



VILLANOVA COLLEGE

Year 9 Studies Guide
2017



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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

CORE CURRICULUM

Year 8

In the Year Eight program, the major Core Curriculum was divided into two parts:

- the Humanities (including English, Religious Education and Personal Development, History) and
- Mathematics and Science.

In addition to these two major core areas, students were exposed to a number of enrichment subjects and completed minor studies in two Languages other than English, and Health and Physical Education.

In Year Eight, everyone did the same Core program and chose Term elective choices.

Year 9

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

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

As Year Nine is a transition year towards the Senior School, the curriculum in this final year of the Middle School is not integrated along subject lines - rather the subjects are treated separately. On the pages that follow are descriptions of the Core Subjects studied in Year Nine. Later in the booklet are descriptions of the Elective Subjects on offer for Year Nine.

In Year Nine, in addition to the Core Program, all students take four elective units - two in Semester One, and a further two in Semester Two. Choosing these four units is the subject of this booklet.

Year 9 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

Religious Education is a core curriculum area in every year level at Villanova College. As a Catholic school in the Archdiocese of Brisbane, Villanova's Religious Education program is modelled on the established guidelines of the Brisbane Catholic Education Curriculum. The content of the curriculum is organised into four interrelated strands: Sacred Texts, Beliefs, Church and Christian Life.

The Middle School Religious Education curriculum at Villanova College is designed for optimal student engagement. This allows students to develop their religious literacy, participate actively in the religious life of the college and to develop cross-curriculum skills. Student engagement is developed through an enquiry learning model that promotes discussion, collaboration, reflection, creativity and draws from their personal experiences.

The Year Nine Religious Education Curriculum covers four units over two semesters. In Semester One, Students explore the divergent understandings of God (G*d, Allah, God) in the monotheistic religions (Judaism, Islam, Christianity). They develop their understanding of the experience of sin throughout human history and deepen their understanding of New Testament texts by engaging in biblical criticism to better understand the purpose and message of the texts.

In Semester Two, Year Nine students continue to develop their understanding of prayer in the Christian tradition through an exploration of the writings of key religious and lay leaders throughout Church history. They consider sources of inspiration, strength and guidance for believers today, including Catholic Social Teaching, the Sacrament of Healing (Penance and Anointing of the Sick) and communal prayer experiences.



HISTORY

History is a disciplined inquiry into the past that develops students' curiosity and imagination. It develops understanding of cultural, social and political events, processes and issues that have shaped humanity from earliest times. It enriches students' appreciation of how the world and its people have changed, and the significant continuities that exist into the present. In this way, the study of history enables students to contribute more effectively to creating the future.

Historical study is based on the evidence of the remains of the past. It develops skills in interpretation, promotes debate and encourages thinking about values both in the past and in present times with a view to encouraging students to consider future challenges. The History skills are life skills which students can utilise across many disciplines and in many areas of life. These include the ability to ask relevant questions, critically analyse and interpret sources and different contexts, respect and explain different perspectives and values and of course to communicate more effectively.

The Year 9 History Course covers the period from 1750 to 1918. It takes a world history approach and includes units relating to how humanity has worked towards the creation of a better world. They will study Australia and Asia, the making of nations and World War I. Within these units there is scope to develop all the skills students will need to continue a further study of History later in their education. One of the key aims is to equip students for the world in which they live by enhancing their appreciation of Australian history and Australia's position in the Asia-Pacific region and then move towards developing their understanding of global relationships that are essential for active participation in society.



ENGLISH

The ability to comprehend and interpret written and spoken English in its various forms, together with the ability to express oneself in a variety of ways, is vital for personal well-being and that of the community in general. It is also the basis for learning in other spheres. For this reason, it is included in the studies of all students.

The Year 9 English course is concerned with the development of students' ability to interpret and use language in a wide variety of ways. In Year 9 students interact with peers, teachers, individuals and groups in a range of face to face and online environments. They will experience familiar and unfamiliar contexts, both local and global. The key aim is to promote the student's ability to communicate effectively in a wide range of contexts.

In line with the Australian Curriculum the students engage with a variety of texts, which involve students in the practice of writing, speaking, and creating, and, listening, viewing and reading. The students learn to create, evaluate, discuss and perform a wide range of texts. They will learn how to engage with texts designed to inform and persuade. To this end, during Year 9 English, students encounter a wide variety of differing forms of English expression such as novels, plays, poetry, films, short stories, dramatic performances, newspapers and video clips. These texts will explore themes of human experience and cultural significance, interpersonal relationships and ethical and global dilemmas within both real world and fictional settings which represent a variety of perspectives. Students will create a range of imaginative, informative and persuasive types of texts.

Students' understanding of themselves and the world depends on language. At the very fundamental level, thinking itself depends on language. Clarity and precision in language are the keys to thinking critically, solving problems and reasoning logically. Language is a means by which students can share the insight, feeling and experiences of others. The exploration of human issues highlighted in literature, film and drama opens up to students the experience and insight of others. Through the language, literature and literacy in the Year 9 English course, in keeping with the Australian Curriculum, students are provided with the opportunity to develop empathy with others and the world.



MATHEMATICS

Effective mathematical thinking can be an advantage when measuring and marking a cut on a piece of timber, using a street directory, checking the bill at a restaurant, choosing from a variety of loan repayment options, evaluating statistical tests used in research, or surveying an irregular piece of land.

Through their learning experiences in the Middle School Mathematics course at Villanova, students are encouraged to develop the skills and productive habits of mind for mathematics. The course content is structured along the strands Chance and Data, Measurement, Number, Space, Algebra. Learning experiences in the course are shaped by the view that students learn best by active, rather than passive, participation - they learn by doing, and not just by watching.

Our assessment strategies are designed to extend, measure and record what students can do. An individual profile, which is maintained throughout the year, enables the student, teacher and parent to constantly monitor progress and devise strategies to overcome difficulties. Information from a variety of sources is used to update the student's folio. Assignments, in-class tests and investigations provide valuable data to build the student profile.

One of the keys to success in Mathematics is to work consistently. Each student should therefore do about 15-20 minutes of mathematics study each school evening. Though this figure is a guide only, and may vary at times during term, the teacher should be contacted if the student is regularly spending much more or much less time on homestudy in mathematics.

A range of courses in Mathematics in Years 11 and 12 are offered to Villanova students. Some of these involve a level of technical difficulty and are not suitable for all students. Entry to these courses is not automatic. Students need to demonstrate the desired level of competency before commencing these later courses. Students will determine the appropriate Senior mathematics subject for them during the course of their studies in Year 10.

SCIENCE

So many issues which touch our everyday lives are intertwined with scientific questions. A good knowledge of the principles and theories involved in issues such as technology, the environment and nuclear energy is needed by all. Likewise, students must become equipped to evaluate their own knowledge of science as it relates to our society and the ethical use of the rapidly advancing scientific understanding.

The Middle School Science Course is based on the Australian Curriculum and focuses on the four main understandings of Biological Sciences, Chemical Sciences, Earth and Space Sciences and the Physical Sciences. There is an increasing emphasis on development of scientific skills such as questioning, designing and conducting, and analysis of data. The course is broadly based and provides a background for all future studies in this area at Villanova. However, this is not to say it is only for those who wish to pursue a scientific career. On the contrary, it attempts to equip all students with an understanding of their own bodies and the world in which they live.

In addition to completing set homework which is given on a regular basis, students should endeavour to develop mature study habits that include, for example, a weekly revision program, reading ahead of the work at hand and reading beyond the material presented in the course.

HEALTH & PHYSICAL EDUCATION

The continuing physical development of students and their growing understanding of relevant health issues are considered in the design of the HPE program in Year 9. The course combines a practical dimension (sport and physical activity) with a theoretical dimension (health) in addressing the priorities as outlined in the Australian Curriculum.

In the physical performance domain, students will participate in a variety of sports and physical activities which promote physical fitness, skill-development, team-work and socialisation. These physical activities may include: cricket, volleyball, lifesaving, futsal, touch, basketball, athletics and NFL. The specific physical activities a class participates in is dependent upon the timetable and available facilities. Each activity is formally assessed against the descriptors and standards of the new Australian Curriculum.

Each semester, each HPE class will complete and be assessed in one Health topic. In Semester One, students will study a comprehensive drug education course, adopting the harm minimisation approach to the design and implementation of the unit. In Semester Two, Year 9 HPE students complete a unit on sports medicine. In this topic, boys learn how to diagnose, manage and provide care for a range of common sports injuries. Student learning in each of the Health units is formally appraised through one major assessment task.

Additionally, students complete the 20-metre shuttle run test (beep test) regularly throughout the year to monitor their cardiovascular endurance. Student performance in this fitness test is included in each semester's report in the subject as part of overall feedback to parents.



HOW TO CHOOSE ELECTIVE SUBJECTS

The elective choices you made in Year 8 was an opportunity for you to explore and discover your own particular talents and interests. This is developed further in Year 9.

Developing and discovering your own values, talents, skills and interests is:

- for your own personal development - things you would like to do in your leisure time both now and in the future and
- about discovering what kind of work you might like to do in the future - this is a gradual process and you will most likely change your mind several times over the next few years.

This whole process will take place in your CORE subjects as well as in your ELECTIVE subjects; however, elective subjects require you to do something even before you start. You must think about the things you might like to do and investigate the subjects yourself.

In the elective subjects you have a number of key areas where you can follow very personal preferences. These may:

- develop a personal interest or hobby,
- allow you to pursue your family heritage,
- encourage you to select and follow a particular career,
- select a career in an allied field, or
- be a help to a career in a different field.

Career Choices

You are not being asked to make career choices at this particular moment. Due to the way the courses are structured at Villanova, most career paths will still be open to you, even after you have completed Year 10.

There are two reasons for this. Firstly, the part of Year 9 and 10 courses at Villanova that everybody does (The Core) is quite far-ranging so everybody experiences a broad range of core subjects. Secondly, even those courses in Years 11 and 12 which follow on from an elective course are open to students in Years 11 and 12 after consultation with the College.

At this stage of your education, students should choose electives because they have an interest in them or because they would like to try something new or unknown to see if they have a talent or interest in these areas.

YEAR 9 ELECTIVES

Year 9 students study two semester length elective subjects in each semester, in addition to their core subjects from the following areas below. Throughout the year, all students will study four electives.

Extension Electives

- English Extension
- Mathematics Extension
- Science Extension

Physical Education

- Sports Science - Exercise Physiology and Biomechanics

Arts

- Art
- Drama
- Music
- Audio Engineering Studies

Social Sciences

- Geography

Languages Other Than English

- Italian
- Chinese

Business Studies and Food Studies

- Business Studies - Financial Literacy
- Business Studies - Entrepreneurial Studies
- Food Studies - Food and Nutrition

Design and Technologies

- Digital Technologies - Programming and Internet
- Digital Technologies - Games Programming
- Design and Technologies - Design Fundamentals (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.

EXTENSION SUBJECTS

English Extension

The English Extension course will be delivered over one semester in Year 9. 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 in English language linked to an area of English literature. So, for example Classic Literature or Shakespearean Studies or The American Novel would represent the richness and variety of what this elective can offer. Only one area would be the focus of study per semester.

While running independently of the core English Syllabus in Year 9, this elective provides an opportunity to extend and challenge students in English.

Students must have achieved the minimum overall grade of a “B” in Year 8 English to apply.

Mathematics Extension

This one semester elective is designed for students who excel in Mathematics. Its purpose is to give students the opportunity to explore other areas of Mathematics outside the regular Year 9 Mathematics curriculum.

Topics covered in the course include:

- Cryptography
- Techniques of counting
- Probability
- Permutations and Combinations
- Complex Numbers

Assessment in this subject consists of a multi-media presentation and an examination.

This Additional Mathematics Elective is an Extension subject, and as such is not designed to suit all students.

Science Extension

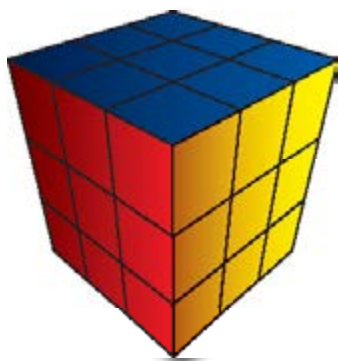
This one semester course is designed to extend and challenge passionate and able students who wish to improve their scientific skills.

A range of directed research and practical activities are envisaged as a mechanism for students to enhance their abilities to design and conduct experimental work and write scientific reports. Further experimental work is an opportunity to analyze and evaluate a range of methodologies and how they relate to key areas of learning in the sciences.

Topics covered in the course include;

- Biochemistry
- Impact of Disease
- Microbiology
- Physics

Assessment in this subject consists of formal tests, written scientific reports, presentations and practical skills.



PHYSICAL EDUCATION



Sport Science - Exercise Physiology & Biomechanics

In this Semester Unit, students explore the basic scientific principles behind Exercise Physiology and Biomechanics.

After covering the theory underpinning training methods and planning, the students are involved in a series of fitness tests and training activities. The students write up the test procedures and results and this is submitted at the end of the unit for assessment, where they will link test results to their suitability to a range of sports. They will study introductory anatomy and physiology and apply knowledge acquired in the course to a variety of physical activities.

Topics include:

- Anatomy
- Physical activity guidelines
- Benefits of fitness
- Components of fitness
- Fitness testing
- Considerations for planning and implementing physical training

The biomechanics section examines the application of physics principles to the efficiency of movement in a sporting context. Students will present a multi-modal assessment task that analyses a selected sporting task, demonstrating a range of strategies that are designed to improve their own performance and those of others.

Topics covered include:

- Force production
- Levers
- Newton's Laws
- Velocity
- Impulse
- Summation of forces
- Projectile motion

SOCIAL SCIENCES



Geography

Geography in Year Nine explores the interconnectedness and specific characteristics of places and spaces, providing 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 - Biomes and Food Security

This unit examines the personal and global patterns of food production and consumption and the impact this has on the natural environment. We also investigate the idea of food security and the ability to sustainably feed the projected future populations in the face of competing land uses, such as biofuel production and urbanisation.

Unit 2 – Geographies of Interconnections

This unit is focused on transport and communication technologies which connect people and places across the globe. We investigate the impacts of our consumption on places of production. The Unit focusses on studies drawn from Australia and across the world.

LANGUAGES OTHER THAN ENGLISH

Italian

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 one 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

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 one semester course, a prerequisite to Year 10 Chinese, topics are introduced through dialogues, role play, simple texts and games. Materials are related to everyday activities such as family and community relationships, likes and dislikes, interests, school and food. Thus language can be seen not only as an academic exercise but also 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. Some of these tasks will be completed at home. Students will be required to spend 20 minutes working on Chinese at home for each lesson they have during the week. This will concentrate on the basis of communication, i.e. drill and practice in real life situations.



BUSINESS STUDIES

Business Studies A - Financial Literacy

Financial Literacy aims to provide an understanding of the benefits of being an informed consumer. A financially literate person has the ability to act rationally and ethically when making personal consumer and financial decisions.

The course consists of the following units:

- Managing money
 - Income
 - Budgeting
 - Saving and Investing
 - Understanding Tax
- Sharemarket
- Consumer Protection
- Effective financial decision making
- Ethical consumerism



Business Studies B - Entrepreneurial Studies

The capability to develop innovative and creative ideas in a changing economic environment is essential for business growth.

Students will have an opportunity to explore real business owners and entrepreneurs in order to:

- Identify entrepreneurial skills and qualities needed to run a successful business
- Understand the various areas of management required for business operation
- Determine how business ideas are generated and understand the important role marketing plays in bringing ideas to reality
- Analyse how the domestic and international economies impact on up and coming entrepreneurial businesses

The course will culminate in the practical application of course fundamentals.

FOOD STUDIES

Food and Nutrition

Food Studies provides students with an introduction to food and the food industry. The subject is designed to develop skills in:

- Management - the effective use of time, energy and money
- Food Preparation - the safe, effective storage and cooking of foodstuffs
- Nutrition - understanding what is in food and how the body uses food.

Food Studies involves cooking practicals and theory in the following topic areas:

- The Working Environment – safety, hygiene, recipes, measurement, working with food
- Technology in the Kitchen – kitchen resources, technology and the environment, genetic engineering
- Food and You – What is food? Why eat food? The body's need for food, food requirements, nutrition



VISUAL ARTS

Art

What happens when you trap air pockets in clay? It explodes! By exploring the qualities of a material you are able to 'push the boundaries' of your design and create innovative two-dimensional or three-dimensional masterpieces.

Studying Art will build firm foundations for you to develop confidence using a range of expressive mediums and materials to successfully create 2D and 3D artworks. You will be encouraged to think creatively to generate concept-driven artworks that demonstrate effective visual communication skills. Clear communication is achieved by developing an understanding of visual representations of cultures, viewpoints and experiences to form the concept of your artworks.

In this Semester of study, students will:

- learn how to control and manipulate a range of mediums and materials such as: charcoal, acrylic paints, clay/ceramic sculpture;
- develop an understanding of the visual language of Art (Art Elements, Design Principles, Forms and Symbolism) as they discuss and appraise their own and related artists' works;
- research, develop and reflect on the processes of their art making regularly in a Visual Diary.



THE PERFORMING ARTS

Drama

Did you enjoy teamwork games, working in groups and creating your own performances in Year 8? Drama builds on these foundations where you will learn how to create drama, become an actor and how to reflect on and respond to live theatre. Understanding people, their stories and the world in which we live is at the very heart of Drama. You will become not only more confident in yourself but in how you undertake all of your studies. Across the semester of study, you will:

- Enjoy group exercises and games which introduce you to the elements and conventions of drama;
- Create an extension scene based on the popular boys' play Blowout, written for and about boys' culture at Villanova;
- Learn acting techniques and present scripts to a live audience;
- View and review live theatre.



Audio Engineering Studies

Do you have a 'good ear'? Do you enjoy creating and re-arranging music using technology? Audio Engineering Studies will teach you the basics of sound engineering using software on the PC and Mac platforms, and introduce you to the layout and functionality of our very own recording studio.

Dr. Who?

In this unit, you are introduced to electronic music through the ages. From the Theremin to The Beatles and Darude, you will learn how to apply basic editing and MIDI skills to your own music projects.

We discover the world of Dr. Who and the pioneer of remixing, Delia Derbyshire – create your own Dr. Who remix and engineer your own Tardis sound from scratch using programs such as GarageBand, Mixcraft 7, Audacity, Ableton Launchpad and FruityLoops 10.



Like A Version:

In this unit, learn how to arrange and record single track style in a small group using the DigiDesign 003 Audio Interface and the ProTools 11 system. Learn how to record for different instruments, how to record overdubs and apply editing and effects to your product to refine it further.

Music

People of every culture have found a need to express and share feelings, thoughts and ideas by ordering sounds into forms which symbolise and interpret their experience. The creation of music stems from our need to communicate through patterns of sound which have significance, and which may be re-created on subsequent occasions.

Aussie Icons:

What do James Morrison, Cat Empire, Cold Chisel, Percy Grainger and Powder Finger all have in common? Other than being amazing musicians, all of these artists, and many others, form the basis of our learning in Year 9 Music as we explore Aussie Music Icons. Through Year 9 Music, students will develop an awareness and appreciation of organised sound patterns and the capacity to express ideas, thoughts and feelings through composing, performing and responding to music with a particular focus on our own Australian Music industry icons.



Design Technologies – Programming the Internet

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 allow for the sharing of data both locally and globally. Students will learn about the nature, structure, operation, control of a range of common digital systems, and the ethical and social and risks of digital technologies and environments, and security strategies and protocols to protect information, rights, identity and personal safety. They will design interfaces and use HTML5, Javascript and CSS in creating interactive webpages.

Activities in this course will provide students with opportunities to :

- explore different operating systems
- understand data transfer in networks and the internet
- learn about network topologies, file structures, file storage systems, web browsers, search engines and a variety of protocols
- develop a working knowledge of computing and network technology within their own environment
- use HTML5, Javascript and CSS to structure and present information on the internet.

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

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.



Design and Technologies - Design Fundamentals (Graphics)

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 orthographic projections, pictorial views, and detail and assembly drawings. They will create 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 affect their uses. 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)

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 is the same as Year 10 Workshop Technology; therefore, students may take this course in Year 9, or Year 10, but not both.

This publication was produced by the Curriculum Office. The details about the various courses on offer contained in this Guide to Year Nine 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.

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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

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

