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

ENGINEERING STUDIES

ATAR course

Year 12 syllabus – What's changing: General capabilities

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 to investigate the assessment and reporting of the general capabilities on the Western Australian Statement of Student Achievement (WASSA), the Authority has updated the statements about the general capabilities in each syllabus.

The Authority has mapped the general capabilities through the unit content and assessment types for each of the WACE courses. Students will have the opportunity to develop the general capabilities identified in the course through the teaching, learning and assessment programs. These general capabilities will be reflected on the WASSA.

Important information

WACE Refreshment: Investigating the assessment and reporting of the general capabilities on the Western Australian Statement of Student Achievement (WASSA)

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.

Representation of the general capabilities

The general capabilities encompass the knowledge, skills, behaviours and dispositions that will support students to live and work successfully now and into the future. Teachers should find opportunities to incorporate the following capabilities into the teaching and learning program for the Engineering Studies ATAR course. The general capabilities are not assessed unless they are identified within the specified unit content.

Critical and creative thinking

Critical and creative thinking is integral to the design process. Design thinking methodologies are fundamental to the Engineering Studies ATAR course. Students develop understanding and skills in critical and creative thinking during periods of evaluation at various stages of the design process. They devise plausible solutions to problems and then, through interrogation, critically assess the performance of the most efficient solution. Students identify possible weaknesses in their design solutions and analyse, evaluate and modify the developing solution to construct a functioning prototype.

Digital literacy

Digital literacy capability is developed and used in all stages of the design process. In the course, students use digital tools and strategies to locate, access, process and analyse information. They use ICT skills and understandings to investigate and devise design ideas, and access information from websites and software programs to develop design solutions. They use computer-aided drawing software and computer control software to produce engineered products.

Literacy

Students develop their literacy skills in the course by accessing engineering and technological content through a variety of forms, including data books, texts, computer software, images and written technical materials. They learn to investigate, interpret and apply engineering principles from a variety of textual sources to design solutions for engineering tasks. Students analyse and evaluate information for authority, reliability, relevance and accuracy. They learn to monitor their language use for accuracy and clarity in their use of design principles and technological terms; their expression of ideas, processes and engineering activities; and their evaluation of functioning prototypes.

Numeracy

Numeracy is fundamental in calculating and evaluating engineering processes. Students develop their understanding and skills of numeracy in the course while undertaking tasks to produce, test and evaluate engineered products. They study core and specialist area theory to forge a greater understanding of the scientific, mathematical and technical concepts that explain how engineered products function.

Personal and social capability

Personal and social capability skills are developed and practised in the course as students enhance their communication skills and participate in teamwork. Students work collaboratively during stages of investigation and when producing engineering products. They develop increasing social awareness through the study of the impact of engineering in society and on the environment.

Addressing the other general capabilities

Although the following general capabilities have not been identified as a focus in the Engineering Studies ATAR Year 12 syllabus, teachers may find opportunities to incorporate these capabilities into the teaching and learning program.

- Ethical understanding
- Intercultural understanding

Such opportunities may occur through the application of different contexts, pedagogical practices and/or assessment strategies that relate to the syllabus as part of the teaching and learning program.

Summary representation of the general capabilities in the Engineering Studies ATAR course

A representation of the general capabilities for the two years is summarised in the table below.

Year	Course	Course type	General capabilities						
			CCT	DL	EU	IU	L	N	PSC
Year 11	Engineering Studies (AEEST)	ATAR	✓	✓			✓	✓	✓
Year 12	Engineering Studies (ATEST)	ATAR	✓	✓			✓	✓	✓

Key

CCT: Critical and creative thinking, DL: Digital literacy, EU: Ethical understanding, IU: Intercultural understanding, L: Literacy, N: Numeracy, PSC: Personal and social capability