics and understand and value how ceramics, as a field of practice, invites different interpretations and explanations.

## Main Topics Covered:

The Ceramics Content Endorsed Course is comprised of eleven modules, two mandatory and nine optional. Schools are able to select from these modules to develop programs that respond to student needs and interests. The Core module *Introduction to Ceramics* must always be done as the first module. Issues of Work Health and Safety must be considered over the entire course.

The time allocated to each of the optional modules is flexible within the range of 20 – 40 hours. When deciding on the duration of modules, consideration should be given to:

- The time required to achieve outcomes
- The level to which outcomes will be achieved
- The extent to which the module will be explored,
- The requirements of TAFE courses for, which there may be potential for, credit transfer.

## Mandatory:

Module Number	Hours	Title
1	40	Introduction to Ceramics (Core)
2 (Integrated module)	4–6	Work Health and Safety

## Optional modules:

Module Number	Hours	Title
3	20–40	Hand building
4	20–40	Throwing
5	20–40	Sculptural Forms
6	20–40	Kilns
7	20–40	Glaze Technology
8	20–40	Casting
9	20–40	Surface Treatment
10	20–40	Mixed Media
11	20–40	Ceramics Project

The modules outline the content to be taught within each of modules that can be undertaken for 20–40 hours. Each module makes explicit references to practice, ceramic objects and works, frames, construction methods, surface treatments and technologies. These have different emphases in the modules and over the course teachers will offer students.

**Particular Course Requirements:****Student diary and portfolio of work**

Students are required to keep a diary over the duration of the course. The diary may include a sketch book, folder, boxes and containers, photographs etc. The diary can indicate various aspects of the learning that has occurred within the modules. The diary, in conjunction with other work produced, should be used within the assessment program developed by the school.

Students should document the technical aspects of their work and should note the development of concepts and ideas, points of departure and changes in direction in their diaries. The diary should provide some evidence of the critical reflection and the exercise of judgement undertaken by students in ceramics.

The diary provides a useful point for discussion and negotiation between teachers and students about students' developing understanding of practice in ceramics. The diary, in relation to the ceramics works produced, provides the opportunity for the exchange of views about ideas and concepts, techniques, interpretation and meaning of work produced.

Students are encouraged to develop a portfolio of their work over the course. The portfolio could contain works which are accomplished, conceptually strong and well-resolved and that demonstrate students learning in the selected modules.

**Assessment:**

One task may be used to assess several components. It is suggested that two to three tasks are sufficient to assess the HSC course outcomes for a one-unit course and three to five tasks are sufficient to assess the HSC course outcomes for a two-unit course

The assessment tasks given to students must:

- be consistent with the objectives and outcomes being assessed
- provide for a range of performances and achievements within the group
- be consistent in number with comparable 1 or 2 unit Board-developed courses
- use a range of assessment instruments. Each instrument must be appropriate to the outcomes it is designed to measure.

Component	Weighting (%)
Making	70%
Critical Study/Historical Study	30%

Other requirements include:

- At least one assessment task derived from formal examinations which includes both making and critical/historical studies. Formal examinations are defined as any form of examination as used in the Higher School Certificate under conditions similar to those used in the HSC for comparable tasks and which apply equally to all students at the school
- Reference to work undertaken in the diary as part of the assessment process.



## English Studies

2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Students studying English Studies may elect to undertake an optional HSC examination.** The examination mark will be used by the Universities Admissions Centre (UAC) to contribute to the student's Australian Tertiary Admission Rank (ATAR). Students who do not sit for the English Studies HSC examination are not eligible for the calculation of an ATAR.

Preliminary and HSC modules support students in developing proficiency in English to enhance their personal, social and vocational lives. This course is an alternative to the Standard English course. English Studies is designed for students who wish to refine their skills and knowledge in English and consolidate their English literacy skills to enhance their personal, social, educational and vocational lives. It is a course for students who wish to be awarded a Higher School Certificate but who are seeking an alternative to the English Standard course.

### Fundamentals of English Course

Students undertake:

Year 11 – *Achieving through English: English in education, work and community* (Compulsory)

Year 12 – Common module: *Texts and Human Experiences* (Compulsory)

and up to four additional Modules chosen from a range of new modules, selected by the English faculty. Examples include:

Module A – We are Australians: English in citizenship, community and cultural identity

Module C – On the road: English and the experience of travel

Module E – Playing the Game: English in sport

Module F – MiTunes and Text: English and the language of song

### Particular Course Requirements

All modules involve a minimum of 24 indicative hours of study. Students must complete a minimum of three modules. They may undertake other modules (with a minimum of 24 indicative hours of study) or apply the balance of time to additional work in the modules they have already undertaken.

## Overview of components of school based assessment

Component	Weighting.
Knowledge and understanding of course content	50
Skills in: <ul style="list-style-type: none"><li>• Comprehending texts</li><li>• Communicating ideas</li><li>• Using language accurately, appropriately and effectively</li></ul>	50
	100

<b>English Standard</b>	
<b>2 units for each of Preliminary (120hrs) and HSC (120hrs)</b>	
<b>Exclusions:</b> English (Advanced); English (ESL); English (Extension).	
<b>Course description:</b> <b>1. Preliminary Course</b> <ul style="list-style-type: none"> <li>Common module is undertaken through units of work called <i>Reading to Write</i>, Transition to Senior English. This content comprises 40% of the course content.</li> <li>Electives in which students explore and examine texts and analyse aspects of meaning. The electives comprise 60% of the content. Modules include <i>Contemporary Possibilities</i> and <i>Close study of literature</i>.</li> </ul> <b>2. HSC Course</b> <ul style="list-style-type: none"> <li>The HSC Common content is <i>Texts and Human Experiences</i> where students analyse and explore texts and apply skills in synthesis.</li> <li>Elective choice modules emphasise particular aspects of shaping meaning and demonstration of the effectiveness of texts for different audiences and purposes.</li> </ul>	
<b>Main Topics Covered:</b> <b>1. Preliminary English (Standard) course</b> requires study of <ul style="list-style-type: none"> <li>Australian and other texts</li> <li>a range of types of text: prose fiction, drama, poetry, nonfiction, film, media and/or multimedia texts</li> <li>wide reading programs involving texts and textual forms in a variety of contexts</li> <li>reading, writing, listening, speaking, viewing and representing as appropriate</li> <li>the integrated study of language and text</li> </ul> <b>2. HSC English (Standard) course</b> requires study of three types of prescribed texts, one drawn from each of the following categories: <ul style="list-style-type: none"> <li>prose fiction</li> <li>poetry OR drama</li> <li>film OR media OR nonfiction</li> </ul> <p>Students study a wide range of additional related texts and textual forms in the Common module: <i>Texts and Human Experiences</i>.</p>	

#### External HSC Assessment

#### Internal HSC assessment

Section / Part	Component	
<b>Paper 1 – Texts and Human Experiences</b> <b>Two Sections</b> Section 1 – Short answer response questions on a selection of short texts. Section 2 – An extended response on the set text.	Common module: Texts and Human Experiences	
	Module A	
	Module B	
	Module C	
<b>Paper 2 – Modules</b> <i>Module A: Language, Identity and Culture</i> Candidates answer one sustained response question	<b>Components assessed across the course</b>	
<i>Module B: Close Study of Literature</i> Candidates answer one sustained response question	Knowledge and understanding of the course content.	50
<i>Module C: The Craft of Writing</i> Candidates answer only one response question which may have one or two parts.	Skills in responding to text and communication of ideas appropriate to audience, purpose and content across all modes.	50
		100

# English Advanced

## 2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Exclusions:** English (Standard); Fundamentals of English; English (ESL)

### Course Description:

Preliminary English (Advanced) students explore the ways that events, experiences, ideas, values and processes are represented in and through texts and analyse the ways in which texts reflect different attitudes and values. HSC English (Advanced) course students analyse and evaluate texts and the ways that they are valued in their contexts.

### Main Topics Covered:

#### 1. Preliminary Course – The course has two sections:

- Common module is undertaken through units of work called *Reading to Write*. This content comprises 40% of the course content.
- Electives in which students explore and examine texts and analyse aspects of meaning. The electives comprise 60% of the content. Modules include *Narratives That Shape Our World* and *Critical Study of Literature*.

#### 2. HSC Course – The course has two sections:

- the HSC Common Content Common module, *Texts and Human Experiences* consists of to both courses where students analyse and explore texts and apply skills in synthesis.
- Modules which emphasise particular aspects of shaping meaning and representation, questions of textual integrity, and ways in which texts are valued.

### Particular Course Requirements:

#### 1. Preliminary English (Advanced) course requires:

- study of Australian and other texts
- exploration of text drawn from prose fiction, drama, poetry, nonfiction, film, media and/or multimedia texts
- reading programs involving texts and textual forms in a wide variety of contexts
- integration of the modes of reading, writing, listening, speaking, and viewing and representing as appropriate
- engagement in the integrated study of language and text

#### 2. HSC English (Advanced) course requires:

Students are required to closely study four prescribed texts, one drawn from each of the following categories:

- Shakespearean drama
- prose fiction
- poetry OR drama

The remaining text may be film, media or nonfiction text or may be selected from one of the categories above.

### External HSC Assessment

### Internal HSC assessment

Section / Part	Component	
<b>Paper 1 – Texts and Human Experiences</b> <b>Two Sections</b> Section 1 – Short answer response questions on a selection of short texts. Section 2 – An extended response on the set text.	Common Module: Texts and human experiences	
	Module A	
	Module B	
	Module C	
<b>Paper 2 – Modules</b> <i>Module A: Textual Conversations</i> Candidates answer one sustained response question	<b>Components assessed across the course</b>	
	Knowledge and understanding of the course content.	50
	Skills in responding to text and communication of ideas appropriate to audience, purpose and content across all modes.	50
	<i>Module B: Critical Study of Literature</i> Candidates answer one sustained response question	
<i>Module C: The Craft of Writing</i> Candidates answer only one response question which may have one or two parts.		
		100

# Preliminary English Extension

1 unit of study for each of Preliminary (120hrs) and HSC (120hrs)

<b>Prerequisites:</b>	(a) English (Advanced) course (b) Preliminary English Extension Course for HSC Extension Course 1 (c) Extension Course 1 for Extension Course 2
<b>Exclusions:</b>	English (Standard); Fundamentals of English; English (EAL/D)

## Course Description:

- In the Preliminary (Extension) 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 HSC English (Extension) Course 1, 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 HSC English (Extension) Course 2, 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.

## Main Topics Covered:

**Preliminary Extension Course** has one mandatory module: Texts, Culture and Value as well as a related research project.

**HSC Extension Course 1** has one common module, Literary Worlds, with five associated electives. Students must complete one elective - Literary homelands.

**HSC Extension Course 2** requires students to undertake a composition process in order to complete a Major Work and Reflection Statement.

## Particular Course Requirements:

**Preliminary English (Extension) 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.

**Preliminary English (Extension) Course 1** 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.

**The HSC English (Extension) Course 2** 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.

## Business Studies

2 units for each of Preliminary (120hrs) and HSC (120hrs)

### 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 foster's intellectual, social and moral development by assisting students to think critically about the role of business and its ethical responsibilities of society.

### Main Topics Covered:

#### Preliminary 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

#### HSC 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

## Summary of external and internal HSC assessment

External examination	Mark
<i>Section I</i> Objective response questions	20
<i>Section II</i> Short-answer questions	40
<i>Section III</i> Candidates answer one extended response question in the form of a business report	20
<i>Section IV</i> Candidates answer one extended response question	20
	<b>100</b>

Internal assessment	Weighting
Knowledge and understanding of course content	40
Stimulus-based skills	20
Inquiry and research	20
Communication of business information, ideas and issues in appropriate forms	20
	<b>100</b>

Internal school assessment	Weighting
In class essay	20
Half yearly exam	25
Research and in class business report	25
Trial HSC	30

# Geography

2 units for each of Preliminary (120hrs) and HSC (120hrs)

## Course Description

- The Preliminary course investigates biophysical and human geography and develops students' knowledge and understanding about the spatial and ecological dimensions of geography.. Inquiry 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 demonstrate the relevance of geographical study.

## Main topics Covered:

### 1. Preliminary Course

Biophysical Interactions (45%) – how biophysical processes contribute to sustainable management

Global Challenges (45%) – geographical study of issues at a global scale.

Senior Geography Project (10%) – a geographical study of student's own choosing

### 2. HSC Course

Ecosystems at Risk (33%) – the functioning of ecosystems, their management and protection

Urban Places (33%) – study of cities and urban dynamics

People and Economic Activity (33%) – geographic study of economic activity at a local and global context.

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

## Particular Course Requirements:

Students complete a senior geography project (SGP) in the Preliminary course and must undertake 10 hours of fieldwork in both the Preliminary and HSC courses. Students will be required to submit both oral and written geographic reports.

## Summary of external and internal HSC assessment

External examination	Mark	Internal assessment	Weighting
<i>Section I</i> Objective response questions	20	Knowledge and understanding of course content	40
<i>Section II</i> Short-answer questions	40	Geographical tools and skills	20
<i>Section III</i> Candidates answer two extended response questions	40	Geographical inquiry and research, including fieldwork	20
	100	Communication of geographical information, ideas and issues in appropriate forms	20
			100

Internal school assessment	Weighting
Field work and report	25
Short responses related to urban Dynamics	20
Geography essay in class	25
Trial HSC	30

# Economics

2 units for each of Preliminary (120hrs) and HSC (120hrs)

## Course Description

Economics provides understanding for students about many aspects of the economy and its operation that are frequently reported in the media. It investigates issues such as why unemployment or inflation rates change and how these changes will impact on individuals in society. Economics develops students' knowledge and 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.

## Main Topics Covered:

### Preliminary 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

### HSC 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

## Summary of external and internal HSC assessment

External examination	Mark
<i>Section I</i> Objective response questions	20
<i>Section II</i> Short-answer questions	40
<i>Section III</i> Candidates answer one stimulus-based extended response question	20
<i>Section IV</i> Candidates answer one extended response question	20
	<b>100</b>

Internal assessment	Weighting
Knowledge and understanding of course content	40
Stimulus-based skills	20
Inquiry and research	20
Communication of economic information, ideas and issues in appropriate forms	20
	<b>100</b>

Internal school assessment	Weighting
Research and in class essay	25
In class essay	30
Multiple choice with problem solving	15
Trial HSC	30

# Society and Culture

2 units for each of Preliminary (120hrs) and HSC (120hrs)

## Course Description

Society and Culture deals with areas of interest and relevance to students and develops knowledge, understanding, skills, values and attitudes essential to an appreciation of the social world. The interaction of persons, society, culture, environment and time and how they shape human behavior is a central theme of study. Students develop an understanding of research methodologies and undertake research in an area of particular interest to them. The research findings are presented for external assessment in the Personal Interest Project (PIP).

## Main topics Covered:

### 1. Preliminary Course

- The Social and Cultural World – the interaction between aspects of society and cultures
- Personal and Social Identity – socialisation & coming of age in a variety of social and cultural settings.
- Intercultural Communication – how people in different cultures interact and communicate

### 2. HSC Course

#### Core

- Social and Cultural Continuity and Change – the nature, continuity and change, research and study of a selected country
- The Personal Interest Project - an individual research project

#### Depth Studies

Two to be chosen from:

- Popular Culture – the interconnection between individuals and popular culture
- Belief Systems – role of belief systems in societies, cultures and personal life
- Conformity and Non conformity – why are there sub-cultures?
- Inclusion and Exclusion- why does inequality exist and how can it be overcome?

## Particular Course Requirement

- Completion of Personal Interest Project

## Summary of external and internal HSC assessment

External examination	Mark
<b>Written examination</b>	
<i>Section I – Core</i>	
Objective response questions	8
Short-answer questions	12
<i>Section II</i>	
Candidates answer one question in parts on a Depth Study	20
<i>Section III</i>	
Candidates answer one extended response question on a different Depth Study to that chosen in Section II	20
<b>Personal Interest Project</b>	40
	<b>100</b>

Internal assessment	Weighting
Knowledge and understanding of course content	50
Application and evaluation of social and cultural research methodologies	30
Communication of information, ideas and issues in appropriate forms	20
	<b>100</b>

Internal school assessment	Weighting
Research and written report	25
Oral presentation on social Inclusions / Exclusions	20
In class essay	25
Trial HSC	30



## Aboriginal Studies 2 unit

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**

### Course Description

#### Year 11 course

Focuses on Aboriginal peoples' relationship to the Land, Aboriginal heritage and identity, and an historical examination of colonialism, racism and prejudice from pre-contact times to the 1960s. The course also includes the development of skills in culturally appropriate research and inquiry methods. It involves case studies.

**HSC course** provides for in depth study of current events from the 1960s. During the course, students will undertake consultation with Aboriginal communities and will study the course through the experiences of national and international Indigenous communities. Students apply research and inquiry methods through the completion of a major project.

### Main Topics Covered

#### Year 11 Course

■ Part I: Aboriginality and the Land (20%) – Aboriginal peoples' relationship to Country

-Dispossession and dislocation of Aboriginal peoples from Country

-Impact of British colonisation on Country

■ Part II: Heritage and Identity (30%) – The Dreaming and cultural ownership

-Diversity of Aboriginal cultural and social life

-Impact of colonisation on Aboriginal cultures and families

-Impact of racism and stereotyping

■ Part III: International Indigenous Community: Comparative Study (25%) – Location, environment and features of an international Indigenous community

-Comparison of the key experiences of the international Indigenous and an Australian Aboriginal community in relation to Aboriginality and the Land; and Heritage and Identity

■ Part IV: Research and Inquiry Methods: Local Community Case Study (25%) – Methods and skills relating to; community consultation; planning research; acquiring information; processing information; communicating information

#### HSC Course

■ Part I – Social Justice and Human Rights Issues (50%) – A Global Perspective (20%)

Global understanding of human rights and social justice

AND

B Comparative Study (30%)

A comparative case study on an Aboriginal and international Indigenous community, in relation to TWO of the following topics: Health, Education, Housing, Employment, Criminal Justice, Economic Independence

■ Part II – Case Study of an Aboriginal community for each topic (20%) – A Aboriginality and the Land The Land Rights movement and the recognition of native title; government policies and legislation; non-Aboriginal responses

OR

B Heritage and Identity – Contemporary aspects of Aboriginal heritage and identity, government policies and legislation; non-Aboriginal responses

■ Part III – Research and Inquiry Methods – Major Project (30%)

Choice of project topic based on student interest.

# Ancient History

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**

## Course Description

The Preliminary course is structured for students to investigate:

- People, groups, events, institutions, societies and historical sites from the ancient world
- Archaeological and written evidence and the methods used by historians and archaeologists.

The Preliminary Course introduces students to the language and concepts of Ancient History through case studies such as Ancient Human Remains, and Tutankhamen's Tomb.

In the HSC course, students use archaeological and written evidence to investigate a core study, a personality from the ancient world plus one ancient society and one historical period drawn from at least two of the following geographic areas: Egypt, Near East, Greece and Rome.

HSC History Extension involves the study and evaluation of the ideas and processes used by historians to produce history. In Part 1 of the course, students investigate the question "What is history?" through readings compiled in a source book and through one case study. In Part II, students design, undertake and communicate their own personal historical inquiry.

**1 unit at HSC only – recommended students**

## Main Topics Covered

### Preliminary Course

- **Part I**
  - **Investigating Ancient History**, The Nature of Ancient History.
  - Case Studies – at least one: Tutankhamen's Tomb and Human Remains.
- **Part II: Investigation Ancient History Case Studies**; The Roman Games and Persepolis.
- **Part III: Historical Investigation** - Student choice of Historical Inquiry topic research skills.
- **Part IV: Features of Ancient Societies: Women in Ancient Egypt and Greece.**

### HSC Course

- **Part I:** Core Study – Cities of Vesuvius, Pompeii and Herculaneum (25% of course time)
- **Part II:** Personalities in Their Times – one personality to be studied from the Personality options offered in the syllabus: (25% of course )
- **Part III:** Ancient Societies – one Ancient Society to be studied from the Ancient Societies options offered in the syllabus: (25% of course time)
- **Part IV:** Historical Periods – one Historical Period to be studied from the Historical Periods options offered in the syllabus: (25% of course time)

# Legal Studies

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**

## Course Description

The Preliminary 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 examines an individual's rights and responsibilities, how disputes are resolved and examines a contemporary issue concerning the individual and technology. Students have the opportunity to analyse and synthesise legal information and investigate legal issues from a variety of perspectives.

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

## Main Topics Covered

### Preliminary Course

- The Legal System (40% of course time)
- The Individual and the State (30% of course time)
- The Law in Practice (30% of course time)

### HSC Course

- Crime (30% of course time)
- Human Rights (20% of course time)
- Options (50% of course time)

Students will also study two focus studies chosen from:

- Family
- World order

**Key themes incorporated across all topics:** Justice, Law and Society, Culture, Values and Ethics, Conflict and Cooperation, Continuity and Change, Legal Processes and Institutions, Effectiveness of the Legal System.

**Particular Course Requirements:** No special requirements

# Modern History

2 units for each of Preliminary (120hrs) and HSC (120hrs)

## Course Description

The Preliminary course is designed to provide students with opportunities to investigate individuals, groups, events, institutions, societies and ideas in a range of historical contexts, as a background for their more specialised HSC studies.

The HSC course is designed for students to investigate national and international forces for change and continuity in the 20<sup>th</sup> century through three major studies.

**HSC History Extension** involves the study and evaluation of the ideas and processes used by historians to produce history and also undertake a Case Study on the Presidency of John Fitzgerald Kennedy. In Part 1 of the course, students investigate the question 'What is history?' through readings compiled in a source book and through one case study. In Part II, students design, undertake and communicate their own personal historical inquiry. **1 unit at HSC only - recommended students**

*Main Topics Covered;*

## Preliminary Course

- **Part I: Investigation Modern History:** The Construction of Modern Histories and a choice of 2 Depth Studies including; The Assassination of JFK, The Fall of the Romanovs, The American Civil War, The Cuban Revolution.  
( 60 % of course time)
- **Part II: Shaping the Modern World:** World War One  
( 40% of course time)
- **Part 111: A Historical Investigation:** Student Choice of Historical Inquiry and research skills project.  
( 20% of course time)

## HSC Course

- **Part I: Core Study Power and Authority in the Modern World 1919-1946-** The Rise of Dictatorship after WW I the Rise of Nazi regime to 1939 and the search for peace and security in the world  
(30% of course time)
- **Part II: National Study; The USA or Russia and the Soviet Union.**  
(30 % of course time)
- **Part III: Peace and Conflict:** Conflict in Europe or Conflict in Indochina  
(30 % of course time)
- **Part IV: Change in the Modern World:** Apartheid in South Africa or Civil Rights in the USA.  
(30 % of course time)

# Studies of Religion I

1 unit for each of Preliminary (60hrs) HSC (60hrs)

**Exclusions:** Studies of Religion II

## Course Description:

Studies of Religion I promotes a critical awareness, understanding and application of the nature of religion and the influence of religious traditions, beliefs and practices on individuals and society. The particular focus is on the way in which a religious tradition, as an integrated belief system, provides a distinctive answer to the enduring questions of human existence. The study of a particular religious tradition enables students to demonstrate an appreciation of the diversity of expression within, and the underlying unity of, the whole religious tradition.

## Main Topics Covered:

### Preliminary Course

- The nature of religion and beliefs including Australian beliefs and spiritualities, as a distinctive response to the human search for the meaning of life
- Two religious tradition studies :  
Buddhism, and Hinduism,

Students learn about: origins, principal beliefs, sacred text and writings, core and ethical teachings and personal devotion in the home.

### HSC Course

- Religion and belief systems in Australia post - 1945
- Two religious depth studies : Buddhism and Hinduism:

Students learn about significant people and ideas, ethics and significant practices in the life of adherents

## Studies of Religion II

**2 unit for each of Preliminary (120hrs) and HSC (120hrs)**

**Exclusions:** Studies of Religion I

### **Course Description:**

Studies of Religion II promotes a critical awareness, understanding and application of the nature of religion and the influence of religious traditions, beliefs and practices on individuals and society. The particular focus is on the way in which a religious tradition, as an integrated belief system, provides a distinctive answer to the enduring questions of human existence. The study of a particular religious traditions enables students to demonstrate an appreciation of the diversity of expression within, and the underlying unity of, the whole religious tradition.

### **Main Topics Covered:**

#### **Preliminary Course**

- The nature of religion and beliefs including Australian beliefs and spiritualities, as a distinctive response to the human search for the meaning of life. Religions of Ancient Origin
- Religion in Australia pre-1945,
- **THREE** religious tradition studies :  
Buddhism, and Hinduism, Choose Third Depth Study from (Islam Christian, Judaism)

Students learn about: origins, principal beliefs, sacred text and writings, core and ethical teachings and personal devotion in the home.

#### **HSC Course**

- Religion and belief systems in Australia post – 1945- Religion and Non Religion, Religion and Peace
- **THREE** religious Depth Studies: Buddhism and Hinduism, and either, Islam or Christianity or Judaism.

Students learn about significant people and ideas, ethics and significant practices in the life of adherents

## Japanese (Beginners)

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**

### Course Description

The Preliminary course develops students' knowledge and understanding of the Japanese language. Students must acquire knowledge of the Japanese language through six themes integrated by the four specific skills of listening, speaking, reading and writing.

The HSC course continues to develop this knowledge and understanding.

All themes listed in the syllabus must be studied for the HSC. Themes studied in the Preliminary year will be discovered in greater depth.

The study of Japanese contributes to the overall education of students, particularly in the areas of communication, cross-cultural understanding, literacy and general knowledge.

Students can gain access to both the language and the rich cultural traditions of Japan, as well as an understanding of different attitudes and values within the wider Australian

Community and beyond. The ability to communicate in Japanese may, in conjunction with other skills, provide students with enhanced vocational opportunities in areas such as trade, tourism and hospitality, banking and finance, technology, education and research, the arts, diplomacy, government, law, media and advertising, translation and interpreting, and cuisine and Catering.

### Main Topics Covered:

- Family Life and Home
- Neighbourhoods and Communities
- Education and Work
- Friends, Recreation and Pastimes
- Holidays, Travel and Tourism
- Future plans and Aspirations.

A continuers course is also available which looks at the themes of the individual, Japanese speaking communities and the changing world. See the HT for this area for more information.

## Japanese (Continuers)

2 units for each of Preliminary (120hrs) and HSC (120hrs)

### Course Description

The Preliminary course develops students' knowledge and understanding of the Japanese language. Students must acquire knowledge of the Japanese language through three themes integrated by the four specific skills of listening, speaking, reading and writing. As they expand the range of tasks, texts and text types studied, students' knowledge and understanding of the culture and the language of Japanese-speaking communities will develop further.

The study of Japanese contributes to the overall education of students, particularly in the areas of communication, cross-cultural understanding, literacy and general knowledge. Students can gain access to both the language and the rich cultural traditions of Japan, as well as an understanding of different attitudes and values within the wider Australian Community and beyond. The ability to communicate in Japanese may, in conjunction with other skills, provide students with enhanced vocational opportunities in areas such as trade, tourism and hospitality, banking and finance, technology, education and research, the arts, diplomacy, government, law, media and advertising, translation and interpreting, and cuisine and Catering.

### Main Topics Covered:

There are three prescribed themes studied in the HSC Course:

- the individual
- the Japanese-speaking communities
- the changing world.



# MATHEMATICS -

## Understanding the different levels of study at Macquarie Fields High School

<b>Preliminary and HSC Courses</b>	<p>It is important to realise that <b>Mathematics is a particular way of thinking and not all students can study mathematics easily.</b></p> <p>There are three levels of Mathematics in the Preliminary year. All three courses are demanding and it is important to determine which course suits a student's interests, needs and abilities.</p> <p>Mathematics is not compulsory; however at Macquarie Fields most students study one of these courses. Mathematics can be studied at a standard level or, advanced level or extension level representing either two or three units.</p>
<b>Mathematics Standard</b>	The study of Mathematics Standard in Stage 6 enables students to develop their knowledge and understanding of what it means to work mathematically, improve their skills to solve problems relating to their present and future needs and aspirations, and improve their understanding of how to communicate in a concise and systematic manner.
<b>Mathematics Advanced</b>	The study of Mathematics Advanced in Stage 6 enables students to enhance their knowledge and understanding of what it means to work mathematically, develop their understanding of the relationship between 'real-world' problems and mathematical models and extend their skills of concise and systematic communication.
<b>Mathematics Extension 1</b>	<p>The study of Mathematics Extension 1 in Stage 6 enables students to extend their knowledge and understanding of what it means to work mathematically, develop their skills to reason logically, generalise and make connections, and enhance their understanding of how to communicate in a concise and systematic manner.</p> <p><b>In term 4 Year 12 students can enroll in one other additional course</b></p>
<b>Mathematics Extension 2</b>	The study of Mathematics Extension 2 in Stage 6 enables students to extend their knowledge and understanding of working mathematically, enhance their skills to tackle difficult, unstructured problems, generalise, make connections and become fluent at communicating in a concise and systematic manner.

## Pathway

Year 10	Level 1	Level 2	Level 3		
Year 11	Standard		Advanced	Extension 1	
Year 12	Standard 1	Standard 2	Advanced	Extension 1	Extension 2

***Please talk to the Mathematics staff about the differences between these levels.***

# Mathematics Standard

## 2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Prerequisites:** The course is constructed on the assumption that students have achieved the Stage 5

**Level 1 or Level 2 outcomes.**

**Exclusions:** Students may **not** study any other Stage 6 Mathematics course in conjunction with Standard Mathematics.

### Course Entry Guidelines –

- All students study the Preliminary Standard Mathematics course. Students must choose their own HSC Pathway at the completion of Year 11. The two pathways are the HSC Mathematics Standard 1 and HSC Mathematics Standard 2

\* Students considering choosing the course should be advised that:

Students studying Mathematics Standard 1 may elect to undertake an optional HSC examination. The examination mark may be used by the Universities Admissions Centre (UAC) to contribute to the student's Australian Tertiary Admission Rank (ATAR). All students studying Mathematics Standard 2 will sit for an HSC examination.

### Course Description:

- The Mathematics Standard courses are focused on enabling students to use mathematics effectively, efficiently and critically to make informed decisions in their daily lives. They provide students with the opportunities to develop an understanding of, and competence in, further aspects of mathematics through a large variety of real-world applications for a range of concurrent HSC subjects.
- Mathematics Standard 1 is designed to help students improve their numeracy by building their confidence and success in making mathematics meaningful. This course offers students the opportunity to prepare for post-school options of employment or further training.
- Mathematics Standard 2 is designed for those students who want to extend their mathematical skills beyond Stage 5 but are not seeking the in-depth knowledge of higher mathematics that the study of calculus would provide. This course offers students the opportunity to prepare for a wide range of educational and employment aspirations, including continuing their studies at a tertiary level.
- 

### Preliminary Standard Course

Topics	Sub topics
<ul style="list-style-type: none"><li>Algebra</li><li>Measurement</li><li>Financial Mathematics</li><li>Statistical Analysis</li></ul>	Formulae and Equations Linear Relationships Applications of Measurement Working with Time Money Matters Data Analysis Relative Frequency and Probability

### HSC Standard 1 Course

Topics	Sub topics
<ul style="list-style-type: none"><li>Algebra</li><li>Measurement</li><li>Financial Mathematics</li><li>Statistical Analysis</li><li>Networks</li></ul>	Types of Relationships Right-angled Triangles Rates Scale Drawings Investment Depreciation and Loans Further Statistical Analysis Networks and Paths

### HSC Standard 2 Course

Topics	Sub topics
<ul style="list-style-type: none"><li>Algebra</li><li>Measurement</li><li>Financial Mathematics</li><li>Statistical Analysis</li><li>Networks</li></ul>	Types of Relationships Non right-angled Trigonometry Rates and Ratios Investments and Loans Annuities Bivariate Data Analysis The Normal Distribution Network Concepts Critical Path Analysis

**Note:** Students will choose either HSC Mathematics Standard 1 or HSC Mathematics Standard 2 pathway at the completion of the Preliminary Mathematics Standard Course

### Assessment

#### **Preliminary and HSC Course**

The suggested components, weightings and tasks for the Preliminary Course are detailed below.

Section / Part	Weighting	Tasks might include
Understanding, Fluency and Communicating	50	<ul style="list-style-type: none"><li>• examination style questions</li><li>• an investigative project or assignment involving presentation of work in class</li><li>• an independently chosen project or investigation</li><li>• scaffolded learning tasks culminating in an open-ended or modelling style problem</li><li>• a guided investigation or research task involving collection of data and analysis.</li></ul>
Problem Solving, Reasoning and Justification	50	
<b>Total</b>	<b>100</b>	

# Mathematics Extension 1

1 unit Preliminary (60hrs) HSC (60hrs)

**Prerequisites:** The course is constructed on the assumption that students have achieved the stage **5.3 outcomes at a high level**. This includes the option topics of Functions and Logarithms, Curve Sketching and Polynomials and Circle Geometry.

**Exclusions:** Mathematics Standard

**Course Description:** this course is intended for students who have demonstrated a mastery of the skills of Stage 5 Mathematics and who are interested in the study of further skills and ideas in mathematics. The course is intended to give these students a thorough understanding of and competence in aspects of mathematics. It has general educational merit and is also useful for concurrent studies of science, industrial arts and commerce. The course is a recommended minimum basis for further studies in mathematics as a major discipline at a tertiary level and for the study of mathematics in support of the physical and engineering sciences. Although the course is sufficient for these purposes, students of outstanding mathematical ability should consider undertaking the Mathematics Extension 2 course.

Year 11 course (60 hours)	Mathematics Extension	
	Topics	Subtopics
	Functions	ME-F1 Further Work with Functions ME-F2 Polynomials
	Trigonometric Functions	ME-T1 Inverse Trigonometric Functions ME-T2 Further Trigonometric Identities
	Calculus	ME-C1 Rates of Change
	Combinatorics	ME-A1 Working with Combinatorics
Year 12 course (60 hours)	Mathematics Extension 1	
	Topics	Subtopics
	Proof	ME-P1 Proof by Mathematical Induction
	Vectors	ME-V1 Introduction to Vectors
	Trigonometric Functions	ME-T3 Trigonometric Equations
	Calculus	ME-C2 Further Calculus Skills ME-C3 Applications of Calculus
	Statistical Analysis	ME-S1 The Binomial Distribution

## Preliminary HSC and Assessment Component and Weightings

Component	Description	Weighting
Concepts, skills and techniques	Use of concepts, skills and techniques to solve mathematical problems in a wide range of theoretical and practical contexts	50
Reasoning and communication	Application of reasoning and communication in appropriate forms to construct mathematical arguments and proofs and to interpret and use mathematical models	50
		<b>100</b>

School assessment for the Mathematics Extension 1 course can be based on the whole of the course. (Preliminary and HSC courses)

The HSC External assessment consists of two written examination papers. One paper is identical to the three hours of paper for the Mathematics course. The other, of two hours duration, is based on Mathematics Extension 1 course content.

# Mathematics Advanced

2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Prerequisites:** The course is constructed on the assumption that students have achieved the stage **5.3 outcomes at a satisfactory level**. This includes the option topics Real Numbers, Algebraic Techniques and Coordinate Geometry as well as at least some of Trigonometry and Deductive Geometry.

**Exclusions:** Mathematics Standard

## Course Description:

The course is intended to give students who have demonstrated an above average competence in Stage 5 Mathematics, an understanding of further aspects of mathematics, which are applicable to the real world. It has general educational merit and is also useful for concurrent studies in science and commerce. The course is a sufficient basis for further studies in mathematics as a minor discipline at tertiary level in support of courses such as the life sciences or commerce. Students who require substantial mathematics at a tertiary level, supporting the physical sciences, computer science or engineering, should undertake the Mathematics Extension 1 course or both the Mathematics Extension 1 and Mathematics Extension 2 courses.

Year 11 course (120 hours)	<b>Mathematics Advanced</b>	
	<b>Topics</b>	<b>Subtopics</b>
	Functions	<b>MA-F1</b> Working with Functions
	Trigonometric Functions	<b>MA-T1</b> Trigonometry and Measure of Angles <b>MA-T2</b> Trigonometric Functions and Identities
	Calculus	<b>MA-C1</b> Introduction to Differentiation
	Exponential and Logarithmic Functions	<b>MA-E1</b> Logarithms and Exponentials
	Statistical Analysis	<b>MA-S1</b> Probability and Discrete Probability Distributions
Year 12 course (120 hours)	<b>Mathematics Advanced</b>	
	<b>Topics</b>	<b>Subtopics</b>
	Functions	<b>MA-F2</b> Graphing Techniques
	Trigonometric Functions	<b>MA-T3</b> Trigonometric Functions and Graphs
	Calculus	<b>MA-C2</b> Differential Calculus <b>MA-C3</b> Applications of Differentiation <b>MA-C4</b> Integral Calculus
	Financial Mathematics	<b>MA-M1</b> Modelling Financial Situations
	Statistical Analysis	<b>MA-S2</b> Descriptive Statistics and Bivariate Data Analysis <b>MA-S3</b> Random Variables

## Preliminary and HSC Course Assessment Components and Weightings

Component	Description	Weighting
Concepts, skills and techniques	Use of concepts, skills and techniques to solve mathematical problems in a wide range of theoretical and practical contexts	50
Reasoning and communication	Application of reasoning and communication in appropriate forms to construct mathematical arguments and proofs and to interpret and use mathematical models	50
		<b>100</b>

The HSC external examination is 3 hours in duration. Up to 20% of the Preliminary course content is examinable.

# PDHPE

## 2 units for each of Preliminary (120hrs) and HSC (120hrs)

### Course Description:

The Personal Development, Health and Physical Education course has an integrated approach that involves students learning about and practising ways of maintaining active, healthy lifestyles and improving their health status. PDHPE has a strong focus on applying the skills of critical thinking, research and analysis.

The preliminary course examines a range of areas that underpin health and physical activity. It allows students to examine how people think about health and physical activity and the management of their own personal health and that of others. The scientific foundations of human movement including the relationships between anatomy, physiology, fitness and biomechanics are examined. Students have the opportunity to study two option modules .

In the HSC course students examine the health status of Australians, investigate the health priorities in Australia, and examine the role of the health care system and health promotion. Students investigate the factors that affect performance through a study of the approaches to training and skill development, psychology, nutrition and recovery strategies. Students have the opportunity to study two option modules.

### Main Topics Covered:

#### Preliminary Course

##### Core Topics (60%)

- Better Health for Individuals
- The Body in Motion

##### Optional Component (40%)

Two of the following options will be selected:

- First Aid
- Composition and Performance
- Fitness Choices
- Outdoor Recreation

#### HSC Course

##### Core Topics (60%)

- Health Priorities in Australia
- Factors Affecting Performance

##### Optional Component (40%)

Two of the following options will be selected.

- The Health of Young People
- Sport and Physical Activity in Australian Society
- Sports Medicine
- Improving Performance
- Equity and Health

### Preliminary and HSC Course Assessment Components and Weightings

#### Assessment

Component	Weighting
Knowledge and understanding of course content	40
Skills in critical thinking, research, analysis and communicating	60
Total Marks	100



## Sport Lifestyle and Recreation (SLR)

### 1 unit Content Endorsed Course (Non ATAR) for Preliminary (60hrs) HSC (60hrs)

#### Course Description:

The Sport, Lifestyle and Recreation course comprises of 15 optional modules. There is no prescribed core component. A selection from the modules below are utilised to develop programs that respond to student needs and interests.

The Sport, Lifestyle and Recreation Content Endorsed Course Stage 6 provides a context within which to develop general competencies considered essential for the acquisition of effective, higher-order thinking skills necessary for further education, work and everyday life.

The following key competencies are embedded into the Sport, Lifestyle and Recreation course to enhance student learning:

- collecting, analysing and organising information
- communicating ideas and information
- planning and organising activities
- working with others and in teams
- using mathematical ideas and techniques
- using technology
- solving problems

Units and Years of Study	Hours	Preliminary / HSC	Number of Modules
1 unit / 2 years	140	60 hours Preliminary plus 80 hours HSC 60 hours HSC	3–6

**3-6 Modules are covered from the list below**

- The modules in Sport, Lifestyle and Recreation are:
- Aquatics
- Athletics
- Dance
- First Aid and Sports Injuries
- Fitness
- Games and Sports Applications I
- Games and Sports Applications II
- Gymnastics
- Healthy Lifestyle
- Individual Games and Sports Applications
- Outdoor Recreation
- Resistance Training
- Social Perspectives of Games and Sports
- Sports Administration
- Sports Coaching and Training

**Assessment Components, Weightings and Tasks**

There is no external examination of students in Stage 6 Content Endorsed Courses. Assessment provides a measure of a student's achievement based on the range of syllabus content and outcomes.

One task may be used to assess several components. Two to three tasks are sufficient to assess the HSC course outcomes for a one-unit course.

There is a balance between the assessment of:

- knowledge and understanding outcomes and course content  
and
- skills outcomes and content, as follows:

Component	Weighting (%)
Knowledge and Understanding	50%
Skills	50%

## Sport Lifestyle and Recreation (SLR)

### 2 unit Content Endorsed Course ( Non ATAR) for Preliminary (120hrs) and HSC (120hrs)

#### Course Description:

The Sport, Lifestyle and Recreation Course comprises of 15 optional modules. There is no prescribed core component. A selection from the modules below are utilised to develop programs that respond to student needs and interests.

The Sport, Lifestyle and Recreation Content Endorsed Course Stage 6 provides a context within which to develop general competencies considered essential for the acquisition of effective, higher-order thinking skills necessary for further education, work and everyday life.

The following key competencies are embedded in Sport, Lifestyle and Recreation to enhance student learning:

- collecting, analysing and organising information
- communicating ideas and information
- planning and organising activities
- working with others and in teams
- using mathematical ideas and techniques
- using technology
- solving problems
- 

Units and Years of Study	Hours	Preliminary / HSC	Number of Modules
2 units / 2 years	280	120 hours Preliminary plus 160hrs 120 hours HSC	6–12

**6-12 Modules are covered from the list below**

The modules in Sport, Lifestyle and Recreation are:

- Aquatics
- Athletics
- Dance
- First Aid and Sports Injuries
- Fitness
- Games and Sports Applications I
- Games and Sports Applications II
- Gymnastics
- Healthy Lifestyle
- Individual Games and Sports Applications
- Outdoor Recreation
- Resistance Training
- Social Perspectives of Games and Sports
- Sports Administration
- Sports Coaching and Training

**Assessment Components, Weightings and Tasks**

There is no external examination of students in Stage 6 Content Endorsed Courses. Assessment provides a measure of a student's achievement based on the range of syllabus content and outcomes.

One task may be used to assess several components. Three to five tasks are sufficient to assess the HSC course outcomes for a two-unit course.

There is a balance between the assessment of:

- knowledge and understanding outcomes and course content and
- skills outcomes and content, as follows:

Component	Weighting (%)
Knowledge and Understanding	50%
Skills	50%

# Community & Family Studies

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**

## Course Description:

Community and Family Studies is designed to develop in each student an understanding of the diverse nature and interdependence of families and communities, within Australian society. The course enables students to plan and manage resources effectively in order to address contemporary issues facing families and communities.

## Main Topics Covered:

### 1. Preliminary Course

- Resource Management - Basic concepts of the resource management process (approximately 20% of course time).
- Individuals and Groups - The individual's roles, relationships and tasks within groups (approximately 40% of course time).
- Families and Communities - Family structures and functions and the interaction between family and community (approximately 40% of course time).

### 2. HSC Course

- Research Methodology - Research methodology and skills culminating in the production of an Independent Research Project (approximately 25% of course time).
- Groups in Context - The characteristics and needs of specific community groups (approximately 25% of course time).
- - Parenting and Caring Issues facing individuals and groups who adopt roles of parenting and caring in contemporary society (approximately 25% of course time).

**PLUS ONE HSC Option Modules** (approximately 25% of course time):

- Family and Societal Interactions - Government and community structures that support and protect family members throughout their lifespan.
- Social Impact of Technology - The impact of evolving technologies on individuals and lifestyle.
- Individuals and Work - Contemporary issues confronting individuals as they manage roles within both their family and work environments.

## Particular Course Requirements:

Students are required to complete an Independent Research Project as part of the HSC internal assessment. The focus of the Independent Research Project should be related to the course content of one or more of the following areas: individuals, groups, families, communities, resource management.

Component	Weighting %
Knowledge and understanding of course content	40
Skills in critical thinking, research methodology, analysing and communicating	60
	100

# Design and Technology

2 units for each of 2 units for each of Preliminary (120hrs) and HSC (120hrs)

## Course Description

Design and Technology Stage 6 is designed to develop students' confidence, competence and responsibility in designing, producing and evaluating to meet both needs and opportunities, and to understand the factors that contribute to successful design and production.

## Preliminary Course

The Preliminary course is 120 indicative hours and will involve a minimum of two design projects. The projects will develop skills and knowledge to be further developed in the HSC course. Each project will place emphasis on the development of different skills and knowledge in designing and producing.

Students must participate in hands-on, practical activities to achieve the outcomes of this course. Class activities should be designed to develop knowledge and skills in designing and producing. Students should develop their knowledge of the activities within industrial and commercial settings which support design and technology and relate these processes to the processes used in their own designing and producing.

Design projects must involve the design, production and evaluation of a product, system or environment that includes evidence of design processes recorded in a design folio, which may be in a variety of different forms. Students should be encouraged to communicate their design ideas using a range of appropriate media.

## HSC Course

The HSC course is 120 indicative hours and includes the development and realisation of the major design project, a case study of an innovation and other teaching and learning activities. The comprehensive study of design and the processes of designing and producing that were studied in the Preliminary course are synthesised and applied.

The major design project involves students selecting and applying appropriate design, production and evaluation skills to a product, system or environment which satisfies an identified need or opportunity. Students have developed a wide range of skills and knowledge in the Preliminary course and in the HSC course are able to select and use those skills and knowledge appropriate to their selected project. The students relate the techniques and technologies used in industrial and commercial settings to those used in the development of design projects.

The case study involves the critical analysis of an innovation. By conducting a detailed case study of an innovation, students will be able to identify the factors underlying the success of the innovation; analyse ethical issues in relation to the innovation; and discuss the impact of the innovation on Australian society. They may also be able to apply processes similarly in the exploration and development of the major design project.

## Particular Course Requirements

In the Preliminary course, each of the content areas should be introduced and given appropriate emphasis through teaching and learning activities and a minimum of two design projects.

In the HSC course, each of the content areas is addressed through the major design project, case study and through other teaching and learning activities.

Component	Weighting %
Knowledge and understanding of course content	40
Knowledge and skills in designing, managing, producing and evaluating (a major) design project(s)	60
	100

# Food Technology

## 2 units for each of Preliminary (120hrs) and HSC (120hrs)

### Course Description:

The Preliminary 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.

### Main Topics Covered:

#### 1. Preliminary Course

- **Food Availability and Selection:** (30%) The availability of food from a world perspective
- **Food Quality:** (40%) The storage, preparation and sensory characteristics of food
- **Nutrition:** (30%) The structure and functional properties of food.

#### 2.HSC Course

- **The Australian Food Industry:** (25%) Storage and distribution of food
- **Food Manufacture:** (25%) The production and processing aspects of the food industry.
- **Food Product Development:** (25%) Factors impacting on the marketing and designing of food products.
- **Contemporary Nutrition Issues:** (25%) Incorporating diet and health in Australia and its influence on nutritional status of the individual.

### Particular Course Requirements

There is no prerequisite study for the 2 unit Preliminary course. Completion of the 2 unit Preliminary course is a prerequisite to the study of the 2 unit HSC course. **It is mandatory that students undertake practical activities.**

Component	Weighting %
Knowledge and understanding of course content	40
Knowledge and skills in designing, researching, analysing and evaluating	30
Skills in experimenting with and preparing food by applying theoretical concepts	30
	100

# Engineering Studies

**2 units for each of 2 units for each of Preliminary (120hrs) and HSC (120hrs)**

**Desired Prerequisite: 2 Unit Mathematics and/or Extension Mathematics**

## Course Description:

Both Preliminary 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 and applying a range of applications and fields of engineering.

## Main Topics Covered:

### Preliminary 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.

### HSC 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.

## Particular Course Requirements:

### Preliminary 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.

### HSC 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 Preliminary 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.

Component	Weighting %
Knowledge and understanding of course content	60
Knowledge and skills in research, problems solving and communication related to engineering practice	40
	100



## Industrial Technology - Timber or Graphics

**2 units for each of 2 units for each of Preliminary (120hrs) and HSC (120hrs)**

**Exclusions:** Some industry focus areas with similar VET Curriculum Framework streams and Content Endorsed Courses. **Only one focus area can be chosen by each student.**

### Course Description

Industrial Technology at Stage 6 will develop a student's knowledge and understanding of a selected industry and its related technologies, highlighting the importance of design, management, communication and production through practical experiences.

Industrial Technology Stage 6 consists of project work and an industry study that will develop a broad range of skills and knowledge related to the focus area chosen for the course. The Focus Areas include: Automotive Technologies; Electronics Technologies; Graphics Technologies; Metal and Engineering Technologies; Multimedia Technologies; Timber Products and Furniture Technologies.

### Preliminary Course

The following sections are taught in relation to the relevant focus area:

Industry Study – structural, technical, environmental and sociological factors, personnel issues, Occupational Health and Safety (15%)

Design – elements and principles, types of design, quality, influences affecting design (10%)

Management and Communication – development of practical projects; research, analysis and evaluation; skills in managing a project and developing and presenting a management folio; computer based technologies (20%)

Production – display a range of skills through the construction of a number of projects (40%)

Industry Related Manufacturing Technology – understanding of a range of materials, processes, tools and equipment, machinery and technologies (15%)

### HSC Course

The following sections are taught in relation to the relevant focus area through the development of a Major Project (60%) and a study of the relevant industry:

Industry Study (15%)

Major Project (60%) - Design, Management, Communication and Production

Industry Related Manufacturing Technology (25%)

### Particular Course Requirements

In the Preliminary course, students must design, develop and construct a number of projects. Each project will include a management folio. Each project may emphasise different areas of the preliminary course content. Students also undertake the study of an individual business within a focus area industry.

In the HSC course, students design, develop and construct a Major Project with a management folio. They will also undertake a study of the overall industry related to the specific focus area industry.

Component	Weighting %
Knowledge and understanding of course content	40
Knowledge and skills in the design, management, communication and production of projects (a major project – HSC)	60
	100

# Software Design and Development

**2 units for each of Preliminary (120hrs) and HSC (120hrs)**  
(This course is designed for Gifted and Talented I.T. Students)

**Exclusions:** Computing Applications CEC

## Course Description

The Preliminary course introduces students to the basic concepts of computer software design and development. It does this by looking at the different ways in which software can be developed, the tools that can be used to assist in this process and by considering the interaction between software and the other components of the computer system.

The HSC course builds on the Preliminary course and involves the development and documentation of software using a variety of data structures and language facilities. Students learn to solve a number of interesting and relevant software problems.

## Preliminary Course

Concepts and Issues in the Design and Development of Software (30%)

- Social and ethical issues
- Hardware and software
- Software development approaches

Introduction to Software Development (50%)

- Defining the problem and planning software solutions
- Planning and designing software solutions
- Implementing software solutions
- Maintaining software solutions

Developing software solutions (20%)

## HSC Course

Development and Impact of Software Solutions (15%)

- Social and ethical issues
- Application of software development approaches

Software Development Cycle (40%)

- Defining and understanding the problem
- Planning and design of software solutions
- Implementation of software solutions
- Testing and evaluation of software solutions
- Maintenance of software solutions

Developing a Solution Package (25%)

Options (20%)

- Programming paradigms

**or**

- The interrelationship between software and hardware

## Particular Course Requirements

Practical experience should occupy a minimum of 20% of the Preliminary course, and a minimum of 25% of the HSC course time.

Component	Weighting %
Knowledge and understanding of course content	50
Knowledge and skills in the design and development of software solutions	50
	100

# Biology

2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Exclusions:** Students may pick a maximum of 6 units in science in year 11 and year 12 (including *Science Extension*)

## Course Rationale:

The Biology Stage 6 Syllabus explores the diversity of life from a molecular to a biological systems level. The course examines the interactions between living things and the environments in which they live. It explores the application of biology and its significance in finding solutions to health and sustainability issues in a changing world. Biology uses Working Scientifically processes to develop scientific investigative skills. It focuses on developing problem-solving and critical thinking skills in order to understand and support the natural environment. When Working Scientifically, students are provided with opportunities to design and conduct biological investigations both individually and collaboratively. The study of biology, which is often undertaken in interdisciplinary teams, complements the study of other science disciplines and other STEM (Science, Technology, Engineering and Mathematics) related courses. Through the analysis of qualitative and quantitative data, students are encouraged to solve problems and apply knowledge of biological interactions that relate to a variety of fields. The Biology course builds on the knowledge and skills of the study of living things found in the Science Stage 5 course. The course maintains a practical emphasis in the delivery of the course content and engages with the technologies that assist in investigating current and future biological applications. The course provides the foundation knowledge and skills required to study biology after completing school, and supports participation in a range of careers in biology and related interdisciplinary industries. It is a fundamental discipline that focuses on personal and public health and sustainability issues, and promotes an appreciation for the diversity of life on the Earth and its habitats.

## Year 11

- Cells as the Basis of Life
- Organisation of Living Things
- Biological Diversity
- Ecosystem Dynamics

## Year 12

- Heredity
- Genetic Change
- Infectious Disease
- Non-infectious Disease and Disorders

## Particular Course Requirements:

The Preliminary course includes a field study related to local terrestrial and aquatic environments.

**Course Costs: \$30 Laboratory Fee**

## Assessment

There will be three assessment tasks in Year 11 and Year 12.

- |   |     |
|---|-----|
| • Skills in working scientifically              | 60% |
| • Knowledge and understanding of course content | 40% |

15 hours of class time is devoted to a Depth Study

# Chemistry

2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Exclusions:** Students may pick a maximum of 6 units in science in year 11 and year 12 (including *Science Extension*)

## Course Rationale:

The Chemistry Stage 6 Syllabus explores the structure, composition and reactions of and between all elements, compounds and mixtures that exist in the Universe. The discovery and synthesis of new compounds, the monitoring of elements and compounds in the environment, and an understanding of industrial processes and their applications to life processes are central to human progress and our ability to develop future industries and sustainability. The course further develops an understanding of chemistry through the application of Working Scientifically skills. It focuses on the exploration of models, understanding of theories and laws, and examination of the interconnectedness between seemingly dissimilar phenomena. Chemistry involves using differing scales, specialised representations, explanations, predictions and creativity, especially in the development and pursuit of new materials. It requires students to use their imagination to visualise the dynamic, minuscule world of atoms in order to gain a better understanding of how chemicals interact. The Chemistry course builds on students' knowledge and skills developed in the Science Stage 5 course and increases their understanding of chemistry as a foundation for undertaking investigations in a wide range of Science, Technology, Engineering and Mathematics (STEM) related fields. A knowledge and understanding of chemistry is often the unifying link between interdisciplinary studies. The course provides the foundation knowledge and skills required to study chemistry after completing school, and supports participation in a range of careers in chemistry and related interdisciplinary industries. It is an essential discipline that currently addresses and will continue to address our energy needs and uses, the development of new materials, and sustainability issues as they arise.

### Year 11

- Properties and Structure of Matter
- Introduction to Quantitative Chemistry
- Reactive Chemistry
- Drivers of Reactions

### Year 12

- Equilibrium and Acid Reactions
- Acid/base Reactions
- Organic Chemistry
- Applying Chemical Ideas

### Particular Course Requirements:

**Course Costs: \$30 Laboratory Fee Year 11**  
**\$40 Laboratory Fee Year 12**

## Assessment

There will be three assessment tasks in Year 11 and Year 12.

- |   |     |
|---|-----|
| • Skills in working scientifically              | 60% |
| • Knowledge and understanding of course content | 40% |

15 hours of class time is devoted to a Depth Study

# Earth and Environmental Science

2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Exclusions:** Students may pick a maximum of 6 units in science in year 11 and year 12 (including *Science Extension*)

## Course Rationale:

The Earth and Environmental Science Stage 6 Syllabus explores the Earth's renewable and nonrenewable resources and also environmental issues. An understanding of the Earth's resources and the ability to live sustainably on the planet is a central purpose of the study of Earth and Environmental Science. The course uses the Working Scientifically skills to develop knowledge through the application of those skills. Students engage with inquiry questions to explore knowledge of the Earth. They also undertake practical and secondary-sourced investigations to acquire a deeper understanding of the Earth's features and naturally occurring phenomena and cycles. Fieldwork is an integral part of these investigation processes. Earth and Environmental Science involves the analysis, processing and evaluation of qualitative and quantitative data in order to formulate explanations and solve problems. In conjunction with knowledge and understanding, communication skills are essential in forming evidence-based conclusions or arguments. The Earth and Environmental Science course builds on the knowledge and skills of Earth and Space gained in the Science Stage 5 course. The course maintains a practical emphasis in the delivery of the course content, and engages with technologies that assist in developing earth and environmental science applications. The course provides the foundation knowledge and skills required to study earth and environmental science after completing school, and supports participation in careers in a range of related industries. The application of earth and environmental science is essential in addressing current and future environmental issues and challenges. It is also necessary for the use and management of geological resources that are important to Australia's sustainable future.

## Year 11

- Earth's Resources
- Plate Tectonics
- Energy Transformations
- Human Impacts

## Year 12

- Earth's Processes
- Hazards
- Climate Science
- Resource Management

## Particular Course Requirements:

The Preliminary course includes a field study related to local terrestrial and aquatic environments.

**Course Costs: \$15 Laboratory Fee**

## Assessment

There will be three assessment tasks in Year 11 and Year 12.

- |   |     |
|---|-----|
| • Skills in working scientifically              | 60% |
| • Knowledge and understanding of course content | 40% |

15 hours of class time is devoted to a Depth Study

# Investigating Science

2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Exclusions:** Students may pick a maximum of 6 units in science in year 11 and year 12 (including *Science Extension*)

## Course Rationale:

The Investigating Science Stage 6 Syllabus is designed to assist students of all abilities engage with scientific processes, and apply those processes to investigate relevant personal, community and global scientific issues. The ongoing study of science and the specific Working Scientifically skills processes and their application have led humans to accumulate an evidence-based body of knowledge about human interactions – past, present and future – with the world and its galactic neighbourhood. The course is firmly focused on developing the Working Scientifically skills, as they provide a foundation for students to value investigation, solve problems, develop and communicate evidence-based arguments, and make informed decisions. The course promotes active inquiry and explores key concepts, models and phenomena. It draws and builds on the knowledge, understanding, skills, values and attitudes gained in Science Stage 5. The Stage 6 course is designed to enhance students' understanding of the value of evidence-based investigations and the use of science-based inquiry in their lives. The Investigating Science course is designed to complement the study of the science disciplines by providing additional opportunities for students to investigate and develop an understanding of scientific concepts, their current and future uses, and their impacts on science and society. The course draws on and promotes interdisciplinary science, by allowing students to investigate a wide range of STEM (Science, Technology, Engineering and Mathematics) related issues and concepts in depth. Investigating Science encourages the development of a range of capabilities and capacities that enhance a student's ability to participate in all aspects of community life and within a fast-changing technological landscape. The knowledge, understanding and skills gained from this course are intended to support students' ongoing engagement with science, and to form the foundation for further studies and participation in current and emerging STEM-related post-school activities and industries.

### Year 11

- Cause and Effect – Observing
- Cause and Effect – Inferences and Generalisations
- Scientific Models
- Theories and Laws

### Year 12

- Scientific Investigations
- Technologies
- Fact or Fallacy?
- Science and Society

## Particular Course Requirements:

**Course Costs: \$15 Laboratory Fee**

## Assessment

There will be three assessment tasks in Year 11 and Year 12.

- |   |     |
|---|-----|
| • Skills in working scientifically              | 60% |
| • Knowledge and understanding of course content | 40% |

30 hours of class time is devoted to a Depth Study

# Physics

2 units for each of Preliminary (120hrs) and HSC (120hrs)

**Exclusions:** Students may pick a maximum of 6 units in science in year 11 and year 12 (including *Science Extension*)

## Course Rationale:

The Physics Stage 6 Syllabus involves the study of matter and its motion through space and time, along with related concepts that include energy and force. Physics deals with the study of phenomena on scales of space and time – from nuclear particles and their interactions up to the size and age of the Universe. This allows students to better understand the physical world and how it works, appreciate the uniqueness of the Universe, and participate in navigating and influencing the future. The problem-solving nature of physics further develops students' Working Scientifically skills by focusing on the exploration of models and the analysis of theories and laws, which promotes an understanding of the connectedness of seemingly dissimilar phenomena. Students who study physics are encouraged to use observations to develop quantitative models of real-world problems and derive relationships between variables. They are required to engage in solving equations based on these models, make predictions, and analyse the interconnectedness of physical entities. The Physics course builds on students' knowledge and skills developed in the Science Stage 5 course and help them develop a greater understanding of physics as a foundation for undertaking post-school studies in a wide range of Science, Technology, Engineering and Mathematics (STEM) fields. A knowledge and understanding of physics often provides the unifying link between interdisciplinary studies. The study of physics provides the foundation knowledge and skills required to support participation in a range of careers. It is a discipline that utilises innovative and creative thinking to address new challenges, such as sustainability, energy efficiency and the creation of new materials.

### Year 11

- Kinematics
- Dynamics
- Waves and Thermodynamics
- Electricity and Magnetism

### Year 12

- Advanced Mechanics
- Electromagnetism
- The Nature of Light
- From the Universe to the Atom

### Particular Course Requirements:

**Course Costs: \$15 Laboratory Fee**

## Assessment

There will be three assessment tasks in Year 11 and Year 12.

- |   |     |
|---|-----|
| • Skills in working scientifically              | 60% |
| • Knowledge and understanding of course content | 40% |

15 hours of class time is devoted to a Depth Study

## Science Extension (Year 12 only)

1 units the HSC (60hrs)

**Exclusions:** Students may pick a maximum of 7 units (including *Extension Science*) in Year 12

### Course Rationale:

The Science Extension Stage 6 Syllabus focuses on the nature, development and processes of science. The course requires students to engage with complex concepts and theories and to critically evaluate new ideas, discoveries and contemporary scientific research. Students are challenged to examine a scientific research question influenced by their study of one or more of the scientific disciplines. In doing this, students extend their knowledge of the discipline(s), conduct further analysis and authentic scientific investigations, and uniquely for this course, produce a detailed scientific research report that reflects the standards generally required for publication in a scientific journal. Through designing and conducting their own scientific research, initially using small datasets, students deepen and build upon their understanding of analysing and interpreting data. They are provided with opportunities to refine and extend their skills of Working Scientifically by applying these interrelated processes to contemporary authentic scientific research reflecting the skills used by practising research scientists. Students gather, examine, model and critically assess evidence that is informed by analysis of primary and secondary-sourced data and examining this data in relation to relevant publicly available data sets. Students interrogate and refine their ideas of and about science through analysing historic and cultural observations and significant scientific research within the relevant ethical frameworks and philosophical arguments of the time. Science Extension is designed for students with an interest in scientific research. The course lays a foundation for students planning to pursue further study in Science, Technology Engineering or Mathematics (STEM) based courses offered at the tertiary level, and to engage in new and emerging industries.

### Year 12

- The Foundations of Scientific Thinking
- The Scientific Research Proposal
- The Data, Evidence and Decisions
- The Scientific Research Report
- Mandatory Scientific Research Report and Portfolio

### Particular Course Requirements:

**Course Costs: No Laboratory Fee**

### Assessment

There will be three assessment tasks including the **Mandatory Scientific Research Report and Portfolio**.

- |   |     |
|---|-----|
| • Skills in working scientifically              | 60% |
| • Knowledge and understanding of course content | 40% |



## Vocational Education and Training (VET) Courses

Vocational Education and Training (VET) courses are offered as part of the Higher School Certificate (HSC) or Record of School Achievement (RoSA). VET courses are designed to deliver workplace-specific skills and knowledge and cover a wide range of careers and industries. VET courses for secondary students are developed by NSW Educational Standards Authority (NESA) and are based on national training packages.

VET courses allow students to gain both HSC or RoSA qualifications and a national qualification or a statement of attainment recognised throughout Australia as part of the Australian Qualification Framework (AQF). These qualifications are widely recognised by industry, employers and tertiary training providers and universities and will assist students to progress to various education and training sectors and employment.

Public Schools NSW, Ultimo is accredited as a Registered Training Organisation (RTO 90072) to deliver and assess VET qualifications to secondary students.

It is mandatory for all students studying a VET course to create a Unique Student Identifier (USI) upon enrolment. Students will require a form of identification for the creation of the USI. Examples include a Medicare Card, Australian Birth Certificate, Driver's License or a valid Passport.

Assessment in all VET courses is competency based. The student is assessed on what they can do (the skills) and what they know (the knowledge) that will equip them in the workplace. Students are either deemed "competent" or "not yet competent" by the teacher. Students who have successfully achieved competency will have the skills and knowledge to complete workplace activities in a range of different situations and environments, to an industry standard of performance expected in the workplace.

Competency-based assessment materials are designed to ensure each learner has achieved all the outcomes (skills and knowledge) to the level of the qualification. Competency-based training is based on performance standards that have been set by industry. Students will receive documentation showing any competencies achieved for the VET course undertaken.

Due to the specific requirements of a VET course it is recommended students speak to the VET Coordinator or Careers Adviser before choosing the course to ensure they are fully aware of the requirements and the course is suitable for their individual needs, knowledge and skills.



Public Schools NSW, Ultimo Registered Training Organisation 90072  
VOCATIONAL EDUCATION and TRAINING

**2021 HOSPITALITY FOOD and BEVERAGE COURSE DESCRIPTION**

This may change due to Training Package and NSW Education Standards Authority (NESA) updates.  
Notification of variations will be made in due time.

Course: **Hospitality - Food and Beverage**  
in total  
Board Developed Course  
(ATAR)

2 or 4 Preliminary and/or HSC units

Category B for Australian Tertiary Admission Rank

This course is accredited for the HSC and provides students with the opportunity to obtain nationally recognised vocational training. This is known as dual accreditation.

**SIT20316 Certificate II in Hospitality**  
**Based on SIT Tourism, Travel and Hospitality training package**  
**(Release 1.2)**

**Units of Competency**

**Core**

BSBWOR203 Work effectively with others  
SITHIND002 Source and use information on the hospitality industry  
SITHIND003 Use hospitality skills effectively  
SITXCCS003 Interact with customers  
SITXCOM002 Show Social and Cultural sensitivity  
SITXWHS001 Participate in safe work practices

**Electives**

SITXCOM001 Source and present information  
SITHFAB005 Prepare and serve espresso coffee  
SITHFAB007 Serve food and beverage  
SITXFSA002 Participate in safe food handling practices  
BSBSUS201 Participate in environmentally sustainable work practices  
SITHFAB004 Prepare and serve non-alcoholic beverages  
SITXFSA001 Use hygienic practices for food safety  
SITHCCC002 Prepare and present simple dishes  
SITHCCC003 Prepare and present sandwiches

**Students may apply for Recognition of Prior Learning and /or credit transfer provided suitable evidence is submitted.**

**Recommended Entry Requirements**

Students selecting this course should be interested in working in a hospitality environment preparing and serving food and beverages to customers. They should be able to lift and carry equipment, use hand held and larger commercial kitchen equipment. Students may be required to participate in after-hours school events and functions. There will be out of class homework, research activities and assignments.

**Examples of occupations in the hospitality industry:**

- Café attendant
- Barista
- Kitchen hand
- Food and beverage attendant

**Mandatory HSC Course Requirements** Students must complete 240 indicative hours of course work and a minimum of 70 hours work placement. Students who do not meet these requirements will be 'N' determined as required by NESA.

**External Assessment (optional HSC examination for ATAR purposes)**

The Higher School Certificate examination for Hospitality Food and Beverage is only available after completion of 240 indicative hours and will involve a written examination consisting of multiple-choice items, short answers and extended response items. The examination is independent of the competency-based assessment undertaken during the course and has no impact on the eligibility of a student to receive a vocational qualification.

**Competency-Based Assessment**

Students in this course work to develop the competencies, skills and knowledge described by each unit of competency listed above. To be assessed as competent a student must demonstrate to a qualified assessor the competency requirements for performance and knowledge of the units/s of competency.

**Appeals and Complaints**

Students may lodge a complaint or an appeal about a decision (including assessment decisions) through the VET teacher.

**Course Costs: Uniform approx \$60.00 - \$90.00**  
**(To be purchased from Private Supplier)**  
**Refund Arrangements on a pro-rata basis**

**Consumables: Yr 11 \$140 (\$70 per semester) Yr 12 \$150 (3 terms)**

**Please see your VET teacher to enquire about financial assistance**

A school-based traineeship and apprenticeship are available in this course, for more information: <http://www.sbatinnsw.info/>

Exclusions - VET course exclusions can be checked on the NESA website at <http://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/vet/course-exclusions>