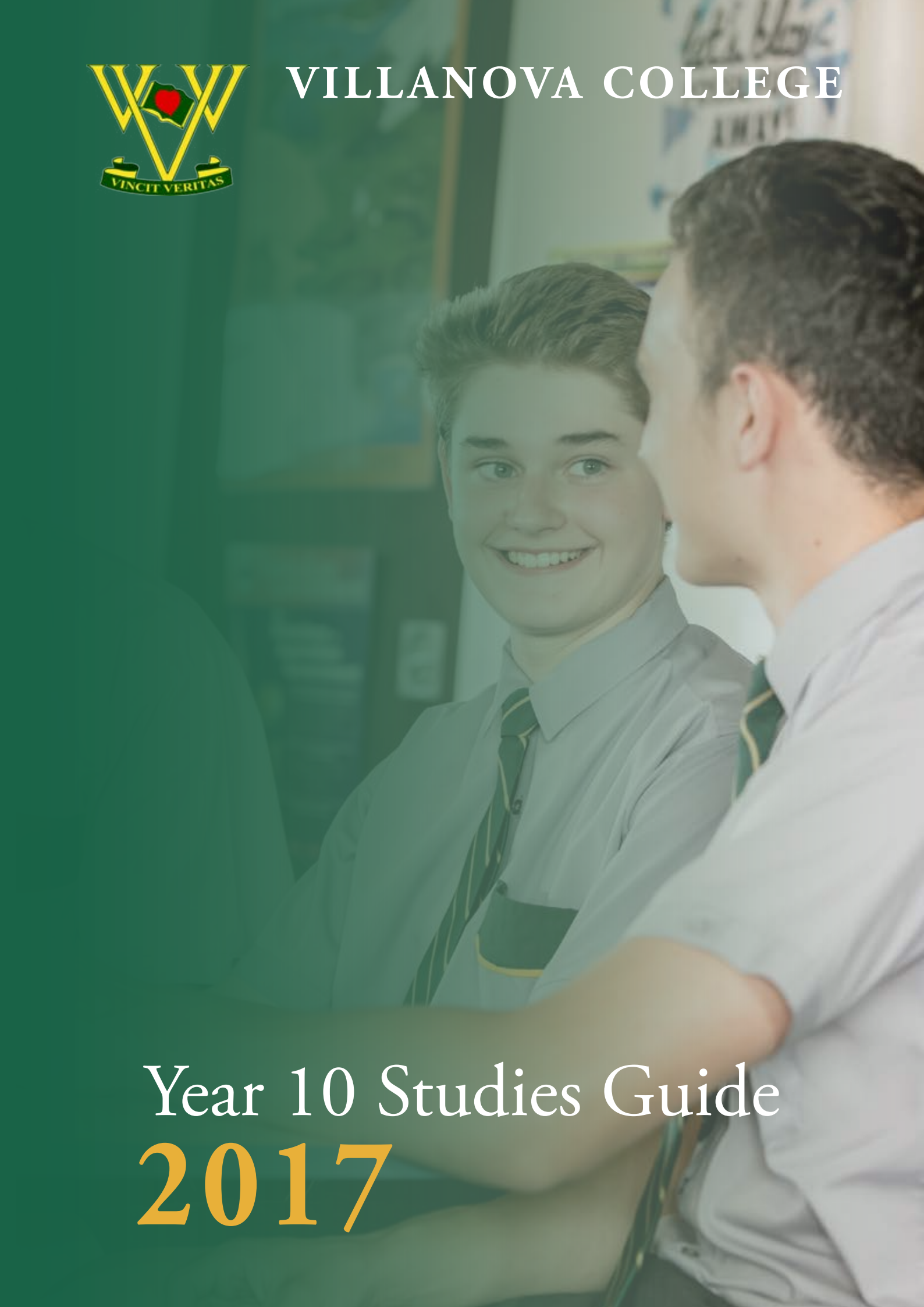
VILLANOVA COLLEGE



Year 10 Studies Guide

2017

CONTENTS

CURRICULUM FRAMEWORK

Our Overarching Goal for Learning

Empowering learners of all ages to understand, shape and enrich our changing world, by living the Gospel of Jesus Christ in the spirit of St Augustine.

Our Beliefs

About Learners:

- Each person is created in the image and likeness of God.
- Every person is a unique lifelong learner.

Foundations of Learning

- The person of Jesus gives meaning to life and learning.
- Every person can achieve success in learning.
- Learning is an interior process.
- Learning is the active process of searching for and constructing meaning.
- Learning occurs within a community of fellow learners in a safe, connected, supportive and inclusive environment.
- Opportunities for learning encompass the richly diverse aspects of all life experience.
- Learning is directed towards knowing Truth, which is God.

Our Learning Community

- Promotes the educational mission of Villanova College as an Augustinian Catholic school
- Gives witness to the Gospel and the integration of faith, life and culture
- Maintains the focus on learning as the core business of our college
- Recognises that the heart of our learning community is the relationship between the teacher and the student.
- Focuses on the future and is flexibly structured.

Our Values

As an Augustinian Catholic school we value: the Catholic Christian Tradition, dignity and justice for each person, the building of community, high quality learning, the principles of collaboration and subsidiarity, creativity, stewardship and mutual accountability.

In particular, our Augustinian heritage calls us to love God and one's neighbour, to solidarity with the poor and the marginalised, to value interiority and humility, to be devoted to study and the pursuit of truth, to promoting freedom, to actively building and nurturing community, to be devoted to the common good in a spirit of service, and to friendship and prayer.

Our aims for each Villanova student

- To be a faithful, responsible person with integrity
- To be a knowledgeable person with deep understanding
- To be a complex thinker
- To be a designer/creator
- To be a reflective, self-directed learner
- To be an effective communicator
- To be a community contributor
- To be an active investigator
- To be a quality producer
- To be a leader and collaborator

Year 10

In Year Ten, the Core Curriculum consists of the following full year subjects:

- Religious Education and Personal Development
- English
- Mathematics
- History
- Science
- Health & Physical Education

Year 10 Flowchart of Subjects

Semester One

- Religious Education and Personal Development
- English
- Mathematics
- History
- Science
- Health & Physical Education
- Elective subject
- Elective subject

Semester Two

- Religious Education and Personal Development
- English
- Mathematics
- History
- Science
- Health & Physical Education
- Elective subject
- Elective subject

RELIGIOUS EDUCATION

Core Curriculum Subject

The key to our understanding of our self and our world and to finding meaning in our lives is Religious Education. Included in our Religious Education Course is a Personal Development Strand. This is particularly important in helping students face the many demands of life today. Religious Education and Personal Development are part of the curriculum in every level of the school.

The Year Ten Program focuses on the Christian faith of Catholics as outlined in the new Religious Education Curriculum of the Archdiocese of Brisbane. Learning experiences and activities are structured to enable students to focus on themselves as individuals and in relationship with others. They are encouraged to explore their personal call to growth in faith through deepening of their understanding of their relationship with God and the Christian Community to which they belong.

Activities in the Program encourage students to be creative, original and reflective in the presentation of their work. Opportunities are provided for students to participate in Liturgical celebrations both at the class and whole school level.

Skill development in language and communication is an important element of the course. The Course is also directed to the development and understanding of interpersonal skills and their application in family life and the workforce.

First Semester:

- Called to Know – Who wrote the Bible? The mystery of God, Understanding the Bible – biblical criticism, St Paul rhetorical criticism.
- Called to Justice – Human rights, Principles of Catholic Social Teaching, Social Justice/service, Social sin, Eucharistic call to transformation, Community service project.

Second Semester:

- Called to a moral life – Moral Development, Church as teacher and leader, Conscience, Contemporary Moral issues, Church in action in Australia.
- Introduction to World Religions – What is Religion? Smart's dimensions, Hinduism, Buddhism, Judaism, Islam and Christianity.

ENGLISH

Core Curriculum Subject

Our world today is one of constant change - culturally, socially, economically and technologically, and the study of the English Language provides a system of making meaning of that world. By learning to speak, listen to, read, write and shape texts, students learn how to use language purposefully to represent experiences of real and imagined worlds, to interact with others and to create coherent and cohesive texts themselves.

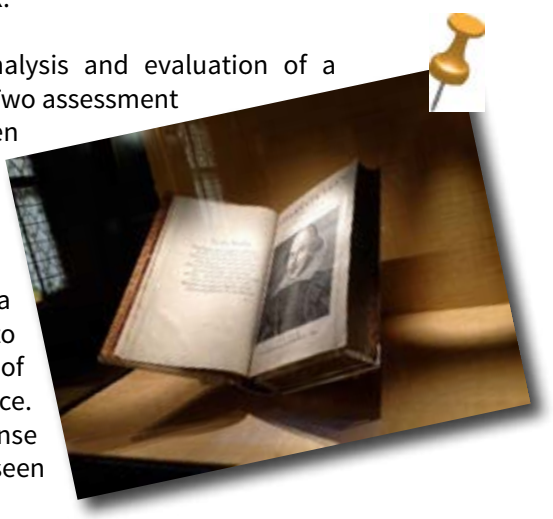
The Year Ten English course meets these wider aims of the English subject area, and seeks to develop within each student an enjoyment of language whilst also helping students become purposeful, critical and creative users of the English language. The units studied in the course prepare students very effectively for their study of Senior English in Year Eleven and Year Twelve.

First Semester:

Unit One: Understanding and analysing satire in texts: Students read and analyse the techniques used in satirical texts. One written assessment task.

Unit Two: Reading and comprehending a novel: Students read and respond to a contemporary novel that explores issues relevant to Australian society. One written assessment task.

Unit Three: Responding to literary texts: Students continue their analysis and evaluation of a contemporary novel in order to develop complex responses to literature. Two assessment tasks associated with this unit, a written creative piece and a spoken monologue.



Second Semester:

Unit Four: Love and Tragedy: This unit involves an in-depth study of a Shakespearean text – The Tragedy of Romeo & Juliet - which leads into exploring a range of love poetry. All the texts will relate to the wider themes of love and tragedy and the relevance of their messages to a modern audience. Assessment will take the form of an oral (analytical exposition), in response to the effectiveness of techniques evident in Shakespearean text, and a seen written examination – in the form of an analytical exposition.

Unit Five: Evaluating media texts: : As part of the second semester, there are choices from a range of unit topics in Term 4 associated with media texts, each of which provides the opportunity for students to further develop their English skills and knowledge base. The starting place in this semester will be an in-depth study of the Dr Seuss story, The Lorax (2012), which will investigate - in an unseen written examination - the forcefulness of the message and the techniques used by modern cartoon makers to convey that message. Additionally, the second task which is a multi-media oral presentation, will involve an investigation into two news media texts analysing how/why the reading paths differ.

Units on offer in Term 4 may be drawn from such diverse areas as:

- Shock Horror: exploration of Gothic/ Horror genre
- Reality TV : exploration into the genre and its significant impact on our society
- True Action Heroes: Mining the Action Hero Genre
- Comedy: exploration of what makes us laugh and why.

The task for this unit will involve the presentation of a persuasive oral which will promote a new and exciting extension to the genre.

The Second Semester is designed to facilitate students' transition into Senior English in Year 11, whilst meeting the requirements of the Australian Curriculum.

MATHEMATICS

Core Curriculum Subject

The Year 10 Mathematics course at Villanova College enables students to select one of two different courses. Both courses are designed to give students a solid foundation in preparing them for the course they undertake in Years 11 and 12. The two options are outlined in the Australian Curriculum.

The two choices are; **10 Mathematics and 10 Mathematics Addition.**

10 Mathematics is the core component, as outlined by the Australian National Curriculum. It should be considered the precursor for students who are heading towards Mathematics A or Prevocational Mathematics in Years 11 and 12. This course does contain some topics which can be difficult to understand, but the pace of delivery by the teacher will be such that ALL students should grasp the basics of most of these concepts.

10 Mathematics Addition is the core component with additional, extension topics added in, as outlined by the Australian National Curriculum. It should be considered the precursor for students who are heading towards Mathematics B and/or Mathematics C in Years 11 and 12. This course will challenge students significantly, with some concepts being difficult to understand. There are often large components of problem solving and it should be noted that the course will be fast paced. There is a high expectation on students to complete homework and additional study in order to achieve good results.

A summary of both courses is provided below:

10 Mathematics	10A Mathematics
Semester One	
Number and Algebra – indices, linear algebra, coordinate geometry, simultaneous equations and inequations.	Number and Algebra – indices, linear algebra, coordinate geometry, simultaneous equations and inequations, functions.
Measurement and Geometry – deductive geometry,	Measurement and Geometry – deductive geometry, circle geometry, trigonometry, applied trigonometry
trigonometry	Statistics and Probability - univariate data, bivariate data, statistics in the media
Semester Two	
Number and Algebra – quadratic expressions, quadratic equations	Number and Algebra – advanced quadratic expressions, advanced quadratic equations, real numbers (including surds, index laws and logarithms), polynomials, functions and relations
Measurement and Geometry - surface area and volume	Measurement and Geometry - surface area and volume (with introductory components of Optimization).
Statistics and Probability – concepts of probability	Statistics and Probability - concepts of probability, conditional probability, subjective probability

There is no compulsory prerequisite to elect to do 10 Mathematics Addition, but any student who is achieving below a B year by the end of Year 9, will find several components of the 10 Mathematics Addition course challenging.

SCIENCE

Core Curriculum Subject

"Science is a dynamic, collaborative and future thinking field of human endeavour that has emerged through a need to understand natural phenomena."

The phenomena explored occur within the framework of Biological, Chemical, Earth and Space and Physical Sciences. Within each of these strands students will develop key understandings and link these with Science inquiry skills and Science as a human endeavour.

The core components of Year 10 Science are:

Biological Science

- The transmission of inheritable characteristics from one generation to the next involves DNA and genes.
- The Theory of Evolution by natural selection explains the diversity of living things and is supported by a range of evidence.

Chemical Science

- The atomic structure and properties of elements are used to organise them in the Periodic Table.
- Different types of chemical reactions are used to produce a range of products and can occur at different rates.

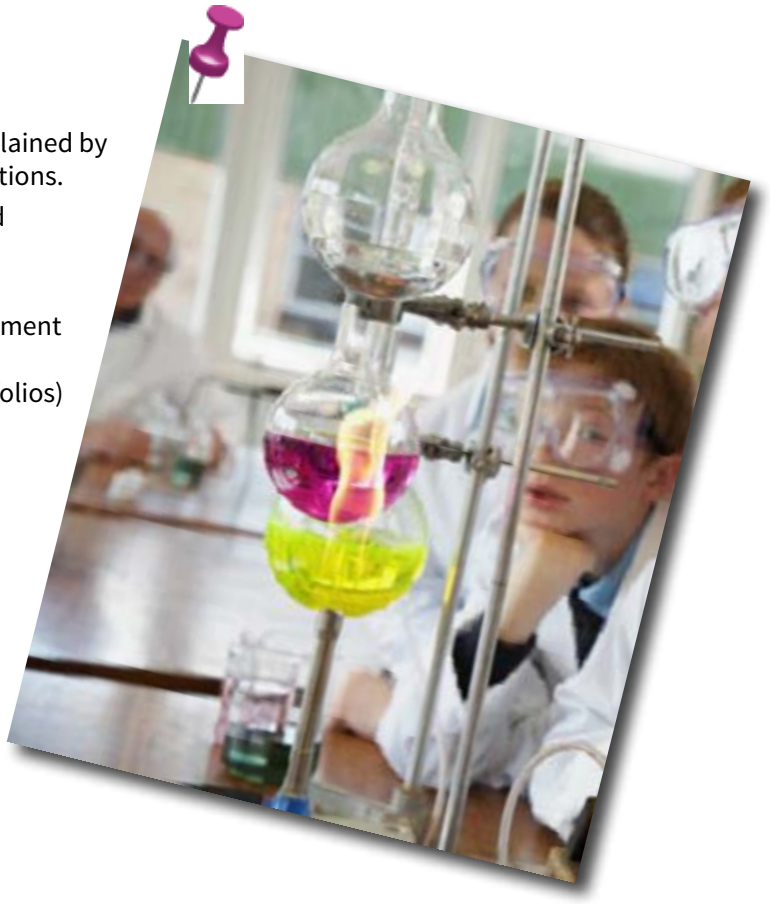
Earth and Space Sciences

- The universe contains features including galaxies, stars and solar systems and the Big Bang Theory can be used to explain the origins of the universe.
- Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere.

Physical Sciences

- Energy conservation in a system can be explained by describing energy transfers and transformations.
- The motion of objects can be described and predicted using the laws of Physics.

Assessment in Year 10 will utilise a range of assessment types including practical investigation, non-experimental investigations, collections of work (folios) and supervised tests.



HISTORY

Core Curriculum Subject

The Year 10 History curriculum provides a study of the history of the modern world and Australia from 1918 to the present, with an emphasis on Australia in its global context. The twentieth century became a critical period in Australia's social, cultural, economic and political development. The transformation of the modern world during a time of political turmoil, global conflict and international cooperation provides a necessary context for understanding Australia's development, its place within the Asia-Pacific region, and its global standing.

Students will engage in an overview of the time period under study (1918 to the present). The overview will contextualise the events that shaped Australia during this period and provide an understanding of broad patterns of historical change.

There are three depth studies for this historical period that all students will engage with:

World War II - Students investigate wartime experiences through a study of World War II. This includes a study of the causes, events, outcome and broader impact of the conflict as an episode in world history, and the nature of Australia's involvement.

Rights and Freedoms - Students investigate struggles for human rights. This will include how rights and freedoms have been ignored, demanded or achieved in Australia and in the broader world context.

The Globalising World - Students investigate one major global influence that has shaped Australian society. Students study ONE of these electives: Popular Culture or The Environment Movement or Migration Experiences.

Students will develop a range of critical thinking skills that are transferable across a range of study areas. Specifically the content provides opportunities to develop historical understanding through key concepts, including evidence, continuity and change, cause and effect, perspectives, empathy, significance and contestability.

Students will complete three assessment tasks across the semester: a short response exam in response to stimulus, an essay based on research and written under exam conditions, and a research project.

HEALTH & PHYSICAL EDUCATION

Core Curriculum Subject

Based on the Australian Curriculum, the HPE course in Year 10 addresses two important priorities:

- providing students with opportunities to engage in a variety of sports and physical activities they may encounter in Year 11 elective subjects, Physical Education and Recreation.
- concluding the Health Education course with a study of how to plan and implement physical training to optimise and maintain personal health.

The course in Year 10 devotes 75% of the timetable to practical lessons with the remaining 25% assigned to the completion of the Health unit on training plans.

The sports and physical activities which may be undertaken include:

1. Duathlon (combining running and swimming in an event)
2. Badminton
3. European Handball
4. Oz-tag
5. Futsal
6. Basketball
7. Street Hockey

The Health unit, Planning to Train will provide students the knowledge needed to plan episodes of physical training for improving/maintaining optimal health. Additionally, it is hoped that all students will acquire the confidence and skills needed to engage in physical training as they move into adulthood.

The major subject matter includes:

1. Components of fitness
2. Devising fitness tests
3. Goal-setting
4. Elements of a training session
5. Principles of training
6. Methods of training
7. Training program design

YEAR 10 ELECTIVES

Throughout Year 10, students study four semester length elective subjects in addition to their core subjects from the following subjects below. The exception to this is if students were to study a year long subject.

Extension Subjects
- English Extension
- Mathematics Extension
- Science Extension

Physical Education
- Sports Science - Exercise Physiology and Biomechanics

Arts
- Art - *Year long subject*
- Drama - *Year long subject*
- Music - *Year long subject*
- Audio Engineering Studies
- Media Arts

Social Sciences
- Geography

Languages Other Than English
- Italian - *Year long subject*
- Chinese - *Year long subject*

Business Studies and Food Studies
- Business Studies - Enterprise Education
- Business Studies - Financial Management
- Food Studies - Coffee Shop Operations
- Food Studies - Food Preparation

Design and Technologies
- Digital Technologies - Internet and Things
- Digital Technologies - Robot Design and Control
- Digital Technologies - Games Programming
- Digital Technologies - Engineering Design (Graphics)
- Design and Technologies - Materials and Technologies (Workshop)

Not all elective units are expected to be conducted in all semesters/years. Actual timetabled subjects in any year depend on student demand and the capacity of the College to conduct the courses.

There are some subjects that are a year long in length. Please be aware that if students choose a year long subject that they will complete only two other semester subjects in their timetable.

EXTENSION SUBJECTS

English Extension

Semester long subject

The English Extension course is offered as an independent course running over one semester and depending on numbers can run over Semester One or Two or both. It is designed to enhance and develop skills in English language and literature and to broaden the knowledge of the students who study the core English units.

Typically the focus will be on a broad spectrum of skills – spoken and written - in English language linked to an area of English literature. So, for example Romantic Poetry or Shakespearean Studies or The American Novel would represent the richness and variety of what this elective can offer students. Only one area would be the focus of study per semester. Three tasks are typically presented - a narrative, an analytical exposition and a persuasive oral.

While running independently of the core English Syllabus in Year 10, this elective provides an opportunity to extend and challenge students in their development of skills in English.

Mathematics Extension

Semester long subject

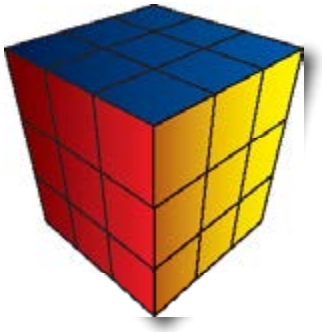
The Mathematics Extension course is designed to explore advanced mathematical techniques and concepts beyond the Mathematics Addition Course, and it provides opportunities for students to further develop their problem-solving abilities.

There is a strong focus on algebra throughout the duration of the course, but more specifically the course covers advanced mathematical topics including:

- Logarithms
- Exponential functions
- Trigonometric functions
- Geometry
- Matrices
- Dynamics

Please note that this course is designed to be challenging and students should only choose this elective if they are passionate about Mathematics, and have already demonstrated in Year Nine an aptitude for the study of Mathematics.

The topics covered will be helpful to students who are looking to study advanced mathematics subjects in Year 11 and 12 and will explore these topics in a way that links them to other scientific studies.



Science Extension

Semester long subject

This course is designed for students who are serious in their study of science and are likely to study at least one senior science subject in Years 11 and 12.

The opportunity to develop important scientific skills and problem solving skills are two key aspects of this course.

Experimental design is a key aspect of senior sciences and students need to develop skills in this domain and link them with their ability to analyse and evaluate experimental data.

Numerical and algebraic skills are also important components in problem solving, especially in physical sciences. Opportunities will be provided to develop these skills.

Assessment for this course will consist of formal tests and written reports.

Sport Science

Semester long subject

Combining the disciplines of Physical Education and Science, this semester-long elective course provides students with opportunities at extending themselves beyond the Core HPE course.

Two units, each one term in duration, are completed in this course:

1. Fundamentals of Strength and Conditioning
2. Analysing Performance.

Unit 1 – Strength and Conditioning

In this unit, students will learn:
- how to plan and implement elements of a training session
- how to appraise the effectiveness of training exercises
- how to conduct physical tests to assess physical fitness
- how the body responds to physical training
- the fundamentals of sports nutrition
- how to plan and deliver a training program phase.

Unit 2 – Analysing Performance

In this unit, students will learn:
- classification of skills
- stages of learning motor skills
- how to capture, transfer and annotate video footage of sports performance
- how to compare and contrast personal performance with a professional
- how to evaluate technique and suggest changes to performance
- how sports scientists apply biomechanical principles such as force, momentum, acceleration, velocity, stability, leverage, projectile motion and resistive forces to performance in sport and physical activity.

The course will be delivered using a variety of practical (sporting) and theoretical (classroom) activities. Students will therefore be required to be active learners in both of these learning environments.

There are two (2) major assessment instruments in Sport Science:
- an evaluation of a personalised training session (700 words)
- a multi-modal evaluating the quality of a chosen sporting technique (3-5 minutes)

Involvement in Sport Science is encouraged for any student considering Physical Education and Certificate III Fitness in Years 11 and 12.

Geography

Semester long subject

This course of study will provide students the opportunity to compare the significance, interconnectedness and specific characteristics of a variety of places, spaces and environments. It will also allow students to analyse the relationships between humans and the natural world, the consequences of our actions and ways in which we can manage these consequences.

This elective will provide students the opportunity to develop a range of core skills including:

- Observing and questioning
- Planning, collecting and evaluating
- Processing, analysing, interpreting and concluding
- Communicating
- Reflecting and responding

Unit 1 - Environmental challenges

The unit gives students the opportunity to use geographical thinking, skills and technological tools to examine some environmental challenges that will affect their future lives, and to find out how geography contributes to the understanding and management of these challenges. Environmental challenges that may be included in a detailed study (fieldwork may be incorporated) include:

- Marine resources and the oceans
- Climate change
- Coastal erosion and sea level rise
- River basins
- Urban biophysical environments
- Mountains
- Land degradation

Unit 2 - Global well-being

This unit focuses on the nature of well-being around the world and how it can be measured. Spatial characteristics of well-being and the factors that influence global inequalities are used to investigate programs that address issues of well-being. Sustainability principles will be applied to evaluate alternative futures.

Learning a second language is a developmental process. For this reason, the Chinese and Italian elective subjects in Year Ten are both two semesters in length to allow students to better develop their skills and proficiency with the languages.

Chinese and/or Italian must be taken in Year 10 in order to be selected for study in Years 11 and 12.

Italian

Year long subject

Italian is a language in which it is relatively easy to achieve a basic degree of social proficiency. Italy is a leading industrial nation and, therefore, Italian is a major language of trade and commerce. The student of Italian gains access to cultural traditions which go back thousands of years and which have had a profound effect on western society. For students with an Italian family heritage, the study of Italian may fill in gaps in literacy or give access to the standard form of the language.

Italian is one of the easiest languages for English speakers to learn, as Italian and English are related. It has many similarities to English in grammar and vocabulary and is no trouble to write as the language is phonetic.

In this two semester course, topics are introduced through dialogues, role play, simple texts and games. Materials are presented as realistically as possible so that language can be seen not as an academic exercise but as a medium of communication. Topics include:

Personal Identification Name, address, age, parts of the body, nationalities etc. Relationships with Others Social conversations, greetings, introductions, apologies, invitations. Entertainment Hobbies, radio and TV programs, cinema, parties, sports.

Food and Drink Common foods and drinks, eating at home, ordering from a menu. Services and Landmarks Public transport, buying tickets, finding your way, buildings, landmarks. Travel Means of transport, holidays, places and countries.

Student skills are developed in four major areas - listening, reading, speaking and writing. The kinds of tasks students master include: Responding in English to questions in English about a text; Retelling in English the gist of a message spoken in Italian; Role play, one to one interview; Reading a variety of texts that differ in length, purpose and style, e.g. recipe, menu, TV guide, newspaper; Directed writing, e.g. postcard, letter, invitation; Writing of narrative and descriptive paragraphs and dialogues. Some of these tasks will be completed at home. Students will be required to spend 15 to 20 minutes working on Italian at home for each lesson they have during the week.

Chinese

Year long subject

Australia has always had a substantial Chinese community and this is growing. Australia's links with Asia are becoming more and more important and many nations throughout Asia also have large Chinese communities. Australia's links with China itself are also becoming increasingly important.

Chinese is therefore a very valuable language for Australians to learn. It has relevance to careers in commerce, diplomacy, law and tourism to name a few.

In this two semester course, a continuation of the Year Nine semester unit, topics are introduced through dialogues, role play, simple texts and games. Materials are related to everyday activities such as family and community relationships, shopping, school, travel, food, health, local transport, dining and customs. Thus, language can be seen not as an academic exercise but as a medium of communication.

Amongst the goals of the course are familiarity with the basic Chinese characters, the romanization of Chinese, and the tonal quality of the language. Included also is the development of an understanding of language as a communication process.

Student skills are developed in four major areas - listening, reading, speaking and writing. The kinds of tasks students master include: responding in English to questions in English about a text; retelling in English the gist of a message spoken in Chinese; role play, one to one interview; reading a variety of texts that differ in length, purpose and style, e.g. timetables, maps, menus, articles; directed writing, e.g. postcard, letter, invitation; writing of narrative and descriptive paragraphs and dialogues.

Business Studies - Enterprise Education

Semester long subject

Enterprise Education allows the development of enterprising behaviours and capabilities that allow individuals to engage in and contribute to society. Enterprise education is learning which is directed towards developing, in young people, those skills, competencies understandings and attributes which assist them to be innovative, such as: critical and creative thinking, ethical behaviour, curiosity, managing, analysing issues, taking opportunities and managing identified risks. In a constantly changing world, enterprising behaviours and capabilities provide individuals with the necessary skills to manage change.

The course consists of the following units:

- Entrepreneurs and business
- Enterprise opportunities
- Innovation and change
- Corporate ethics
- Business concentration

Business Studies - Financial Management

Semester long subject

A key element to the success of any business is the understanding of financial information. It is from this understanding that effective business decisions are made. Financial Management introduces basic accounting skills. These skills are applied to determine the financial success (or not) of a business through the preparation of reports and finally these reports are analysed to assist in determining the best course of action for the business. In addition to developing Excel skills through the preparation of this information, financial records will be also prepared using the accounting package MYOB.

The course consists of the following units:

- Benefits of effective financial management
- Choosing a business structure
- Introduction to basic accounting skills
- Preparation of financial reports using Excel
- Analysis of profitability ratios
- Strategies to improve business performance
- MYOB

Food Studies - Coffee Shop Operations

Semester long subject

Coffee Shop Operations is a one semester course designed for students to develop an understanding of the operations of a coffee shop. The foundation of the course is weekly practical cookery. Students will produce, market and sell their products in a student-run coffee shop.

- Preparing and serving coffee
- Food service
- Financial management
- Methods of cookery
- Coffee operation
- Marketing and advertising

Food Studies - Food Preparation

Semester long subject

Food Preparation is a one semester course designed for student to develop an understanding of how to cook. This is achieved through a practical cookery session each week, and is complemented with theoretical topics on food selection. Students investigate the appropriate food selection criteria of appearance, colour, aroma, taste and texture of foods.

Types of foods include:

- Meat and meat products
- Poultry
- Fish and Seafood
- Fruit and Vegetables
- Milk and milk products
- Cereals

Students also investigate the suitable methods of storage and methods of cookery associated with these foods. Theoretical content is consolidated with the practical components.

Audio Engineering Studies

Semester long subject

Are you interested in developing your knowledge and understanding of the sound recording equipment used in the Music Industry?

Audio Engineering Studies will provide you with opportunities to develop sound engineering skills in both live and studio settings through learning experiences including: preparing and operating sound mixing consoles; arranging MIDI compositions and samples in GarageBand; learning how to use ProTools, the recognised, industry-preferred recording platform for professional and home studios worldwide; developing trouble-shooting skills from an aural perspective, and experiencing music production within the acoustic walls of a professional recording studio.

Drama

Year long subject

Creativity plays a vital role in the well being and advancement of all societies. Drama is a practical and engaging opportunity for you to unlock and extend your creative potential. Through practical learning experiences you will develop real life skills such as; creative thinking, critical evaluation, literacy, negotiation, organising, planning, presentation, research and team work. In a fun and social environment, Drama allows you to identify your strengths as a learner and use them to your advantage in other subjects. Across the semester of study you will:

- participate in fun, practical workshops that explore the elements and conventions of drama to learn the art of making theatre;
- become a scriptwriter, an actor, and devise a performance from your own experiences which will be presented to a live audience in the Hanrahan Theatre;
- view live theatre and write a review, analysing and reflecting on how dramatic action and meaning is created;
- experience new styles of theatre such as visual, verbatim and cinematic to prepare you for Senior Drama.

Music

Year long subject

Take an auditory journey through the wide, cosmic realm of Sonic Events we call Music! Unlock the building blocks of music in these important foundation units. The skills unleashed in this new, two-semester course will provide students with the knowledge base for great success in Senior Music.

Protest Music
This unit will allow you to explore the many great Protest Rock songs throughout history and discover what the formula is to write a successful Protest song. This unit is a very hands on unit with lots of playing and creating opportunities.

Sonic Expressions
Hurtling through interstellar space on board the spacecraft "Voyager" is our planet's message to potential extra-terrestrials and believe it or not, it is in the universal language of Music. This highly popular unit explores a variety of musical genres from far reaching parts of the globe and throughout human history, all of which are found on Voyager's "Golden Record".

Music of the "Virtual" World
Do you like playing computer games and enjoy the exciting musical scores which accompany them? In this unit, students explore the genre of video game music, learning about the variety of compositional devices used in popular computer game soundtracks, and have the opportunity to perform them on an instrument of their choice.

Please note: Year 10 Music is a pre-requisite for studying Music in Year 11 and 12.

Visual Art

Year long subject

In our graphic-based society, 'visual literacy' is in the foreground of our daily communication.
To keep in step with the modern world, be active in the arts and develop essential 'visual communication skills'. In Visual Art, you will construct meaning through controlled use of visual language; employing symbolism and metaphors to communicate while making and responding to artworks. You will be encouraged to think openly and build confidence in expressing your opinions on life and the world around us.

Visual Art will provide you with a broad range of opportunities to extend your skills and unlock your creativity in a dynamic working environment. In response to the explosion of new artistic professions, this course combines traditional art-making skills with the use of industry-level-software to produce artworks that respect the past and embrace the future. During this course you will think creatively and critically, solve problems, communicate verbally and visually, conceptualise and make decisions to resolve and respond to artworks.

Across the Semester of study, students will:

- develop and extend their knowledge and understanding of the following art forms and media areas: Painting, Print-making, Ceramic/ Clay Sculpture and Computer-Based Design.
- apply their developing knowledge of art history, concepts and terminology to deconstruct and critically discuss two-dimensional and three-dimensional art, and graphic design/typography.
- complete a range of folio-based 'Making' tasks, maintain a Visual Diary of research, ideas and progress, and develop formal written responses to artworks in context.

Please note: Year 10 Visual Art is a pre-requisite for studying Visual Art in Year 11 and 12.

Media Arts

Semester long subject

Recognised as an evolving arts form in the twenty-first century, Media Studies focuses on the creative use of emerging technologies, specialised software and digital media to share stories, interpret cultural viewpoints, engage audiences, and communicate individualised ideas. In this course, students will be involved in studying two highly creative and engaging forms of media:

Animation
Animation is all around us - apps, games, films and commercials present diverse examples of creative animation for equally diverse purposes. Students will learn concepts of media, storyboarding techniques, and Animation Principles to develop and produce their own creative, short animation features using industry-level Adobe software.

The Art and Influence of Music Videos
Music Videos are symbolic texts that position, engage, influence, challenge and reflect a wide range of stereotypes and social/cultural conventions. Students will explore media concepts, theory, production techniques, industry trends and gender bias related to contemporary music videos as they critique examples and work collaboratively to storyboard and produce their own music video.

Design Technologies - Internet and Things

Semester long subject

This semester unit within Digital Technologies is designed to introduce students to different computer and networking hardware and software and to help them gain an understanding of how these work together to enable the Internet of Things (IoT). Students will learn about the nature, structure, operation, control of a range of common digital systems, and design and develop systems based on development boards. They will design interfaces and use the software development cycle to produce solutions to real-world problems.

Activities in this course will provide students with opportunities to:

- explore different sensors and actuators and their use in IoT
- understand data transfer and storage in networks and the internet
- use databases and simple SQL to extract required data
- program development board applications and use HTML5 to display live data
- design and develop digital applications by identifying a problem, specifying a solution, and then implementing, testing and evaluating the designed product

Software used in this subject requires Windows. A 13" screen is the minimum recommended for programming activities. All software used is free to download.

Digital Technologies - Robot Design and Control

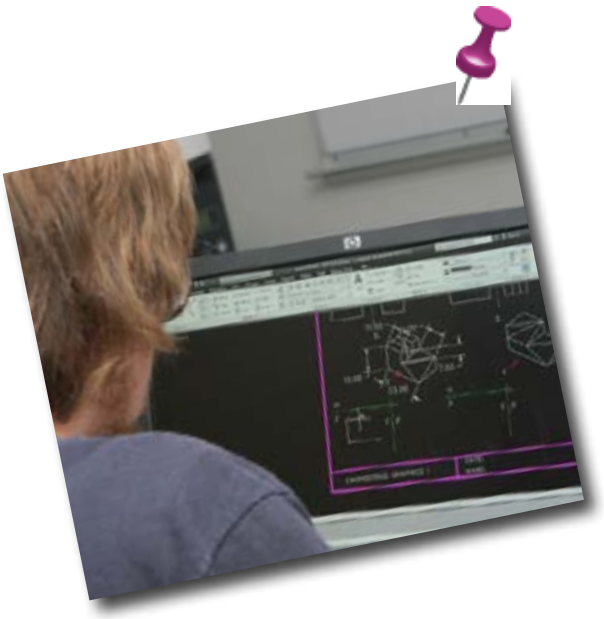
Semester long subject

Robotics is an interesting and challenging area of study within Digital Technologies. The aim of this semester unit is to provide students with knowledge and basic skills in programming, and experience in software design by designing robots to perform a number of tasks. While engaging in this work, students should again an understanding and appreciation of the social considerations and impacts robots have on society. This unit is problem-based, with student exploration of possible solutions to a range of given situations.

Students will use design processes to develop solutions for real-world problems. They will define problems and break these down to identify the components. Students will develop algorithms to specify solutions, implement, test and evaluate their digital solutions. They will learn about sensors and actuators and organise and present data collected by programming these devices. Students will also investigate, analyse and, where appropriate, modify existing programs to control robotic devices.

Activities in this unit will involve constructing simple robotic devices, controlling the robots using textual programming in a C-based language. Programming techniques used will include procedural programming, functions, procedures, abstraction and multithreading.

Software used in this subject requires Windows. A 13" screen is the minimum recommended for programming activities. All software used is free to download.



Digital Technologies - Games Programming

Semester long subject

This one semester unit is aimed at extending the technology skills of the students who are interested in computer programming and game development components of Digital Technologies. Students will develop and apply computational thinking, creativity, innovation, and project management.

In this course students will use the software design processes to design and develop games. They will design develop and evaluate the interface, software function and development process used. Object-oriented programming will be used throughout this course, with students learning and applying the principles of abstraction, inheritance, encapsulation and polymorphism.

Students will have opportunities to develop new ways of interacting with and controlling software. They will learn about different file types and compression methods. They will define and decompose problems taking into account function and non-functional requirements. An emphasis on developing and representing algorithms to solve problems will help develop the essential skills required for programming at higher levels. Students will design and creating a working game using the design process, including the design and development of the elements of the game – sprites, animations, interface and sounds.

Software used in this subject requires Windows. A 13" screen is the minimum recommended for programming activities. All software used is free to download.

Digital Technologies - Engineering Design (Graphics)

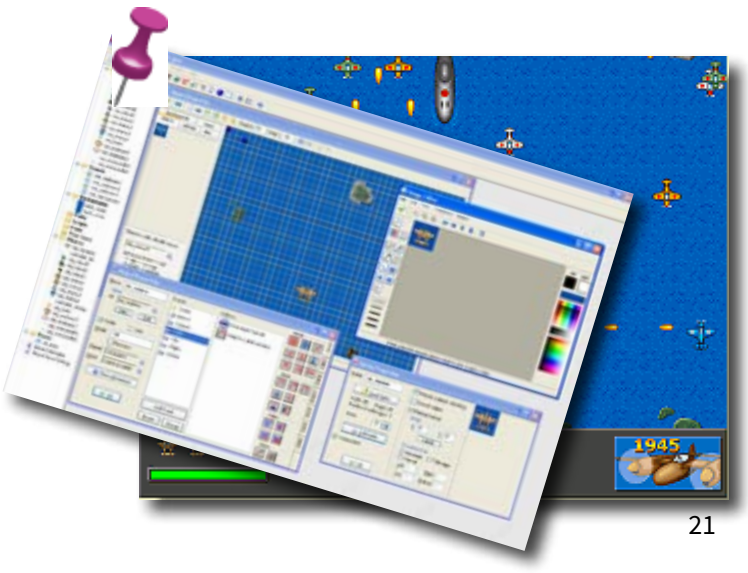
Semester long subject

In an increasingly technological and complex world, it is important for students to develop knowledge and confidence to critically analyse and creatively respond to design challenges. This course focuses on the design process and the technical drawings to explain and visualise the designs.

Students will produce designed solutions to identified needs or opportunities of relevance to individuals and regional and global communities. Using a range of technologies including a variety of graphical representation techniques for communicating ideas, they will generate and represent original ideas and production plans in two and three-dimensional representations using a range of technical drawings including perspective, orthogonal and production drawings with sectional and exploded views. They will produce rendered, illustrated views for marketing and use graphic visualisation software to produce dynamic views of virtual products.

In this course students will investigate and make judgments on how the characteristics and properties of materials are combined with force, motion and energy to create engineered solutions. They will use a design process and evaluate their design ideas against comprehensive criteria for success recognising the need for sustainability.

Software used in this subject requires Windows. The graphics software is free to download for use at school and at home.



Design and Technologies - Materials and Technologies (Workshop)

Semester long subject

In this unit, within the Design and Technologies area, students will identify the steps involved in planning the production of designed solutions. They will identify and establish safety procedures that minimise risk and manage projects with safety and efficiency in mind, maintaining safety standards and management procedures to ensure success. They will learn to transfer theoretical knowledge to practical activities across a range of projects.

In producing a variety of projects students will undertake activities to:

- develop skills and techniques in the use of hand and powered tools and machinery used in workshop situations
- develop the ability to plan and design simple projects which they will then construct and evaluate
- develop both knowledge of and adherence to safe working habits suitable for working with hand tools and powered equipment in the workshop
- develop knowledge of woodworking materials (including plastic polymers) and hardware and the ability to select suitable materials for given situations.

The approach in this subject emphasises learning by doing. By making simple objects students gain knowledge and skills in production. The theory work involves design processes, online activities and a research assignment which is completed during class time and through home study. It is important for students to develop good workshop attitudes and to work on their skills and techniques.

This course develops the same skills as Year 9 Workshop Technology in 2016; therefore, it is only open to students who did not take the course in Year 9.

This publication was produced by the Curriculum Office. The details about the various courses on offer contained in this Guide to Year Ten Studies were correct at the time of publication, but may change from time to time as necessary to respond appropriately to student needs and the College's response to the Australian Curriculum.

The Curriculum Office acknowledges the assistance of the Subject Area Coordinators

Ms Alison Perrot	Coordinator - Visual Arts
Ms Justine Silk	Coordinator - Performing Arts
Ms Michelle Smith-Rowan	Coordinator - Business Studies
Mr Paul Gribben	Coordinator - Senior School English
Mr Shawn Creamer	Coordinator - Middle School English
Mr Brenden Kennedy	Coordinator – Middle School REPD
Ms Sophie Studders	Coordinator – Middle School Social Sciences
Mr Brett Morrissey	Coordinator - Senior Mathematics
Mr Nick Simpson	Coordinator - Middle School Mathematics
Mr Darren Thomas	Coordinator - Physical Education
Ms Kath Neehouse	Coordinator - Senior School Religious Education
Mrs Juanita Jacobs	Coordinator - Senior Science
Ms Hannah Elder	Coordinator - Middle School Science
Mr Stuart Rowland	Coordinator - Senior School Social Sciences (Acting)
Ms Kathy Duncan	Coordinator - Technical Studies

Curriculum Office

Mr Paul Mead	Vice Principal - Teaching and Learning
Mr Peter Wall	Director of Studies
Ms Dianne Martin	Program Pathways Leader
Ms Joanne Fewtrell	Curriculum Secretary

Enquiries about the material covered in this book should be directed to:

Vice Principal – Teaching and Learning
Villanova College
P.O. Box 1166 Coorparoo DC Q 4151

Telephone: (07) 3394 5690
Facsimile: (07) 3397 0103
Email: curriculum@vnc.qld.edu.au

New enrolment enquiries should be directed to The Registrar at the above address.