



ST GEORGE'S
ANGLICAN GRAMMAR SCHOOL
A school of the Anglican Schools Commission (Inc)

SUBJECT SELECTION HANDBOOK

YEAR 12 WAUFP 2019



INTRODUCTION

The Year 12 WAUFP Handbook provides information regarding the courses on offer at St George's Anglican Grammar School for Year 12 WAUFP next year.

Assisting your child in planning their future is a challenging task. The courses offered by St George's Anglican Grammar School facilitates students with opportunities to choose their pathway based upon their interests and ability. These courses provide excellent grounding for your child's future endeavours whether that be university, further studies at a State Training Provider or the workplace.

In planning for their future, it is essential that students utilise the information and resources available to them to ensure they are making fully informed decisions regarding their course selections. Students are advised to:

- Read the handbook carefully, looking at all of the courses and options available;
- Talk with their parents;
- Seek advice from their course teachers and Heads of Learning Area;

I wish all students every success as they embark on this journey.

Yours sincerely

Angela Tanham | HEAD OF CURRICULUM COORDINATOR

TIMELINE

Thursday 21 June 2018	Parent/Student Information Evening
Monday 25 June 2018 and Tuesday 26 June 2018	Counselling/Subject Selection Day
Friday 6 July 2018	Course selections to be completed online



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GENERAL INFORMATION

Western Australian Universities Foundation Program Pathway (WAUFP) INTERNATIONAL STUDENTS

The Western Australian Universities' Foundation Program (WAUFP) is a program of academic study which has been helping international students achieve their study goals since 1993. WAUFP graduates have gone on to complete degrees at prestigious universities throughout Australia. The WAUFP is studied in Year 12.

WAUFP was established with the support of the four public Western Australian universities:

- Edith Cowan University
- Curtin University
- Murdoch University
- The University of Western Australia

These universities offer a comprehensive range of professional degree courses, which are recognised nationally and internationally.

The WAUFP is also recognised by interstate and international universities.

In the WAUFP program, you will study at least four subjects, including an extended English language subject which has been specially designed for international students: English Language and Australian Cultural Studies (ELACS). Success in ELACS means that you meet the English competency requirement necessary for university entrance in WA.

International students who successfully complete WAUFP and who satisfy the course entry requirements are guaranteed a place at the university of their choice.

NB. All WAUFP subjects, except ELACS, use the WA Certificate of Education ATAR course syllabuses.

WAUFP Subjects
ELACS
Mathematics (Applications)
Mathematics (Methods)
Mathematics (Specialist)
Chemistry
Physics
Human Biology
Psychology
Accounting and Finance (ATAR)
Business Management and Enterprise (ATAR)



University Entrance

A **Combined Percentage Score (CPS)** is calculated by averaging the best three scaled scores (excluding ELACS) OR averaging the sum of the best three scaled scores and ELACS score, whichever is highest, plus any bonuses*.

The moderated college assessments and final external examination marks are combined on a 50:50 basis and then scaled using an ability test to produce the final scaled marks in each subject. Unacceptable subject combinations in the calculation of the CPS are the same as for calculating an ATAR ie Mathematics Applications and Mathematics Methods cannot both be counted as part of the CPS; Mathematics Applications and Mathematics Specialist cannot both be counted as part of the CPS.

*A Mathematics bonus of 2.5% of a student's final scaled score in Mathematics Methods and/or Mathematics Specialist will be added to the student's CPS, regardless of whether the subject scaled score is used in the calculation of the CPS.

Subject scores used in the calculation of the CPS can be accumulated up to 5 years. Competence in English using ELACS can be achieved in any year. Repeaters will have their CPS calculated as above.

The CPS requirements for courses at university are published on the TISC website.

For current information on university entrance please consult the following websites:

- Curtin University <http://futurestudents.curtin.edu.au>
- Edith Cowan University (ECU) <http://www.ecu.edu.au/future-students/year10s/how-to-get-intoecu/entry-pathways>
- Murdoch University <http://www.murdoch.edu.au/Future-students>
- University of Western Australia (UWA) <http://www.studyat.uwa.edu.au>
- University of Notre Dame Australia (UNDA): <https://www.nd.edu.au>



WAUFP COURSES (UNIVERSITY PATHWAY)

English Language and Australian Cultural Studies

English Language and Australian Cultural Studies (ELACS) is designed to meet the needs of overseas high school graduates whose present level of English language attainment may be below the minimum level of competence required for entry into undergraduate programs at Western Australian universities.

Compared with local students, those entering this course may have:

- different frames of cultural reference;
- different learning styles;
- greater difficulty with the structural, phonological, graphological and social features of English which may cause them to comprehend and compose texts more slowly.

Students who successfully complete this course are deemed to have met the literacy requirement necessary for direct entry into Western Australian Universities.

The course has two main aims. The first is to develop students' functional literacy within an academic context. Particular attention will be given to the skills of reading, writing, listening, speaking and viewing, which are deemed necessary for success at university. The second is to increase the students' knowledge and understanding of Australian society and culture. By achieving this enculturation, students should be better prepared to cope with the rigors of university life in Australia.

Students will be introduced to Australian society and culture through a wide variety of texts. For the purpose of this syllabus the word texts is used in the broadest sense to include books, films, and television programs as well as the wide range of oral and written material that students will encounter in their lives after school.

The course is designed to provide optimum learning outcomes for students who have gained an overall Band Score of 5.5 in the IELTS test (or equivalent).

HUMANITIES AND SOCIAL SCIENCES

Accounting and Finance

The Accounting and Finance ATAR course aims to make students financially literate by creating an understanding of the systems and processes through which financial practices and decision-making are carried out, as well as the ethical, social and environmental issues involved. The focus for this course is double entry accounting for small business and accrual accounting. Students apply their understanding of financial principles, systems and institutions to manage financial information and make decisions in a variety of small businesses. Students learn to record and process financial information using the double entry system and apply the principles of the Goods and Services Tax (GST).

Unit 3

The focus for this unit is on internal management for business.

Unit 4

The focus for this unit is on Australian reporting entities and how they are regulated by the *Corporations Act 2001*.



Business Management and Enterprise

Business is vital to individuals and society, and it impacts on many aspects of our lives. It has a complex and dynamic organisational structure that 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. 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 day-to-day running and continuing viability and expansion of a business. Exposure to a wide range of business activities, management strategies and an understanding of enterprise, helps students to appreciate the significance of their role as both participants and consumers in the business world.

Unit 3

The focus of this unit is on strategic international business growth.

Unit 4

The focus of this unit is on global business operations.

MATHEMATICS

Mathematics Specialist

This course provides opportunities, beyond those presented in the Mathematics Methods ATAR course, to develop rigorous mathematical arguments and proofs, and to use mathematical models more extensively. Mathematics Specialist contains topics in functions and calculus that build on and deepen the ideas presented in the Mathematics Methods course, as well as demonstrate their application in many areas. The Mathematics Specialist course also extends understanding and knowledge of statistics and introduces the topics of vectors, complex numbers and matrices. Mathematics Specialist is the only ATAR mathematics course that should not be taken as a stand-alone course and it is recommended to be studied in conjunction with the Mathematics Methods ATAR course as preparation for entry to specialised university courses such as engineering, physical sciences and mathematics.

Unit 3

This unit contains the three topics:

- Complex numbers
- Functions and sketching graphs
- Vectors in three dimensions

Unit 4

This unit contains the three topics:

- Integration and applications of integration
- Rates of change and differential equations
- Statistical inference



Mathematics Methods

This course focuses on the use of calculus and statistical analysis. The study of calculus provides a basis for understanding rates of change in the physical world, and includes the use of functions, their derivatives and integrals, in modelling physical processes. The study of statistics develops students' ability to describe and analyse phenomena that involve uncertainty and variation.

Mathematics Methods provides a foundation for further studies in disciplines in which mathematics and statistics have important roles. It is also advantageous for further studies in the health and social sciences. In summary, this course is designed for students whose future pathways may involve mathematics and statistics and their applications in a range of disciplines at the tertiary level.

Unit 3

This unit contains the three topics:

- Further differentiation and applications
- Integrals
- Discrete random variables.

Unit 4

This unit contains the three topics:

- The logarithmic function
- Continuous random variables and the normal distribution
- Interval estimates for proportions.

Mathematics Applications

This course focuses on the use of mathematics to solve problems in contexts that involve financial modelling, geometric and trigonometric analysis, graphical and network analysis, and growth and decay in sequences. It also provides opportunities for students to develop systematic strategies based on the statistical investigation process for answering statistical questions that involve analysing univariate and bivariate data, including time series data.

The course is designed for students who want to extend their mathematical skills beyond Year 10 level, but whose future studies or employment pathways do not require knowledge of calculus. It is designed for students who have a wide range of educational and employment aspirations, including continuing their studies at university or TAFE.

Unit 3

This unit contains the three topics:

- Bivariate data analysis
- Growth and decay in sequences
- Graphs and networks

Unit 4

Contains the three topics:

- Time series analysis
- Loans, investments and annuities
- Networks and decision mathematics.



SCIENCE

Chemistry

The Chemistry ATAR course equips students with the knowledge, understanding and opportunity to investigate properties and reactions of materials. Theories and models are used to describe, explain and make predictions about chemical systems, structures and properties. Students recognise hazards and make informed, balanced decisions about chemical use and sustainable resource management. Investigations and laboratory activities develop an appreciation of the need for precision, critical analysis and informed decision making.

This course prepares students to be responsible and efficient users of specialised chemical products and processes at home or in the workplace. It also enables students to relate chemistry to other sciences, including biology, geology, medicine, molecular biology and agriculture, and prepares them

An understanding of chemistry is relevant to a range of careers, including those in forensic science, environmental science, engineering, medicine, dentistry, pharmacy and sports science. Additionally, chemistry knowledge is valuable in occupations that rely on an understanding of materials and their interactions, such as art, winemaking, agriculture and food technology.

Unit 3 – Equilibrium, acids and bases, and redox reactions

In this unit, students investigate the concept of reversibility of reactions and the dynamic nature of equilibrium in chemical systems; contemporary models of acid-base behaviour that explain their properties and uses; and the principles of oxidation and reduction reactions, including the generation of electricity from electrochemical cells.

Unit 4 – Organic chemistry and chemical synthesis

In this unit, students develop their understanding of the relationship between the structure, properties and chemical reactions of different organic functional groups. Students also investigate the process of chemical synthesis to form useful substances and products and the need to consider a range of factors in the design of these processes.



Human Biology

The Human Biology ATAR course gives students a chance to explore what it is to be human—how the human body works, the origins of human variation, inheritance in humans, the evolution of the human species and population genetics. Through their investigations, students research new discoveries that increase our understanding of human dysfunction, treatments and preventative measures.

Practical tasks are an integral part of this course and develop a range of laboratory skills; for example, biotechnology techniques. Students learn to evaluate risks and benefits to make informed decisions about lifestyle and health topics, such as diet, alternative medical treatments, use of chemical substances and the manipulation of fertility.

The course content deals directly and indirectly with many different occupations in fields, such as science education, medical and paramedical fields, food and hospitality, childcare, sport and social work.

Unit 3 – Homeostasis and disease

This unit explores the nervous and endocrine systems and the mechanisms that help maintain the systems of the body to function within normal range, and the body's immune responses to invading pathogens.

Unit 4 – Human variation and evolution

This unit explores the variations in humans, their changing environment and evolutionary trends in hominids.

Physics

In the Physics ATAR course students will learn how energy and energy transformations can shape the environment from the small scale, in quantum leaps inside an atom's electron cloud, through the human scale, in vehicles and the human body, to the large scale, in interactions between galaxies. Students have opportunities to develop their investigative skills and use analytical thinking to explain and predict physical phenomena. Students plan and conduct investigations to answer a range of questions, collect and interpret data and observations, and communicate their findings in an appropriate format. Problem-solving and using evidence to make and justify conclusions are transferable skills that are developed in this course.

Studying physics will enable students to become citizens who are better informed about the world around them and who have the critical skills to evaluate and make evidence-based decisions about current scientific issues. The Physics ATAR course will also provide a foundation in physics knowledge, understanding and skills for those students who wish to pursue tertiary study in science, engineering, medicine and technology.

Unit 3 – Gravity and electromagnetism

Students investigate models of motion in gravitational, electric and magnetic fields to explain how forces act at a distance.

Unit 4 – Revolutions in modern physics

Students use the theory of electromagnetism to explain the production and propagation of electromagnetic waves and investigate how shortcomings in existing theories led to the development of the quantum theory of light and matter, the Special Theory of Relativity, and the Standard Model of particle physics.



Psychology

In the Psychology ATAR course students will be introduced to psychological knowledge which supports an understanding of the way individuals function in groups. Students learn about major psychological models and theories, and the methods used to conduct scientific investigations in the discipline of psychology. Students apply research methods and ethical principles as they analyse data to illustrate how empirical procedures are used to examine phenomena, such as memory, attention, attitudes, personality and group behaviour. Acquiring this foundation of scientific method and critical thinking is a valuable skill which students can apply throughout their study, work and everyday lives.

The study of psychology is highly relevant to further studies in the health professions; education, human resources, social sciences, sales, media and marketing and management.

Unit 3

This unit focuses on the functions of the lobes of the cerebral cortex and examines how messages are transmitted from the brain to the body. It explores how behaviour is influenced by learning and other factors, and the impact of others on individual behaviour. Students examine socialisation processes observed within families and how social background and gender can shape communication styles. Students expand on their knowledge of ethics in psychological research as they engage in detailed investigations.

Unit 4

This unit focuses on developmental and contemporary personality theories, and behaviours observed when individuals are examined in the social context. Students analyse the causes of conformity and obedience and gain an understanding of the factors that shape a sense of community. Students continue to develop their understanding and application of psychological research methods.



HOMEWORK

As a guide students should be doing approximately 3 hours of homework and study 5 nights per week. During times when there are tests and exams more time may need to be allocated to study.

It is important for students to have well organised study plans and to realise that study is not the same thing as homework. Study or course revision should occur regularly and be planned and organised. Some students find it helpful to revise by re-writing notes in their own words, noting key words, writing down and memorising definitions and so on. Keeping separate 'study' work books (or digital alternatives) devoted to each course can aid as a support in revising and preparing for tests and exams. Synthesising is important. It is not enough for students to just read over their notes.

It is hoped that well established study skills are already in place before studying the WAUFP, but if they are not and a student is struggling to organise their study habits then they should consult relevant teachers, HoLAs and the Senior School Coordinator.

Help is always available for students; however, the commitment of the student to their studies is the most crucial factor at this level of education.

STUDENT ACHIEVEMENT

Student achievement is recorded in marks out of 100 and grades (A, B, C, D or E) for all courses and this is indicated on the College report.

Grade Interpretation

A = Excellent achievement

B = High achievement

C = Satisfactory achievement

D = Limited achievement

E = Inadequate achievement

Students should constantly check with their teachers so that they are always aware of their mark and grade.



ASSISTANCE WITH COURSE SELECTION

This handbook attempts to provide information that will assist in answering many of your questions. Contact with subject staff is an important part of the process.

For Course Specific Queries:

Please contact the relevant teacher for the course.

SUBJECT	TEACHER	EMAIL
English	Mrs Susan Lazenby	slazenby@stgeorges.wa.edu.au
Humanities	Mrs Katheryne Kania	kkania@stgeorges.wa.edu.au
Mathematics	Mr Frank Murray	fmurray@stgeorges.wa.edu.au
Science	Ms Charlotte Donovan	cdonovan@stgeorges.wa.edu.au

For other course selection queries please contact:

TITLE	TEACHER	EMAIL
Head of Curriculum	Mrs Angela Tanham	atanham@stgeorges.wa.edu.au



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