



Christ Church Grammar School

Academic Handbook Year 10, 2022

Overview

The timetable

The Senior School operates on a 10-day timetable cycle with six 50-minute periods a day. The 10 days are organised within a Week A / Week B structure. The timetable differs from Week A to Week B.

Students can access an electronic copy of their timetable on their Surface device through Nexus (nexus.ccgswa.edu.au).

Where a day or days are missed for long weekends or public holidays, these are skipped in the timetable. A boy's timetable therefore completes a cycle every two weeks.

With the exception of Thursday, each day begins at 8.30am with a 20-minute tutorial prior to the first period of the day. On Thursdays, the period from 8.30am until 9.45am includes Chapel, Assembly, House meetings etc. There are therefore only five periods on a Thursday.

The academic timetable on Friday concludes after period 4 with Year 10 students being involved in a formal activities program for periods 5 and 6.

Academic Administration

The Deputy Principal/Director of Studies is responsible for curriculum implementation and curriculum policy from Pre-Primary to Year 12. The Deputy Principal/Director of Studies and the Assistant Director of Studies organise the day-to-day and long-term academic program in the Senior School. In particular, the Assistant Director of Studies is responsible for the timetable.

Questions relating to a course of study should be directed initially to a boy's tutor or Head of House. However, where a boy is new to the School, such queries may be directed to the Assistant Director of Studies.

If there are any concerns, early in the year, about the electives chosen by a boy, the matter should be discussed with the tutor or Head of House. The issue may then be referred to the Studies Office. If there are good reasons for a change of course, the School will try to accommodate this.

Homework policy

The School supports the view that homework is an integral part of a student's education. Homework encourages the skills and study habits that are essential for intellectual growth and academic achievement. It is developmental and therefore increases in amount and complexity as the student progresses through the Senior School. The nature of homework can vary from simple reading of text or reference material, formal

written work and preparation for a test or classroom exercise, to involved research assignments that may take many weeks to complete. It is also expected that the student will take some responsibility for the allocation of time for revision and review of subjects in the absence of homework that is specifically set. The School encourages the independence of teachers in determining the type and amount of homework necessary to sustain the day to day academic program.

While homework is set in all subjects, not all homework is due to be submitted in the following lesson. Teachers will give advice on the timing of homework. As such, there will be some days when more homework is required than others. It is therefore up to the student, teacher, tutor and parents to manage an organised program of homework time to meet the specific demands of the following day. Students are required to use a diary as an organiser and planner for homework and similar activities. Students may chose between using the School diary, a personally purchase diary or an electronic diary. For many students, the development and management of such skills will be critical for future academic success.

In Year 10, students should expect to spend from one to two hours per weeknight on homework. The ebb and flow of assessments will necessarily mean that these times will vary, and there will be occasions when there are intense periods of homework interspersed with relatively free periods of time. It is here that preparation and planning are the key ingredients of a balanced response to the after-school demands of the academic program.

More information can be found in the School's 'Guidelines for study and homework' available from CCGS World under Governance.

Students are often required to attach a bibliography to assignments and incorporate in-text referencing. The School uses the American Psychological Association (APA) Referencing System.

Assessment and reports

Specific details about subject assessments can be found in the programs issued by teachers. The information gathered from the in-class assessment program is provided in reports to parents four times a year.

The reports provided for Terms 1, 2, 3 and 4 provide a broad overview of progress, including information about current grade, percentage and rating of a number of work practices. Academic grades are provided on an A - E scale. Each report represents the current status of the student in that subject.

Trimesterised subjects (Biology, Chemistry and Physics in Science) and unitised subjects (Civics and Citizenship, Economics and Business, Geography and History in Humanities) will be reported on in the term report in which the trimester or unit is completed.

Students in Year 10 have end of year examinations in English and Mathematics, together with examinations in elective subjects when this is considered to be a valid and effective means of determining a student's achievement.

There is a parent/teacher/student evening for Year 10 students, which takes place in Term 2. The evening serves the dual function of providing feedback about current performance as well as exploring possibilities for Year 11.

Together with these formal reports, there is ongoing communication between the student's classroom teacher and tutor. Thus tutors and the Head of House can provide parents with early warning of any problems or difficulties. Parents should direct any specific concerns or questions about class work to the tutor in the first instance.

Study Lab

After-school academic support is available for all students, including Year 10s. It is currently held in the CLC on Mondays, Tuesdays, Wednesdays and Thursdays, from 3.15pm to 4.45pm. English and Mathematics specialist staff are available on some of these afternoons, while organisational support is provided for work in other subjects. A number of current and former students also volunteer their assistance. Some students attend these sessions simply to complete homework, knowing that help is available if they encounter difficulties. For other students these sessions provide a time to go over work that may have been missed in class.

Information Technology

The School actively encourages teachers and departments to integrate the use of information technologies into the curriculum. Students are exposed to a wide range of information technology experiences by applying the computing resources to subject-based tasks. These experiences range from simple uses such as access to the Internet, to more complex uses such as multimedia.

Year 10 students are expected to bring their Surface device to all their classes (except Physical Education). It will be utilised by teachers as a tool for connected learning in their classrooms. Students are provided with their own email account.

Students may be required to use information technology, particularly their Surface device, while at home. Parents are encouraged to monitor their son's use of the Surface device in the same way that they might monitor other homework. Parents should restrict access to the device if it is not being used in a suitable manner. There are also technical solutions to do this; in this case, the School recommends the use of OpenDNS.

All activities that engage students with information technology require the student to demonstrate appropriate responsibility. They need to plan to manage their time efficiently and to ensure that they are using technology in ways that assist their learning.

The use of the Internet, email, Surface device and other IT assets is governed by the School's *IT Acceptable Use Policy*, available on each boy's computer.

Nexus

Nexus (nexus.ccgswa.edu.au) is the School's Learning Management System. In Nexus, students have access to their timetables, class learning resources and due dates for assessments as well as daily information about school activities.

Textbooks

For subjects where a textbook is utilised, a hard copy textbook will be provided for students. Where possible, an electronic version of the textbook will also be made available to students through their Surface device.

Curriculum Policy

The School's Curriculum Policy is available through the 'Policies' section of CCGS World (Governance). It gives further information about the way in which the curriculum is delivered.

Reporting and Assessment Policy

The School's Reporting & Assessment Policy is available through the 'Policies' section of CCGS World (Governance). It gives further information about the way in which information about student progress is reported to parents and protocols around assessment.

Rewarding academic achievement and endeavour Policy

The School's Rewarding academic achievement and endeavour Policy is available through the 'Policies' section of CCGS World (Governance). It gives further information about the way in which Subject and Merit Prizes are awarded.

Year 10 Curriculum

The Year 10 course is made up of seven core subjects and a choice of two elective subjects. All core and elective units are offered over the whole year and are listed below.

Boys will study the core subjects of English, Humanities, Mathematics, Science, Physical Education and Health. They are also required to take part in the Year 10 Venture at the end of the year.

Extension Classes

Extension classes run in the four core subject areas (English, Humanities, Mathematics and Science). These classes follow a significantly modified learning and assessment program and aim to provide students of high cognitive potential with appropriately challenging learning experiences. Selection criteria for these classes are outlined in the School's Curriculum Policy.

Support Classes

Support classes are run in the four core subject areas (English, Humanities, Mathematics and Science). These classes have lower student numbers and are designed to cater for the needs of boys with specific learning challenges, needs or gaps. The programs in these classes are aligned to the mainstream West Australian Curriculum but the content differentiated, and assessment modified to meet the learning needs of individual students. Recommendations for student access of support classes is made by Heads of Department and classroom teachers. Further information around this process is outlined in the School's Curriculum Policy.

Peter Moyes Centre (PMC)

The Senior Peter Moyes Centre (PMC) caters for students with diagnosed disabilities who are unable to access aspects of the mainstream curriculum. The PMC program covers core subject areas (English and Mathematics) as well as Health and Protective Behaviours, Life Skills (cooking and daily living skills), Community Access, Business Enterprise, Work Experience and ASDAN. All students access mainstream electives in Years 7 – 10.

The overarching vision of the Senior PMC is to prepare students for life after school through developing their independent work skills and increasing their ability to manage themselves in a variety of situations and contexts.

Each student works from an individually developed program called a Documented Plan (DP) which contains learning objectives specific to relevant subject areas. The DPs are developed in consultation with Senior PMC teaching staff, parents/guardians and other relevant stakeholders. The DPs are reviewed biannually.

Placement in the Senior PMC will be discussed upon enrolment or transition into the Senior School and the Coordinator of the Senior PMC will be in touch with parents/guardian to conduct a Needs Assessment before a decision regarding placement is made. Where appropriate, mainstream students will be invited to participate in some PMC programs (such as English, Mathematics and ASDAN) to facilitate learning development and enhancement of opportunities post-schooling.

Elective Subject Selection

The choice within the elective program represents a cross section of courses from the SCSA learning areas that are not represented in the core subjects. These learning areas are: The Arts, Technology & Enterprise and Languages. In addition to courses in these four learning areas, an elective in Marine Studies is offered.

Subject Selection for the Year 10 course is made by studying the Subject Outlines in the next section and then completing the online Subject Selection Form. Every Year 10 elective subject operates for the whole year for six periods per 10 day cycle.

If assistance is needed in making subject choices please consult initially with the Head of House. For boys new to Christ Church, it is advisable that you seek assistance and advice from the Acting Assistant Director of Studies, Megan West (term 2 only) and then Assistant Director of Studies, Dr Holly Rose. Please note that boys may select at most **one** subject from each of the follow groups:

- Data Science and Artificial Intelligence **and** Ethical Hacking and Data Security
- Design and Technology Materials **and** Mechatronics
- Global Perspectives **and** Investing & Enterprise
- Marine Studies **and** Sports Science
- Digital Media **and** Visual Art.

SUBJECTS

Mandatory	Electives Two electives are to be selected
English Humanities Mathematics (Mainstream or Advanced) Health and Wellbeing Physical Education Science Venture	Chinese Data Science & Artificial Intelligence Design & Technology – Materials Digital Media Drama Ethical Hacking & Data Security French Investing & Enterprise Japanese Marine Studies Marine and Environmental Science Mechatronics – Arduino powered buggies Music Sports Science TICK – Think, Innovate, Create and Know Visual Art

Mandatory Subjects

English

This is a whole-year course taught for eight periods in each ten day cycle. In Year 10 boys are prepared to make informed choices for their upper-school English courses of study, and equipped to succeed in them. Non-fiction texts are an important focus, comprising study of the elements of rhetoric and persuasive speaking, argumentative writing, expository texts, feature articles and documentary films. Students study multiple imaginative texts (novels, poems, prose and drama), drawn from both classic and contemporary canons, and extend their experience of literature with consideration of a range of poems in different forms, short stories from the speculative fiction genre and a full-length play. They also study a feature film. Much of their assessment is now done as in-class writing of essays, and expectations in regard to homework are high. The course is designed to help bridge the gap to later ATAR subjects, and connections between current learning and ATAR Literature and English will be prioritised in the delivery of content.

All boys work to consolidate and extend their general and subject specific vocabulary, spelling and grammar throughout the year, and are expected to become increasingly proactive and independent in this regard. To assist in this, students will undertake regular vocabulary tests and will make significant additions to their vocabulary. When possible, there are excursions to appropriate plays and films, and from time to time, visiting speakers. Creative writing again features in the program, and the boys are also encouraged to enter a range of internal and external creative writing competitions, with a number having their work celebrated on the English noticeboard.

The formal assessment program is reviewed on an annual basis but is likely to approximate the schedule that follows. Common Assessment Tasks, which require the whole cohort to sit the same in-class assessment on the same day, are set twice a year and cross-marked by Year 10 teachers or external markers to assist grading consistency. The final examination is an important milestone, with students writing short answer and essay responses to questions that test their reading comprehension, compositional and analytical understandings.

Assessment schedule

SEMESTER ONE

Persuasive speech
Comprehending short answer response
Analytical essay (novel)
Analytical essay (documentary)
Vocabulary test

SEMESTER TWO

Creative writing (short story/poem)
Analytical essay (film)
Vodcast presentation (drama)
Examination (reading comprehension, analytical essays on literary and media texts, composition)

In addition there will be a number of informal opportunities to assess levels of understanding and competency over the course of the year.

Contact

Ms Melanie Hastie
Year 10 Coordinator and Assistant Head of English

Mr Spencer Davies
Head of English

English as an Additional Language or Dialect (EAL/D)

English as an Additional Language or Dialect (EAL/D) is run through the Languages Department. Students recommended for, or eligible to study EAL/D, will be taught by an EAL/D specialist who will cover the contexts, processes and strategies studied in other English classes but using resources geared to EAL/D students and at a pace to cater for the needs of these students.

Contact

Mr Vinko Shain

Head of Languages

Health and Wellbeing

Students will study five topics during the year

Health

At Christ Church the underlying focus in the Health area is health maximisation. The course covers three major standards:

- Students explain the impact of social and cultural influences on personal identity and health, safety and wellbeing, including stereotypes and gender, diversity and cultural differences
- They analyse media messages about health and propose and evaluate interventions to improve individual and community health and wellbeing
- Students evaluate the impact of emotional responses on relationships and apply skills and strategies to promote respectful relationships, such as taking action to address disrespect or other inappropriate behaviour

Outline:

1. Keys for Life: driver education that focuses on educating young drivers, commitment to extensive driving practice and preparing them for all road use. Students will have the opportunity to sit their Learner's test and with a completed log book and attendance in the program will be eligible to gain their Learner's Permit from the Department of Transport licensing centre .
2. Drug Education including both illicit and legal substances.

Careers

The Career and Development course focuses on preparing students for selecting subjects for senior school and pathways beyond school. The areas students cover in this course are

- Identifying personal skills, interests, talents and values
- Exploring possible career options using the career tool 'Career Voyage'
- Researching university and further training
- An introduction to the subject selection process for Year 11; the subjects they will choose from and how they relate to post school education and training
- Resumé writing
- Old Boy guest speaker – Life After Christ Church

The course provides an excellent launch pad for parents to begin having conversations with their son about possible pathways for when he leaves school and how they will relate to his subject selection for Years 11 and 12.

Positive Psychology

In this component students continue to explore the concepts of Positive Psychology that have been introduced previously, specifically focusing on

- Character Strengths
- Personality and relationship building
- Problem solving
- Common thinking traps
- Mental health and substance abuse

Religion

Consistent with CCGS's Anglican traditions and desire to contribute to the development of 'global citizens', this unit includes comparisons between religion and spirituality; writing my own spiritual autobiography; exploration of different spiritual traditions and famous lives; discussion of contemporary social justice issues in Australia; and a deeper exploration of contemporary religious issues around the world.

The Young Man Project

The Young Man Project continues on from the Year 9 On Queenslea Drive (OQD) Program with a focus on students revisiting their OQD commitments and creating new relationships with students in their class. The Young Man Project also focuses on building the students social and emotional skills that are critical for young men of the future.

The aims of the project are

- To revisit key OQD themes.
- To work with the young men to become proactive in building their relationships and develop an understanding of what kind of young man they wish to be
- To continue to build a tight bond amongst the cohort
- To provide young men with an understanding of how individuals think differently and develop skills to work effectively with different personalities
- To encourage and engage students to step up another level from OQD

Contacts

Mr Liam Casson	Mrs Jody Clarke	Mr Jarrod Kayler-Thomson
Director of the Wynne Centre for Boys' Health and Wellbeing	Head of Careers	Head of Year 9 on Queenslea Drive Program

Mr Luke Farmer
Head of Health & Physical Education

Reverend Nicholas Russell
School Chaplain

Humanities

The Year 10 Humanities course runs for eight periods a fortnight and is split into four units: Civics and Citizenship, Economics and Business, Geography and History.

Through the contexts of Civics and Citizenship, Economics and Business, Geography and History, students will have the opportunity to develop 21st Century skills and develop into global citizens. These capabilities are essential in preparing students for an increasingly interconnected and globalised economy and include being able to question and research, analyse, evaluate, communicate and reflect.

Civics and Citizenship

Students will build an understanding of democracy, democratic values, justice, rights and responsibilities by exploring Australia's system of government and comparing it with Indonesia's, analysing Australia's roles and responsibilities at a global level and its international legal obligations. They will inquire into the values and practices that enable a resilient democracy to be sustained.

Economics and Business

Students will expand on their global awareness by looking at direct comparisons between Australia and different economies around the world. They will look at the various factors that affect standard of living including; economic growth, distribution of income and wealth, and standards of living.

The topics addressed are

- Indicators of economic growth
- Macroeconomic performance and living standards
- Factors that influence decision of consumers and producers
- Business structures and how they affect productivity improvements.

Geography

The Year 10 Geography course emphasises the application of practical and investigative skills covered in previous years. It also focuses on sustainability and human impact upon the environment. This is achieved through the examination and investigation of global issues. In this context, all boys examine climate change. A lengthy investigation of a local coastal area issue involving diverse stakeholders and sustainable development allows the students to utilise a range of practical skills including Geographical Information Systems.

This unit will introduce students to some of the thematic, practical and theoretical work conducted in Senior Geography courses. The topics covered are

- Environmental Issues and Sustainability
- Population Geography and Human Wellbeing
- Physical Geography, especially Coastal Processes including the management of our coastline
- Practical and fieldwork skills

History

The History unit builds on the analytical skills of history and students will also further develop their writing skills so that they can write strong essays, interpret sources and understand bias. In line with the topics contained in the Western Australian Curriculum, students will study

- World War II: An overview of the long-term and short-term causes of war and its progression from mainly European theatres to another global conflagration. An examination of the broader impact of the conflict will be completed as well as Australia's contribution to the war and its lasting consequences will also be studied.

- The struggle for freedom since World War II: a study of the civil rights movement in the USA and parallel developments in Australia; the Vietnam War and 'freedom and rights' – both in Vietnam and Australia, which includes Australia's response to the conflict.

Contact

Mr Patrick Parker

Head of Humanities

Mathematics Mainstream

This is a whole year course taught for eight periods in each 10-day cycle. All boys are required to own a scientific calculator and a Casio ClassPad, both of which are available from the bookroom. The use of these calculators is integrated into almost all topics in the course, and they may both be used up to and including the ATAR Mathematics examinations. The Year 10 mainstream course is very heavy in algebraic content. Students must have a solid understanding of core algebraic skills to be successful.

The following units are studied during the year

1. Linear relations
2. Geometry
3. Indices
4. Exponential functions and Financial Mathematics
5. Trigonometry
6. Quadratic equations
7. Measurement
8. Parabolas and other graphs
9. Probability
10. Statistics

Class work and formal testing will be used to assess learning. Students will be assessed through tests, investigations, applications and a final examination.

Students studying the Year 10 Mathematics Mainstream course will be able to select from Mathematics Applications ATAR and Mathematics Essential General in Year 11.

Contact

Mr Khiem Ly (Term 2 only)

Acting Head of Mathematics

Ms Megan West

Head of Mathematics

Mathematics Advanced

This is a whole year course taught for eight periods in each 10-day cycle. All boys are required to own a scientific calculator and a Casio ClassPad, both of which are available from the bookroom. The use of these calculators is integrated into almost all topics in the course, and they may both be used up to and including the ATAR Mathematics examinations. This course covers the Mainstream content and the Advanced content. The course encompasses a significant amount of algebra and students must demonstrate a solid knowledge, understanding and ability of algebra and be able to apply their skills in unfamiliar contexts. The course is fast-

paced and students will need to be self-motivated and independent learners to cope with the demands of the course.

The following units are studied during the year

1. Linear relations
2. Geometry
3. Indices and surds
4. Exponential functions and Financial Mathematics
5. Trigonometry; including non-right angled trigonometry and graphs
6. Quadratic equations
7. Measurement
8. Parabolas and other graphs
9. Logarithms
10. Polynomials
11. Probability
12. Statistics

Class work and formal testing will be used to assess learning. Students will be assessed through tests, investigations, applications and a final examination.

Students studying the Year 10 Advanced course will be able to choose Mathematics Methods ATAR and Mathematics Specialist ATAR if they achieve an A grade. Student can elect to study Mathematics Methods ATAR if they achieve an A or B grade. Students achieving a C or D grade in this course are advised to select from Mathematics Applications ATAR or Mathematics Essential General in Year 11.

Contact

Mr Khiem Ly (Term 2 only)
Acting Head of Mathematics

Ms Megan West
Head of Mathematics

Physical Education

This course is taught over the whole year for four periods in each 10 day cycle. Each boy is expected to be able to swim 400 metres using a recognised stroke over deep water prior to starting the Year 10 course.

Physical Education

This part of the program focuses on the development of skills in a variety of new and traditional activities in addition to furthering a boy's fitness and participation in more advanced team play.

Activities throughout the year include badminton, various football codes, athletics, basketball, water polo, weight training and fitness testing. Students are also trained and tested for the Royal Life Saving Society Bronze Medallion Award.

Each student's fitness, athleticism, lifesaving ability, ball skills, attitude, behaviour, dress, punctuality, game performance and skill development will be assessed.

Health Education

The health education component of this course is taught as part of the Health and Wellbeing Program (see p. 7 and 8).

Contact

Mr Luke Farmer

Head of Health & Physical Education

Science

Each Science course runs for one trimester for eight periods in each 10-day cycle.

Biology

This course aims to introduce students to the concepts of heritable characteristics from one generation to the next, as well as the Theory of Evolution. The theory behind these concepts is supported by practical work, including Biotechnology. This unit of work covers cells, DNA, genetics, evolution, natural selection, evidence for evolution, artificial selection, cloning and recombinant DNA technology in an interesting and practical way. It provides a good basis for both the Year 11 Biology and Human Biology courses. Boys have the opportunity to participate in a variety of activities, such as spooling DNA and using gel electrophoresis to produce a DNA fingerprint and look at the relatedness of organisms through DNA and protein sequencing. The Year 10 course builds on previous knowledge and extends the boys into the applications of new biological understandings and the ethical ramifications of such advancements. It is assessed by tests and investigations.

Chemistry

This course is applications-based, though it must be recognised that there is a need to prepare for more content-oriented studies in Year 11. Hands-on experiences are provided through a variety of practical activities to illustrate that Chemistry is an applied and experimental science. Knowledge and understanding of a variety of chemical concepts, theories and principles is necessary for further studies, and also necessary for an informed general population. Recollection and use of many of the ideas introduced during the Year 9 course will be required. The material is organised into two units

- Chemical Models: this unit introduces students to a more detailed model of atomic structure, the general classes of chemical reactions and to the language of Chemistry. Students are also introduced to Stoichiometry (chemistry calculations) in preparation for Year 11 Chemistry
- Salt Analysis: this unit introduces students to analytical chemistry and tests students' broader understanding of Chemistry through investigations and other experiments

Assessment will be by means of topic tests and Science Inquiry Skills investigations. The development of a responsible and safe approach to laboratory work is a desirable outcome of the course. Worksheets and other text material will also be provided for the course.

Physics

The study of Physics is concerned with understanding the nature of forces and motion, and matter and energy. In this course, students will focus on developing an understanding of how objects move and providing descriptions of this motion. They will investigate conservation of energy within systems by describing energy transfers and transformations and identify how the motion of objects can be described and predicted using Newton's Laws of Motion. Students will also have the opportunity to discuss features of the universe including

galaxies, stars and solar systems and use the Big Bang theory to explain the origin of the universe. There will be a strong emphasis on discovery through practical work and investigation and students will use both qualitative and quantitative techniques. Contexts covered may include motor vehicles, rocketry and fun parks.

Contacts

Mr Edward Hogg
Head of Science

Ms Sharyn Bana
Head of Biology

Mr Jacob Marai
Head of Physics

Mrs Megan Caporn
Head of Chemistry

Venture

Venture involves the whole Year 10 group in an expeditionary adventure in a remote, wilderness environment. Boys are randomly divided into several smaller groups, each made up of approximately 12 fellow Year 10 students. Each group is in the care of a Leader who is a volunteer from the teaching staff. Staff and students prepare for Venture throughout the year. This exciting and challenging part of the Year 10 curriculum is seen as the culmination of the Outdoor Education program at Christ Church. It is accepted as being a lasting experience, good for self-esteem, which teaches greater independence and promotes strong interpersonal and communication skills.

Contact

Mr Jamie Foster
Acting Director of Planning & Co-Curricular

Elective Subjects

Chinese

In Chinese, boys will acquire more advanced competencies in Speaking, Reading, Listening and Writing. Through topics of particular interest to boys, students will improve competency in their own language and understanding of how it functions. Students will

- gain a deeper understanding of linguistic conventions
- critically reflect on their own and other cultures and values
- and prepare themselves for the Year 11 and 12 courses

The Languages Department also offers a bi-annual China tour for students interested in immersing themselves in the language and culture.

Assessment

Boys are assessed in Speaking, Reading, Listening and Writing each term as well as in an end of year examination in Term 4. Grammar and vocabulary tests are set at least twice a term. Continuous, less formal assessment will be carried out during the year.

Homework

Regular practice reviewing words and grammatical concepts learned is fundamental in the acquisition of a language and as such, forms an integral part of the course. In Year 10, we expect boys to spend 15-20 minutes each evening reviewing words and grammatical concepts covered in class in addition to any specific homework set by the teacher. Using their Education Perfect platform, students will find it easy to consolidate their learning and build proficiency in their target language.

Contact

Mr Vinko Shain

Head of Languages

Data Science & Artificial Intelligence

Data Science is the art of obtaining, exploring, and making sense of data. Effective Data Scientists employ skills in a range of disciplines including programming, statistics, mathematical modelling, data acquisition and analysis, machine learning and artificial intelligence. The demand for Data Scientists continues to grow as organisations discover the powerful insights they can draw from large and complex data sets, commonly known as "Big Data".

In this course students will learn ways to collect and store large amounts of data in a way that can be easily accessed. They will then investigate how they can use the power of languages such as Python to analyse this data for trends and opportunities, making use of a variety of complex data structures and algorithms. Once students have discovered how to analyse data, they will investigate how this data can be applied in the fields of artificial intelligence and machine learning.

Throughout the course students will have the opportunity to work with a range of industry standard tools and systems, ranging from big name cloud computing platforms to versatile hardware such as the Raspberry Pi, to develop intelligent solutions to real-world problems such as AI chat bots and autonomous robots.

This course will cover complex algorithms and advanced programming techniques, so it is highly recommended that students achieved an **A or B grade in Algorithmic Programming and/or Bioinformatics** in Year 9. Students who achieved an A grade in App Development in Year 9 may also consider this course and are advised to discuss this option with their teacher.

Contact

Mr Graham Nolan (Term 2 only)
Acting Head of Computer Science

Mr Chris Anderson
Head of Computer Science

Design & Technology – Materials

The Year 10 courses in Design and Technology aim at developing in students an understanding of the **materials, information** and **systems** that are appropriate to the design and manufacture of products to meet human needs. The underlying focus is the **technology process**, of which the elements of investigating, devising, producing and evaluating are fundamental components. Students gain an understanding of the concept of **enterprise** and learn the relevance of **technology in society**, while being guided through the design and manufacture of a number of practical projects that will develop their **technology skills**. Particular consideration is given to health and safety in the workshop.

This subject is suited to those students who are interested in and enjoy working with resistant materials. Students can expect to build upon the knowledge and skills acquired in Years 7, 8 and 9 Design and Technology, learning how to use a range of new hand tools, power tools and machinery. The underlying focus of this course is the technology process, with particular emphasis on the design and construction of complex projects involving machining techniques appropriate to wood, metal and plastic materials.

Assessment of achievement of the outcomes of these subjects takes the following forms:

- Design development (20%) - development of a design folio using IT and including 3D modelling and computer aided drawing
- Practical project production (70%) - manufacture of practical projects in resistant materials using traditional woodworking and metalworking equipment and machinery, as well as modern 3D manufacturing equipment including the laser cutter and the computer numerically controlled router
- Response (10%) – completion of theoretical assignments and written testing of understanding

Contact

Mr Alec Barbour
Head of Design & Technology

Digital Media

Designers are creative problem solvers who have learned to see the world a little differently. In this course, students learn how to solve visual problems using a variety of media, embracing traditional and digital technologies to target, engage, entertain, and motivate an audience.

Students will be challenged in a range of approaches to working with images, signs, symbols and text.

They will undertake studies of

- a range of approaches to working with images, signs and symbols such as observation, analysis, expression, communication and imagination

- an understanding of conventions and genres such as figurative, abstract and symbolic
- an understanding of role and function such as documentary, portraiture and narrative
- a range of techniques appropriate to the digital media
- an understanding of pictorial space, composition, rhythm, sequence, scale and structure
- an understanding of formal elements such as colour, tone, texture, shape, form and sound.

This is an extension of the Year 9 Digital Photography and Graphic Design courses but does not preclude students who may not have completed these courses. It has a digital focus that includes the possibility to branch into new industry areas like print publication and illustration, visual identity design, animation and time based graphics. Drawing is an integral part of the course.

Film making is studied as a distinct skill set in this course, in preparation for the Media Production and Analysis course offering in Year 11 and Year 12.

Basic knowledge of Adobe Photoshop and Illustrator and a personal digital camera for use at home to complete tasks would be advantageous.

One of the following art styles will be explored: Realism, Modernism (Dadaism, Surrealism, Futurism), contemporary Australian art; Postmodernism, International art.

The course will be assessed with an emphasis on

- Art Making – body of work through inquiry, art practice and presentation
- Art Responding – analysis, interpretative reflection and personal response.

Contact

Ms Pam Yordanoff

Head of Art

Drama

In Drama, boys develop confidence and self-esteem to explore, depict and celebrate human experience, take risks and challenge their own creativity through a collaborative experience. Students are assessed through a variety of exciting and challenging activities of creation, performance and reflection. They experiment with techniques in movement, voice and characterisation, to shape and focus theatrical effect for an audience. They reflect, respond and evaluate drama and become critical, informed audiences.

The Year 10 Drama course is designed to provide a foundation for Drama in Year 11 and 12. In making and staging drama boys learn how to be focused, innovative and resourceful, and collaborate and take on responsibilities for drama presentations.

The Year 10 Drama course explores

- Acting for the stage and the camera
- Designing Sets, Costumes, Sound and Lighting
- Theatre of the Absurd
- Realistic and Non-realistic drama
- Original and devised performances
- Ensemble and solo performances
- Contemporary theatre

- Improvisation and Play building

Contact

Mr Gregory Jones

Head of Drama

Ethical Hacking & Data Security

Is your network vulnerable? Is your data safe? These questions are becoming increasingly important as more and more of our world relies on technology. What would happen if someone hacked into a power plant and turned off the power to Perth?

This course will introduce students to the skills needed to keep their data safe and to test that their networks are secure. They will investigate the importance of penetration testing (or ethical hacking) to allow organisations to test the security of their systems and keep us all safe.

Throughout the course students will learn the fundamentals of how data is stored and communicated via networks. They will then be able to investigate potential vulnerabilities in computer systems and the avenues through which attackers exploit them. After learning how to set up and configure a network, students will then learn the basic principles of penetration testing that will allow them to ethically test the security of a network.

This course will involve a large amount of skills-based practical work to supplement the theory component, and students will be given the opportunity to secure their own networks and computer systems while exploiting weaknesses in other systems.

Throughout the course, students can expect to build upon the knowledge and skills that were acquired in the various Year 9 Computer Science courses. Students with no previous experience in Computer Science courses are welcome to enrol in this course, although they will be expected to complete bridging material to be able to participate in the practical programming activities.

Contact

Mr Graham Nolan (Term 2 only)

Acting Head of Computer Science

Mr Chris Anderson

Head of Computer Science

French

In French, boys will acquire more advanced competencies in Speaking, Reading, Listening and Writing, allowing them to communicate with native speakers of the language. Through topics of particular interest to boys, students will improve competency in their own language and understanding of how it functions.

Students will

- gain a deeper understanding of linguistic conventions
- critically reflect on their own and other cultures and values
- and prepare themselves for the Year 11 and 12 courses.

The Languages Department currently offers a bi-annual French tour and exchange program for students interested in immersing themselves in the language and culture.

Assessment

Boys are assessed in Speaking, Reading, Listening and Writing each term as well as in an end of year test. Grammar and Vocabulary tests are set at least twice a term. Continuous, informal assessment will be carried out during the year.

Homework

Regular practice reviewing words and grammatical concepts learned is fundamental in the acquisition of a language and as such, forms an integral part of the course. In Year 10, we expect boys to spend 15-20 minutes each evening reviewing words and grammatical concepts covered in class in addition to any specific homework set by the teacher. Using their Education Perfect platform, students will find it easy to consolidate their learning and build proficiency in their target language.

Contact

Mr Vinko Shain

Head of Languages

Investing & Enterprise

The course examines how the commercial world operates and encourages boys to analyse potential career pathways. The emphasis is on creativity and exploration in developing entrepreneurial spirit, with numerous opportunities to test their ability and skills in supportive and competitive environments. Students will study investment opportunities within the Australian economy and be given the opportunity to initiate and develop an idea for a small business.

The investment options will include, but not be limited to, analysis of the Australian share market through the interactive ASX share market game. As this course is a year-long elective unit, more detailed study into the reasons for fluctuations in the share market will be possible. The concept of opportunity cost will also be introduced when the students review their investment options after the investing period.

The culmination of the course is a highlight, where students are required to develop a *hypothetical* business, in the process combining their knowledge, skills and talent developed throughout the year. They are empowered as decision-makers, learning valuable lessons from trial, success and error, in demonstrating creative problem solving.

The assessed item of this component of the unit will be to come up with a simple, yet enterprising business idea and complete a business plan as part of a submission for the nationwide Plan Your Own Enterprise Competition. A business plan is a detailed document that can help entrepreneurs to assess whether an idea is likely to be profitable and help them acquire the necessary money to start up a business. Collaboration with other students may also allow for the completion of a trading day whereby students get to produce, market and try and sell their products or services.

Overall, it is hoped that this unit will help to further develop the financial literacy and business skills of students who have an interest in this area. Activities will be designed to be interactive and hands-on learning experiences, however, most tasks will need to be completed individually in order to successfully complete the unit.

Contact

Mr Patrick Parker

Head of Humanities

Japanese

In Japanese, boys will acquire more advanced competencies in Speaking, Reading, Listening and Writing in the Japanese language, allowing them to communicate with native speakers of the language. Through topics of particular interest to boys, students will improve competency in their own language and understanding of how it functions. Students will:

- gain a deeper understanding of linguistic conventions;
- critically reflect on their own and other cultures and values;
- and prepare themselves for the Year 11 and 12 courses.

Assessment

Students will be assessed in Listening, Reading and Writing each term, as well as in Speaking each semester. The end of year examination covers all four skills.

The Languages Department currently offers a bi-annual tour and exchange program to Japan for students interested in immersing themselves in the language and culture.

Homework

Regular practice reviewing words and grammatical concepts learned is fundamental in the acquisition of a language and as such, forms an integral part of the course. In Year 10, we expect boys to spend 15-20 minutes each evening reviewing words and grammatical concepts covered in class in addition to any specific homework set by the teacher. Using their Education Perfect platform, students will find it easy to consolidate their learning and build proficiency in their target language.

Contact

Mr Vinko Shain
Head of Languages

Marine Studies

This course is limited to **48** students. The course deals with aspects of Marine Biology, SCUBA diving and recreational boat handling. All boys participating in the course will undertake accreditation for an Open Water SCUBA qualification and a Recreational Skippers Ticket (RST). There will be a significant practical component to the course as well as practical and theoretical examinations for both the SCUBA diving and Recreational Skipper Ticket. The SCUBA and RST courses have rigorous theoretical examinations with 80% pass requirements to meet certification guidelines.

Special Requirements

Students need to be able to display a competent swimming ability of no less than Royal Life Saving Bronze Star. Students will be required to pass a specific medical examination for SCUBA diving in order to be considered for selection into the course. **It is regretted that students who are asthmatic or diabetic will not be able to obtain a medical certificate and therefore will not gain entry to the course.**

It is important that any Medical Certificate obtained is from a medical practitioner qualified to provide medicals for recreational diving. A meeting notifying students of the medical requirements of the course is held late in Term 3 (the date will be advertised in the Daily Bulletin). Students should wait until this meeting before obtaining a Medical Certificate.

After this meeting, entry to the course is available for approved students in order of receipt of the Medical Certificates.

Fees

- An extra fee of approximately \$500 will be levied in late September to cover the SCUBA course
- Recreational Skippers Ticket (RST) administration fee costs approximately \$25.00.

The levy will be collected separately from school fees during Term 1.

Contact

Mr Arvi Pocock

Teacher in Charge of Marine Studies

Marine and Environmental Studies

This course is limited to **22** students.

The course deals with aspects of Marine Biology as well Environmental Science. It provides a solid grounding of the growing need for environmental stewardship as well as a deeper understanding of our surrounding geographical area. The course also delves into the science of sustainability and conservation to ensure students leave school with a level of understanding that enables them to support positive environmental change into the future. Term 4 is focussed around a student-led scientific investigation on the surrounding environment using science and theory learned over the year. To further engage with the environment we are fortunate enough that all boys participating in the course will undertake accreditation for an Open Water SCUBA Qualification through Australasian Diving Academy. This is taught both internally and externally and the SCUBA course has rigorous theoretical and practical examinations with 80% pass requirements to meet certification guidelines.

Special Requirements

Students need to be able to display a competent swimming ability of no less than Royal Life Saving Bronze Star. Students will be required to pass a specific medical examination for SCUBA diving to be considered for selection into the course. It is regretted that students who are asthmatic or diabetic will not be able to obtain a medical certificate and therefore will not gain entry to the course. It is important that any Medical Certificate obtained is from a medical practitioner qualified to provide medicals for recreational diving. A meeting notifying students of the medical requirements of the course is held late in Term 3 (the date will be advertised in the Daily Bulletin). Students should wait until this meeting before obtaining a Medical Certificate. After this meeting, entry to the course is available for approved students in order of receipt of the Medical Certificates.

Fees

- An extra fee of approximately \$500 will be levied in late September to cover the SCUBA course

The levy will be collected separately from school fees during Term 1.

Contact

Mr Tom Shalders

Teacher in Charge of Marine & Environmental Science

Mechatronics: Arduino-powered buggies

This subject is based on elements of mechanical, electrical and computer engineering. Students will typically produce a two wheel buggy that operates autonomously and/or by remote control. The subject is suited to those students who are interested in the design, construction and programming of physical devices. Arduino chips will be programmed and used to drive the electronics platform.

Students can expect to

- Design and configure electrical circuits
- Learn to program Arduino devices using the C programming language
- Design structural components using CATIA 3D modelling software
- Produce structural components using the 3D printer and laser cutter

Students will have a functional prototype for their buggy at the conclusion of Semester 1. During Semester 2 students will design their own robot using their buggy as a starting point for their own requirements.

Contact

Mr Patrick Loudon
Engineering Studies Teacher

Music

The course is designed to increase musical awareness and musicianship by

- Participation in ensemble and practical solo work
- Working towards grade examinations in Theory and/or Musicianship of the Australian Music Examinations Board with students being encouraged to work at their own level
- Encouraging creative listening and score reading/analysis in a wide variety of musical styles
- Developing a historical perspective and understanding of music
- Developing aural perception

Assessment is through regular written homework, together with the expectation that students will undertake consistent instrumental practice. The course provides an excellent background for the ATAR Music course in Years 11 and 12.

Special Requirements

The student must be learning a musical instrument, either inside or outside the School. Please discuss with the Head of Music before selecting the Music elective on your Subject Selection Form.

Textbooks

AMEB Musicianship Grades 3 and 4 (5) by D Holland, *Enjoying Music, Books 1, 2 and 3* by Roy Bennett, *History of Music* by Roy Bennett, *Score Reading, Books 1 and 2* and *Form and Harmony* by Smith & Renouf.

Contact

Mr Kevin Gillam
Head of Music

Sports Science

This course focuses on both the practical and theoretical components of sport performance. An interest in sport and improving performance is important. This course will prepare boys for future success in ATAR Physical Education Studies. It is important to note this is an elective and will be taken in addition to the compulsory Physical Education course.

Approximately 50% of the course time will be spent in a practical environment covering skilled movement patterns, tactics, positioning and gameplay while the other 50% will be in the classroom. The theoretical focus will be laboratory-based with the use of classroom experiments and hands on activities.

The theoretical concepts covered include

1. Sports psychology – How can the mind help or hinder performance
2. Exercise physiology – How does the body work during exercise?
3. Functional anatomy – What is the structure of our body? How do we move?
4. Coaching – Using outside expertise to motivate a sportsman, while at the same time providing knowledge and feedback
5. Biomechanics – The physics behind body movement and projectiles
6. History of sport – Is Australia as a country any good at sport? What is our sporting culture? Where do our sports come from?

Assessment

The final course grade will be a mixture of

- Practical ability assessed across a number of sports including but not limited to badminton, touch rugby and volleyball **50%**
- Theoretical component including topic tests, assignments and laboratories **50%**

Contact

Mr Luke Farmer

Head of Health & Physical Education

TICK – Think, Innovate, Create and Know

“Think left and think right and think low and think high. Oh, the thinks you can think up if only you try!” – Dr Seuss

The purpose of the course is to support boys in their education focusing on the first two elements of our school mission- *Boys educated **to know, to do, to live with others and to be.*** It is intended to stretch boys through challenging them in a range of subjects of their choice, in a range of formats of their choice.

The year-long course has two main themes.

Students will commence by accepting the challenge of **doing** - taking part in a program aligned with the UWA Shark Tank eSchool initiative. This program is designed to immerse young people in the development of entrepreneurial and innovative thinking. They will be dared to identify existing and future problems before undertaking a process to conceive a range of original solutions and then *actually* create and market a product to solve these real-world issues.

The other aspect of the course is to challenge their concept of **knowing** - reconsidering knowledge and academic disciplines by identifying alternative perspectives and ways of thinking. The course enables students to develop thinking frameworks and multi-disciplinary approaches to questioning, analysing and evaluation, using reason. Students will consider a range of issues and develop local to global perspectives through investigation and dialogue. This part of the course develops independent, critical thinking, reasoning, debating and communication skills.

Each part of the course is designed to allow for rich and deep investigation, to question topics of significance so students can pursue a wide range of their own interests. The course has been conceived in order to address the needs of our students in developing critical thinking, problem-solving capacity, entrepreneurial spirit and other 21st Century skills.

The course will be assessed through individual and group research projects and various written and oral tasks, as well as their Shark Tank initiative.

Contact

Mr Patrick Parker

Head of Humanities

Visual Arts

Art is a form of communication and expression: a visual language, which deals with the construction and interpretation of both personal and cultural meanings. It is a catalyst to developing intellectual, imaginative, creative and intuitive powers.

The Year 10 course provides students with the opportunity to use visual language and artistic conventions, in both written and practical work. This is a highly expressive and personal course.

Art Making: Students learn to develop and refine their ideas and techniques to resolve artworks by documenting the design, production and evaluation processes of their artworks. They will extend their knowledge of art practices, through adaptation, manipulation, deconstruction and reinvention techniques, and use their understanding of a variety of art styles in the making of their 2D and 3D artworks. Drawing is an integral part of the course. Students extend their knowledge and practise of safe and sustainable visual arts practice. Resolved artworks are exhibited and evaluated, with consideration to their own artistic intentions, personal expression, and audience.

Art Responding: Students develop greater understanding of how global contexts of culture, time and place impact on the development of ideas and production of art forms in the artistic process. They continue to explore artistic influences, while being encouraged to express greater individualism in their application of ideas and materials. Students are provided with opportunities to reflect on traditional and/or contemporary artworks using a breadth of critical analysis frameworks, incorporating visual language, art terminology and conventions.

This course provides visual and tactile experiences in 2D and 3D artforms. Studio areas are selected from

- Drawing and/or illustration
- Printmaking: the techniques and processes associated with a variety of printmaking techniques and the production of an edition of prints
- Ceramics: a variety of methods of hand building clay forms will be explored. Wheelwork opportunities are also available
- Painting: covers a variety of approaches to painting techniques in watercolour, gouache, acrylic or oils

- Textiles: provides students with the opportunity to apply their designs to fabric using traditional and contemporary technologies
- Graphic Design and New Media: students will produce a solution to a problem in visual communication. Practical projects will have real application. Students will experience use of digital cameras, scanners and image manipulation using computer programs such as Adobe Photoshop
- Sculpture: production of a sculpture experimenting with both the additive or subtractive method

One of the following art styles will be explored: Realism, Modernism (Dadaism, Surrealism, Futurism), contemporary Australian art; Postmodernism, International art.

The course will be assessed with an emphasis on

- Art Making – body of work through inquiry, art practice and presentation
- Art Responding – analysis, interpretative reflection and personal response.

Contact

Ms Pam Yordanoff

Head of Art

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