# 2017 Year 12 Subject Descriptions

## VCE Subjects offered at PVGC

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* Food Studies has a higher cost of approximately $150.00
# VET Hospitality and VET Business have a $150.00 registration fee
Arabic

Unit 3
Prerequisites: Satisfactory completion of Unit 2 Arabic.
Unit Description: This unit is designed to extend students’ knowledge and skills in speaking and writing in Arabic. On completion of this unit, students should be able to: express ideas through the production of original texts; analyse and use information from spoken texts; exchange information, opinions and experiences.

Unit 4
Prerequisites: Satisfactory completion of Unit 3 Arabic.
Unit Description: This unit is designed to extend students’ knowledge and skills in speaking and writing in Arabic. On completion of this unit, students should be able to: analyse and use information from written texts; respond critically to spoken and written texts which reflect aspects of the language and culture of LOTE-speaking communities.

Australian Politics

Unit 3: Democracy in the Making
Prerequisites: Nil
Unit Description: This unit provides an overview of Australia’s ‘Westminster’ system of government with its influences from the United Kingdom’s and the United States’ systems of government. Students undertake a comparative study of the political systems of Australia and the United States by considering values, ideologies, structures and institutions.

Unit 4: The Challenge of Power
Prerequisites: Students must undertake Unit 3 prior to Unit 4.
Unit Description: This unit examines the influences on Australian federal policy-making and implementation. It also considers contemporary challenges to Australian domestic and foreign policy. In terms of the policy making process, foreign policy is unique. In contrast to domestic policy, little needs to be legitimised through legislation.
Biology

Unit 3: How Do Cells Maintain Life?
Prerequisites: Successful completion of Unit 1 and 2 Biology is highly recommended.
Unit Description: In this unit, students investigate the workings of the cell from several perspectives. They explore the importance of the insolubility of the plasma membrane in water and its differential permeability to specific solutes in defining the cell, its internal spaces and the control of the movement of molecules and ions in and out of such spaces. Students consider base pairing specificity, the binding of enzymes and substrates, the response of receptors to signalling molecules and reactions between antigens and antibodies to highlight the importance of molecular interactions based on the complementary nature of specific molecules. Students study the synthesis, structure and function of nucleic acids and proteins as key molecules in cellular processes. They explore the chemistry of cells by examining the nature of biochemical pathways, their components and energy transformations. Cells communicate with each other using a variety of signalling molecules. Students consider the types of signals, the transduction of information within the cell and cellular responses. At this molecular level students study the human immune system and the interactions between its components provide immunity to a specific antigen.

Unit 4: How Does Life Change and Respond To Challenges Over Time?
Prerequisites: Successful completion of Unit 3 Biology.
Unit Description: In this unit students consider the continual change and challenges to which life on Earth has been subjected. They investigate the relatedness between species and the impact of various change events on a population’s gene pool. The accumulation of changes over time is considered as a mechanism for biological evolution by natural selection that leads to the rise of new species. Students examine change in life forms using evidence from palaeontology, biogeography, developmental biology and structural morphology. They explore how technological developments in the fields of comparative genomics, molecular homology and bioinformatics have resulted in evidence of change through measurements of relatedness between species. Students examine the structural and cognitive trends in the human fossil record and the interrelationships between human biological and cultural evolution. The biological consequences, and social and ethical implications, of
manipulating the DNA molecule and applying biotechnologies is explored for both the individual and the species.

**Business (Office Administration) VET**

**Units 3 and 4: Certificate II in Business**

**Prerequisites:** Units 1 and 2 Business Administration

**Unit Description:** This is an office skills course. Students learn skills to enable them to become effective office workers. The Certificate II in Business is a Vocational Education and Training (VET) program. This means that students are able to gain work skills whilst doing their VCE. Students benefit by gaining their VCE and a nationally recognised Business certificate. To gain the Certificate II in Business, students must satisfactorily complete Business (Office Administration) in Years 11 and 12. Unit 4 also covers part of the Certificate III course. Units 3 and 4 contribute to VCE graduation requirements and a student’s tertiary entrance score. Students complete their Business Administration studies entirely at the College. Students are enrolled for the subject at Kangan-Batman TAFE so they receive a TAFE Business certificate. To cover the Kangan-Batman TAFE certificate issuing fee and associated course costs, a fee is payable via your college statement.

**Business Management**

**Unit 3: Managing a Business**

**Prerequisites:** Nil

**Unit Description:** In this unit, students explore the key processes and issues concerned with managing a business efficiently and effectively to achieve the business objectives. Students develop an understanding of the complexity and challenge of managing businesses. Business case studies are used to compare business theory with current business practice. In Area of Study 1, students examine the key characteristics of businesses and their stakeholders. A range of management styles and skills that may be used when managing a business are also investigated. In Area of Study 2, students investigate essential factors such as motivation and training involved in effectively managing employees to ensure the business objectives are achieved. An overview of how employee wages and conditions are
determined and the dispute resolution process are also examined. In Area of Study 3, students examine the effective and socially responsible management of the production of quality goods and services in a competitive global business environment.

**Unit 4: Transforming a Business**

**Prerequisites:** Completion of Unit 3 Business Management

**Unit Description:** Businesses are under constant pressure to adapt and change to meet their objectives. In this unit students consider the strategic management necessary to position a business for the future. Students consider a variety of strategies to manage change in the most efficient and effective way to improve business performance. Business case studies are used to evaluate business practice against theory. In Area of Study 1, students develop their understanding of the need for change. How managers review and evaluate business performance to make decisions concerning the future of a business is examined. Students also investigate the ways a business can search for new opportunities and the current forces for change on businesses. In Area of Study 2, students explore the importance of leadership in change management, how leaders can inspire change, the effects of change in a business and how corporate social responsibility can be incorporated into the change process.
Chemistry

Unit 3: How Can Chemical Processes Be Designed To Optimise Efficiency?

Prerequisites: It is highly recommended that students satisfactorily complete Units 1 and 2 Chemistry.

Unit Description: In this unit students compare and evaluate different chemical energy resources, including fossil fuels, biofuels, galvanic cells and fuel cells. They investigate the combustion of fuels, including the energy transformations involved, the use of stoichiometry to calculate the amounts of reactants and products involved in the reactions, and calculations of the amounts of energy released and their representations. Students consider the purpose, design and operating principles of galvanic cells, fuel cells and electrolytic cells. In this context they use the electrochemical series to predict and write half and overall redox equations, and apply Faraday’s laws to calculate quantities in electrolytic reactions. Students analyse manufacturing processes with reference to factors that influence their reaction rates and extent. They investigate and apply the equilibrium law and Le Chatelier’s principle to different reaction systems; including predicting and explaining the conditions that will improve the efficiency and percentage yield of chemical processes. They use the language and conventions of chemistry including symbols, units, chemical formulas and equations to represent and explain observations and data collected from experiments, and to discuss chemical phenomena.

Unit 4: How Are Organic Compounds Categorised, Analysed And Used?

Prerequisites: Satisfactory completion of Unit 3 Chemistry.

Unit Description: In this unit students study the ways in which organic structures are represented and named. They process data from instrumental analyses of organic compounds to confirm or deduce organic structures, and perform volumetric analyses to determine the concentrations of organic chemicals in mixtures. Students consider the nature of the reactions involved to predict the products of reaction pathways and to design pathways to produce particular compounds from given starting materials. Students investigate key food molecules through an exploration of their chemical structures, the hydrolytic reactions in which they are broken down and the condensation reactions in which they are rebuilt to form new molecules. In this context the role of enzymes and coenzymes in facilitating chemical reactions is explored. Students use calorimetry as an investigative tool to determine the energy released in the combustion of foods.
**Drama**

**Unit 3: Ensemble Performance**
Prerequisites: Nil. Units 1 and 2 recommended. Students with no prior experience will be at a disadvantage. Flexible, creative thinking, a good working knowledge of Illustrator and Photoshop, and/or well developed skills in more traditional techniques, and an enjoyment of drawing and design are also recommended.

Unit Description: This unit focuses on non-naturalistic drama from a diverse range of traditions. Non-naturalistic performance styles and associated theatrical conventions are explored in the development of ensemble performance. The processes involved in the development and realisation of an ensemble performance are developed and evaluated. A non-naturalistic work selected from the prescribed playlist will also be analysed.

**Unit 4: Solo Performance**
Prerequisites: Unit 3 Drama (Units 3 and 4 must be taken sequentially).

Unit Description: The focus of this is on the use of performance styles, theatrical conventions and stimulus from a variety of cultural sources in the development of a solo performance. The processes involved in the development of solo work are also analysed and evaluated.

**English**

**Unit 3**
Prerequisites: All students must undertake the common study of English. At least one of Units 1 or 2 English must be satisfactorily completed before students are to attempt Unit 3. At least three units of English must be satisfactorily completed for students to gain their VCE.

Unit Description: The focus of this unit is on reading, analysing and comparing a range of visual and written texts. Students analyse how the authors of texts create meaning. Students produce written responses in different modes, that incorporate reflections on their own choices as writers.

**Unit 4**
Prerequisites: Unit 3 English

Unit Description: The focus of this unit is on reading and analysing a range of written texts. Students complete detailed comparisons, in written form, of two set texts. Students also produce a sustained and reasoned point of view, in oral form, in response to an issue that is currently debated in the media.
Food Studies

Unit 3: Food in Daily Life

Prerequisites: Nil, but Units 1 and 2 in Food and Technology are recommended.

Unit Description: This unit explores food as an integral and important part of everyday life; how it is important to physical health, wellbeing and as a vehicle for social interactions, connectedness and identity. Students investigate how food is evolving to meet the demands of our changing society, its many roles, science and nutritional values. Various food processing techniques are examined with specific focus on the impact of chemical and functional properties. Students also analyse a range of food and nutrition information and how it may be manipulated by advertisers to sell products. Food studies give students an opportunity to get involved in real, everyday food issues that empower them with practical and theoretical skills to facilitate the establishment of nutritious and sustainable eating patterns.

Unit 4: Food Issues, Challenges and Futures

Prerequisites: Unit 3 Food in Daily Life

Unit Description: This unit examines the various debates surrounding global and Australian food systems. It explores food and its impact on environment, ecology, ethics, farming practices and technology to meet the Global challenges of food security, safety, wastage and resource usage. Contemporary food issues are studied to seek clarity on food issues, considering solutions to support sustainable futures. There is a focus on individual responses to food information and misinformation and the development of food knowledge, skills and habits to empower consumers to make discerning food choices in regards to contemporary food fads, trends, labelling, marketing and packaging. The practical component provides students with opportunities to apply their ideas to environmental and ethical food challenges and extend their food production repertoire.

Further Information: There is a levy to pay for food purchased for this subject.

French

Unit 3

Prerequisites: Satisfactory completion of Unit 2.

Unit Description: This unit is designed to extend students’ knowledge and skills in speaking and writing
French. On completion of this unit students should be able to: express ideas through the production of original texts; analyse and use information from spoken texts; exchange information, opinions and experiences.

**Unit 4**

**Prerequisites:** Satisfactory completion of Unit 3.

**Unit Description:** This unit is designed to extend students’ knowledge and skills in speaking and writing French. On completion of this unit, students should be able to: analyse and use information from written texts; respond critically to spoken and written texts which reflect aspects of the language and culture of LOTE-speaking communities.

**Further Mathematics**

**Units 3 & 4**

**Prerequisites:** Students will normally have completed General Mathematics Units 1 and 2.

**Unit Description:** This subject consists of a compulsory area of study (core) ‘Data Analysis’, ‘Finance’ and ‘sequences and series’ then two modules in the ‘Applications’ area of study. The ‘Applications’ units covered are ‘Matrices’, ‘Geometry and Trigonometry’.

The core is covered in Unit 3. The two ‘Applications’ Modules are studied in Unit 4.

**Other Information:** Students must have a Texas Instruments TiNspire CAS Calculator.

**Geography**

**Unit 3: Regional Resources**

**Prerequisites:** Nil. However, students who have completed Outdoor Education Units 3 and 4 are strongly advised to take Geography due to the links between the two subjects.

**Unit Description:** This Unit concentrates on the importance of the Murray-Darling region to all Australians as a major source of food. Students will study the development of this region, the problems this development has led to, how these problems have been magnified by the current drought and the policies and strategies being implemented to ensure that this resource can be continued to be used by future generations.

Students are also asked to use their problem-solving skills to devise a management plan for a regional resource. This resource is Sydenham Park, an undeveloped area of land in Keilor.
**Unit 4: Global Perspectives**

**Prerequisites:** Completion of Unit 3 Geography.

**Unit Description:** This Unit looks at major natural and human events that possess the ability to affect large parts of the world and large numbers of people. Population issues, such as countries with too many people, or low birth rates, are studied as are the possible policies and strategies used to deal with such problems. Students will also look at the effects issues such as the spread of HIV/AIDS and Global Warming will have on the population of different countries.

Countries studied in this Unit include Australia, China, Italy, Kenya, South Africa, The Russian Federation, the United Kingdom and Vietnam.

**Global Politics**

**Unit 3: Global Actors**

**Prerequisites:** Nil

**Unit Description:** In this unit students investigate the extent of the power of a series of Global Actors. These include the state, the United Nations, the International Monetary Fund, and the World Trade Organisation. We also investigate the actions of one transnational corporation and two non-government organisations. These can include both legal organisations, such as Amnesty International, and illegal organisations, such as the Japanese Yakuza. In Area of Study Two, students investigate the use of different forms of power by one Asia-Pacific state.

**Unit 4: Global Crises**

**Prerequisites:** Global Politics Unit 3

**Unit Description:** In this unit students investigate ethical issues and debates surrounding two global issues. These issues can be chosen from People Movement, Human Rights, Arms Control & Disarmament or Development. In Unit 4 students investigate the causes of and responses to global crises. Two crises are investigated from Climate Change, Economic Instability, Terrorism or Armed Conflict.
Health and Human Development

Unit 3: Australia’s Health
Prerequisites: Nil.
Unit Description: In this unit, students learn about the health status of Australians, our health achievements and potential areas for improvement. They investigate the major causes of morbidity and mortality and the groups that are more vulnerable to poor health and premature death. Students look at the role government and non-government organisations play in preventing disease and promoting good health; and why this is vital to a healthy population. Students study the importance of nutrition and eating and its role as either a risk or protective factor to good health.

Unit 4: Global Health and Development
Prerequisites: Nil.
Unit Description: This unit explores global health, human development and sustainability. Students compare the health of populations from developing countries with Australia and analyse the reasons for differences. Students also investigate the role of the United Nations, Governments and Non-Government Organisations and the strategies that they use to achieve sustainable improvements to health and human development.

History - Revolutions

Unit 3: Russia
Prerequisites: Nil
Unit Description: This unit involves a study of pre-revolutionary Russia from 1896 to October 1917 and post-revolutionary Russia up until the death of Lenin. It includes an examination of the factors which contributed to the Communist Revolution and the role of ideas, movements and leaders in the revolutionary collapse of the traditional government. An evaluation of the creation of a new society is also conducted.

Unit 4: China
Prerequisites: Unit 3: Revolutions.
Unit Description: This unit involves a study of pre-revolutionary China from 1911 to October 1949 and post-revolutionary China to the death of Mao. It includes an examination of the factors which contributed to the Communist Revolution and the role of ideas, movements and leaders in the revolutionary collapse of the traditional government. An evaluation of the new society is also conducted.

**Hospitality**

**Units 3 and 4 Certificate II in Hospitality (Extended Program):**

**Prerequisites:** Units 1 and 2 Hospitality

**Unit Description:** Hospitality students in Year 12 undertake an extended Certificate II course where they complete some Certificate III Hospitality units. The focus of the course is on Food and Beverage service. Students work in the College Coffee Shop and Restaurant to learn, develop and refine food and beverage service skills.

Students are enrolled at Kangan - Batman TAFE for the subject so they gain a TAFE Hospitality statement of attainment. To cover the Kangan-Batman TAFE certificate costs, a fee is payable via your College statement.

Students must retain their College restaurant jacket and provide either a black knee length skirt or black pants to satisfy the uniform requirements.

**Italian**

**Prerequisites:** Satisfactory completion of Unit 2.

**Unit Description:** This unit is designed to extend students’ knowledge and skills in speaking and writing Italian. On completion of this unit students should be able to: express ideas through the production of original texts; analyse and use information from spoken texts; exchange information, opinions and experiences.

**Unit 4**

**Prerequisites:** Satisfactory completion of Unit 3.

**Unit Description:** This unit is designed to extend students’ knowledge and skills in speaking and writing Italian. On completion of this unit, students should be able to: analyse and use
information from written texts; respond critically to spoken and written texts which reflect aspects of the language and culture of LOTE-speaking communities.

**Japanese**

**Unit 3**  
**Prerequisites:** Satisfactory completion of Unit 2.  
**Unit Description:** This unit is designed to extend students’ knowledge and skills in speaking and writing Japanese. On completion of this unit students should be able to: express ideas through the production of original texts; analyse and use information from spoken texts; exchange information, opinions and experiences.

**Unit 4**  
**Prerequisites:** Satisfactory completion of Unit 3.  
**Unit Description:** This unit is designed to extend students’ knowledge and skills in speaking and writing Japanese. On completion of this unit, students should be able to: analyse and use information from written texts; respond critically to spoken and written texts which reflect aspects of the language and culture of LOTE-speaking communities.

**Legal Studies**

**Unit 3: Law Making**  
**Prerequisites:** Nil.  
**Unit Description:** The purpose of this unit is to enable students to develop an understanding of the institutions that determine laws and the processes by which laws are made. It considers reasons why laws are necessary and the impact of the Commonwealth Constitution on the operation of the legal system. Students undertake an evaluation of the strengths and weaknesses of the law-making bodies and the processes used to influence change and reform.

**Unit 4: Resolution and Justice**
Prerequisites: Students must undertake Unit 3 prior to Unit 4.

Unit Description: This unit explores the function and jurisdiction of the courts, tribunals and alternative avenues of dispute resolution with a view to comparing and evaluating the operation of the various dispute resolution methods. Students develop an understanding of criminal and civil pretrial and trial processes and procedures that operate within the Victorian legal system. The current operation of the jury system in criminal and civil trials will be examined and students will also review the operation of the adversary system, giving consideration to its strengths and weaknesses. Students will compare features of the adversary and inquisitorial systems of dispute resolution. In this unit, students evaluate the effective operation of the Victorian legal system and make recommendations for possible improvement and reform.

Literature

Units 3 & 4
Prerequisites: There are no prerequisites, although Units 1 and 2 Literature are good preparation for both Units 3 and 4. Students should have a love of literature and the ability to write fluently.

Unit Description: In Literature Unit 3, students consider how the form of a text affects meaning, and how writers construct their texts. They investigate ways writers adapt and transform texts and how meaning is affected as texts are adapted and transformed. They consider how the perspectives of those adapting texts may inform or influence the adaptations. Students draw on their study of adaptations and transformations to develop creative responses to texts. Students develop their skills in communicating ideas in both written and oral forms.

In Literature Unit 4, students develop critical and analytic responses to texts. They consider the context of their responses to texts as well as the ideas explored in the texts, the style of the language and points of view. They investigate literary criticism informing both the reading and writing of texts. Students develop an informed and sustained interpretation supported by close textual analysis.

Mathematical Methods

Units 3 & 4
Prerequisites: Satisfactory completion of Mathematical Methods Units 1 and 2. Students will be advantaged if they have also completed Specialist Mathematics.

Unit Description: Mathematical Methods consists of the following areas of study:

- Graphing Functions
• Circular Functions
• Calculus
• Algebra
• Probability

These areas develop from the units in Mathematical Methods Unit 1 and 2.

Other Information: Students must have a Texas Instruments TiNspire CAS Calculator.

Media

Unit 3: Narrative and Production Design
Prerequisites: Nil
Unit Description: So, you think you know films?

If you enjoy watching films, and appreciate the art of the film-maker, then you will enjoy this unit. The unit begins with a detailed analysis of two films. This analysis builds on the understandings developed in Unit 1. We investigate how directors use production and story elements to engage audiences.

Later in the semester students develop a comprehensive production design plan for their major production, to be completed in second semester. This is the chance for students to flex the creative muscles they developed in Units 1 and 2. Students can choose to create a short film, a series of photographs, an animation, a radio production or a convergent media piece. The actual production phase for their major work begins in semester two.

Unit 4: Media Production, Society’s Values and Media Influence
Prerequisites: Unit 3 (Units 3 and 4 must be taken as a sequence).
Unit Description: The highlight of this unit is the production of the pieces that the students planned in Semester 1. Students begin production in the semester break and post-production is completed late in Term 3. Students also complete two theoretical units. They investigate the ways in which a society’s values are embedded in the media texts it produces. They look at one discourse and investigate the way it has been represented in different media products over time. We also investigate the issue of media influence, and look to answer the question “How much influence does the media really have?”

Music
Unit 3: Music Performance

Prerequisites: There are no prerequisites for this unit. However, it is highly advisable to have completed Units 1 and 2 Music Performance or its equivalent.

Unit Description: This unit is designed mainly to develop practical skills in music performance in either a solo or group context complemented with technical work, theory and analysis.

Areas of Study Include: Performance of solo and/or group works, Performance Technique (development of technical skills and musicianship), Aural Comprehension and Analysis of music. An excursion/incursion is organized to enable students to respond in an analytical way to a professional performance.

Other Information: Students must study an instrument or voice as part of the College’s Instrumental Music Program. Students may also become a member of the various ensembles and/or choirs. They are provided with the opportunity to perform at monthly lunchtime concerts, the Gala Music night at the Clocktower Centre, NWMR School of Rock, the End-of-Year Concert in the school Auditorium, the Victorian State Schools Spectacular, College assemblies, LOTE week, the Grade 6 Orientation Program, College Production, Pascoe’s Café as well as festivals, local primary school fetes, various formal RSL functions and the annual PVGC Art show.

Unit 4: Music Performance

Prerequisites: Unit 3 Music Performance

Unit Description: This unit is designed to continue developing and consolidate all the components covered in Music Performance Units 1, 2 and 3.

Physical Education

Unit 3: Physical Activity Participation and Physiological Performance

Prerequisites: Nil. However, Units 1 and 2 P.E. are recommended.

Unit Description: This unit introduces students to an understanding of physical activity and sedentary behaviour from a participatory and physiological perspective. Students also investigate the contribution of energy systems to performance in physical activity.

Uniform: Students must have the FULL college PE uniform for all practical components of the course.
**Unit 4: Enhancing Performance**

Prerequisites: Nil. However, Units 1 and 2 P.E. are recommended.

Unit Description: This unit focuses on the components of fitness, fitness assessment and training programs. Also explored is the nutritional, physiological and psychological strategies used to enhance performance.

Uniform: Students must have the full college PE uniform for all practical components of the course.

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**Physics**

**Unit 3: How Do Fields Explain Motion And Electricity?**

Prerequisites: It is strongly advised to have a pass in Unit 1 and Unit 2 Physics. It is strongly recommended that you also study Year 12 Mathematical Methods.

Unit Description: It gets better! Now you have an idea about what Physics is about, why not extend your knowledge and enrich yourself even further?

We launch objects, spin them round and round, there REALLY is an unseen force between people, objects, planets, stars, galaxies... We ask what was Einstein on about anyway?

We build our own circuits – burglar warning systems, alarms to turn the fridge on when it gets too warm and even more!

We play with magnets then we figure out ways in which we could solve the world’s energy crisis. We learn what auroras are and how they show that magnetism keeps us alive.

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**Unit 4: How Can Two Contradictory Models Explain Both Light And Matter?**

Prerequisites: Satisfactory completion of Unit 3 Physics. It is strongly recommended that you also study Year 12 Mathematical Methods.

Unit Description: We will explore light. We’ll ask questions like how do rainbows form? How fast does light REALLY move?

Why is music, sound and physics so closely linked? How will this help you to get the BEST seats at the next Taylor Swift gig you are trying to get tickets for?

How do we know what stars are made up of?
We have our first step into Quantum physics and ask the BIG question – well what is light anyway

**Product Design and Technology – Fabrics**

**Units 3 & 4: Applying the Product Design Process & Product Development & Evaluation**

Prerequisite: Nil

Unit Description: In these units students work as a designer. They follow the design process from beginning to end. They start by analysing the needs of a client and preparing a series of potential design solutions. They then choose their own preferred option and prepare a comprehensive work plan for its completion. They are then required to follow their work plan and document their progress. Once they have completed their product they evaluate its effectiveness.

Over the course of the units students also investigate the roles of designer and client in industry and compare products made in industrial settings. These units are a chance for students who have enjoyed Units 1 and 2 Product Design and Technology to really exercise their creativity on a product of their own choice.

**Psychology**

**Unit 3: How Does Experience Affect Behaviour and Mental Processes?**

Prerequisites: Nil

Unit Description: This unit focuses on both macro-level and micro-level functioning of the nervous system to explain how the nervous system enables a person to interact with the world around them. Students will explore how stress may affect a person’s psychological functioning and consider the causes and management of stress. They will investigate how mechanisms of memory and learning lead to the acquisition of knowledge, the development of new capacities and changed behaviours. They consider the limitations and fallibility of memory and how memory can be improved. Students examine the contribution that classical and contemporary research has made to the understanding of the structure and function of the nervous system, and to the understanding of biological, psychological and social factors that influence learning and memory.

**Area of study 1: How does the nervous system enable psychological functioning?** Students explore the role of different branches of the nervous system in enabling a person to
integrate, coordinate and respond to internal and external sensory stimuli. They explore the specialised structures and functioning of neurons that allow the nervous system to transmit neural information. Students consider the ways in which stress can affect the mind and body, the role that the nervous system plays in these processes and how stress can be managed.

Area of study 2: How do people learn and remember? Students study the neural basis of memory and learning and examine factors that influence the learning of new behaviours and the storage and retention of information in memory. They consider the influence of biological, psychological and social factors on the fallibility of memory.

Unit 4: How Is Well-Being Developed and Maintained?

Prerequisites: Satisfactory completion of Unit 3 Psychology

Unit Description: This unit focuses on the study of the nature of consciousness and how changes in levels of consciousness can affect mental processes and behaviour. It considers the role of sleep and the impact that sleep disturbances may have on a person’s functioning. Students explore the concept of a mental health continuum and apply a bio psychosocial approach, as a scientific model, to analyse mental health and disorder. They use specific phobia to illustrate how the development and management of a mental disorder can be considered as an interaction between biological, psychological and social factors. Students examine the contribution that classical and contemporary research has made to the understanding of consciousness, including sleep, and the development of an individual’s mental functioning and wellbeing.

Area of study 1: How do levels of consciousness affect mental processes and behaviour? Students should be able to explain consciousness as a continuum, compare theories about the purpose and nature of sleep, and elaborate on the effects of sleep disruption on a person’s functioning.

Area of study 2: What influences mental wellbeing? Students explore the concept of a mental health continuum and factors that explain how location on the continuum for an individual may vary over time.

Area of study 3: Practical investigation: A student-designed or adapted practical investigation related to mental processes and psychological functioning is undertaken in either Unit 3 or 4, or across both Units 3 & 4.

Specialist Mathematics
**Units 3 & 4**

Prerequisites: Satisfactory completion of Mathematical Methods Units 1 and 2. It is also strongly recommended that students have also completed Specialist Mathematics.

Students must also be enrolled in Mathematical Methods 3 and 4.

Unit Description: Specialist Mathematics consists of the following areas of study:

- Coordinate Geometry
- Circular Functions
- Calculus
- Algebra
- Vectors in Two and Three Dimensions
- Mechanics.

Use of a CAS TiNspire calculator is required throughout the course.

**Studio Arts**

**Unit 3: Studio Production and Professional Practices**

Prerequisites: Nil. Units 1 and 2 recommended. Students with no prior experience will be at a disadvantage

Unit Description: This unit focuses on the implementation of an individual design process leading to the production of a range of potential directions and solutions. Students develop and use an exploration proposal to define an area of creative exploration. They plan and apply a design process to explore and develop their individual ideas. Analysis of these explorations and the development of the potential directions is an intrinsic part of the design process to support the making of finished artworks in Unit 4.

For this study, the exploration proposal supports the student to identify a direction for their design process. The design process is individually determined by the student. It records trialling, experimenting, analysing and evaluating the extent to which their art practices successfully communicate their aims and ideas. From this process students can develop directions for the development of finished artworks in Unit 4.

**Unit 4: Studio Production and Art Industry Contexts**
**Visual Communication Design**

**Unit 3: Design thinking and practice**

Prerequisites: Nil. However, Units 1 and 2 are recommended. Students with no prior experience will be at a disadvantage. Flexible, creative thinking, a good working knowledge of Illustrator and Photoshop, and/or well developed skills in more traditional techniques, and an enjoyment of drawing and design are also recommended.

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

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

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

**Unit 4: Design development and presentation**

**Prerequisites:** Unit 3 (Units 3 & 4 must be taken sequentially).

**Unit Description:** The focus of this unit is the development of design concepts and two final presentations of visual to meet the requirements of the brief. This involves applying the design process twice to meet each of the stated needs. Having completed their brief and generated ideas in Unit 3, students continue the design process by developing and refining concepts for each need stated in the brief. They utilise a range of digital and manual two- and three-dimensional methods, media and materials. They investigate how the application of design elements and design principles creates different communication messages with their target audience.

As students revisit stages to undertake further research or idea generation when developing and presenting their design solutions, they develop an understanding of the iterative nature of the design process. Ongoing reflection and evaluation of design solutions against the brief assists students with keeping their endeavours focused.

Students refine and present two visual communications within the parameters of the brief. They reflect on the design process and the design decisions they took in the realisation of their ideas. They evaluate their visual communications and devise a pitch to communicate their design thinking and decision making to the client.