Government of **Western Australia**
School Curriculum and Standards Authority

MATHEMATICS APPLICATIONS

ATAR course

Year 12 syllabus – What's changing: Rationale and Aims

For teaching in 2027

Acknowledgement of Country

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

Background

As part of the Western Australian Certificate of Education (WACE) Refreshment for reviewing the nomenclature of courses, the Authority has updated the rationale and aims of each syllabus.

The revised rationale and aims are aligned with the mapping of the general capabilities to provide clear connections between the rationale, aims and syllabus content. The rationale outlines what the subject is about and why it is important. It describes what students can expect to study in the course, along with the knowledge, skills and understandings they will develop throughout the course. It also explains how these can be applied in everyday life and references potential future pathways, outlining how students might connect what they learn in the course to further education, training and employment opportunities.

Important information

WACE Refreshment: Reviewing the nomenclature of courses

This document contains information that will be included in the syllabus effective from 1 January 2027.

Users of the syllabus are responsible for checking its currency.

Syllabuses are formally reviewed by the Authority on a cyclical basis, typically every five years.

Rationale

The Mathematics Applications ATAR course is the study of mathematical concepts and techniques used to analyse, interpret and solve real-world problems. It focuses on applying mathematical concepts to help students make informed choices in personal and professional settings, including financial and statistical-based decisions.

The course focuses on solving practical problems that involve financial modelling, statistical analysis of bivariate and time-series data, real-world growth and decay using sequences, and network graph models with an emphasis on efficient and appropriate use of digital tools.

By studying this course, students develop fluency in calculations, analytical reasoning and the ability to interpret and communicate mathematical ideas effectively. The course encourages logical thinking, attention to detail, and the ability to evaluate information critically, fostering a deeper understanding of the role mathematics plays in everyday decision-making.

The mathematical skills and concepts covered in the course have broad applications in daily life. Students learn to manage personal investments, and model and analyse growth and trends using statistical data to make informed predictions in practical scenarios. Students apply graph theory techniques to solve real-world problems such as finding optimal routes, analysing connections and optimising resource allocation in various situations.

The Mathematics Applications ATAR course provides a strong foundation for students intending to pursue tertiary education or vocational training in business, finance, social sciences, health sciences, information technology and environmental studies. Careers in areas such as economics, data analysis, logistics, project management, public administration and education all benefit from the skills developed in this course.

Aims

The Mathematics Applications ATAR course aims to develop students':

- understanding of concepts and techniques drawn from number and algebra, geometry and trigonometry, graphs and networks, and statistics
- ability to apply mathematical knowledge to solve real-world problems
- proficiency in reasoning and interpretation within mathematical and statistical contexts
- capacity to communicate findings clearly and systematically, using precise and appropriate mathematical and statistical language
- confidence to select and use digital tools appropriately and efficiently to support problem-solving and data analysis.