

Wednesday 12th June 2024



Stella Maris

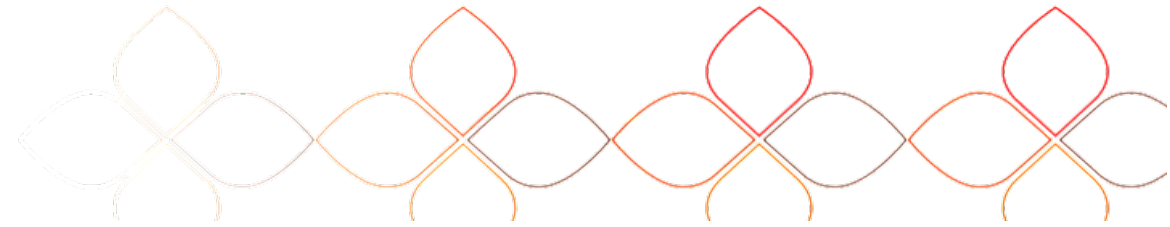
COLLEGE MANLY

MS Teams Question Forum

Heads of Department information slides



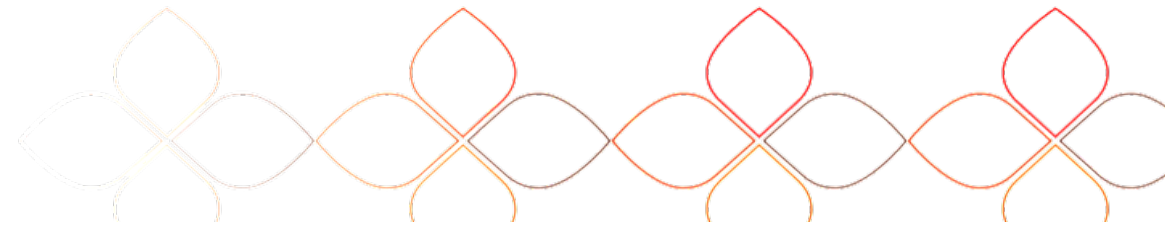
TECHNOLOGY



Design and Technology

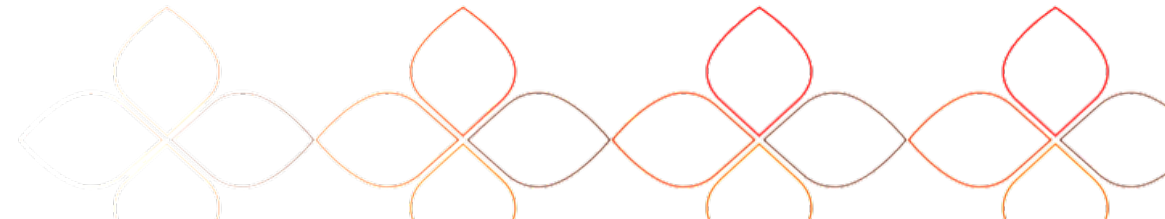
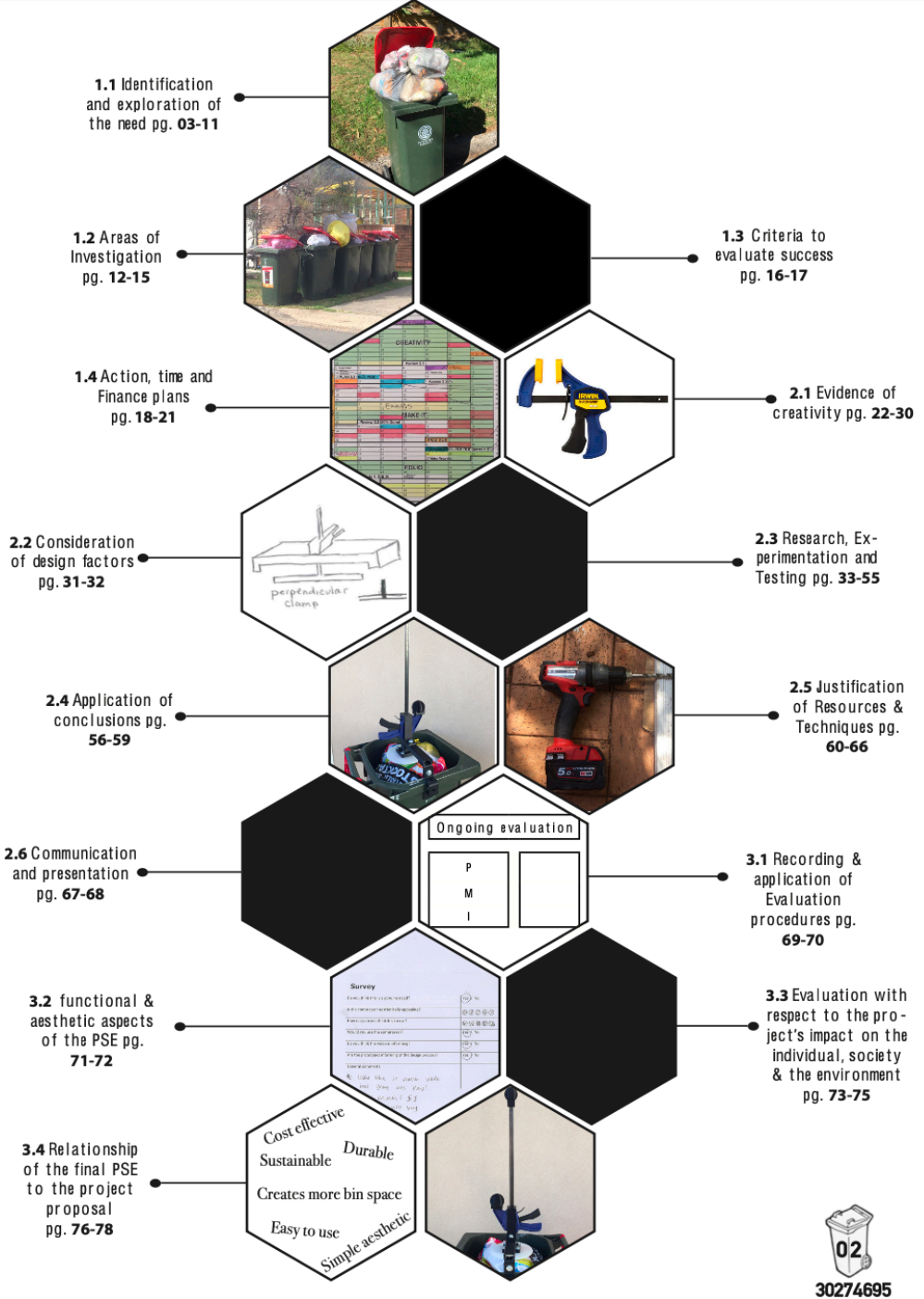
Industrial Technology - Multimedia Technologies

Contact: Head of Technology - Mr Lawrence Wong



Design and Technology

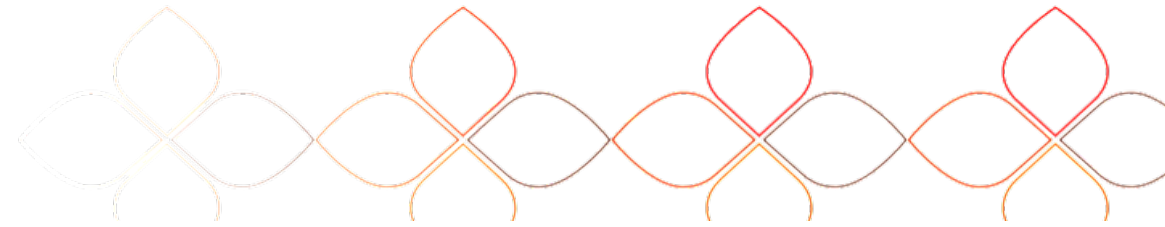
Design and Technology aims to build **problem-solving skills** through the participation in design projects where creative ideas are turned into actual **solutions**. These skills are developed by using the **design process** and the study of design concepts in order to develop confidence, engagement and success in any project undertaken.



DT

YEAR 11

The Year 11 Course focuses on **designing** and **producing** through the successful completion of design projects. The **theory** component is also assessed in a final examination.



DT YEAR 12



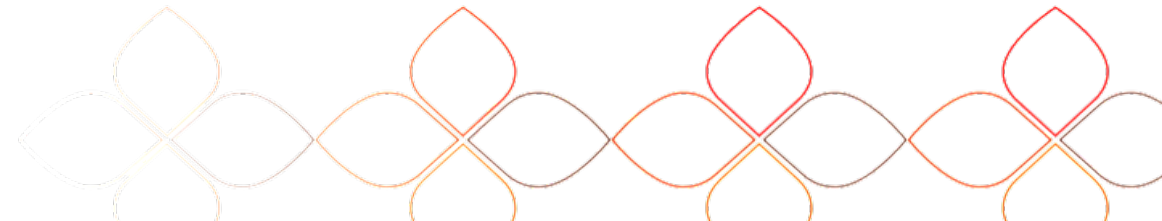
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In the HSC Course, students undertake a **Major Design Project** (MDP) based on a genuine need they have identified.

This MDP allows students to demonstrate their design skills, management skills and creative and analytical ways of thinking.

The project is guided by a **MDP Activity Booklet** that enables students to work creatively while specifically targeting the highest level of achievement expectations of the HSC when documenting their processes.

To prepare for the **HSC Examination**, students engage in discussion about design related issues, research and create presentations of design innovations and emerging technologies.



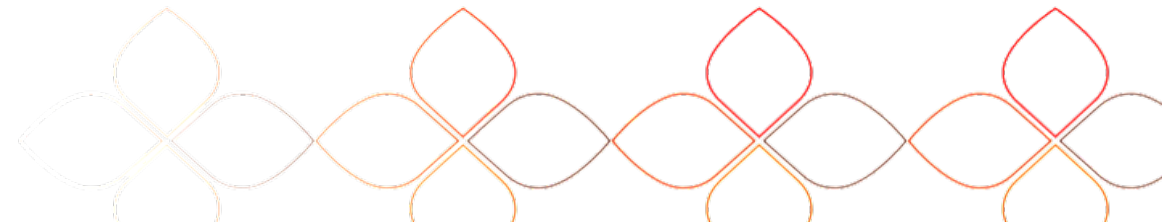
Students who are **inquisitive** and like to come up with creative solutions to everyday problems.

Students who enjoy **project-based learning** whereby you move through a series of stages to achieve your goals.

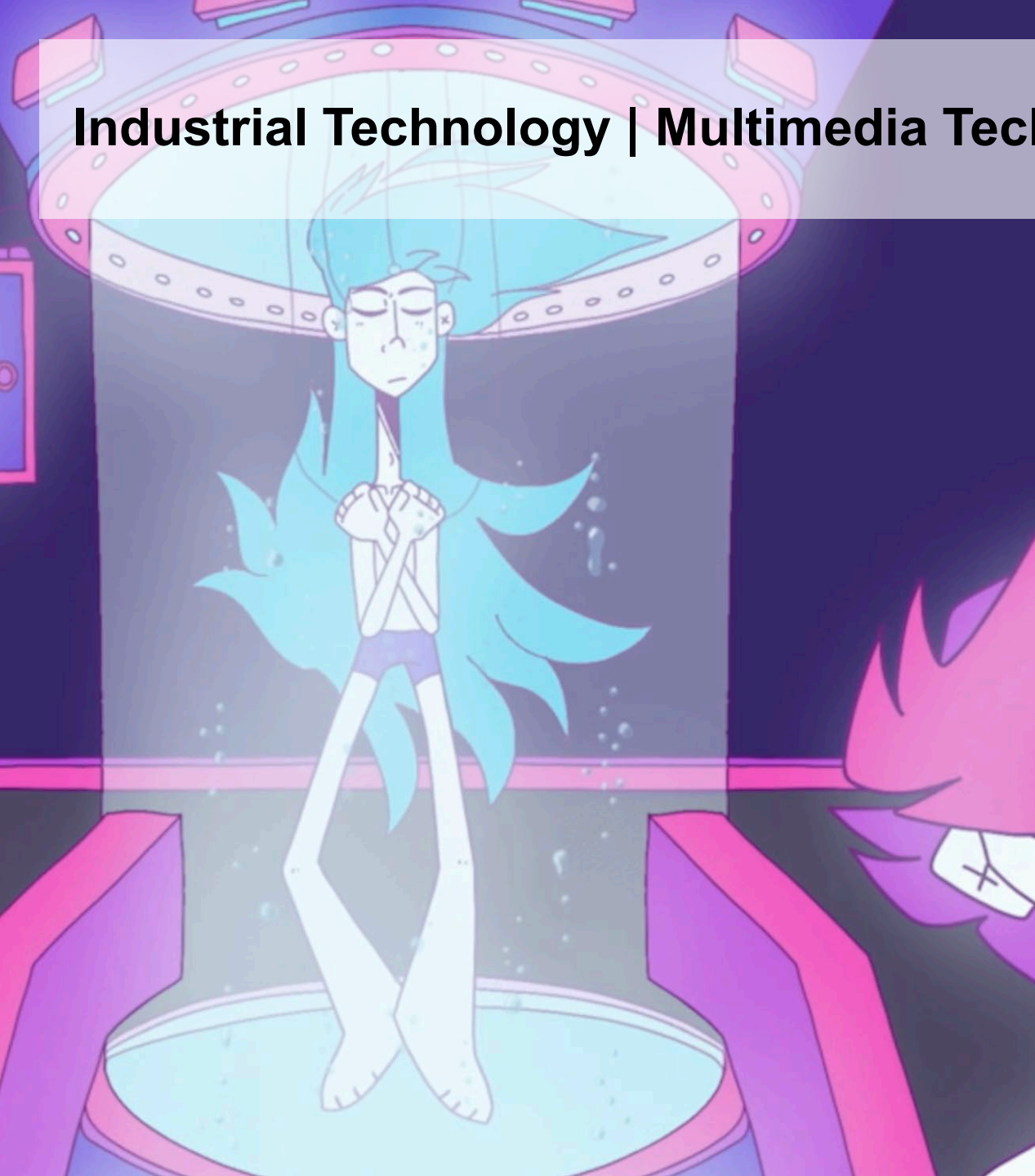
Students who have the ability to **work independently**, and who wish to develop their organisational and management skills.

All students studied mandatory Technology in Years 7 and 8, which had a Design and Technology strand.

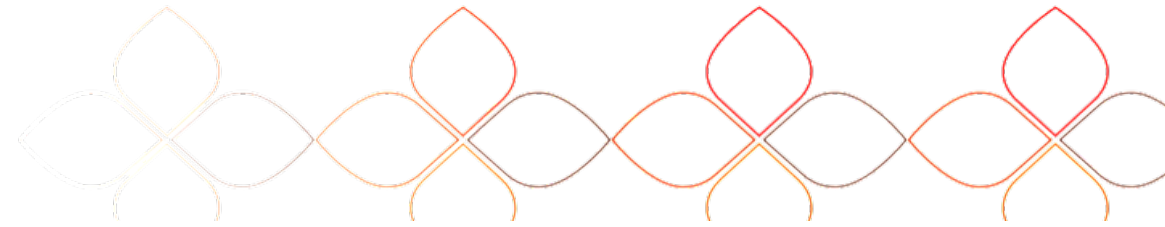
Students can undertake Design and Technology even if they didn't study it as an elective in Year 9 or 10.



Industrial Technology | Multimedia Technologies

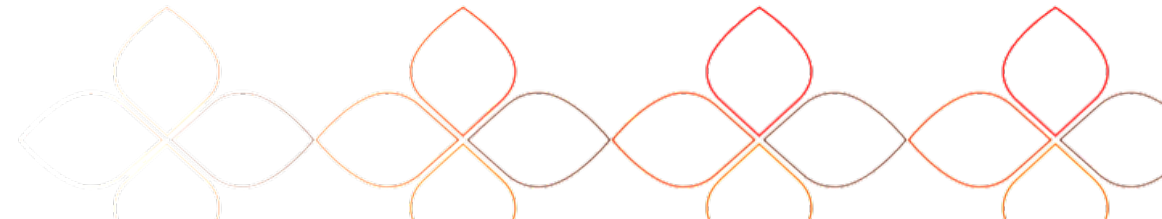
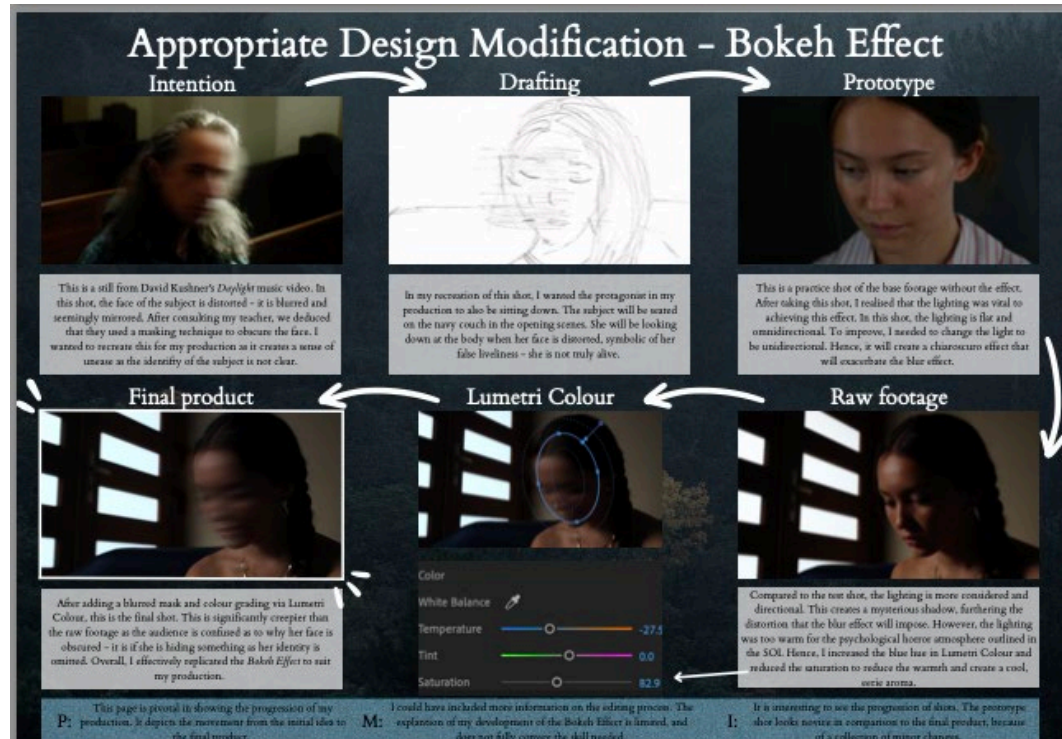


- Industrial Technology - Multimedia Technologies is a subject that allows students to explore their **interests** in the multimedia industry by creating **entertaining videos**, soundtracks, text, graphics and animated content.
- They also investigate specific media **technologies** and how popular **multimedia businesses** operate and have become an integral part of our society.



ITM YEAR 11

In the Preliminary Course, students will design, develop and construct a number of multimedia projects to **gain experience** with the available **technologies**. Each project will include a complimenting design, management and communication **folio**. Students also undertake the study of an individual **business** within the multimedia industry.



ITM YEAR 12

Students can choose what type of production they would like to focus on, based on what they have learnt and enjoyed during Year 11.

The HSC Course focuses on students planning and producing a high-quality Major Project that is accompanied by a design, management and communication folio.

The aim of the project is to showcase high quality skills and the application of their planning to the final production.



ITM

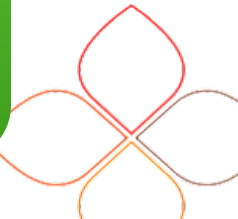
Suitability

Students who have a **genuine interest** in learning about the **multimedia industry**.

Students who are interested in developing **advanced practical skills** in creating videos, short films, documentaries and animations.

Students looking to **pursue further opportunities** within the diverse multimedia industry.

Students can undertake Industrial Technology – Multimedia Technologies even if they didn't study it as an elective in Year 9 or 10.



TERTIARY PATHWAYS

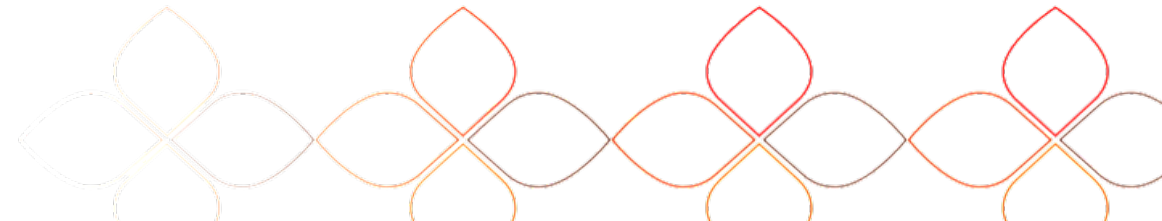
Design Disciplines

Industrial Design, Interior, Graphics, Textile, Exhibition, Fashion, Management, Education, Jewellery, Furniture, Digital Media ...

Multimedia Disciplines

Directing, Producing, Screenwriting, Cinematography, Editing, Production Design, Sound Design, Music, Documentary, Animation ...

Industry experience
placement
connections



TERTIARY Study

Possible Uni Courses

UNSW
Bachelor of Design
Bachelor Bachelor of Media
(Screen and Sound Production)/Arts

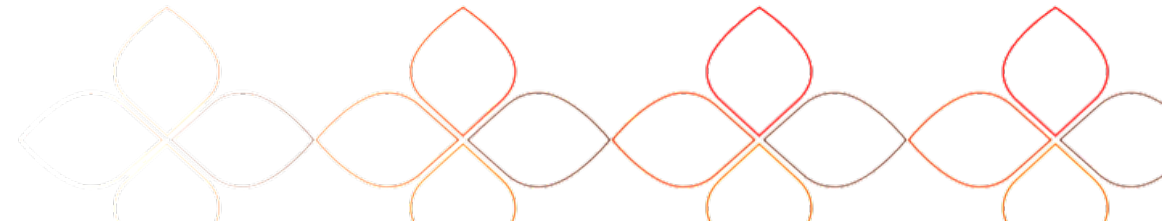
UTS
Bachelor of Communication (Media Arts
and Production)
Bachelor of Design in Product Design

Colleges

AFTRS
Bachelor of Arts Screen, Masters
of Arts Screen

RMIT, AIT, JMC Academy, SAE
Creative Media Institute, AIE

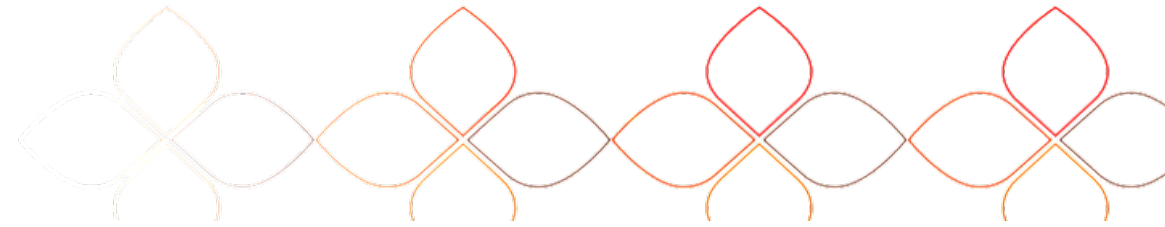
Torrens University -
Billy Blue College of
Design



Bachelor of Design (Interior Design)

Bachelor 3D Art and Animation

Cert II – IV
Diploma
Advanced Diploma
Bachelor

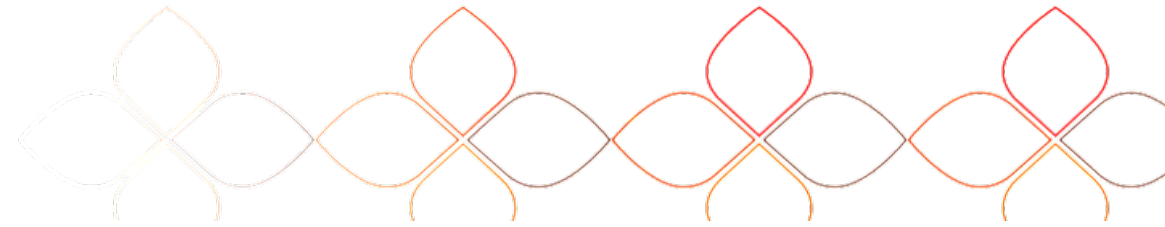




THANK YOU

Teachers who could tell you more about Technology Subjects:

Miss Cavallaro, Ms Don, Mr Nicotra, Mr Waters, Ms Palmer, Mrs Brown and Mr Wong





Health & Movement Science

Stage 6 PDHPE

Exciting News!

The senior PDHPE curriculum has been revised and restructured, and from 2025 will be known as

Health & Movement Science (HMS)

Why the changes?



- The Stage 6 syllabus hasn't been updated since 2010
- The old syllabus is quite content heavy. NESAs response to feedback from PDHPE teachers was to reduce the scope of content and give schools the opportunity to go into concepts of interest in more depth
- The course needs to keep up with student interest and provide more contemporary content
- The course name, PDHPE, is replaced with *Health & Movement Science* (HMS). The current PDHPE course consists of health and movement science concepts, which is why the revised course has adopted the HMS name. It provides a more relevant representation of what the course is about.

Summing up the changes...

- The content in HMS is similar to the old PDHPE course but has been revised, updated and restructured.
- It is NOT a completely new course.



Change in Course Structure

11 PDHPE (120 hours)	12 PDHPE (120 hours)
Core 1	Core 1
Core 2	Core 2
Option 1	Option 1
Option 2	Option 2

11 HMS (120 hours)		12 HMS (120 hours)	
Focus Area 1 (40h)	2 x Depth Studies (20h)	Focus Area 1 (45h)	2 x Depth Studies (30h)
Focus Area 2 (40h)	1 x Collaborative Study (20h)	Focus Area 2 (45h)	

A snapshot...

Year 11 is organised into 2 focus areas:

- Health for individuals and communities
- The body and mind in motion

Year 12 is organised into 2 focus areas:

- Health in an Australian and global context
- Training for improved performance

- Depth studies are also embedded in Years 11 and 12, and a Collaborative Investigation embedded in Year 11.



Health and Movement Science 11-12

Focus on educative purpose, take a strengths-based approach, value movement, develop health literacy and include a critical inquiry approach

Year 11

Health for individuals
and communities

The body and mind
in motion

Collaborative Investigation

Depth studies

Year 12

Health in an Australian
and global context

Training for
improved performance

Depth studies

**Collaboration, analysis, communication,
creative thinking, problem-solving, research**

The background features a complex network of glowing green lines and semi-transparent blue circles of various sizes, creating a sense of interconnectedness and digital technology.

Year 11 HMS

120 hours

Year 11 Course Structure & Requirements

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

Health and Movement Science	Indicative hours
Health for individuals and communities	40
The body and mind in motion	40
Collaborative Investigation	20
Depth studies (a minimum of 2)	20

Year 11 Focus Area 1:

Health for individuals and communities



This focus area explores the meanings of health from different perspectives. Students investigate the interplay of the determinants influencing health and the indicators used to measure and evaluate health status.



Health for Individuals and Communities has a focus on the health of young people, with students having the opportunity to research a selected health issue of interest. They analyse the skills needed to protect and enhance the health and wellbeing of themselves and others.



Students explore how government and non-government organisations can advocate and support the health of young people. They explore health promotion as a way to improve health and are introduced to the United Nations Sustainable Development Goals (SDGs) as a framework that demonstrates the complexity and interconnectedness of strategies needed to improve the health of Australians.

How do we understand and measure Australia's health?



- Definitions of health
- Dimensions of health and how these change
- Epidemiology – how health is measured. Investigate the health status of Australian
- The role of social justice principles in promoting individual and community health
- Discuss the determinants (environmental factors, socioeconomic factors, health behaviours and genetics) that influence the health and well being of Australians

What are young people's meanings of health?

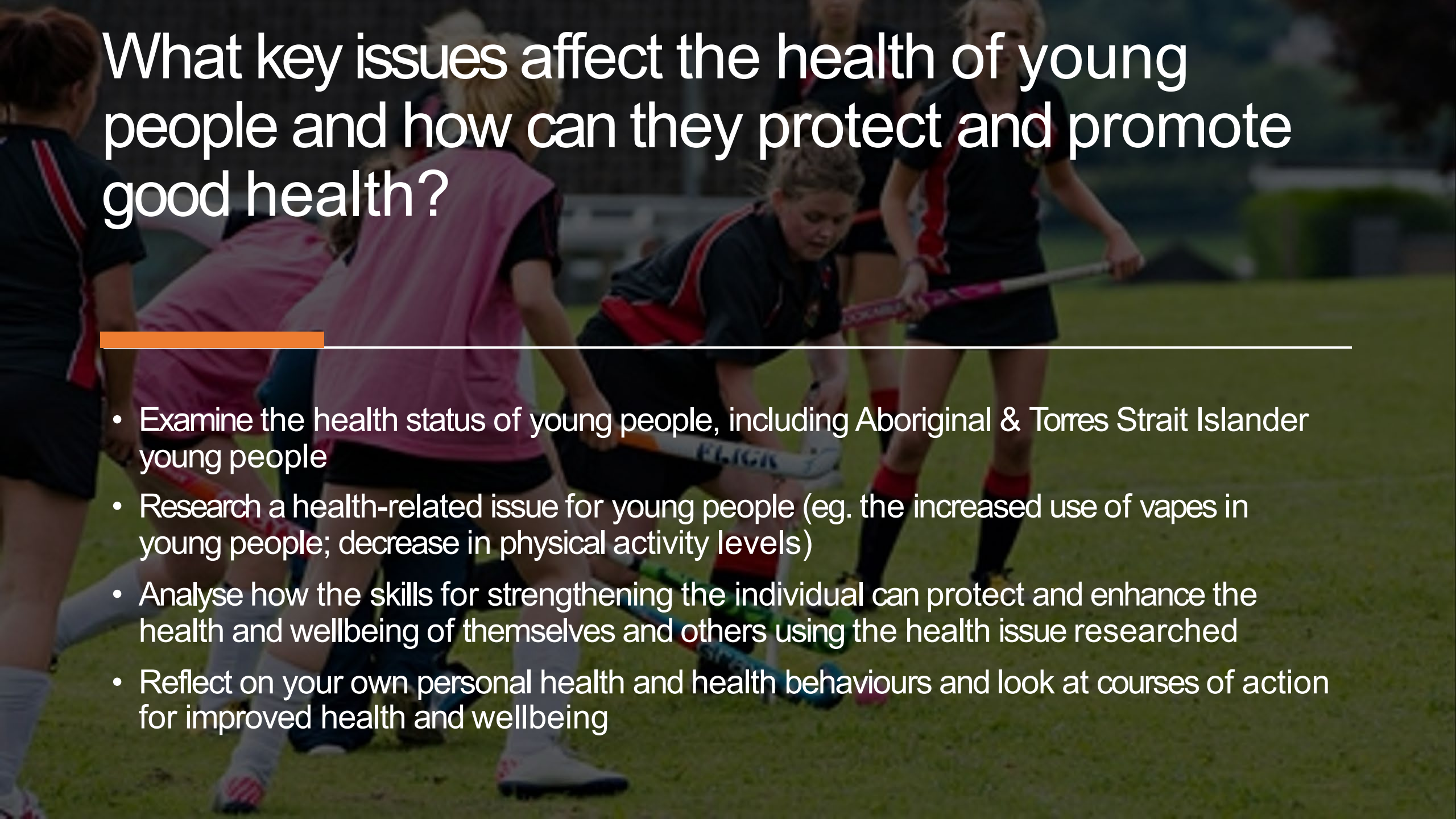


Explore the similarities and differences between the young people of today and the young people of previous generations



Investigate the meanings of health for young people

What key issues affect the health of young people and how can they protect and promote good health?



-
- Examine the health status of young people, including Aboriginal & Torres Strait Islander young people
 - Research a health-related issue for young people (eg. the increased use of vapes in young people; decrease in physical activity levels)
 - Analyse how the skills for strengthening the individual can protect and enhance the health and wellbeing of themselves and others using the health issue researched
 - Reflect on your own personal health and health behaviours and look at courses of action for improved health and wellbeing

What are the opportunities for improving and promoting young people's health?



-
- Examine how young people advocate for their own and others' health. Consider past, current and future advocacy and the role of the individual within communities
 - Discuss how organisations and communities advocate for the health of young people
 - Explain the nature of health promotion in Australia
 - Global health policies and their impact on Australia
 - How the Ottawa Charter has been used in Australia
 - Examine how the United Nations Sustainable Development Goals (SDGs) are being used to improve health

Year 11 Focus Area 2:

The Body and Mind in Motion



Students investigate how body systems influence and respond to movement, and understand the interrelationships between these systems for efficient movement.



Students develop an understanding of the role energy systems and types of training and training methods play and how the body physiologically adapts to training.



Students consider how movement skills are acquired, developed and improved, by exploring the characteristics of learners, the acquisition of skill, practice methods, performance elements and feedback.



Students investigate the relationship between performance and psychological factors, including motivational strategies, and the impact communities of exercise can have on participation and performance.

How do the systems of the body influence and respond to movement?

- The skeletal and muscular systems & how they work together
- Joints and joint actions
- Characteristics of muscle fibres
- Types of muscle contractions
- How biomechanical principles enhance safe movement and increase movement efficiency
- The respiratory and circulatory systems and how they work together
- The digestive and endocrine systems and how they work together
- The interrelationship between the nervous system and movement

- 
- What factors influence movement and performance?
-

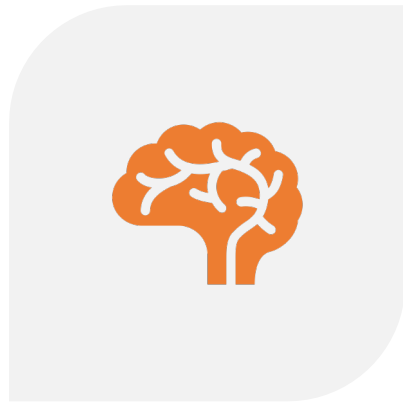
- Energy systems
- The role of nutrition in enabling energy systems
- Comparing aerobic and anaerobic training
- Contemporary training methods (eg. HIIT, SIT)
- Physiological responses to training
- The purpose of fitness testing

A 3D maze constructed from colorful blocks (blue, green, red, yellow, white) on a wooden surface. Several chess pieces (black pawns and a yellow pawn) are placed on the maze. An orange bar is visible in the top left corner.

How are movement skills acquired, developed and improved?

- How movement skills are acquired, developed and improved for recreational and elite athletes
- Characteristics of learners
- Stages of learning
- Practice methods
- Performance elements (eg. strategic & tactical development)
- Types of feedback

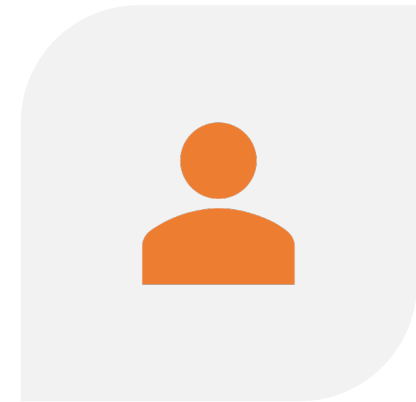
What is the relationship between psychology, movement and performance?



PSYCHOLOGY, MOVEMENT
AND PERFORMANCE



MOTIVATION



SELF-REGULATION

Collaborative Investigation

Students will engage in a Collaborative Investigation which is a mandatory component of the coursework for Year 11 HMS. Students work collaboratively to investigate an agreed topic aligned with content and concepts explored in one of the two focus areas:

- Health for Individuals and Communities

OR

- The Body & Mind in Motion

Participation in the investigation allows students to build and extend their subject knowledge and develop a range of skills to apply their knowledge and understanding. The CI will include the research design, documentation, presentation of the findings and reference list.

The CI involves both individual and group assessment

Depth Studies

The requirements for the Depth Studies include:

- a total of 20 hours of in-class time allocated in Health for Individuals and Communities and/or The Body and Mind in Motion
- a minimum of 2 Depth Studies
- knowledge and understanding, and skill outcomes, to be addressed in each depth study.





Year 12 HMS

120 hours

The Year 12 course comprises 3 components. Students are required to study all 3 components of the course.

Health and Movement Science	Indicative hours
Health in an Australian and global context	45
Training for improved performance	45
Depth studies (a minimum of 2)	30

Year 12 Focus Area 1:

Health in an Australian and Global Context



Students explore how healthy Australians are by comparing the health status of Australians within and across population groups. They evaluate the health status of Australians relative to other Organisation for Economic Co-operation and Development (OECD) countries and draw conclusions that could be applied to enhance the health of Australians.



Students examine major chronic conditions, diseases and injury, and the impact these conditions can have on the healthcare system. They explore the impact of a growing and ageing population. Students evaluate the healthcare system in Australia and explore the roles government and non-government organisations play in improving health. Students investigate changes and challenges to the health system, including the impact of emerging technologies and treatments, digital health and big data.




Students investigate actions needed to promote and improve the health of Australians by investigating how the SDGs can inform strategies to improve the health status of a community.

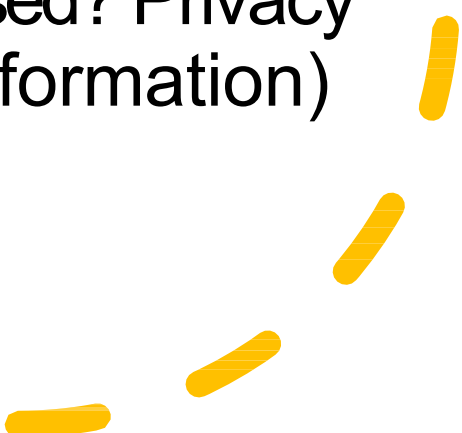
How healthy are Australians?

- Research trends in health data – major causes of illnesses, disease & death; life expectancy
- Analyse groups experiencing health inequities
- Compare the health status of Australia to other OECD countries
- Examine chronic conditions, diseases and injury in Australia
- Investigate the impact of an ageing population on Australia's health

How does
Australian
healthcare
system work
towards
achieving
better health
for all?

- The effectiveness of the healthcare system in Australia, including equity of access
 - How government and non-government organisations collaborate to provide healthcare
 - Health expenditure and its impact on current and future populations
 - Medicare, Commonwealth funded programs, NDIS, Aged Care
 - Complementary healthcare approaches
 - Being a critical health consumer
 - Current and emerging changes and challenges to the healthcare system
- 

How is the growing and changing use of technology and data impacting Australia's healthcare system?

- The relationship between technology and health (eg. early diagnosis)
 - New technologies and treatments (eg. Health apps, AI)
 - The impact of digital health
 - How big data is shaping the health of Australians (eg. how is it being used? Privacy and confidentiality of personal information)
- 

What actions are needed to promote and improve the health of Australians?

- Key features of the Sustainable Development Goals (SDGs)
- How can these be applied to improve the health status of a community?
 - SDG 3: Good health and wellbeing
 - SDG 4: Quality education
 - SDG 10: Reduced inequalities
 - SDG 11: Sustainable cities and communities



Year 12 Focus Area 2:

Training for Improved Performance



Students investigate the significance of Training for Improved Performance. This includes recognising the importance of personalised exercise assessment and prescription, and exploring how various training types and methods can be used to positively affect physiological adaptations.



Students compare training plans and programs for recreational or elite individuals and groups, applying their understanding of biomechanics, injury prevention, training methods and technology to analyse how athletes can train for sustained movement and performance.

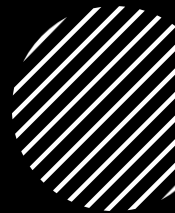


Students explore the importance of nutrition, and how nutrition and supplementation affect an individual's performance. They compare the dietary requirements of athletes from different sports.



• How can exercise assessment and prescription be

● personalised?



The importance of health screening



The use of performance/fitness testing for recreational participants and elite athletes



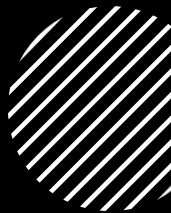
How exercise assessment can assist in the development of training programs

- 
- How does training influence movement and performance?
-

- Types of training and training methods and their relevance for a variety of sports
- Application of the principles of training
- The relationship between the principles of training, physiological adaptations and improved performance



How does training differ for individual and group sports?



Aspects that need to be considered when designing a training session for individual and group sports



- Compare yearly training programs for individual and group sports



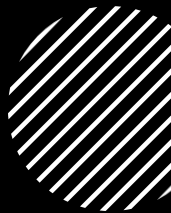
- Investigate how sports apply psychological strategies to improve performance



- Factors that influence how



What impact does sleep, nutrition and supplementation have on movement and performance?




Analysis of dietary requirements, pre, during and post-performance



Fluid intake requirements of athletes from different sports



How sleep, nutrition and hydration can be used to reduce fatigue



How do individuals train for sustained movement and performance?

- How biomechanics can be used to develop efficient movements and improved performance
- Recovery strategies
- Technology and improved performance
- Management and prevention of sports injuries
- The impact of drug use on injury management and improving performance

Depth Studies

The requirements for the Depth Studies include:

- a total of 30 hours of in-class time allocated in Health in an Australian and Global Context and/or Training for Improved Performance
- a minimum of 2 Depth Studies
- knowledge and understanding, and skill outcomes, to be addressed in each depth study
- one depth study must be formally assessed as a school-based assessment task.



Assessment

Signature _____

Date _____





Assessment in Year 11

3 assessment tasks:

- Collaborative Investigation (group & individual)
- Assessment task (written)
- Formal examination



Requirements for the Collaborative Investigation:

- a total of 20 hours course time
- assessment of knowledge, understanding and skills outcomes, including assessment of outcome HM-11-05
- a research question for investigation that reflects an area of interest for students
- assessment of the process and findings
- an individual assessment and a group assessment

Assessment in Year 12

The Year 12 formal school-based assessment program is to reflect the following requirements:

- a maximum of 4 assessment tasks
- the minimum weighting for an individual task is 10%
- the maximum weighting for an individual task is 40%
- one Depth Study worth 20–30%
- one formal written examination with a maximum weighting of 30%



HSC Exam

Written examination

- The examination will consist of a written paper worth 100 marks.
- Time allowed: 3 hours plus 10 minutes reading time.
- Questions relating to Health and Movement Science skill outcomes will be integrated throughout the examination.
- The paper will consist of three sections.
- There will be approximately equal weighting given to the two focus areas:
 - Health in an Australian and Global Context
 - Training for Improved Performance.

Health and Movement Science HSC examination specifications

Section I (20 marks)

- There will be objective response questions to the value of 20 marks.

Section II (56 marks)

- This section will contain short-answer questions.
- Questions may contain parts.
- There will be 9 to 12 items in total.
- At least 3 items will be worth 6 to 8 marks.

Section III (24 marks)

There will be 2 extended-response questions worth 12 marks each – one question based on each focus area: Health in an Australian and Global Context, Training for Improved Performance.



- Health & Movement Science (HMS) is an ATAR subject – will contribute to your Australian Tertiary Admission Ranking (ATAR - university entrance) score.
- HMS is a mostly a theory subject with some practical application to illustrate theory concepts. Whilst there are no scheduled practical lessons, there will be opportunities to observe others or participate in activities that explore course concepts. Do not choose this subject if you expect to be playing sport.

Links to the future

This course provides opportunities to develop knowledge, understanding and skills in a range of health and human movement-related careers.

Health and human movement science professionals work in a diverse range of employment areas, including sports sciences, coaching, teaching, exercise physiology, psychology, rehabilitation, research, social work, public health, workplace health and safety, and corporate health.

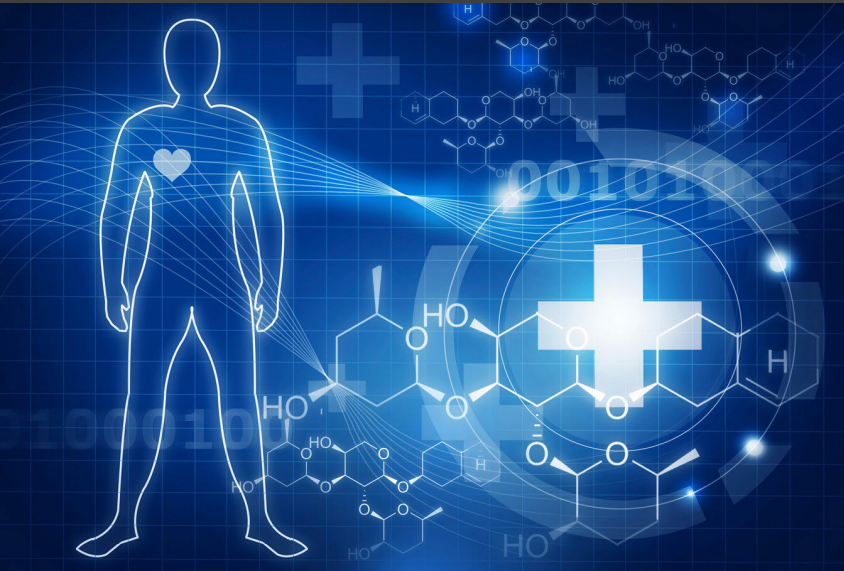


Career Links

Medicine
Nursing
Education
Exercise Science
Physiotherapy
Fitness Industry
Child Care
Health Promotion

- Health Sciences
- Sports nutrition/ dietetics
- Sports Psychology
- Coaching
- Sciences
- Exercise Physiology
- Personal Trainer
- Outdoor Recreation & Education

AFE recognition is also possible





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Stage 6 History

Modern History Ancient History and History Extension

Modern History



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Stage 6 Year 11 Topics

Investigation of Historic Sites and Sources: Q Station and the Third Cemetery at North Head

Case Study: The Decline and Fall of the Romanov Dynasty (Nicholas and Alexandra; Rasputin, Anastasia)

Case Study: Meiji Restoration (Modernisation of Japan)

Construction of Modern History: The Holocaust

Historical Investigation: an investigation into an area of Modern History that interests you

Shaping of the Modern World: World War 1 (international focus, not like Stage 5)

Stage 6 Year 11 Assessment

3 Assessment Tasks

1. Source Analysis Task
2. Historical Investigation:
Logbook and Essay
3. Examination



Stage 6 Year 12 Topics

Core Study: Power and Authority
(Weimer Germany and Nazi Germany, plus overview of dictatorships that emerge in Russia, Italy and Japan after WW1)

National Study: USA 1919-1941 (the Great Depression, consumerism, entertainment, social tensions such as religious fundamentalism, Prohibition, crime, racial conflict and rise of KKK, foreign policy)

Peace and Conflict: Conflict in Indochina (Vietnam War, Pol Pot and the Killing Fields in Cambodia)

Change in the Modern World: Civil Rights Movement in the USA 1945-1968 (Martin Luther King, Malcolm X, important events, KKK, achievements of the civil rights movement)

Stage 6 Year 12 Assessment

4 Assessment Tasks

1. Source Analysis Task
2. Historical Analysis Task
3. Research Task
4. Trial HSC Examination

Ancient History



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Stage 6 Year 11 Topics

The Investigation of Ancient Sites and Sources

The Roman Games

The Treatment and Display of Human Remains

Palmyra and the Silk Road

Historical Investigation

Ancient Assyrian Weapons and Warfare

Death and Funerary Customs in Old Kingdom Egypt



Year 11 Assessment

3 Assessment Tasks

1. Source Analysis Task
2. Historical Investigation:
Logbook and Essay
3. Examination



Year 12 Topics

Spartan society to the Battle of Leuctra

The Greek World 500-440BC

Cities of Vesuvius- Pompeii and Herculaneum

The Near East- Xerxes



Year 12 Assessment

4 Assessment Tasks

1. Source Analysis Task
2. Historical Analysis Task
3. Research Task
4. Trial HSC Examination

History Extension



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What is Extension History?

- **Extension History is a one unit course offered in Year 12**
- **Students may elect to study Extension History if they have studied Modern and/or Ancient History in Year 11**
- **It is for students who are passionate historians that want to explore historiography and who are capable of completing a major work (their History Project)**

Assessment

3 Assessment Tasks

1. Historical Process
2. History Essay
3. Trial HSC Examination

Languages at Stella Maris

Spanish

Italian

French

Japanese

Chinese

Stage 6

Japanese, Italian, French, Spanish

Beginners

New language or continue the language learnt in Year 8

- Preliminary 2 units
- HSC

Continuers

- Continuing from Year 10
- Preliminary 2 units
- HSC

Extension Year 12 1 unit

Chinese and Literature for native speakers

- Preliminary 2 units
- HSC

A minimum number of students is required for a Year 11 class.

Topics

- **Continuers:** Relationships, School Life, Leisure and Interests, Holidays, Travel and Tourism, Careers, Arts and Entertainment, the Environment
- **Beginners:** Healthy Lifestyle, My Neighbourhood, Housing, Directions, Going Out, Free Time, Holidays, Travel and Tourism

Assessment

- **Listening to spoken texts in the language with questions and answers in English**
- **Reading and Responding to texts in the language with questions and answers in English**
- **Writing in the language**
- **Speaking = a conversation in the language**

- **No grammar questions**
- **Dictionaries allowed in all assessments except Speaking**

Career Prospects

- Finance Manager
- Travel Consultant
- Teacher
- Diplomat
- Interpreter or Translator
- Journalist
- Flight Attendant
- Tour Guide
- Customs Officer

Who is suited to languages study?

- Students who:
- do well in English
- work consistently
- have a good memory
- can recognise when sounds differ
- accept that the grammar is different
- value the interaction in small classes

NSW School of Languages

**Online in language periods
in the College library**

- Chinese
- French
- German
- Indonesian
- Italian
- Japanese
- Korean
- Latin
- Modern Greek
- Portuguese
- Russian
- Spanish

Saturday School of Community Languages

Saturday mornings

- Armenian
- Chinese
- Japanese
- Korean
- Modern Greek
- Polish
- Spanish



Stella Maris

COLLEGE MANLY

Year 11-12 Mathematics

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Studying Mathematics is a great option in any subject package.

It equips students:

- with skills that employers value.
- with important life skills.
- with knowledge and skills to study many courses at a tertiary level.
- AND it is full of fascinating ideas and powerful applications. The process of understanding a new mathematical concept or solving a problem using mathematics is transferrable to other subjects, further education and the workplace.

Year 11 Options

Mathematics Standard – 2 units

Mathematics Advanced – 2 units

Mathematics Advanced & Extension 1 – 3 units

Extension 1 is an additional 1 unit chosen in conjunction with Advanced to give a total of 3 units.

NOTE: Mathematics Extension 2 is available to high-achieving students in Year 12.

MATHEMATICS STANDARD

The topics covered in this course will look very familiar to those covered in the **Year 10 5.2** course and there is an emphasis on applying concepts to real-world applications.

If students have enjoyed Year 10 mathematics classes, then this course is a great option.

There are 7 periods of mathematics a cycle.

Topics

- Algebra
- Measurement
- Financial Mathematics
- Statistical Analysis
- Networks

Students:

- complete on average, 35 minutes of homework and independent study each day. This will increase as assessment tasks are due.
- have an interest in and a positive approach towards learning mathematical concepts.
- have sound problem-solving and literacy skills.

MATHEMATICS ADVANCED

The topics covered in this course will look very familiar to those covered in the **Year 10 5.3** course and there is an emphasis on applying CALCULUS and FUNCTIONS to real-world applications.

It offers students the opportunity to prepare for further academic study at university and employment in a changing and increasingly STEM focused workforce.

There are 7 periods of mathematics a cycle.

Topics

- Functions
- Trigonometric functions
- Calculus
- Exponential and Logarithmic Functions
- Financial Mathematics

Students:

- complete on average, 50 minutes of homework and independent study each day. This will increase as assessment tasks are due.
- have a positive approach towards learning some challenging mathematical concepts
- have sound problem-solving and literacy skills and have demonstrated a thorough understanding of the Year 10 5.3 mathematics course.

MATHEMATICS ADVANCED & EXTENSION 1

The course provides opportunities to develop rigorous mathematical arguments and proofs, and to use mathematical models more extensively.

Mathematics Extension 1 provides a solid foundation for progression to further study in mathematics or related disciplines such as actuarial studies, computer sciences, statistics, finance, physics and engineering.

There are an additional 4 periods of mathematics a cycle. Total of 11 periods of mathematics.

Topics

- Permutations, Combinations and Binomial Theorem
- Inverse functions
- Related rates of change
- Exponential growth and decay
- Polynomials
- Vectors
- Proof and Mathematical Induction

Students:

- devote a substantial amount of time and effort in homework and independent study each day. On average 60 mins increasing as assessment tasks are due.
- have confidence and flair in their mathematical thinking.
- have outstanding problem-solving skills and have demonstrated an extensive understanding of the Year 10 5.3 mathematics course.

Year 11 Assessment

Each course has 3 assessment tasks in Year 11

- Resourced Topic Test
- Investigation and Quiz
- Final Preliminary Examination

NOTE: HSC examinations are between 2.5 – 3 hours in length

How do I know which course is the right fit?

Ability & Interest

Students must be realistic and consider both **INTEREST** in mathematics as well as **ABILITY** to determine the best course to choose.

Grades

Recommendations are based on **GRADES** achieved by your daughter throughout Year 10 as well as the opinion of her Year 10 mathematics teacher.

Recommendation Letter

A letter detailing the recommended Mathematics course for each student is provided by the Mathematics Department at the conclusion of Semester 1. Additionally, the Head of Mathematics will visit each Year 10 class for an information session and student Q&A.

Year 10 grade mapping

Year 10	Grade in Year 10	Most suitable Year 11 course
Year 10 5.3	A	Mathematics Advanced and Mathematics Extension 1
Year 10 5.3	B	Mathematics Advanced (Mathematics Extension 1 only by teacher recommendation)
Year 10 5.3	C	Mathematics Standard (or Mathematics Advanced by teacher recommendation)
Year 10 5.3	D or E	Mathematics Standard
Year 10 5.2	A or B	Mathematics Standard
Year 10 5.2	C	Mathematics Standard
Year 10 5.2	D or E	Mathematics not recommended
Year 10 5.1		Mathematics not recommended

UNIVERSITY & MATHEMATICS

Mathematics Extension 1 and Mathematics Advanced contain content that is often required for admission into many university courses.

It is a great idea to have a look at courses that interest your daughter in the UAC guide.

Assumed Knowledge

This means that understanding the content from the mathematics course is expected and will enable students to be successful in the university course.

Prerequisite

This means that the mathematics course must be chosen as a Preliminary and HSC Subject to apply for admission to the university course.

FAQ

Can I change courses in Year 11?

Students can change to the Standard Mathematics course **FROM** the Advanced Mathematics course, but **NOT** the other way around.

If this change is required, we recommend it occurring after Task 2 (around June) so that students avoid "missing" new work.

Students can "drop" Extension 1 Mathematics if they find it too demanding after Year 11. This assumes that they still have the correct number of units in their Pattern of Study.

FAQ

Does Advanced Mathematics get “scaled up”?

The HSC Advanced course is more academically challenging than the HSC Standard 2 course, however, it does not get “scaled up” in the ATAR calculation.

Students need to perform well in any course chosen to maximise the ATAR.