VCE Studies offered at Koo Wee Rup Secondary College

The following is a list of VCE subjects which we anticipate will be offered at Koo Wee Rup Secondary College in 2020. Also listed are staff who may be able to assist you with specific information about the different studies.

PLEASE NOTE ALL PRICES LISTED ARE INDICATIVE ONLY

Just because a subject is offered does not necessarily mean that it will run.

Many factors will determine if a subject runs, including numbers who select it, blocking and available staff.

STUDY		NOMINATED TEACHER(S)
Accounting		Katie Coggins
Art	$70	Ben Sheers
Biology		Sally Markham / Katrina Brown
Business Management		Katie Coggins
Chemistry		David Campbell
Food Studies	$100	Kristy Cusack
English		Bridget De Bruin
Geography		James Page / Judy Orr
Health & Human Development		Shona Perrin
History		Nicola Power / Sarah Burgess
Information Technology		Kristy Cusack
Legal Studies		Katie Coggins / Sarah Constantine
Literature		Joanna Anketell / Bridget de Bruin / Karen Pain
Mathematics		Dean Beard
Music Performance		David Campbell
Outdoor Education	$750	Tommy Olden
Physical Education		Claire Notman
Physics		Sivaneshan Murugiah
Psychology		Shona Perrin
Studio Arts	$70	Nicole Goodwin
Product Design and Technology (Wood)	$120	Maney Beasley
Visual Communication & Design	$70	Ben Sheers
VCAL		Melissa McCallum
VET Hospitality	$300	Kristy Cusack
VET Music	$100	David Campbell
VET Sport & Recreation	$150	Jarryd Palser

These subjects are offerings only. They will only run if sufficient numbers of students select them. Remember students who choose to study VCE can also select VET subjects. Links for VET subject descriptions are included in this handbook, but students need to be aware that VET runs all day Wednesday or Friday and work missed for other subjects will need to be caught up on. If you are completing a VET course with your VCE you must complete the course in Year 10 and 11. The only VET Course available for completion in Year 12 is VET Music at the College which is integrated into the school timetable and does not require students to miss additional classes.

Selecting a Course for 2020

You may like to select your subjects based on one of the programs mentioned in the Victorian Certificate of Education document on the website. If not, you can develop a course by selecting from the subjects below. Student choice will be the determining factor on how much the 2020 list changes from the current structure. This selection model allows you to develop a program for yourself, but please ensure that you consider all the requirements of the VCE and that you keep a range of options open for post-VCE careers.

From the research each student has undertaken, there should by now be a list of preferred VCE/VET subjects. If this is not so, then please complete that research, and return to this page of the selection process.

Remember that you must choose English from one of the Blocks.

With any luck and a little juggling, you should be able to fill a program appropriately. If this is proving difficult, please don't hesitate to seek help from College personnel.

Guidelines to the Senior Studies Units and VET Courses

VCE subjects listed below will have a page of detailed information, including study outlines for Units 1&2 and Units 3&4 to help you decide which subjects will appeal most to you.

The course descriptions and venues for VET Courses can be found using the links provided. Final cost for 2020 courses are not yet available. Any costs listed are 2019 and subject to change for 2020. For more detailed information on VET courses please contact Ms Ingram or Ms Miller in the Careers Office. Please note that places in many of these courses are restricted and entry can be competitive.

English

Contact: Ms Bridget De Bruin

Unit 1

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

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

Areas of Study
1. Reading and Creating Texts
2. Analysing and Presenting Arguments

Unit 2

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

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

Areas of Study
1. Reading and Comparing Texts
2. Analysing and Presenting Arguments

Unit 3

In this unit students read and respond to texts analytically and creatively. They analyse arguments and the use of persuasive language in texts.

Areas of Study
1. Reading and Creating Texts
2. Analysing Arguments.

Unit 4

In this unit students compare the presentation of ideas, issues and themes in texts.

They create an oral presentation, intended to position audiences, about an issue currently debated in the media.

Areas of Study
1. Reading and Comparing Texts
2. Presenting Arguments

Art ($70)

Contact: Mr Ben Sheers

What is Art all about?

The VCE Art study recognises art as an integral part of our lives. Art is a potent and dynamic visual language through which we are able to communicate personal experiences, ideas, cultural values and beliefs. In both the process of making and examining art, students can realise the power to inspire change through imagination, creativity and innovation.

Within the VCE Art study, theoretical research and investigation informs art making. Students are encouraged to recognise the interplay between research and art making. This provides students with an informed context that supports an awareness of art as a tool for cultural and personal communication, in addition to providing stimulus and inspiration for their own art making. The study acknowledges the value of creativity and analytical thinking in preparing students for today's world by encouraging imagination, flexibility, adaptability and risk-taking. Students develop their visual language through personal and independent learning by combining a focused study of artworks with practical art making.

Unit 1

Outcome 1

On completion of this unit the student should be able to analyse and interpret a variety of artworks using the Formal Framework and the Personal Framework.

Outcome 2

On completion of this unit the student should be able to present visual creative responses that demonstrate their personal interests and ideas through trialling techniques, materials and processes.

Unit 2

Outcome 1

On completion of this unit the student should be able to analyse, interpret, compare and contrast artworks from different cultures using the Formal Framework and the Cultural Framework.

Outcome 2

On completion of this unit the student should be able to demonstrate technical and artistic development in the presentation of visual responses that include one finished artwork, through the exploration of selected media, materials and techniques.

Unit 3

Outcome 1

On completion of this unit the student should be able to use the Analytical Frameworks to analyse and interpret artworks produced before 1970 and artworks produced since 1970, and compare and contrast the meanings and messages of artworks produced before 1970 with those of artworks produced since 1970.

Outcome 2

On completion of this unit the student should be able to explore personal ideas and concepts through a conceptual and practical investigation including at least one finished artwork, using selected Analytical Frameworks to reflect upon and annotate their work.

Unit 4
Outcome 1
On completion of this unit the student should be able to discuss and debate an art issue using selected artist/s works as context, and present their informed opinion with reference to artworks and with the support of selected commentaries and relevant aspects of the Analytical Frameworks.
Outcome 2
On completion of this unit the student should have progressively communicated ideas, directions and/ or personal concepts in a body of work that includes at least one finished artwork, having used selected Analytical Frameworks to underpin reflections on their art making.

Accounting

Contact: Mrs Katie Coggins

What is Accounting all about?

VCE Accounting explores the financial recording, reporting, analysis and decision-making processes of a sole proprietor small business. Students study both theoretical and practical aspects of accounting. They collect, record, report and analyse financial data, and report, classify, verify and interpret accounting information, using both manual methods and information and communications technology (ICT). Students apply critical thinking skills to a range of business situations to model alternative outcomes and to provide accounting advice to business owners. In business decision-making, financial as well as ethical considerations (incorporating social and environmental aspects) should be taken into account.

Unit 1
This unit explores the establishment of a business and the role of accounting in the determination of business success or failure. In this, it considers the importance of accounting information to stakeholders.
Areas of Study
1. The Role of Accounting
2. Recording financial data and reporting accounting information for a service business

Unit 2
Accounting and decision making for a Trading Business
In this unit students develop their knowledge of the accounting process for sole proprietors operating a trading business, with a focus on inventory, accounts receivable, accounts payable and non-current assets. Students use manual processes and ICT, including spreadsheets, to prepare historical and budgeted accounting reports.
Areas of Study
1. Accounting for inventory
2. Accounting for and managing accounts receivable and accounts payable
3. Accounting for and managing non-current assets

Unit 3
Financial accounting for a trading business
This unit focuses on financial accounting for a trading business owned by a sole proprietor, and highlights the role of accounting as an information system. Students use the double entry system of recording financial data and prepare reports using the accrual basis of accounting and the perpetual method of inventory recording
Areas of Study
1. Recording and analysing financial data
2. Preparing and interpreting accounting reports

Unit 4
Recording, reporting, budgeting and decision-making
In this unit students further develop their understanding of accounting for a trading business owned by a sole proprietor and the role of accounting as an information system. Students use the double entry system of recording financial data, and prepare reports using the accrual basis of accounting and the perpetual method of inventory recording. Both manual methods and ICT are used to record and report.
Areas of Study
1. Extension of recording and reporting
2. Budgeting and decision-making

Biology

Contact: Miss Sally Markham / Mrs Katrina Brown

What is Biology all about?

Biology is a diverse and evolving science discipline that seeks to understand and explore the nature of life, past and present. Despite the diversity of organisms and their many adaptations for survival in various environments, all life forms share a degree of relatedness and a common origin. This study explores the dynamic relationships between organisms and their environments. It also explores the processes of life, from the molecular world of the cell to that of the whole organism.

Unit 1: How do living things stay alive?

In this unit students examine the cell as the structural and functional unit of life, from the single celled to the multicellular organism, and the requirements for sustaining cellular processes in terms of inputs and outputs. They analyse types of adaptations that enhance the organism's survival in a particular environment and consider the role homeostatic mechanisms play in maintaining the internal environment. Students investigate how a diverse group of organisms form a living interconnected community that is adapted to, and utilises, the abiotic resources of its habitat. Students consider how the planet's biodiversity is classified and the factors that affect the growth of a population. A student practical investigation related to the survival of an organism or species is undertaken in Area of Study 3. The investigation draws on content from Area of Study 1 and/or Area of Study 2.

Unit 2: How is continuity of life maintained?

In this unit students focus on cell reproduction and the transmission of biological information from generation to generation. Students learn that all cells are derived from pre-existing cells through the cell cycle. They examine the process of DNA replication and compare cell division in both prokaryotic and eukaryotic organisms. Students explore the mechanisms of asexual and sexual reproductive strategies, and consider the advantages and disadvantages of these two types of reproduction. The role of stem cells in the differentiation, growth, repair and replacement of cells in humans is examined, and their potential use in medical therapies is considered. Students use chromosome theory and terminology from classical genetics to explain the inheritance of characteristics, analyse patterns of inheritance, interpret pedigree charts and predict outcomes of genetic crosses. They explore the relationship between genes, the environment and the regulation of genes in giving rise to phenotypes. They consider the role of genetic knowledge in decision making about the inheritance of autosomal dominant, autosomal recessive and sex-linked genetic conditions. In this context the uses of genetic screening and its social and ethical issues are examined.

Unit 3: How do cells maintain life?

The cell is a dynamic system of interacting molecules that define life. An understanding of the workings of the cell enables an appreciation of both the capabilities and the limitations of living organisms whether animal, plant, fungus or microorganism. The convergence of cytology, genetics and biochemistry makes cell biology one of the most rapidly evolving disciplines in contemporary biology. In this unit students investigate the workings of the cell from several perspectives. They explore the importance of the insolubility of the plasma membrane in water and its differential permeability to specific solutes in defining the cell, its internal spaces and the control of the movement of molecules and ions in and out of such spaces. Students consider base pairing specificity, the binding of enzymes and substrates, the response of receptors to 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 to provide immunity to a specific antigen. A student practical investigation related to cellular processes is undertaken in Unit 3, and is assessed in Unit 4, Outcome 3. The findings of the investigation are presented in a scientific poster format.

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

In this unit students consider the continual change and challenges to which life on Earth has been subjected. They investigate the relatedness between species and the impact of various change events on a population's gene pool. The accumulation of changes over time is considered as a mechanism for biological evolution by natural selection that leads to the rise of new species. Students examine change in life forms using evidence from palaeontology, biogeography,

developmental biology and structural morphology. They explore how technological developments in the fields of comparative genomics, molecular homology and bioinformatics have resulted in evidence of change through measurements of relatedness between species. Students examine the structural and cognitive trends in the human fossil record and the interrelationships between human biological and cultural evolution. The biological consequences, and social and ethical implications, of manipulating the DNA molecule and applying biotechnologies is explored for both the individual and the species.

Business Management

Contact: Mrs Katie Coggins

What is Business Management all about?

VCE Business Management examines the ways businesses manage resources to achieve objectives. The VCE Business Management study design follows the process from the first idea for a business concept, to planning and establishing a business, through to the day-to-day management of a business. It also considers changes that need to be made to ensure continued success of a business. Students develop an understanding of the complexity of the challenges facing decision makers in managing these resources

Unit 1: Planning a Business
In this unit students explore the factors affecting business ideas and the internal and external environments within which businesses operate, and the effect of these on planning a business.

Areas of Study
1. The Business Idea
2. External Environment
3. Internal Environment

Unit 2: Establishing a Business
In this unit students examine the legal requirements that must be satisfied to establish a business. They investigate the essential features of effective marketing and consider the best way to meet the needs of the business in terms of staffing and financial record keeping. Students analyse various management practices in this area by applying this knowledge to contemporary business case studies from the past four years.

Areas of Study
1. Legal requirements and financial considerations
2. Managing the marketing function
3. Staffing a Business

Unit 3: Managing a Business
In this unit students explore the key processes and issues concerned with managing a business efficiently and effectively to achieve the business objectives. Students examine the different types of businesses and their respective objectives. They consider corporate culture, management styles, management skills and the relationship between each of these. Students investigate strategies to manage both staff and business operations to meet objectives. Students develop an understanding of the complexity and challenge of managing businesses and through the use of contemporary business case studies from the past four years have the opportunity to compare theoretical perspectives with current practice.

Areas of Study
1. Business Foundations
2. Managing Employees
3. Operations Management

Unit 4: Transforming a Business
Businesses are under constant pressure to adapt and change to meet their objectives. In this unit students consider the importance of reviewing key performance indicators to determine current performance and the strategic management necessary to position a business for the future. Students study a theoretical model to undertake change, and consider a variety of strategies to manage change in the most efficient and effective way to improve business performance. They investigate the importance of leadership in change management. Using a contemporary business case study from the past four years, students evaluate business practice against theory.

Areas of Study
1. Reviewing Performance – the Need for Change
2. Implementing Change

Chemistry

Contact: Mr David Campbell

What is Chemistry all about?

This study provides a comprehensive coverage of theory which is applied by students to understand the chemical processes related to new drugs, synthetic materials, biotechnology, microelectronics, new forms of food preservation and fuels.
The subject is important for students who are interested in a career in health, engineering or the sciences. It is recommended that students have achieved a high level in Year 10 Mathematics.

Unit 1: How can the diversity of materials be explained?

The development and use of materials for specific purposes is an important human endeavour. In this unit students investigate the chemical properties of a range of materials from metals and salts to polymers and nanomaterials. Using their knowledge of elements and atomic structure students explore and explain the relationships between properties, structure and bonding forces within and between particles that vary in size from the visible, through nanoparticles, to molecules and atoms. Students examine the modification of metals, assess the factors that affect the formation of ionic

crystals and investigate a range of non-metallic substances from molecules to polymers and giant lattices and relate their structures to specific applications. Students are introduced to quantitative concepts in chemistry including the mole concept. They apply their knowledge to determine the relative masses of elements and the composition of substances. Throughout the unit students use chemistry terminology including symbols, formulas, chemical nomenclature and equations to represent and explain observations and data from experiments, and to discuss chemical phenomena. A research investigation is undertaken in Area of Study 3 related to one of ten options that draw upon and extend the content from Area of Study 1 and/or Area of Study 2.

Unit 2: What makes water such a unique chemical?

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

Unit 3: How can chemical processes be designed to optimise efficiency?

The global demand for energy and materials is increasing with world population growth. In this unit students explore energy options and the chemical production of materials with reference to efficiencies, renewability and the minimisation of their impact on the environment. 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 to predict and explain 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. A

student practical investigation related to energy and/or food is undertaken across both Units 3 and 4, and is assessed in Unit 4, Outcome 3.

Unit 4: How are organic compounds categorised, analysed and used?

The carbon atom has unique characteristics that explain the diversity and number of organic compounds that not only constitute living tissues but are also found in the fuels, foods, medicines and many of the materials we use in everyday life. In this unit students investigate the structural features, bonding, typical reactions and uses of the major families of organic compounds including those found in food. 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.

Food Studies ($100)

Contact: Ms Kristy Cusack

What is Food Studies all about?

Food Studies focuses on the importance of food in our daily lives from both a theoretical and practical point of view. It is designed to provide students with the skills to make informed choices when selecting, storing, purchasing, preparing and consuming foods, and to consider the importance of environmental issues and sustainability practices in food production.
Students explore food from a wide range of perspectives. They study past and present patterns of eating, Australian and global food production systems and the many physical and social functions and roles of food. They research economic, environmental and ethical dimensions of food and critically evaluate information, marketing messages and new trends.

Practical work is integral to Food Studies and includes cooking, demonstrations, creating and responding to design briefs, dietary analysis, food sampling and taste-testing, sensory analysis, product analysis and scientific experiments.

Unit 1: Food origins
Students investigate the origins and roles of food through time and across the world. They explore how humanity has historically sourced its food, examining the general progression from hunter-gatherer to rural-based agriculture, to today's urban living and global trade in food. Students consider the origins and significance of food through inquiry into particular food-producing regions of the world.

They then investigate Australian indigenous food prior to European settlement and how food patterns have changed since, particularly through the influence of food production, processing and manufacturing industries and immigration. Students consider cuisines that are part of Australia's culinary identity today and reflect on the concept of an Australian cuisine, influence of technology and globalisation on food patterns.

Unit 2: Food makers
This unit focuses on commercial food production industries and looks at food production in small-scale domestic settings, as both a comparison and complement to commercial production. Students gain insight into the significance of food industries to the Australian economy and investigate the capacity of industry to provide safe, high-quality food that meets the needs of consumers.

Students use practical skills and knowledge to produce foods and consider a range of evaluation measures to compare their foods to commercial products. They consider the effective provision and preparation of food in the home, and analyse the benefits and challenges of developing and using practical food skills in daily life. In demonstrating their practical skills, students design new food products and adapt recipes to suit particular needs and circumstances. They consider the possible extension of their role as small-scale food producers by exploring potential entrepreneurial opportunities.

Unit 3: Food in daily life
This unit explores the science of food: our physical need for it and how it nourishes and sometimes harms our bodies. Students investigate the physiology of eating and appreciating food, and the microbiology of digestion. They also investigate the functional properties of food and the changes that occur during food preparation and cooking.

Students focus on influences on food choice: how communities, families and individuals change their eating patterns over time and how our food values and behaviours develop within social environments. Students inquire into the role of food in shaping and expressing identity and connectedness and the ways in which food information can be filtered and manipulated. They investigate behavioural principles that assist in the establishment of lifelong, healthy dietary patterns.

The practical component of this unit enables students to understand food science terminology and to apply specific techniques to the production.

Unit 4: Food issues, challenges and futures
This unit focuses on issues about the environment, ecology, ethics, farming practices, the development and application of technologies, and the challenges of food security, food safety, food wastage, and the use and management of water and land.

Students research a selected topic, seeking clarity on current situations and points of view, considering solutions and analysing work undertaken to solve problems and support sustainable futures.

They deliberate 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. Students consider how to assess information and draw evidence-based conclusions. They apply this methodology to navigate contemporary food fads, trends and diets. They practise and improve their food selection skills by interpreting food labels and analysing the marketing terms used on food packaging.

GEOGRAPHY

Contact: Mr James Page / Ms Judy Orr

What is Geography all about?

The study of Geography is a structured way of exploring, analysing and understanding the characteristics of places that make up our world. Geographers are interested in key questions concerning places and geographic phenomena: What is there? Where is it? Why is it there? What are the effects of it being there? How is it changing over time and how could, and should, it change in the future? How is it different from other places and phenomena? How are places and phenomena connected? Students explore these questions through fieldwork and investigation of a wide range of secondary sources. These methods underpin the development of a unique framework for understanding the world, enabling students to appreciate its complexity, the diversity and interactions of its environments, economies and cultures, and the processes that helped form and transform them.

Unit 1: Hazards and Disasters
In this unit students undertake an overview of hazards before investigating two contrasting types of hazards and the responses to them by people. Students examine the processes involved with hazards and hazard events, including their causes and impacts, human responses to hazard events and interconnections between human activities and natural phenomena.

Areas of Study
1. Characteristics of Hazards
2. Response to Hazards and Disasters

Unit 2: Tourism
In this unit students investigate the characteristics of tourism, with particular emphasis on where it has developed, its various forms, how it has changed and continues to change and its impacts on people, places and environments. They select contrasting examples of tourism from within Australia and elsewhere in the world to support their investigations.

Areas of Study
1. Characteristics of Tourism
2. Impact of Tourism

Unit 3: Changing the Land
This unit focuses on two investigations of geographical change: change to land cover and change to land use. Land cover includes biomes such as forest, grassland, tundra and wetlands, as well as land covered by ice and water. Land cover is the natural state of the biophysical environment

developed over time as a result of the interconnection between climate, soils, landforms and flora and fauna and, increasingly, interconnections with human activity. Natural land cover has been altered by many processes such as geomorphological events, plant succession and climate change. People have modified land cover to produce a range of land uses to satisfy needs such as housing, resource provision, communication, recreation and so on. Students investigate three major processes that are changing land cover in many regions of the world: deforestation, desertification, and melting glaciers and ice sheets. Students investigate the distribution and causes of these three processes. They select one location for each of the three processes to develop a greater understanding of the changes to land cover produced by these processes, the impacts of these changes and responses to these changes at different scales. At a local scale students investigate land use change using appropriate fieldwork techniques and secondary sources.

Areas of Study

1. Land Use Change
2. Land Cover Change

Unit 4: Human Population Trends and Issues

In this unit students investigate the geography of human populations. They explore the patterns of population change, movement and distribution, and how governments, organisations and individuals have responded to those changes in different parts of the world. In this unit, students study population dynamics before undertaking an investigation into two significant population trends arising in different parts of the world. They examine the dynamics of populations and their economic, social, political and environmental impacts on people and places.

Areas of Study

1. Population Dynamics
2. Population Issues and Challenges

Health and Human Development

Contact: Ms Shona Perrin

What is Health and Human Development all about?

The study of Health and Human Development provides an opportunity for students to investigate health and human development across the lifespan. Students examine the factors that promote well-being in individuals, families and their local and global communities. It explains the physical, social and emotional aspects of health and development. Health and development are closely related and are influenced by lifestyle, environment, heredity and access to health services and the interaction between them.

Unit 1

This unit looks at health and wellbeing as a concept with varied and evolving perspectives and definitions. It takes the view that health and wellbeing are subject to a wide range of contexts and interpretations, with different meanings for different people. As a foundation to the understanding of health, students should investigate the World Health Organization's (WHO) definition and also explore other interpretations. Wellbeing is a complex combination of all dimensions of health, characterised by an equilibrium in which the individual feels happy, healthy, capable and engaged. For the purposes of this study, students should consider wellbeing to be an implicit

element of health. In this unit students identify personal perspectives and priorities relating to health and wellbeing, and enquire into factors that influence health attitudes, beliefs and practices, including among Aboriginal and Torres Strait Islanders. Students look at multiple dimensions of health and wellbeing, the complex interplay of influences on health and wellbeing and the indicators used to measure and evaluate health status. With a focus on youth, students consider their own health as individuals and as a cohort. They build health literacy through interpreting and using data, through investigating the role of food, and through extended inquiry into one youth health focus area

Unit 2

This unit investigates transitions in health and wellbeing, and development, from lifespan and societal perspectives. Students look at changes and expectations that are part of the progression from youth to adulthood. This unit promotes the application of health literacy skills through an examination of adulthood as a time of increasing independence and responsibility, involving the establishment of long-term relationships, possible considerations of parenthood and management of health-related milestones and changes. Students enquire into the Australian healthcare system and extend their capacity to access and analyse health information. They investigate the challenges and opportunities presented by digital media and health technologies, and consider issues surrounding the use of health data and access to quality health care.

Unit 3

Australia's health in a globalised world

This unit looks at health, wellbeing and illness as multidimensional, dynamic and subject to different interpretations and contexts. Students begin to explore health and wellbeing as a global concept and to take a broader approach to inquiry. As they consider the benefits of optimal health and wellbeing and its importance as an individual and a collective resource, their thinking extends to health as a universal right. Students look at the fundamental conditions required for health improvement, as stated by the World Health Organization (WHO). They use this knowledge as background to their analysis and evaluation of variations in the health status of Australians. Area of Study 2 focuses on health promotion and improvements in population health over time. Students look at various public health approaches and the interdependence of different models as they research health improvements and evaluate successful programs. While the emphasis is on the Australian health system, the progression of change in public health approaches should be seen within a global context.

Area of study 1: Understanding health and wellbeing
Area of study 2: Promoting health and wellbeing

Unit 4

Health and human development in a global context

This unit examines health and wellbeing, and human development in a global context. Students use data to investigate health status and burden of disease in different countries, exploring factors that contribute to health inequalities between and within countries, including the physical, social and economic conditions in which people live. Students build their understanding of health in a global context through examining changes in burden of disease over time and studying the key concepts of sustainability and human development. They consider the health implications of increased globalisation and worldwide trends relating to climate change, digital technologies, world trade and the mass movement of people. Area of Study 2 looks at global action to improve health and wellbeing and human development, focusing on the United Nations' (UN's) Sustainable Development Goals (SDGs) and the work of the World Health Organization (WHO). Students also investigate the role of non-government organisations and Australia's overseas aid program.

Students evaluate the effectiveness of health initiatives and programs in a global context and reflect on their capacity to take action.

Area of study 1: Health and wellbeing in a global context
Area of study 2: Health and the Sustainable Development Goals

History

Contact: Mrs Nicola Power/ Miss Sarah Burgess

What is History all about?

History involves inquiry into human action in the past, to make meaning of the past using primary sources as evidence. As historians ask new questions, revise interpretations or discover new sources, fresh understandings come to light. Although history deals with the particular – specific individuals and key events – the potential scope of historical inquiry is vast and formed by the questions that historians pursue, the availability of sources and the capacity of historians to interpret those sources. VCE History reflects this range of inquiry by enabling students to engage with a range of times, people, places and ideas.

Units 1 & 2: Twentieth Century History

Unit 1: Twentieth Century History 1918-1939
In unit 1 students explore the nature of political, social and cultural change in the period between the world wars. The period after World War One was characterised by significant social and cultural change in the contrasting decades of the 1920s and 1930s.

Areas of Study
1. Ideology and Conflict
2. Social and Cultural Change

Unit 2: Twentieth Century History 1945-2000
In Unit 2 students explore the nature and impact of the Cold War and challenges and changes to existing political, economic and social arrangements in the second half of the twentieth century.

Areas of Study
1. Competing Ideologies
2. Challenge and Change

Units 3 & 4 Australian History

Unit 3: Transformations: Colonial Society to Nation
In this unit students explore the transformation of the Port Phillip District (later Victoria) from the 1830s through to the end of the tumultuous gold rush decade in 1860. They consider the dramatic changes introduced as the British colonisers swiftly established themselves, taking possession of the land and then its newly discovered mineral riches. Students examine transformations in the way of life of the Aboriginal peoples and to the environment as the European society consolidated itself. They also consider how new visions for the future created by the gold rush and the Eureka rebellion further transformed the new colony. Students explore the type of society Australians attempted to create in the early years of the newly federated nation. Much of the legislation debated and

passed by the Commonwealth Parliament was relatively advanced and Australia was seen as a social laboratory exploring new forms of rights and benefits for its citizens. Students evaluate the effect that Australian involvement in World War One had on the country's egalitarian and socially progressive aspirations.

Areas of Study

1. The reshaping of Port Phillip District/Victoria, 1834 –1860
2. Making a people and a nation 1890 –1920

Unit 4: Transformations: Old Certainties and New Visions

In this unit students investigate the continuing development of the nation in the early part of the twentieth century and the dramatic changes that occurred in the latter part of the century. After World War One the process of nation building was renewed. However, world events soon intruded again into the lives of all Australians. The economic crisis of the 1930s followed by another world war redirected the nation's priorities for a time as it struggled to regain economic stability and defeat its military enemies. The experience of both the Depression and World War Two gave rise to renewed thinking by Australians about how to achieve the type of society envisaged at the time of Federation.

Areas of Study

1. Crises that tested the nation 1929 –1945
2. Voices for change 1965 –2000

Information Technology - Applied Computing

Contact: Ms Kristy Cusack

VCE Applied Computing focuses on the strategies and techniques for creating digital solutions to meet specific needs and to manage the threats to data, information and software security. The study examines the attributes of each component of an information system including people, processes, data and digital systems (hardware, software, networks), and how their interrelationships affect the types and quality of digital solutions.

VCE Applied Computing is underpinned by four key concepts: digital systems, data and information, approaches to problem solving, and interactions and impact.

VCE Applied Computing provides students with opportunities to acquire and apply knowledge and skills to use digital systems efficiently, effectively and innovatively when creating digital solutions. Students investigate legal requirements and ethical responsibilities that individuals and organisations have with respect to the security and integrity of data and information. Through a structured approach to problem solving, incorporating computational, design and systems thinking, students develop an awareness of the technical, social and economic impacts of information systems, both currently and into the future.

Unit 1: Applied computing

In this unit students are introduced to the stages of the problem-solving methodology. Students focus on how data can be used within software tools such as databases and spreadsheets to create data visualisations, and the use of programming languages to develop working software solutions.

In Area of Study 1, as an introduction to data analytics, students respond to a teacher-provided analysis of requirements and designs to identify and collect data in order to present their findings as data visualisations. They present work that includes database, spreadsheet and data visualisations solutions. In Area of Study 2 students select and use a programming language to create a working software solution. Students prepare, document and monitor project plans and engage in all stages of the problem-solving methodology.

Unit 2: Applied computing

In this unit students focus on developing innovative solutions to needs or opportunities that they have identified, and propose strategies for reducing security risks to data and information in a networked environment.

In Area of Study 1 students work collaboratively and select a topic for further study to create an innovative solution in an area of interest. The innovative solution can be presented as a proof of concept, a prototype or a product. Students engage in all areas of the problem-solving methodology. In Area of Study 2, as an introduction to cybersecurity, students investigate networks and the threats, vulnerabilities and risks to data and information. They propose strategies to protect the data accessed using a network.

Unit 3: Data analytics

In this unit students apply the problem-solving methodology to identify and extract data through the use of software tools such as database, spreadsheet and data visualisation software to create data visualisations or infographics. Students develop an understanding of the analysis, design and development stages of the problem-solving methodology.

In Area of Study 1 students respond to teacher-provided solution requirements and designs. Students develop data visualisations and use appropriate software tools to present findings. Appropriate software tools include database, spreadsheet and data visualisation software. In Area of Study 2 students propose a research question, prepare a project plan, collect and analyse data, and design infographics or dynamic data visualisations. Area of Study 2 forms the first part of the School-assessed Task (SAT) that is completed in Unit 4, Area of Study 1.

Unit 4: Data analytics

In this unit students focus on determining the findings of a research question by developing infographics or dynamic data visualisations based on large complex data sets and on the security strategies used by an organisation to protect data and information from threats.

In Area of Study 1 students apply the problem-solving stages of development and evaluation to develop their preferred design prepared in Unit 3, Area of Study 2, into infographics or dynamic data visualisations, and evaluate the solutions and project plan. Area of Study 1 forms the second part of the School-assessed Task (SAT). In Area of Study 2 students investigate security practices of an organisation. They examine the threats to data and information, evaluate security strategies and recommend improved strategies for protecting data and information.

Unit 3: Software development

In this unit students apply the problem-solving methodology to develop working software modules using a programming language. Students develop an understanding of the analysis, design and development stages of the problem-solving methodology.

In Area of Study 1 students respond to teacher-provided solution requirements and designs and develop a set of working modules through the use of a programming language. Students examine a simple software requirements specification and a range of software design tools in order to apply

specific processing features of a programming language to create working modules. In Area of Study 2 students analyse a need or opportunity, select an appropriate development model, prepare a project plan, develop a software requirements specification and design a software solution. Area of Study 2 forms the first part of the School-assessed Task (SAT) that is completed in Unit 4, Area of Study 1.

Unit 4: Software development

In this unit students focus on how the information needs of individuals and organisations are met through the creation of software solutions. They consider the risks to software and data during the software development process, as well as throughout the use of the software solution by an organisation.

In Area of Study 1 students apply the problem-solving stages of development and evaluation to develop their preferred design prepared in Unit 3, Area of Study 2, into a software solution and evaluate the solution, chosen development model and project plan. Area of Study 1 forms the second part of the School-assessed Task (SAT). In Area of Study 2 students examine the security practices of an organisation and the risks to software and data during the development and use of the software solutions. Students evaluate the current security practices and develop a risk management plan.

Legal Studies

Contact: Mrs Katie Coggins / Sarah Constantine

What is Legal Studies all about?

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

Unit 1: Guilt and Liability

Criminal law and civil law aim to achieve social cohesion and protect the rights of individuals. Criminal law is aimed at maintaining social order and infringing criminal law can result in charges. Civil law deals with the infringement of a person's or group's rights and breaching civil law can result in litigation. In this unit students develop an understanding of legal foundations, such as the different types and sources of law and the existence of a court hierarchy in Victoria. Students investigate key concepts of criminal law and civil law and apply these to actual and/or hypothetical scenarios to determine whether an accused may be found guilty of a crime, or liable in a civil dispute. In doing so, students develop an appreciation of the way in which legal principles and information are used in making reasoned judgments and conclusions about the culpability of an accused, and the liability of a party in a civil dispute.

Areas of Study

1. Legal Foundations
2. The presumption of innocence
3. Civil Liability

Unit 2: Sanctions, remedies and rights

Criminal law and civil law aim to protect the rights of individuals. When rights are infringed, a case or dispute may arise which needs to be determined or resolved, and sanctions or remedies may be

imposed. This unit focuses on the enforcement of criminal law and civil law, the methods and institutions that may be used to determine a criminal case or resolve a civil dispute, and the purposes and types of sanctions and remedies and their effectiveness. Students undertake a detailed investigation of two criminal cases and two civil cases from the past four years to form a judgment about the ability of sanctions and remedies to achieve the principles of justice. Students develop their understanding of the way rights are protected in Australia and in another country, and possible reforms to the protection of rights. They examine a significant case in relation to the protection of rights in Australia.

Areas of Study

1. Sanctions
2. Remedies
3. Rights

Unit 3: Rights and Justice

The Victorian justice system, which includes the criminal and civil justice systems, aims to protect the rights of individuals and uphold the principles of justice: fairness, equality and access. In this unit students examine the methods and institutions in the justice system and consider their appropriateness in determining criminal cases and resolving civil disputes. Students consider the Magistrates' Court, County Court and Supreme Court within the Victorian court hierarchy, as well as other Victorian legal institutions and bodies available to assist with cases. Students explore matters such as the rights available to an accused and to victims in the criminal justice system, the roles of the judge, jury, legal practitioners and the parties, and the ability of sanctions and remedies to achieve their purposes. Students investigate the extent to which the principles of justice are upheld in the justice system. They discuss recent reforms from the past four years and recommended reforms to enhance the ability of the justice system to achieve the principles of justice. Throughout this unit, students apply legal reasoning and information to actual and/or hypothetical scenarios

Areas of Study

1. The Victorian Criminal Justice System
2. The Victorian Civil Justice System
3.

Unit 4: The people and the law

The study of Australia's laws and legal system involves an understanding of institutions that make and reform our laws, and the relationship between the Australian people, the Australian Constitution and law-making bodies. In this unit, students explore how the Australian Constitution establishes the law-making powers of the Commonwealth and state parliaments, and protects the Australian people through structures that act as a check on parliament in law-making. Students develop an understanding of the significance of the High Court in protecting and interpreting the Australian Constitution. They investigate parliament and the courts, and the relationship between the two in law-making, and consider the roles of the individual, the media and law reform bodies in influencing law reform. Throughout this unit, students apply legal reasoning and information to actual scenarios.

Areas of Study

1. The people and the Australian Constitution
2. The people, the parliaments and the courts

LITERATURE

Contact: Mrs Joanna Anketell/Ms Bridget de Bruin/Ms. Karen Pain

What is Literature all about?
Literature involves the study of novels, plays, poetry and films. It is designed for students who enjoy reading and can write analytically about the texts. They will need to be able to write about characters and themes. They could also be required to write creatively mimicking an author's style.

These units enable student to develop effective reading strategies, examine ideas and views of life which are presented in the literature studied, develop an understanding of contemporary literature and develop an understanding of how themes/ideas in texts comment on personal and social experiences.

Unit 1: Approaches to literature
In this unit students focus on the ways the interaction between text and reader creates meaning. Students' analyses of the features and conventions of texts help them develop responses to a range of literary forms and styles. They develop an awareness of how the views and values that readers hold may influence the reading of a text.

Unit 2: Context and connections
In this unit students explore the ways literary texts connect with each other and with the world. They deepen their examination of the ways their own culture and the cultures represented in texts can influence their interpretations and shape different meanings. Students consider the relationships between authors, audiences and contexts and analyse the similarities and differences across texts and establish connections between them. They engage in close reading of texts and create analytical responses that are evidence-based.

Unit 3: Form and transformation
In this unit 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 develop creative responses to texts and their skills in communicating ideas in both written and oral forms.

Unit 4: Interpreting texts
In this unit students develop critical and analytic responses to texts. They investigate literary criticism informing both the reading and writing of texts. Students develop an informed and sustained interpretation supported by close textual analysis.

Mathematics

Contact: Mr Dean Beard

If you are considering undertaking any mathematics subjects as part of your VCE, please read the following information very carefully and consult with your class teacher.

There are a number of VCE Mathematics subjects offered:

Typical Year11 subjects		Typical Year12 subjects
▪ General Mathematics Units 1 & 2	which leads to	Further Mathematics Units 3 & 4
▪ Mathematical Methods Units 1 & 2	which leads to	Mathematical Methods Units 3 & 4
▪ Specialist Maths Units 1 & 2	which leads to	Specialist Mathematics Units 3 & 4

▪ General Mathematics (Advanced) Units 1 & 2. See below for more information.

What is VCE Mathematics all about?

All units of Mathematics are designed to enable students to:

 Develop mathematical skills and knowledge

 Apply mathematical knowledge analyse, investigate and solve problems in a variety of situations, ranging from well-defined and familiar situations, to unfamiliar and open-ended situations

 Use technology as an effective support for mathematical activity

All VCE mathematics students are required to have a Casio ClassPad calculator.

Units 1 & 2

General Mathematics

Prerequisite: Students need to have achieved a suitable grade in any Year 10 Mathematics.

This subject is for students who are either considering attempting Further Mathematics Units 3 & 4 or who require VCE units of General Mathematics at Units 1 & 2 level only.

The areas of study for this subject are: Arithmetic, Data Analysis, Algebra, Graphs of linear and non-linear relations, Decision Mathematics, Business Mathematics, Geometry and Trigonometry, and Matrices.

General Mathematics (Advanced)

Prerequisite: Students need to have completed Year9 SEAL Maths.

General Mathematics Advanced Units 1 & 2 is specifically designed for students who have completed Year 9 SEAL Maths. Students complete the General Maths course as well as some Maths Methods and Specialist Maths topics. This allows students a better informed choice of Maths subjects for Year 11.

Mathematical Methods

Prerequisite: Students need to have achieved a suitable grade in Year 10 Maths for Methods.
This subject is for students who are either considering attempting Mathematical Methods Units 3 & 4, Specialist Maths Units 3 & 4 or who require VCE Units of Mathematical Methods at Units 1 & 2 level only.
These Units involve the study of Functions and Graphs, Algebra, Calculus and Probability.

Specialist Mathematics

Specialist Mathematics must be taken in conjunction with Mathematical Methods Units 1 & 2. To enrol in this subject, students should have successfully completed Yr10 Maths for Methods or General Maths Advanced U 1 & 2.
These Units will involve the study of Arithmetic & Number, Algebra & structure, Discrete Mathematics, Geometry measurement & trigonometry, Graphs of linear &non-linear relations and Statistics.

Units 3 & 4

Further Mathematics

Students should have successfully completed U1&2 General Mathematics and/or U1&2 Methods to enrol in this subject.
Unit 3 consists of core studies of Data Analysis and Financial Maths & Recursion.
Unit 4 consists of modules (chosen by the school) of Matrices and Networks & Decision Maths.

Mathematical Methods

Students should have successfully completed Units 1 & 2 of Mathematical Methods in order to enrol in this subject.
These Units involve the study of Algebraic Techniques, Circular (trigonometric) Functions, Calculus, and Statistics and Probability.

Specialist Mathematics

Specialist Mathematics must be taken in conjunction with Mathematical Methods Units 3 & 4. To enrol in this subject, students should have successfully completed Mathematical Methods Units 1 & 2 and Specialist Mathematics Units 1 & 2.

These Units will involve the study of Functions & graphs, Calculus, Algebra, Vectors, Probability & statistics and Mechanics.

MUSIC PERFORMANCE

Contact: Mr. David Campbell

What is Music Performance all about?

Central to the study of Music Performance is solo performance. It is expected that students receive some lessons from a specialist in their chosen instrument and that they be committed to regular home practice.

Other areas of this study are designed to enhance musicianship. There is a balance of class work including theory, research, creative work, aural comprehension with practical performance work. Students need to participate in at least one school ensemble or band to satisfy the group performance requirements.

Unit 1
Areas to be studied include:

- Solo Performance including technical work and/or studies, ICT
- Theory
- Aural Comprehension
- Organisation of sound through creative processes
- Analysis of works being prepared for group or solo performance
- Unprepared performance

Unit 2
Areas to be studied include:

- Solo Performance including technical work and/or studies, ICT
- Theory
- Aural comprehension
- Analysis of works being prepared for performance
- Group performance
- Unprepared performance

Unit 3
Music Performance: Solo
Areas to be studied include:

- Solo performance including technical work and studies and unprepared performance
- Aural comprehension
- Interpretation and performance styles in music

- Analysis of ensemble work
- Ensemble performance

Unit 4
Music Performance: Solo
Areas to be studied include:

- Solo performance including technical work, exercises ,unprepared performance and use of ICT
- Aural comprehension
- Interpretation and performance styles in music
- Analysis of ensemble work
- Ensemble performance

OUTDOOR & ENVIRONMENTAL STUDIES ($750)

Note: Units 1/2 are offered to Year 10 students and Units 3/4 Year 11 students.

Contact: Mr Tommy Olden

What is Outdoor & Environmental Studies all about?

VCE Outdoor and Environmental Studies provides students with the skills and knowledge to safely participate in activities in outdoor environments and to respect and value diverse environments. The blend of direct practical experience of outdoor environments with more theoretical ways of knowing, enables informed understanding of human relationships with nature.

Unit 1
This unit examines some of the ways in which humans understand and relate to nature through experiences of outdoor environments. The focus is on individuals and their personal responses to and experiences of outdoor environments.

Students are provided with the opportunity to explore the many ways in which nature is understood and perceived. Students develop a clear understanding of the range of motivations for interacting with outdoor environments and the factors that affect an individual's access to outdoor experiences and relationships with outdoor environments.

Activities: Hiking, surfing, snorkelling, orienteering
Unit 2
This unit focuses on the characteristics of outdoor environments and different ways of understanding them, as well as the human impacts on outdoor environments.

In this unit students study nature's impact on humans, as well as the ecological, social and economic implications of human impact on outdoor environments. Students develop a clear understanding of the impact of technologies and changing human lifestyles on outdoor environments.

Students examine a number of case studies of specific outdoor environments, including areas where there is evidence of human intervention.

Activities: Rock climbing, skiing/snowboarding

Unit 3
Relationships with Outdoor Environments
The focus of this unit is the ecological, historical and social contexts of relationships between humans and outdoor environments in Australia. Case studies of impacts on outdoor environments are examined in the context of the changing nature of human relationships with outdoor environments in Australia.

Students consider a number of factors that influence contemporary relationships with outdoor environments. They also examine the dynamic nature of relationships between humans and their environment.

Activities: Park Ranger education, data collection, stand up paddle-boarding, hiking

Unit 4
Sustainable Outdoor Relationships
In this unit students explore the sustainable use and management of outdoor environments. They examine the contemporary state of environments in Australia, consider the importance of healthy outdoor environments, and examine the issues in relation to the capacity of outdoor environments to support the future needs of the Australian population.

Students examine the importance of developing a balance between human needs and the conservation of outdoor environments and consider the skills needed to be environmentally responsible citizens. They investigate current agreements and environmental legislation, as well as management strategies and policies for achieving and maintaining healthy and sustainable environments in contemporary Australian society.

Activities: Data collection, mountain biking, skiing/snowboarding

Physical Education

Contact: Miss Claire Notman

What is Physical Education all about?
VCE Physical Education explores the complex interrelationships between anatomical, biomechanical, physiological and skill acquisition principles to understand their role in producing and refining movement, and examines behavioural, psychological, environmental and sociocultural influences on performance and participation in physical activity. Students participate in practical activities to examine the core concepts that underpin movement and that influence performance and participation in physical activity, sport and exercise.

Unit 1: The human body in motion

In this unit students explore how the musculoskeletal and cardiorespiratory systems work together to produce movement. Through practical activities students explore the relationships between the body systems and physical activity, sport and exercise, and how the systems adapt and adjust to the demands of the activity. Students investigate the role and function of the main structures in each system and how they respond to physical activity, sport and exercise. They explore how the capacity and functioning of each system acts as an enabler or barrier to movement and participation in physical activity.

Unit 2: Physical activity, sport and society

This unit develops students' understanding of physical activity, sport and society from a participatory perspective. Students are introduced to types of physical activity and the role participation in physical activity and sedentary behaviour plays in their own health and wellbeing as well as in other people's lives in different population groups.

Through a series of practical activities, students experience and explore different types of physical activity promoted in their own and different population groups. They gain an appreciation of the level of physical activity required for health benefits. Students investigate how participation in physical activity varies across the lifespan. They explore a range of factors that influence and facilitate participation in regular physical activity. They collect data to determine perceived enablers of and barriers to physical activity and the ways in which opportunities for participation in physical activity can be extended in various communities, social, cultural and environmental contexts. Students investigate individual and population-based consequences of physical inactivity and sedentary behaviour. They then create and participate in an activity plan that meets the physical activity and sedentary behaviour guidelines relevant to the particular population group being studied.

Unit 3: Movement skills and energy for physical activity

This unit introduces students to the biomechanical and skill acquisition principles used to analyse human movement skills and energy production from a physiological perspective. Students use a variety of tools and techniques to analyse movement skills and apply biomechanical and skill acquisition principles to improve and refine movement in physical activity, sport and exercise. They use practical activities to demonstrate how correct application of these principles can lead to improved performance in physical activity and sport.

Students investigate the relative contribution and interplay of the three energy systems to performance in physical activity, sport and exercise. In particular, they investigate the characteristics of each system and the interplay of the systems during physical activity. Students explore the causes of fatigue and consider different strategies used to postpone fatigue and promote recovery.

Unit 4: Training to improve performance

In this unit students analyse movement skills from a physiological, psychological and sociocultural perspective, and apply relevant training principles and methods to improve performance within physical activity at an individual, club and elite level. Improvements in performance, in particular fitness, depend on the ability of the individual and/or coach to gain, apply and evaluate knowledge and understanding of training. Students analyse skill frequencies, movement patterns, heart rates and work to rest ratios to determine the requirements of an activity. Students consider the physiological, psychological and sociological requirements of training to design and evaluate an effective training program.

Students participate in a variety of training sessions designed to improve or maintain fitness and evaluate the effectiveness of different training methods. Students critique the effectiveness of the implementation of training principles and methods to meet the needs of the individual, and evaluate the chronic adaptations to training from a theoretical perspective.

Physics

Contact: Mr Sivaneshan Murugiah

What is Physics all about?

Physics is about the study of natural phenomena such as energy, light, electricity, movement and the basic structure of matter. In studying physics you will learn how to interpret the world around you. Physics is also useful for pursuing hobbies, confronting technological issues and appreciating a particular way of knowing the world. It will enable you to choose a career in a wide range of technical, trade and professional areas.

Unit 1: What ideas explain the physical world?

Ideas in physics are dynamic. As physicists explore concepts, theories evolve. Often this requires the detection, description and explanation of things that cannot be seen. In this unit students explore how physics explains phenomena, at various scales, which are not always visible to the unaided human eye. They examine some of the fundamental ideas and models used by physicists in an attempt to understand and explain the world. Students consider thermal concepts by investigating heat, probe common analogies used to explain electricity and consider the origins and formation of matter. Students use thermodynamic principles to explain phenomena related to changes in thermal energy. They apply thermal laws when investigating energy transfers within and between systems, and assess the impact of human use of energy on the environment. Students examine the motion of electrons and explain how it can be manipulated and utilised. They explore current scientifically accepted theories that explain how matter and energy have changed since the origins of the Universe. Students undertake quantitative investigations involving at least one independent, continuous variable.

Unit 2: What do experiments reveal about the physical world?

In this unit students explore the power of experiments in developing models and theories. They investigate a variety of phenomena by making their own observations and generating questions, which in turn lead to experiments. Students make direct observations of physics phenomena and examine the ways in which phenomena that may not be directly observable can be explored through indirect observations. In the core component of this unit students investigate the ways in which forces are involved both in moving objects and in keeping objects stationary. Students design and undertake investigations involving at least one independent, continuous variable. A student designed practical investigation relates to content drawn from Area of Study 1 and/or Area of Study 2 and is undertaken in Area of Study 3.

Unit 3: How do fields explain motion and electricity?

In this unit students explore the importance of energy in explaining and describing the physical world. They examine the production of electricity and its delivery to homes. Students consider the field model as a construct that has enabled an understanding of why objects move when they are not apparently in contact with other objects. Applications of concepts related to fields include the transmission of electricity over large distances and the design and operation of particle

accelerators. They explore the interactions, effects and applications of gravitational, electric and magnetic fields. Students use Newton's laws to investigate motion in one and two dimensions, and are introduced to Einstein's theories to explain the motion of very fast objects. They consider how developing technologies can challenge existing explanations of the physical world, requiring a review of conceptual models and theories. Students design and undertake investigations involving at least two continuous independent variables. A student-designed practical investigation related to waves, fields or motion is undertaken across both Units 3 and 4, and is assessed in Unit 4, Outcome 3.

Unit 4: How can two contradictory models explain both light and matter?

A complex interplay exists between theory and experiment in generating models to explain natural phenomena including light. Wave theory has classically been used to explain phenomena related to light; however, continued exploration of light and matter has revealed the particle-like properties of light. On very small scales, light and matter – which initially seem to be quite different – have been observed as having similar properties. In this unit, students explore the use of wave and particle theories to model the properties of light and matter. They examine how the concept of the wave is used to explain the nature of light and explore its limitations in describing light behaviour. Students further investigate light by using a particle model to explain its behaviour. A wave model is also used to explain the behaviour of matter which enables students to consider the relationship between light and matter. Students learn to think beyond the concepts experienced in everyday life to study the physical world from a new perspective. Students design and undertake investigations involving at least two continuous independent variables.

Psychology

Contact: Miss Shona Perrin

What is Psychology all about?

Psychology is the scientific study of mental processes and behaviour in humans. Biological, behavioural, cognitive and socio-cultural perspectives inform the way psychologists approach their research into the human condition.

Unit 1: How are behaviour and mental processes shaped?

Human development involves changes in thoughts, feelings and behaviours. In this unit students investigate the structure and functioning of the human brain and the role it plays in the overall functioning of the human nervous system. Students explore brain plasticity and the influence that brain damage may have on a person's psychological functioning. They consider the complex nature of psychological development, including situations where psychological development may not occur as expected. Students examine the contribution that classical and contemporary studies have made to an understanding of the human brain and its functions, and to the development of different psychological models and theories used to predict and explain the development of thoughts, feelings and behaviours. A student-directed research investigation related to brain function and/or development is undertaken in this unit.

Unit 2: How do external factors influence behaviour and mental processes?

A person's thoughts, feelings and behaviours are influenced by a variety of biological, psychological and social factors. In this unit students investigate how perception of stimuli enables a person to interact with the world around them and how their perception of stimuli can be distorted. They evaluate the role social cognition plays in a person's attitudes, perception of themselves and relationships with others. Students explore a variety of factors and contexts that can influence the behaviour of an individual and groups. They examine the contribution that classical and contemporary research has made to the understanding of human perception and why individuals and groups behave in specific ways. A student practical investigation related to internal and external influences on behaviour is undertaken in this unit.

Unit 3: How does experience affect behaviour and mental processes?

The nervous system influences behaviour and the way people experience the world. In this unit students examine both macro-level and micro-level functioning of the nervous system to explain how the human nervous system enables a person to interact with the world around them. They explore how stress may affect a person's psychological functioning and consider the causes and management of stress. Students 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. A student practical investigation related to mental processes and psychological functioning is undertaken across both Units 3 and 4, and is assessed in Unit 4, Outcome 3.

Unit 4: How is wellbeing developed and maintained?

Consciousness and mental health are two of many psychological constructs that can be explored by studying the relationship between the mind, brain and behaviour. In this unit students examine the nature of consciousness and how changes in levels of consciousness can affect mental processes and behaviour. They consider 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 biopsychosocial 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.

Studio Arts ($70)

Contact: Ms Nicole Goodwin

What is Studio Arts all about?
Studio Arts provides a framework for the establishment of effective art practices through an understanding and application of the design process. The theoretical component informs students practice through an investigation of how selected studio forms have developed; through artists' working methods, professional practices and art industry issues.

Unit 1
Artistic Inspiration and Techniques
The focus of this unit is the investigation of sources of inspiration which generate creative activity and the exploration of a wide range of materials and techniques as tools for translating ideas, observations and experiences into visual form.
Areas of Study
1. Developing art ideas from different sources of inspiration.
2. Developing skills with a range of materials and techniques.
3. Interpretation of how other artists use art ideas and a varied materials and techniques.

Unit 2
Design Exploration and concepts.
The focus of this unit is to establish an effective design methodology and develop skills in the visual analysis of art works.
Areas of Study
1. Developing an individual design process.
2. Analysing ideas and styles in art works.

Unit 3
Studio Production and professional art practices.
The focus of this unit is the implementation of the design process leading to the production of a range of potential directions for finished artworks.
Students will research developments in a particular studio form and investigate traditional and contemporary practices of artists.
Areas of Study
1. Exploration proposal for personal theme to be explored.
2. Design process.
3. Professional art practices and styles.

Unit 4
Studio Production and art industry.
The focus of this unit is to produce a cohesive folio of finished art works and to gain an understanding of artists' involvement in the art industry.
Areas of Study
1. Folio of at least two finished artworks.
2. Evaluation of finished artworks.
3. Art industry contexts.

Product Design and Technology (Wood) ($120)

Contact: Mr Maney Beasley

In VCE product design and technology students assume the role of a designer-maker. In adopting this role, they acquire and apply knowledge of factors that influence design. They will select and use materials such as wood, plastics or textiles to produce a three dimensional product that is innovative, demonstrates their skill in construction and their ability to research and respond to a design brief. Assessment for Units 1 and 2 will be based on a folio of work that will be generated in response to a design brief. All stages of the product design process will be evident in the folio. Production work will be carried out safely using the selected material/s and high quality finish is expected. The finished product and work processes will be evaluated.

Unit 1
Product re-design and sustainability. This unit focuses on analysing, modifying and improving a product's design. Students will do this by considering the materials used and issues such as sustainability. Students will produce a redesigned product using tools, equipment, machines and materials. It will be compared to the original and evaluated against the needs outlined in a design brief. Students will learn about practices used by designers and the importance of acknowledging the Intellectual Property of the original designer.

Unit 2
Collaborative design. Teamwork encourages communication between students and mirrors professional design practice. The use of ICT for communication will be explored. This unit challenges students to work in teams to design and develop an item in a product range or contribute to the design, planning and production of a group project. Students are able to gain inspiration from historical, cultural or style trends. They will work with their team to design and produce a product range based on a theme. They will research and refer to their chosen style or design movement. The finished product/s will be evaluated individually and / or by the group."

Basic materials will be supplied to students to complete their chosen products. Should students require something more complex, they may be required to source their own resource and materials.

Please note that this subject will be capped at 15 students in 2019 due to available facilities. If applications exceed this, the collage will hold a selection process which will primarily be based on student past performance in this subject area.

Unit 3
In this unit students are engaged in the design and development of a product that addresses a personal, local, or global problem (such as humanitarian issues), or that meets the needs and wants of a potential end-user/s. The product is developed through a design process and is influenced by a range of factors including the purpose, function and context of the product; user-centred design; innovation and creativity; design elements and principles; sustainability concerns; economic limitations; legal responsibilities; material characteristics and properties; and technology. Design and product development and manufacture occur in a range of settings. An industrial setting provides a marked contrast to that of a one-off situation in a small cottage industry or a school setting. Although a product design process may vary in complexity or order, it is central to all of these situations regardless of the scale or context. This unit examines different settings and takes students through the product design process as they design for an end-user/s. Students identify methods which could be used in a low-volume or mass/high-volume production setting to

manufacture a similar product to their design. In the initial stage of the product design process a design brief is prepared, outlining the context or situation around the design problem and describing the needs and requirements in the form of constraints or considerations. In Area of Study 1, students examine how a design brief addresses particular product design factors and how evaluation criteria are developed from the constraints and considerations in the brief. They develop an understanding of techniques in using the design brief as a springboard to direct research and design activities. In Area of Study 2, students examine how a range of factors, including new and emerging digital technologies, influence the design and development of products within industrial manufacturing settings. They consider issues associated with obsolescence and sustainability models. In Area of Study 3, students commence the application of the product design process for a product design for an end-user/s, including writing an individual design brief and criteria that will be used to evaluate the product in Unit 4.

Unit 4
In this unit students engage with an end-user/s to gain feedback throughout the process of production. Students make comparisons between similar products to help evaluate the success of a product in relation to a range of product design factors. The environmental, economic and social impact of products throughout their life cycle can be analysed and evaluated with reference to the product design factors. In Area of Study 1, students use comparative analysis and evaluation methods to make judgments about commercial product design and development. In Area of Study 2, students continue to develop and safely manufacture the product designed in Unit 3, Outcome 3, using materials, tools, equipment and machines, and record and monitor the production processes and modifications to the production plan and product. In Area of Study 3, students evaluate the quality of their product with reference to criteria and end-user/s' feedback. Students make judgments about possible improvements. They produce relevant user instructions or care labels that highlight the product's features for an end-user/s.

Visual Communication & Design ($70)

Contact: Mr Ben Sheers

What is Visual Communication all about?

2018 will be the first year of implementation for the revised and updated Study design. The study of this subject will be invaluable to students interested in a range of fields ranging from architecture, fashion; stage set design through to all forms of advertising and product design. The course encompasses both practical and theoretical skills.

Unit 1
Outcome 1: covers skills needed to create drawings for different purposes using a range of drawing methods, media and materials.
Outcome 2: students learn to select and apply design elements and design principles to create visual communications that satisfy stated purposes.
Outcome 3: requires students to describe how a visual communication has been influenced by past and contemporary practices, and by social and cultural factors.

Unit 2
Outcome 1: on completion of this unit the student should be able to create presentation drawings that incorporate relevant technical drawing conventions and effectively communicate information and ideas for a selected design field.

Outcome 2: enables students to manipulate type (font) and images to create visual communications suitable for print and screen-based presentations while taking into account copyright.
Outcome 3: students should be able to engage in stages of the design process to create a visual communication appropriate to a given brief.

Unit 3
Outcome 1: on completion the student should be able to create visual communications for specific contexts, purposes and audiences that are informed by their analysis of existing visual communications.
Outcome 2: in this written outcome, the student should be able to describe how visual communications are designed and produced in the design industry and explain factors that influence these practices.
Outcome 3: students apply design thinking skills to prepare a brief which requires two distinctly different presentation concepts. They undertake research and generate a range of ideas relevant to the brief.

Unit 4
Outcome 1: on completion of this outcome the student should be able to develop distinctly different design concepts for each need as defined in the brief. They are required to select and refine for each need a concept that satisfies each of the requirements of the brief.
Outcome 2: on completion of this outcome the student should be able to produce final visual communication presentations that satisfy the requirements as set out in the brief.
Outcome 3: on completion of this unit the student should be able to devise a pitch to present and explain their visual communications to an audience and evaluate the visual communications against the brief.

ON-CAMPUS VET COURSES

Certificate II in Hospitality (approx. $300)

(Certificate II in Kitchen Operations)

Contact: Ms Kristy Cusack

- The subject would appeal to students who have an interest in food, are considering a career in the food industry or even to students who are considering employment opportunities while studying another course at university.
- VET hospitality can be completed as a unit 1+2 subject and/or as part of the VCAL certificate. If the program is undertaken for a Unit 3/4 sequence it can contribute to the VCE ATAR.
- Students are required to wear a full chef's uniform which can be purchased thought the college for approximately $80.
- Students who intend to complete their VCE are encouraged to begin Certificate II in Hospitality in year 10, but this is not a requirement.
- To receive the full certificate students are required to undertake 2 years of the course. However, if a student decides the course is not for them, upon successful completion of the first year they will receive a statement of attainment for the units they have completed recognition of a unit 1+2 sequence and a food handler's certificate.

Units 1+2 (First year)
This course aims to provide students with an overview of the hospitality industry and to develop competencies in food preparation, hygiene and safety. It includes both theory and practical components and all assessments are competency based.

Students will develop an understanding of kitchen hygiene and safety, develop food preparation skills and prepare dishes using a range of different cooking methods.

Once basic hygiene and safety content has been delivered, students will prepare multiple dishes each week with the focus been on food preparation skills.

Units 3+4 (Second year)
Food preparation and production is the focus for this year and students will prepare multiple dished each week.

Students must be prepared to attend the College out of school hours to prepare and cook food for guests. There will be approximately 4 functions per year. Students must also complete a minimum of 12 complete service periods of industry experience in the second year of the course. This must be completed in a restaurant environment (not places such as a fast food establishment, milk bar or delicatessen).

Some of the main areas covered include appetisers, salads, farinaceous dishes and ordering of stock.

Students cannot undertake the second year of the course without having successfully completed all first year units.

Certificate III in Music Industry (Performance) ($100)

Contact: Mr David Campbell

COLLEGE OF SOUND AND MUSIC PRODUCTION

NATIONALLY RECOGNISED TRAINING

CUA30915 Certificate III in Music Industry (Performance) is offered to students under the auspices of the College of Sound and Music Production (RTO #41549). This qualification is for those students who have an interest in music and are keen to develop skills as a musician with the aim to perform and compose music.
Music Performance Specialisation provides students with the opportunity to apply a broad range of knowledge and skills in varied work contexts in the music industry. Students will work towards composing simple songs or musical pieces and preparing for performances, whilst developing improvisation skills, applying knowledge of genre to music making and performing music as part of a group or as a soloist. Students will gain competencies that will enhance their employment opportunities within the music industry and a recognised qualification that will assist them in making a more informed choice when considering vocational/career pathways.

A study score is available for the Certificate III which will contribute to the student's VCE ATAR score.

At the completion of Certificate III in Music students will be able to:

- Demonstrate performance skills required by a musician or a vocalist in the music industry
- Present a repertoire developed throughout the year
- Demonstrate skills in writing and improvising music
- Work safely in the music industry
- Understand the way the Music Industry functions
- Develop and practice improvisation
- Maintain self and group in music

Assessment will include performances, a research project and a portfolio of work.

Pathways: Certificate II and III are the foundation courses for all of the qualifications from the Music Industry Training Package. They lead to:

- Certificate III and IV in Music Industry (Technical Production), Certificate IV in Music, Certificate in Music Industry (Business)
- Diploma of Music Industry (Technical Production), Diploma of Music, Diploma of Music (Business)

ATAR: Students wishing to receive an ATAR contribution for the Unit 3 & 4 sequence must undertake scored assessment for the purposes of gaining a study score. This study score can contribute directly to the primary four or as a fifth or sixth study.

College of Sound & Music Production (COSAMP) RTO #41549
P: (03) 9592 4801 | E: info@cosamp.edu.au W: cosamp.com.au

Certificate II & III in Sport & Recreation ($150)

Contact: Mr Jarryd Palser

The Sport and Recreation program provides students with the opportunity to acquire and develop the skills, knowledge and confidence to work in the areas of community and outdoor recreation. Leadership, organisational and specialist activity skills will be developed.
Common compulsory in Units 1 and 2 cover areas such as implementing improved work practices, providing first aid and developing knowledge of the sport and recreation industry. Elective units can focus on career orientated activities, coaching specialisations and/or officiating specialisations in areas such as AFL, golf, netball and soccer or activity specialisation such as bushwalking, canoeing, skiing and surfing. Units 3 and 4 include sport and recreation law, risk analysis activities and conducting a sport and recreation session for participants. Optional focus areas are available in aquatics, fitness, outdoor
recreation or sport.

Completion of Certificate II in Sport & Recreation may provide pathways into the community recreation industry in leisure centres, aquatic centres, amusement parks, adventure and theme parks. Potential job roles may include recreation activities or gymnasium assistant.

OFF CAMPUS (EXTERNAL) VET COURSES

For a comprehensive list of VETis qualifications please refer to the following links:

CHISHOLM TAFE
https://www.chisholm.edu.au/career-fields/vet-in-schools

> Many KWRSC students attend Chisholm to complete their VET certificate of choice.

SOUTH EAST VET CLUSTER
http://sellen.org.au/wp-content/uploads/SE-VET-Cluster-Handbook-2019.pdf

Students can also choose to undertake a VET course at another secondary school in the South East VET Cluster. The link above directs you to the handbook which lists:

- Cluster Schools
- VET Courses run at each cluster school including:
  > Description of the VET course
  > Location for the course
  > Days and times that the course is available

- **Please note that fees for VET courses are not published but can range from anywhere between $50 to $1,000 depending on the course, the provider and the materials required.**
- **No VET enrolments will be processed until such time as payment has been made in full.**
- **All VET enquiries (including those regarding fees) should be directed to the Careers Office.**
- **Students interested in undertaking a VET certificate will be required to attend a compulsory VET Information briefing in Term 3.**