



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

EARTH AND ENVIRONMENTAL SCIENCE

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.

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Rationale

The Earth and Environmental Science ATAR course focuses on the dynamic interactions and interdependencies between the Earth's lithosphere, hydrosphere, atmosphere and biosphere. Students consider how these spheres have changed with long-term evolution of the planet and how their interrelationships produce environmental change over a variety of timescales. They study past and present processes to make reliable and scientifically defensible predictions about the future. The course integrates knowledge, concepts, models and methods drawn from Geology, Biology, Physics and Chemistry in the study of Earth's ancient and modern environments.

Students explore the theories and evidence that frame our understanding of Earth's origins and history; the dynamic and interdependent nature of Earth's processes, environments and resources; and how these processes, environments and resources respond to change across a range of temporal and spatial scales.

In the Earth and Environmental Science ATAR course, students develop their investigative, analytical and communication skills. They apply these to their understanding of scientific issues to solve problems, make evidence-based decisions about contemporary issues and engage in public debate. The knowledge, understanding and skills introduced in this course provide a foundation for further studies or employment and encourage students to become confident, active citizens who can competently use diverse methods of inquiry.

Learnings from Earth and Environmental Science can be directly applied to daily living to support the United Nations Sustainable Development Goals (SDGs), particularly those focused on environmental conservation and societally-critical resource management.

Studying the course provides students with skills and understandings that are valuable to a wide range of further study pathways and careers, such as environmental consulting, hydrogeology, geotechnical surveys, engineering geoscience, research, conservation, policy analysis and roles within resource exploration fields.

Aims

The Earth and Environmental Science ATAR course aims to develop students’:

- interest in Earth and Environmental Science and appreciation of how this multidisciplinary knowledge can be used to understand contemporary issues
- understanding of Earth as a dynamic planet consisting of interacting systems, including the lithosphere, atmosphere, hydrosphere and biosphere
- appreciation of the complex interactions, involving multiple parallel processes, that continually change Earth’s systems over a range of timescales
- understanding that Earth and Environmental Science knowledge has developed over time; is used in a variety of contexts; and influences, and is influenced by, social, economic, cultural and ethical considerations
- ability to conduct a variety of field, research and laboratory investigations involving the collection and analysis of qualitative and quantitative data, and interpretation of evidence
- ability to critically evaluate science concepts, interpretations, claims and conclusions with reference to evidence
- ability to communicate scientific understandings, findings, arguments and conclusions using appropriate representations and formats.