COURT GRAMMAR SCHOOL

2023 YEAR 11 SUBJECT SELECTIONS

CONTENTS

INTRODUCTION

This package has been prepared to provide students, currently in Year 10, and their parents with information about curriculum choices for 2023. Students in the Senior Secondary School are provided with a variety of subject choices.

In the following pages each of the subjects on offer has information provided to assist in the selection process. Students are encouraged to talk to their various teachers about the subjects, so they are able to make an informed decision.

Over the course of the next few weeks, students will be choosing their subjects for 2023. I encourage all students and parents to read this booklet to inform themselves of the opportunities for study at CGS in 2023.

SUBJECT SELECTION TIMELINE

Tuesday 23 August (Week 6)	Subject Selection Information Evening. Learning Area Coordinators will be available to discuss courses and options for 2023. Information is provided on WACE, VET pathways, University and TAFE entry requirements.
Week 6 - 9	Subject Selection Counselling Interviews conducted, student/parents complete selections during interview and selection form printed and signed by parents, or, taken home to be signed by parents. Signed forms returned to PCA or Head of Secondary.
Term 4	Subject grid is created and students placed into subjects based on their choices. Students/parents then review choices and options available based on the subject grid, any changes made if necessary.

SUBJECT SELECTION COUNSELLING INTERVIEWS

Students and parents will receive a letter inviting you to attend an interview to ensure you are selecting an appropriate pathway and have met the prerequisites. Students and parents will be contacted by mail with the interview schedule.

MESSAGE TO STUDENTS

It is important to choose your subjects carefully as your decisions may affect not only the types of careers that you follow later but also your success and confidence at school. Even though there are many factors to consider, choosing your course of study can be made easier if you go about the task calmly and logically, and follow a set of planned steps. Your set plan will be a useful tool in assisting you with your subject selection.

Find out as much as you can about

- Careers
- Subjects
- Courses
- Prerequisites

Talk to your subject teachers, Mrs Stringer and Mr Krokosz

Attend the Subject Selection Information Evening

Listen during special talks during Careers Day and PCG and seek support from Mrs Stringer

Research the information on University entry, TAFE entry, VET courses, and further training/employment options

Before you make any decisions about courses and subjects ask yourself:

- What are your interests and abilities? Make a list. Be realistic and honest.
- Do you want to go on to tertiary study? If so, what sort of tertiary course do you want to do, what ATAR score will you require?
- Is your course a balanced one to help you become a well-rounded person?
- Have you covered all the prerequisites for your subject choices?

Overall Plan

As an overall plan, you are advised to select subjects: you enjoy; in which you have demonstrated some aptitude and ability in; which will assist you in reaching your career goals; which will develop skills, knowledge and attitudes useful throughout life.

MESSAGE TO PARENTS

Parents have a pivotal role in the subject selection process as an advisor to your children. You are aware of your child's talents and abilities and should discuss these with your children to encourage them to select subjects that will lead to success.

Students should be encouraged to seek as much information about the various subjects on offer as possible and then discuss this with you as their parent. Guidance through the process should certainly be given by parents with an emphasis being placed on directing the child to subjects that reflect their interests and which are likely to develop their innate talents.

WESTERN AUSTRALIAN CERTIFICATE OF EDUCATION
2024 Year 12

These are the requirements for students to receive the Western Australian Certificate of Education

WACE requirements http://senior-secondary.scsa.wa.edu.au/the-wace/wace-requirements	
General requirements	You must: • demonstrate a minimum standard of literacy (reading and writing) and a minimum standard of numeracy • complete a minimum of 20 units, or equivalents • complete ▪ at least four Year 12 ATAR courses OR ▪ at least five Year 12 General courses and/or ATAR courses or equivalent OR ▪ a Certificate II (or higher) VET qualification in combination with ATAR, General or Foundation courses
Literacy and Numeracy	For the WACE literacy and numeracy standard you may: • pre-qualify through achieving Band 8 or higher in the reading, writing and numeracy tests of the Year 9 National Assessment Program – Literacy and Numeracy (NAPLAN), or; • demonstrate the minimum standard of literacy and numeracy by successfully completing the relevant components of the Online Literacy and Numeracy Assessment (OLNA) in Year 10, 11 or 12.
Breadth and depth requirement	You must complete a minimum of 20 units, which may include unit equivalents attained through VET and/or endorsed programs. This requirement must include at least: • a minimum of ten Year 12 units, or the equivalent • four units from an English course, post-Year 10, including at least one pair of Year 12 units from an English learning area course • one pair of Year 12 units from each of List A (arts/languages/social sciences) and List B (mathematics/science/technology) subjects.
Achievement standard requirement	You must achieve at least 14 C grades or higher (or equivalents) in Year 11 and Year 12 units, including at least six C grades (or equivalents) in Year 12 units.
Unit Equivalents	Unit equivalents can be obtained through VET qualifications and/or endorsed programs. The maximum number of unit equivalents available through VET and endorsed programs is four Year 11 units and four Year 12 units with a maximum of four units with endorsed programs – two in Year 11 and two in Year 12.

AUSTRALIAN TERTIARY ADMISSIONS RANK (ATAR)

Entry into the public universities in Western Australia is a matching process of the people who want to go to university and the number of places that are available. To assist in this process, Year 12 students are ranked and places offered on the basis of this ranking.

An ATAR ranges between 99.95 and zero and reports your rank position relative to all other students. It takes into account the number of students who sit the WACE examinations in any year and also the number of people of Year 12 school leaving age in the total population. The TEA is the sum of the best four scaled marks taking into account unacceptable subject combinations. The TEA is out of 400. Your TEA will be calculated and then converted to an ATAR, which tells you where you are ranked relative to other students. This will be the same position as a ranking based on your TEA, but the TEA is not able to convey this information directly to you. If you have an ATAR of 70.00, for example, it indicates that you have achieved as well as or better than 70% of the Year 12 school leaver age population.

For more information visit www.tisc.edu.au

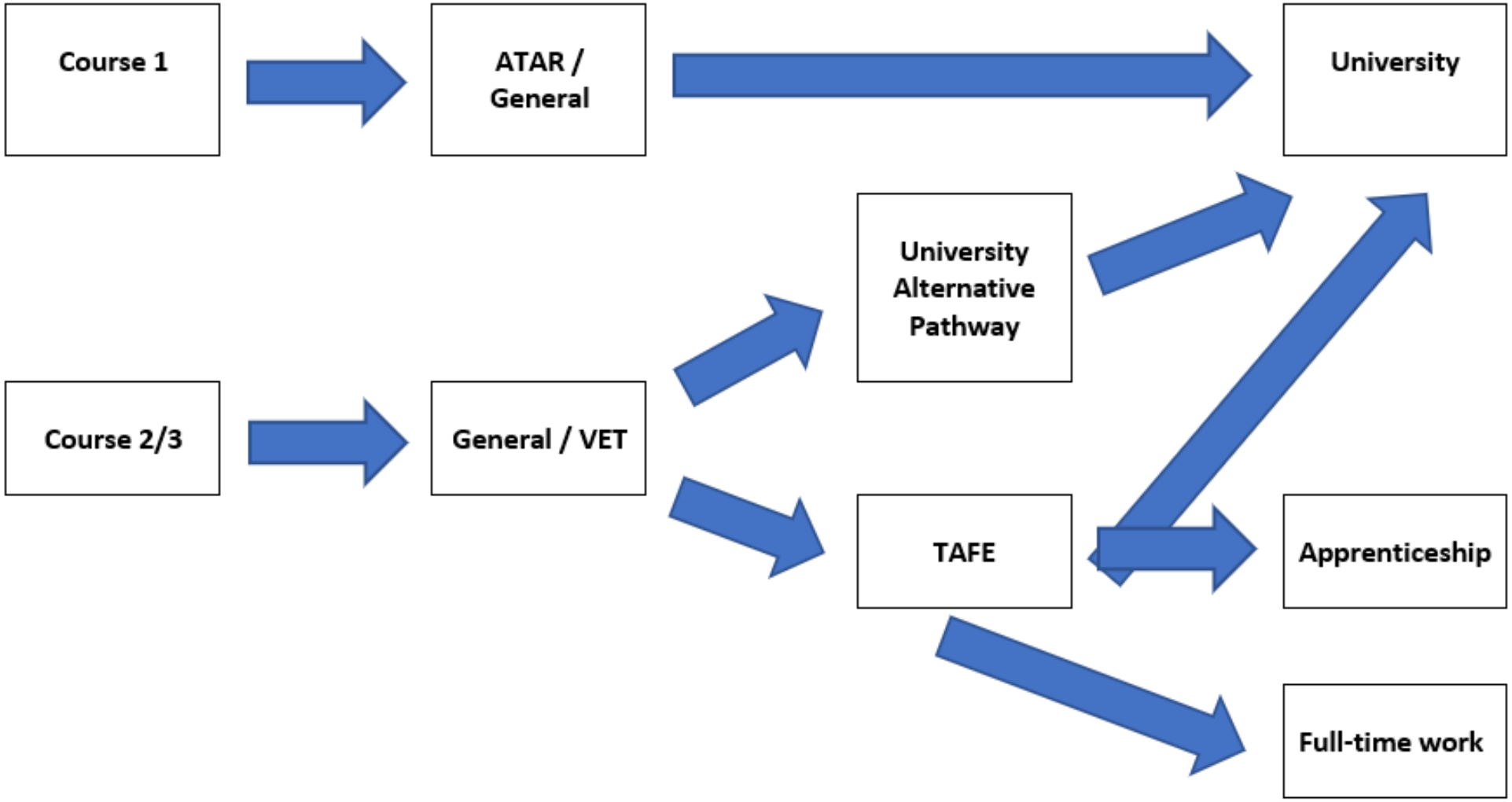
UNIVERSITY ENTRY

Students wishing for a direct entry into university must meet the following requirements:

- Obtain Western Australian Certificate of Education
- Obtain an ATAR score (best 4 ATAR subjects) high enough for entry
- Obtain a scaled score of 50% for ATAR English
- Met any prerequisites set by the university

* Please note that some universities/courses have slightly different entry requirements, and you should consult with the university for the most up-to-date information.

CAREER PATHWAYS



COURSES

Learning Area	2023 Year 11	2024 Year 12
English	English ATAR	English ATAR
	English General	English General
Mathematics	Mathematics Methods ATAR	Mathematics Methods ATAR
	Mathematics Applications ATAR	Mathematics Applications ATAR
	Mathematics Essential (General)	Mathematics Essential (General)
Science	Biology ATAR	Biology ATAR
	Chemistry ATAR	Chemistry ATAR
	Human Biology ATAR	Human Biology ATAR
	Physics ATAR	Physics ATAR
	Integrated Science General	Integrated Science General
Humanities and Social Science	Business Management ATAR	Business Management ATAR
	Modern History ATAR	Modern History ATAR
	Business Management General	Business Management General
Health & Physical Education	Physical Education Studies ATAR	Physical Education Studies ATAR
	Outdoor Education ATAR	Outdoor Education ATAR
	Outdoor Education General	Outdoor Education General
	Elite Sports Performance Endorsed	Elite Sports Performance Endorsed
Arts	Visual Art ATAR	Visual Art ATAR
	Visual Arts General	Visual Arts General
	Dance General	Dance General
	Drama ATAR	Drama ATAR
	Drama General	Drama General
	Design (Photography) General	Design (Photography) General
	Music General	Music General
Technology	Applied Information Technology ATAR	Applied Information Technology ATAR
	Applied Information Technology General	Applied Information Technology General
	Material Design Technology (Woodwork) General	Material Design Technology (Woodwork) General
	Hospitality Cert II	Hospitality Cert II/Cert III

* Courses running in 2023/2024 are subject to sufficient student numbers

SUBJECT PREREQUISITES

Students have three opportunities to meet the subject prerequisites for the following year:

- Mid-year report
- End of year report
- Recommendation by Learning Area Coordinator

YEAR 10 (requirement)	for entry into	YEAR 11
Digital Technologies 'B' grade Year 10 English 60%	→	Applied Information Technology ATAR
HASS – greater than 60% in 10.1 Mathematics – 50% in 10.1 or 60% in 10.2 English – greater than 50% in 10.1	→	Business Management ATAR
Science 10.1 60%	→	Biology ATAR
Science 10.1 – greater than 60% and Mathematics - 50% in 10.1 or 60% in 10.2	→	Chemistry ATAR
English 60%	→	Drama ATAR
English 60%	→	English ATAR
Science 10.1 60%	→	Human Biology ATAR
By invitation only	→	Specialist Mathematics ATAR
Mathematics 10.2 – greater than 60%	→	Mathematics Applications ATAR
Mathematics 10.1 60%	→	Mathematics Methods ATAR
HASS – greater than 60% in 10.1 English – greater than 60% in 10.1	→	Modern History ATAR
Year 10 Outdoor Education 'B' grade	→	Outdoor Education ATAR
Year 10 Physical Education 'B' grade	→	Physical Education Studies ATAR
Science 10.1 – greater than 60% and Mathematics - 50% in 10.1 or 60% in 10.2	→	Physics ATAR
Year 10 Art – B Grade Year 10 English 60%	→	Visual Arts ATAR

SUBJECT PREREQUISITE TRACKING TABLE

			My grade/score		
Tick if applying for entry	Subject	Prerequisite	Year 10 Interim Report	Year 10 Semester 1 Report	Learning Area Coordinator Recommendation
	Applied Information Tech ATAR	Digital Technologies 'B' grade			
	Business Management ATAR	HASS – greater than 60% in 10.1 Maths – 50% in 10.1 or 60% in 10.2 English – greater than 50% in 10.1			
	Biology ATAR	Science 10.1 60%			
	Chemistry ATAR	Science 10.1 – greater than 60% and Mathematics - 50% in 10.1 or 60% in 10.2			
	Drama ATAR	English 60%			
	English ATAR	English 60%			
	Human Biology ATAR	Science 10.1 60%			
	Specialist Mathematics ATAR	By invitation only			
	Mathematics Applications ATAR	Mathematics 10.2 – greater than 60%			
	Mathematics Methods ATAR	Mathematics 10.1 60%			
	Modern History ATAR	HASS – greater than 60% in 10.1 English – greater than 60% in 10.1			
	Outdoor Education ATAR	Year 10 Outdoor Education 'B' grade			
	Physical Education Studies ATAR	Year 10 Physical Education 'B' grade			
	Physics ATAR	Science 10.1 – greater than 60% and Mathematics - 50% in 10.1 or 60% in 10.2			
	Visual Arts ATAR	Year 10 Art – B grade Year 10 English 60%			

SUBJECT INFORMATION

APPLIED INFORMATION TECHNOLOGY ATAR & GENERAL

Throughout the Applied Information Technology ATAR course, students investigate client-driven issues and challenges, devise solutions, produce models or prototypes and then evaluate and refine the design solution in collaboration with the client. Students are provided with the opportunity to experience, albeit in a school environment, developing digital solutions for real situations. The practical application of skills, techniques and strategies to solve information problems is a key focus of the course. Students also gain an understanding of computer systems and networks. In undertaking projects and designing solutions the legal, ethical and social issues associated with each solution are also considered and evaluated

YEAR 11 General
Unit 1 – Personal communication
The focus of this unit is to enable students to use technology to meet personal needs. Students develop a range of skills that enable them to communicate using appropriate technologies and to gain knowledge that assists in communicating within a personal context.

Unit 2 – Working with others
The focus of this unit is to enable students to use a variety of technologies to investigate managing data, common software applications and wireless network components required to effectively operate within a small business environment. They examine the legal, ethical and social impacts of technology within society.

YEAR 11 ATAR
Unit 1 – Media information and communication technologies
This unit focuses on the use of digital technologies to create and manipulate digital media. Students use a range of applications to create visual and audio communications. They examine trends in digital media transmissions and implications arising from the use of these technologies.

Unit 2 – Digital technologies in business
This unit focuses on the skills, principles and practices associated with various types of documents and communications. Students identify the components and configuration of networks to meet the needs of a business. They design digital solutions for clients, being mindful of the various impacts of technologies within legal, ethical and social boundaries.

BIOLOGICAL SCIENCES ATAR

Through Biology we investigate and answer questions about the living world. Biology contributes to our understanding of the world from genes and DNA to the theory of evolution. Biological knowledge is continually refined in the light of new evidence. Research in biology impacts on diverse industries such as: biotechnology, forestry, fishing, agriculture, mining, and eco-tourism.

YEAR 11 ATAR
UNIT 1 – ECOSYSTEMS AND BIODIVERSITY
In this unit, students analyse abiotic and biotic ecosystem components and their interactions, using classification systems for data collection, comparison and evaluation.

UNIT 2 – FROM SINGLE CELLS TO MULTICELLULAR ORGANISMS
In this unit, students investigate the interdependent components of the cell system and the multiple interacting systems in multicellular organisms.

BUSINESS MANAGEMENT AND ENTERPRISE ATAR & GENERAL

The Business Management and Enterprise course gives students the opportunity to understand how vital business is and how it impacts on every aspect of our lives. Business has a complex and dynamic organisational structure which requires a combination of skills, aptitude, creativity, initiative and enterprise to operate effectively. In a constantly changing world, individuals, businesses and nations must adapt their position in an increasingly global economy and generate the wealth to sustain economic growth. To do this, business requires people with strategic vision who are enterprising, innovative and creative. This course focuses on the development of these skills within the business cycle of establishment, day-to-day running and continuing viability. Exposure to a wide range of business activities, management strategies and an insight into the potential of entrepreneurship empowers students and helps them to appreciate the significance of their role as both participants and consumers in the business world**.**

YEAR 11 GENERAL
UNIT 1
The focus of this unit is on establishing a small business in Australia. Opportunities are provided to explore business start-ups and to recognise the factors that contribute to business success. Entrepreneurship and innovative thinking are introduced, generating ideas and proposals that may be suitable for business ventures. These proposals are then developed into a business plan.

UNIT 2
The focus of this unit is on operating a small business in Australia. The unit is suited to the running of a small business in the school or local environment, or to the use of business simulations. The concepts of innovation, marketing and competitive advantage and the key factors that influence consumer decision making are introduced. Legal aspects of running a small business, including rights and responsibilities of employer and employee, are investigated.

YEAR 11 ATAR
UNIT 1
The focus of this unit is on success in business at a national level. It explores what it takes to be successful beyond the initial start-up stage. Students investigate the features of successful marketing campaigns and report on how businesses succeed and prosper through methods, such as expansion in products, market share or diversification. The unit explores how the marketing plan contributes to the overall business plan.

UNIT 2
The focus of this unit is on business growth and the challenges faced by businesses expanding at a national level. The unit explores issues in the business environment, including the importance of intellectual property in protecting business ideas. The unit addresses the significance of employee motivation and the development of a business plan in the overall success of expansion.

CHEMISTRY ATAR

Chemistry, the study of matter and its interactions, is an indispensable human activity that has contributed essential knowledge and understanding of the world around us. Chemical knowledge has enabled us to understand matter and devise processes for activities such as: cooking and preserving food; purifying air and water; recycling plastics; anaesthetising patients; creating and building computers; and communicating with others around the world about chemistry. It has also allowed people to design and produce materials for purposes that include: transport and fuels; cosmetic and beauty products; building products; medical treatments and pharmaceuticals; and cleaning agents. The significant achievements of chemistry stretch across every facet of our lives. However, some may come at a price if they are not used with the greatest of care. Chemical monitoring tells us that some materials, that may pose a threat to ourselves and other life

forms, have entered the environment. Ongoing developments and improved understanding of chemistry can also be used to solve these problems.

YEAR 11 ATAR
UNIT 1 – CHEMICAL FUNDAMENTALS: STRUCTURE, PROPERTIES AND REACTIONS
In this unit, students use models of atomic structure and bonding to explain the macroscopic properties of materials. Students develop their understanding of the energy changes associated with chemical reactions and the use of chemical equations to calculate the masses of substances involved in chemical reactions.

UNIT 2 – MOLECULAR INTERACTIONS AND REACTIONS
In this unit, students continue to develop their understanding of bonding models and the relationship between structure, properties and reactions, including consideration of the factors that affect the rate of chemical reactions. Students investigate the unique properties of water and the properties of acids and bases, and use chemical equations to calculate the concentrations and volumes of solutions involved in chemical reactions.

DESIGN (PHOTOGRAPHY) GENERAL

'Design is the human power to conceive, plan, and realise products that serve human beings in the accomplishment of any individual or collective purpose.' (Richard Buchanan, Carnegie Mellon University)

Design has its own set of theories and practices and incorporates a wide range of principles, methods and techniques drawn from a variety of different disciplines such as psychology, communication studies, digital design, technical graphics, art, engineering, architecture, sociology, cultural studies, marketing and economics. The disciplined application of these elements forms a design process that guides the development of creative and functionally effective solutions to identified possibilities or problems.

YEAR 11 GENERAL
UNIT 1
The focus of this unit is to introduce design process and practice. Students learn that design can be used to provide solutions to design problems and communication needs. They are introduced to basic design skills and a range of techniques within a defined context to demonstrate control over the elements and principles of design.

- Photography: calendar design (the seasons), photography magazine design, poster design, tourism brochure, photography masters book cover

UNIT 2
The focus of this unit is personal design. Students learn that they visually communicate aspects of their personality, values and beliefs through their affiliations and their manipulation of personal surroundings and environments. Students explore design elements and principles and the design process in a project communicating something of themselves. Students increase familiarity with basic production skills and processes, materials and technologies.

- Photography: scrapbook design, exhibition invitation or poster, portfolio website, book cover, advertising photography, fashion model z card, alternative printing techniques, book/magazine cover, Polaroid collage

DRAMA ATAR & GENERAL

YEAR 11 GENERAL
The focus of this unit is **dramatic storytelling**. Students engage with the skills, techniques**,** processes and conventions of dramatic storytelling. Students view, read and explore relevant drama works and texts using scripts and/or script excerpts from Australian and/or world sources. The focus for this unit is **drama performance events** for an audience other than their class members. In participating in a drama performance event, students work independently and in teams. They apply the creative process of devising and of interpreting Australian and/or world sources to produce drama that is collaborative and makes meaning.

- Assessments include 3-4 performance/production tasks, and 3-4 written response tasks, including a review of live event

YEAR 11 ATAR
The Drama ATAR course focuses on drama in practice as students present ideas and explore personal and cultural issues. They engage in drama processes, such as improvisation and text interpretation, which allow them to create drama and interpret a range of texts written or devised by others. Their work in this course includes production and design aspects, such as sets, costumes, sound and lighting. They present drama to a range of audiences and work in different performance settings. While some students intend to pursue a career in drama and related fields, they also participate in drama for enjoyment and satisfaction. They experience the pleasure that comes from developing personal skills, knowledge and understandings that can be transferred to a range of careers and situations. The Drama ATAR course builds confidence, empathy, understanding about human experience, and a sense of identity and belonging.

- Assessments include 3 performance/production tasks, 3 written response tasks, and 2 written and practical examinations including solo monologue performances.

ELITE SPORTS PERFORMANCE ENDORSED PROGRAM

Elite Sports Performance is an Authority-developed endorsed program that enables a student engaged in representative or competitive elite sports activities to be recognised for the significant learning encompassed within such activities. The program requires that a student commits a minimum of 110 hours to the development of technical skills and knowledge of a specific sport through sports development programs such as those provided by the WA Institute of Sport, sporting associations' sports programs and state or national development squads. Typically, a student would have been through a selection process and identified as gifted or talented in a particular sport, usually this is direct entry from the CGS AFL/W Academy or via selection in RKAS basketball and/or netball in Years 7-10. The program must involve one or a series of sports performances or competitions at a high level. The program will also develop personal qualities such as commitment and discipline while building on a range of interpersonal skills.

- Students will complete three practical sport sessions each week and will specialise in the sports of:
  - Basketball (once a week all year, coached by Ricky Grace)
  - AFL (once a week, coached by Mr Bristow and Miss O'Sullivan)
  - Volleyball (once a week coached by Mr Furzer and Miss O'Sullivan
  - Term 1 Fitness training x2 week

- Students studying Elite Sport Performance at CGS will need to complete a variety of community service hours, as directed by the Head of Sport and their class teacher. These include, but are not limited to:

- Coaching Primary School sport teams
- Attending local Primary School Carnivals
- Umpiring Junior Sports games afterschool. AFL, Basketball and Soccer
- Coaching and umpiring Year 7-10 Sporting teams before and afterschool

- Students are required to wear their Sport uniform three times a week. It is expected that students participate in their full school uniform for all practical sessions.

ENGLISH ATAR & GENERAL

Language plays a central role in human life: it provides a vehicle for communication, a tool for thinking, a means of creativity and a source of pleasure. Through language people shape understandings of themselves and their world. An understanding of language and the ability to use it effectively empowers students. It gives them access to knowledge, enables them to play an active part in society and contributes to their personal growth.

YEAR 11 GENERAL
UNIT 1
Unit 1 focuses on students comprehending and responding to the ideas and information presented in texts. Students:

- employ a variety of strategies to assist comprehension
- read, view and listen to texts to connect, interpret and visualise ideas
- learn how to respond personally and logically to texts by questioning, using inferential reasoning and determining the importance of content and structure
- consider how organisational features of texts help the audience to understand the text
- learn to interact with others in a range of contexts, including everyday, community, social, further education, training and workplace contexts
- communicate ideas and information clearly and correctly in a range of contexts
- apply their understanding of language through the creation of texts for different purposes.

UNIT 2
Unit 2 focuses on interpreting ideas and arguments in a range of texts and contexts. Students:

- analyse text structures and language features and identify the ideas, arguments and values expressed
- consider the purposes and possible audiences of texts
- examine the connections between purpose and structure and how a text's meaning is influenced by the context in which it is created and received
- integrate relevant information and ideas from texts to develop their own interpretations
- learn to interact effectively in a range of contexts
- create texts using persuasive, visual and literary techniques to engage audiences in a range of modes and media.

YEAR 11 ATAR
UNIT 1
Students explore how meaning is communicated through the relationships between language, text, purpose, context and audience. This includes how language and texts are shaped by their purpose, the audiences for whom they are intended, and the contexts in which they are created and received. Through responding to

and creating texts, students consider how language, structure and conventions operate in a variety of imaginative, interpretive and persuasive texts. Study in this unit focuses on the similarities and differences between texts and how visual elements combine with spoken and written elements to create meaning. Students develop an understanding of stylistic features and apply skills of analysis and creativity. They are able to respond to texts in a variety of ways, creating their own texts, and reflecting on their own learning.

UNIT 2

Students analyse the representation of ideas, attitudes and voices in texts to consider how texts represent the world and human experience. Analysis of how language and structural choices shape perspectives in and for a range of contexts is central to this unit. By responding to and creating texts in different modes and media, students consider the interplay of imaginative, interpretive, persuasive and analytical elements in a range of texts and present their own analyses. Students critically examine the effect of stylistic choices and the ways in which these choices position audiences for particular purposes, revealing and/or shaping attitudes, values and perspectives. Through the creation of their own texts, students are encouraged to reflect on their language choices and consider why they have represented ideas in particular ways.

HUMAN BIOLOGY ATAR

Human biology covers a wide range of ideas relating to the functioning human. Students learn about themselves, relating structure to function and how integrated regulation allows individuals to survive in a changing environment. They research new discoveries that are increasing our understanding of the causes of dysfunction, which can lead to new treatments and preventative measures. Reproduction is studied to understand the sources of variation that make each of us unique individuals. Through a combination of classical genetics, and advances in molecular genetics, dynamic new biotechnological processes have resulted. Population genetics is studied to highlight the longer term changes leading to natural selection and evolution of our species.

YEAR 11 ATAR

UNIT 1

This unit looks at how human structure and function supports cellular metabolism and how lifestyle choices affect body functioning.

Cells are the basic structural and functional unit of the human body. Cells contain structures that carry out a range of functions related to metabolism, including anabolic and catabolic reactions. Materials are exchanged in a variety of ways within and between the internal and external environment to supply inputs and remove outputs of metabolism. Metabolic activity requires the presence of enzymes to meet the needs of cells and the whole body. The respiratory, circulatory, digestive and excretory systems control the exchange and transport of materials in support of metabolism, particularly cellular respiration. The structure and function of the musculo-skeletal system provides for human movement and balance as the result of the co-ordinated interaction of the many components for obtaining the necessary requirements for life.

Students investigate questions about problems associated with factors affecting metabolism. They trial different methods of collecting data, use simple calculations to analyse data and become aware of the implications of bias and experimental error in the interpretation of results. They are encouraged to use ICT to interpret and communicate their findings in a variety of ways.

UNIT 2
This unit provides opportunities to explore, in more depth, the mechanisms of transmission of genetic materials to the next generation, the role of males and females in reproduction, and how interactions between genetics and the environment influence early development. The cellular mechanisms for gamete production and zygote formation contribute to human diversity. Meiosis and fertilisation are important in producing new genetic combinations.

The transfer of genetic information from parents to offspring involves the replication of deoxyribonucleic acid (DNA), meiosis and fertilisation. The reproductive systems of males and females are differentially specialised to support their roles in reproduction, including gamete production and facilitation of fertilisation. The female reproductive system also supports pregnancy and birth. Reproductive technologies can influence and control the reproductive ability in males and females. Cell division and cell differentiation play a role in the changes that occur between the time of union of male and female gametes and birth. Disruptions to the early development stages can be caused by genetic and environmental factors: inheritance can be predicted using established genetic principles. The testing of embryos, resulting from assisted reproductive technologies, is conducted for embryo selection, and the detection of genetic disease. The application of technological advances and medical knowledge has consequences for individuals and raises issues associated with human reproduction.

HOSPITALITY

The VET industry specific Hospitality course provides students with the opportunity to achieve national vocational qualifications under the Australian Qualifications Framework (AQF) and to gain Council developed course unit credit towards the Western Australian Certificate of Education (WACE).

The course is based on nationally endorsed training packages. It specifies the range of industry developed units of competency from the relevant training packages that are suitable for the WACE. To meet the course requirements and achieve course units towards a WACE, students must follow the course structure, attain required units of competency and fulfil work placement requirements.

INTEGRATED SCIENCE GENERAL

Science is a dynamic, collaborative human activity that uses distinctive ways of valuing, thinking and working to understand natural phenomena. Science is based on people's aspirations and motivations to follow their curiosity and wonder about the physical, biological and technological world. Scientific knowledge represents the constructions made by people endeavouring to explain their observations of the world around them. Scientific explanations are built in different ways as people pursue intuitive and imaginative ideas, respond in a rational way to hunches, guesses and chance events, challenge attitudes of the time, and generate a range of solutions to problems, building on existing scientific knowledge. As a result of these endeavours, people can use their scientific understandings with confidence in their daily lives. Scientific explanations are open to scrutiny; scientific knowledge may be tentative and is continually refined in the light of new evidence.

YEAR 11 GENERAL
UNIT 1
Young people are growing up in a world of rapid change. Expanding technologies, new social structures and shifting community values are complex, interrelated factors that affect the way individuals live their lives. The transition to adulthood can bring up issues of independence and self-identity. For adolescence, nothing symbolises independence more than obtaining their drivers licence, and of expressing self-identity through the music they listen to. Students investigate the issues of inexperience, distractions, drugs and alcohol and the effects they have on drivers; and of vehicle safety. Students also explore the properties of sound and how listening to music and noise can affect the physiology of hearing.

UNIT 2
Biodiversity refers to the variety of life that surrounds us, including all of Earth's plants, animals, their habitats and the ecological processes. Increased scientific understanding of biodiversity has brought to the forefront its importance to our existence. There is a large dependency on biological resources to meet our needs to maintain life. The need for developing areas for our use through clearing land impacts negatively on biodiversity and ecological processes and needs to be monitored carefully. The richer the diversity of life, the greater the opportunity for new medical discoveries, economic development and adaptive responses to climate change. Hence, the need for conservation of flora and fauna to maintain biodiversity is of high importance and is relevant to everyone.

MATHEMATICS ATAR, GENERAL

There are strong, enduring reasons for the prominence of mathematics in the school curriculum. According to one leading mathematics educator these reasons are:

'to teach basic skills; to help children learn to think logically; to prepare students for productive life and work; and to develop quantitatively literate citizens.' – Lynn Arthur Steen

Others have commented on the true artistic nature of mathematics:
'Mathematics, rightly viewed, possesses not only truth, but supreme beauty… [it is] sublimely pure, and capable of a stern perfection such as only the greatest art can show.' – Bertrand Russell.

MATHEMATICS ESSENTIAL YEAR 11 GENERAL
UNIT 1
This unit includes the following four topics:
- Basic calculations, percentages and rates
- Using formulas for practical purposes
- Measurement
- Graphs

UNIT 2
This unit includes the following four topics:
- Representing and comparing data
- Percentages
- Rates and ratios
- Time and motion

MATHEMATICS APPLICATIONS YEAR 11 ATAR
UNIT 1
Contains the three topics:
- Consumer arithmetic
- Algebra and matrices
- Shape and measurement.

'Consumer arithmetic' reviews the concepts of rate and percentage change in the context of earning and managing money, and provides a context for the use of spread sheets. 'Algebra and matrices' continues the Year 7–10 study of algebra and introduces the new topic of matrices. The emphasis of this topic is the symbolic representation and manipulation of information from real-life contexts using algebra and matrices. 'Shape and measurement' extends the knowledge and skills students developed in the Year 7–10 curriculum with the concept of similarity and associated calculations involving simple and compound geometric shapes.

UNIT 2

Contains the three topics:

- Univariate data analysis and the statistical investigation process
- Applications of trigonometry
- Linear equations and their graphs.

'Univariate data analysis and the statistical investigation process' develop students' ability to organise and summarise univariate data in the context of conducting a statistical investigation. 'Applications of trigonometry' extends students' knowledge of trigonometry to solve practical problems involving non-right-angled triangles in both two and three dimensions, including problems involving the use of angles of elevation and depression and bearings in navigation. 'Linear equations and their graphs' uses linear equations and straight-line graphs, as well as linear-piece-wise and step graphs, to model and analyse practical situations.

MATHEMATICS METHODS YEAR 11 ATAR

UNIT 1

Contains the three topics:

- Functions and graphs
- Trigonometric functions
- Counting and probability.

Unit 1 begins with a review of the basic algebraic concepts and techniques required for a successful introduction to the study of functions and calculus. Simple relationships between variable quantities are reviewed, and these are used to introduce the key concepts of a function and its graph. The study of probability and statistics begins in this unit with a review of the fundamentals of probability, and the introduction of the concepts of conditional probability and independence. The study of the trigonometric functions begins with a consideration of the unit circle using degrees and the trigonometry of triangles and its application. Radian measure is introduced, and the graphs of the trigonometric functions are examined and their applications in a wide range of settings are explored.

UNIT 2

Contains the three topics:

- Exponential functions
- Arithmetic and geometric sequences and series
- Introduction to differential calculus.

In Unit 2, exponential functions are introduced and their properties and graphs examined. Arithmetic and geometric sequences and their applications are introduced and their recursive definitions applied. Rates and average rates of change are introduced and this is followed by the key concept of the derivative as an 'instantaneous rate of change'. These concepts are reinforced numerically (by calculating difference quotients), geometrically (as slopes of chords and tangents), and algebraically. This first calculus topic concludes with derivatives of polynomial functions, using simple applications of the derivative to sketch curves, calculate slopes and equations of tangents, determine instantaneous velocities, and solve optimisation problems.

MODERN HISTORY ATAR

History is the study and practice of making meaning of the past with a view to understanding the present. It engages us with the ideas, beliefs and values that shape and influence our lives. At the same time it helps us clarify our own beliefs and values compared to those of others. Studying Modern History provides enjoyment and the knowledge gained reveals the background and some of the driving forces behind present local and global issues. Investigating the past helps students to understand why and how groups and/or societies changed or resisted changes.

YEAR 11 ATAR
UNIT 1 – UNDERSTANDING THE MODERN WORLD
This unit provides an introduction to significant developments in the modern period that have defined the modern world, and the ideas that underpinned them, such as liberty, equality and fraternity.

UNIT 2 – MOVEMENTS FOR CHANGE IN THE 20TH CENTURY
This unit examines significant movements developed in response to the ideas studied in Unit 1 that brought about change in the modern world and that have been subject to political debate. The unit focuses on the ways in which individuals, groups and institutions challenge authority and transform society.

MUSIC GENERAL

The Music General course encourages students to explore a range of musical experiences, developing their musical skills and understanding, and creative and expressive potential, through a selected musical context. The course consists of a written component incorporating Aural and Theory, Composing and arranging, Investigation and analysis, in addition to a practical component. The Aural and Theory content in the written component is generic, and can be adapted and extended to suit any selected context. The practical component consists of three different options and can be delivered in a different context, independent of the written component. Students select only one option, and can choose to perform on an instrument or voice, submit a composition portfolio, or complete a production/practical project. The Music General course provides opportunities for creative expression, the development of aesthetic appreciation, and understanding and respect for music and music practices across different times, places, cultures and contexts. Students listen, compose, perform and analyse music, developing skills to confidently engage with a diverse array of musical experiences both independently and collaboratively. Studying music may also provide a pathway for further training and employment in a range of professions within the music industry.

OUTDOOR EDUCATION ATAR & GENERAL

Through interaction with the natural world, the Outdoor Education ATAR course aims to develop an understanding of our relationships with the environment, others and ourselves. The ultimate goal of the course is to contribute towards a sustainable world.

The Outdoor Education ATAR course is based on the experiential learning cycle. This cycle is made up of three stages; plan, do and review. Students plan for outdoor experiences, participate in these experiences and reflect on their involvement.

The course lends itself to an integrated approach between practical experiences, the environment and conceptual understandings. Students develop self-awareness by engaging in a range of challenging outdoor activities. They enhance personal and group skills and build confidence, empathy and self-understanding. Working with others enables students to better understand group dynamics, and enhance their leadership qualities and decision-making abilities, while showing respect for self, others and the environment.

YEAR 11 ATAR
UNIT 1
The focus of this unit is being responsible in the outdoors. Students are exposed to a broad range of responsibilities involved in undertaking short-duration expeditions. Through regular practical experiences and group activities, students develop flexibility, monitoring and commitment. They further develop problem solving, decision making and outdoor leadership skills and strategies for building effective group relationships. Students become more aware of the natural environment and develop interpretational skills. They are introduced to sustainability and local environmental management strategies and consider the role of technology in mediating human relationships with nature.

UNIT 2
The focus for this unit is attaining independence in the outdoors. Students further their performance and competence at increasing levels of self-sufficiency, technical understanding, and physical fitness, to deal with a range of challenges. They are involved in planning for participation in extended expeditions and become more proficient in outdoor activity roping and navigational skills. They are able to conduct emergency response processes. Opportunities for self-discovery and strategies to enhance personal and interpersonal skills are provided. They deliver briefings, participate in debriefing, and experience shared leadership opportunities. Students extend their understanding about the environment and develop weather forecasting skills. They are introduced to historical, cultural and Indigenous heritage. They explore current controversial environmental issues related to outdoor experiences, and examples of management strategies for environments at risk in Western Australia (WA).

YEAR 11 GENERAL
Students are encouraged to engage in outdoor adventure activities. An experiential approach is used to discover what being active in the environment is all about. Students are introduced to outdoor adventure activities where they can develop and improve technical skills and apply appropriate practices to ensure safe participation. They understand basic planning and organisational requirements necessary for them to participate in safe, short duration excursions/expeditions in selected outdoor activities. They begin developing skills in roping and navigation. Students are introduced to personal skills and interpersonal skills, including self-awareness, communication and leadership. Features of natural environments and examples of local environmental management and ‘Leave No Trace’ principles are introduced.

Students enrolled in Outdoor Education must attend (two) expeditions per year. Failure to attend the expeditions and attempt all challenges on the expeditions, will result in a score of 0.

PHYSICAL EDUCATION STUDIES ATAR

Physical Education Studies contributes to the development of the whole person. It promotes the physical, social and emotional growth of students. Throughout the course emphasis is placed on understanding and improving performance in physical activities. The integration of theory and practice is central to studies in this course.

YEAR 11 ATAR
UNIT 1
The focus of this unit is to explore anatomical and biomechanical concepts, the body's responses to physical activity, and stress management processes, to improve the performance of themselves and others in physical activity.

UNIT 2
The focus of this unit is to identify the relationship between skill, strategy and the body in order to improve the effectiveness and efficiency of performance.

PHYSICS ATAR

Physics is an experimental discipline involving the study of the properties of, and interrelationships between energy and matter. Physics helps us to construct models and explain physical phenomena. These, in turn, allow us to develop a deeper understanding of the world around us.

YEAR 11 ATAR
UNIT 1 – THERMAL, NUCLEAR AND ELECTRICAL PHYSICS
Students investigate energy production by considering heating processes, radioactivity and nuclear reactions, and investigate energy transfer and transformation in electrical circuits.

UNIT 2 – LINEAR MOTION AND WAVES
Students describe, explain and predict linear motion, and investigate the application of wave models to sound phenomena.

MATERIAL DESIGN TECHNOLOGY (WOODWORK) GENERAL

YEAR 11 GENERAL
Unit 1
Students interact with a variety of items that have been specifically designed to meet certain needs. Students are introduced to the fundamentals of design. They learn to communicate various aspects of the technology process by constructing what they design.

Throughout the process, students learn about the origins, classifications, properties and suitability for purpose of the materials they are using, and are introduced to a range of production equipment and techniques. They develop materials manipulation skills and production management strategies, and are given the opportunity to realise their design ideas through the production of their design project.

Unit 2
Students interact with products designed for a specific market. They use a range of techniques to gather information about existing products and apply the fundamentals of design. Students learn to conceptualise and communicate their ideas and various aspects of the design process within the context of constructing what they design.

Throughout the process, students learn about the origins, classifications, properties and suitability for end use of materials they are working with. Students are introduced to a range of technology skills and are encouraged to generate ideas and realise them through the production of their design projects. They work within a defined environment and learn to use a variety of relevant technologies safely and effectively.

Students, in consultation with teachers, select projects of interest and then design and make products suitable for a specific market.

VISUAL ART ATAR & GENERAL

Art is a fundamental dimension of human life. Throughout history the visual arts have given form and meaning to ideas and feelings and provided ways for people to express and communicate experience. The Visual Arts course encompasses the practice and theory of the broad areas of art, craft and design. Students have opportunities to express their imagination and develop personal imagery, develop skills, and engage in the making and presentation of artworks. They develop aesthetic understandings and a critical awareness that assists them to appreciate and make informed evaluations of art.

YEAR 11 General
UNIT 1 – EXPERIENCES
The focus for this unit is experiences. Students develop artworks based on their lives and personal experiences, observations of the immediate environment, events and/or special occasions. They participate in selected art experiences aimed at developing a sense of observation.

UNIT 2 – EXPLORATIONS
The focus for this unit is explorations. Students explore ways to generate and develop ideas using a variety of stimulus materials and explorations from their local environment. They use a variety of inquiry approaches, techniques and processes when creating original artworks.

YEAR 11 ATAR
UNIT 1 – DIFFERENCES
The focus for this unit is differences. Students may, for example, consider differences arising from cultural diversity, place, gender, class and historical period. Differences relating to art forms, media and conventions may also provide a stimulus for exploration and expression.

Students explore ways of collecting, compiling and recording information and documenting thinking and working practices. They explore approaches to drawing and develop awareness that each artist has his or her particular way of making marks to convey personal vision. Students examine how visual language and media choices contribute to the process of conveying function and meaning, and use a range of media and technologies to explore, create, and communicate ideas.

UNIT 2 – IDENTITIES
The focus for this unit is identities. In working with this focus, students explore concepts or issues related to personal, social, cultural or gender identity. They become aware that self-expression distinguishes individuals as well as cultures. Students use a variety of stimulus materials and use a range of investigative approaches as starting points to create artwork. They develop a personal approach to the development of ideas and concepts, making informed choices about the materials, skills, techniques and processes used to resolve and present their artwork.

Students develop understandings of the personal and/or public functions of art in the expression of identity, for example, spiritual expression, psychological expression, therapy, ceremony and ritual, and the purposes of art, such as narrative – telling personal stories or exploring myths. They understand that art may give form to ideas and issues that concern the wider community.

WORKPLACE LEARNING

Workplace Learning will be completed as a block-placements. Students may be required to complete a portion of their Work placement during School Holidays.

Workplace Learning is an Authority-developed endorsed program that is managed by individual schools. To complete this endorsed program, a student works in one or more real workplace/s to develop a set of transferable workplace skills. The student must record the number of hours completed and the tasks undertaken in the workplace in the Authority's *Workplace Learning Logbook*. The student must also provide evidence of his/her knowledge and understanding of the workplace skills by completing the Authority's *Workplace Learning Skills Journal* after each 55 hours completed in the workplace.

OFF-CAMPUS VOCATIONAL EDUCATION & TRAINING

See separate VET Delivered to Secondary Schools booklet.

Disclaimer
The course information and Vocational Education and Training course codes and units of competency are correct at the time of printing. Course units and codes are subject to change and will be updated in periodic versions of this booklet.