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

COMPUTER SCIENCE

General 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 Computer Science General course. The general capabilities are not assessed unless they are identified within the specified unit content.

Critical and creative thinking

Students develop their critical and creative thinking skills through processes such as inquiring, generating, analysing and reflecting. They ask meaningful questions and explore problems in computing, conducting research to understand different technologies, algorithms and systems. Students engage in generating creative solutions, designing innovative applications, coding new programs and developing digital systems. They evaluate the efficiency and functionality of their solutions, testing algorithms and assessing system performance, and identifying areas for improvement. Students review their work, consider alternative approaches and refine their coding practices while contemplating the broader ethical, social and environmental implications of technology.

Digital literacy

Students develop digital literacy by incorporating skills such as practising digital safety and wellbeing, investigating, creating and exchanging, and managing and operating. They learn to safeguard personal data, apply security protocols and address topics like cybersecurity and ethical online behaviour. Students research computing systems, technologies and ethical dilemmas in technology, critically analysing digital tools and their impact. They design, develop and test software solutions, communicate their findings through digital platforms, and collaborate. Students configure and troubleshoot digital systems, ensuring the smooth operation of hardware and software, and maintain network security.

Ethical understanding

Students develop their ethical understanding by focusing on ethical issues in the development and use of technology systems. They consider privacy, security and fairness, particularly with regards to how user data is collected, stored and shared. Students explore ethical and legal issues such as digital communications etiquette, and are encouraged to engage in responsible, respectful communication when using technology systems. They also reflect on the broader social and environmental impacts of their technology, ensuring that their solutions are both responsible and sustainable.

Literacy

Students develop literacy skills, particularly in reading, viewing and writing, throughout the course. They engage with technical documentation, such as programming manuals, system specifications and case studies, which they interpret and analyse to demonstrate their comprehension of complex technologies concepts. Students also review and evaluate code, algorithms and system designs, building their ability to understand and apply specialised terminology and symbols. They document their work through projects, where they write clear, structured reports, including code comments, user manuals and technical summaries that explain system functionality, design choices and testing procedures. Students write and modify code, requiring precise communication through documentation and error analysis.

Numeracy

Students develop numeracy skills, particularly in number and algebra, and statistics and probability, by applying mathematical concepts to solving computing problems. They work with numerical data, and binary and hexadecimal number systems, and use mathematical operations in programming for algorithms calculations and conditional logic. Students apply algebraic thinking when using variables, functions and loops in coding. They collect, organise and interpret data to analyse trends, such as measuring system performance, processing datasets and understanding probability in cybersecurity (e.g. encryption strength and risk assessment).

Addressing the other general capabilities

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

- Intercultural understanding
- Personal and social capability

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 Computer Science 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	Computer Science (GECSC)	General	✓	✓	✓		✓	✓	
Year 12	Computer Science (GTCSC)	General	✓	✓	✓		✓	✓	

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