

Computer science

The computer science program aims to develop skilled computer scientists with the technical background, knowledge, and adaptability to contribute to the development of well-designed, robust, computer-based solutions to a range of problems in business and industry.

Students study computer science (including introduction to computer programming, algorithms and problem-solving, software development) and mathematics. Subjects available in third year include artificial intelligence, database systems, computer networks, graphics.

At all year levels there is a focus on the cultivation of practical skills together with assimilation of the relevant scientific principles. Teaching methods involve a combination of lectures, tutorials, and practical work. Tutorials are provided at all years.

Students taking computer science subjects will be required to spend time on practical assignments in addition to lectures, laboratory classes and tutorials.

Faculty of Arts requirements

Students undertaking the Bachelor of Arts are permitted to enrol in a range of subjects offered by other faculties, but must complete a minimum of 50 points of first year and 100 points of second/third year subjects in areas of study approved by the Faculty of Arts, see *Arts-approved subject requirement (p.4)* for more information.

Students wishing to undertake a major in computer science will need to plan their course carefully to ensure they meet both computer science prerequisites and Faculty of Arts requirements.

Please note that computer science is not available at fourth year for BA (Honours) students. Students interested in fourth year options are invited to contact the Department of Computer Science and Software Engineering.

Combined course students will not *usually* be eligible to enrol in any subject in this area of study: please consult a Faculty of Arts course adviser for more information.

Prerequisites

First year

Students are advised that a knowledge of VCE Mathematical Methods is assumed.

Second year

The prerequisites for all second year subjects are 433-141 Computing Fundamentals A (*p.13*), 433-142 Computing Fundamentals B (*p.13*).

Requirements for a major

Ordinary degree

A major in computer science consists of a minimum of ten 12.5 point subjects, totalling 125 points, plus 25 points of mathematics or statistics. It comprises:

First year	Sem.
Core subjects:	
433-141 Computing Fundamentals A (<i>p.13</i>)	1 rep 2
433-142 Computing Fundamentals B (<i>p.13</i>)	1 rep 2, Summer

In addition students should complete a mathematics requirement of at least 25 points at first year.

Second year	Sem.
Core subjects:	
433-252 Software Engineering Principles & Tools (<i>p.14</i>)	1 rep 2
433-253 Algorithms and Data Structures (<i>p.14</i>)	1 rep 2
433-254 Software Design (<i>p.14</i>)	1 rep 2
433-255 Logic and Computation (<i>p.14</i>)	1 rep 2

Third year	Sem.
Students should complete at least 50 points of third year computer science subjects, including at least four of:	
433-303 Artificial Intelligence (<i>p.15</i>)	1
433-313 Computer Design (<i>p.15</i>)	2
433-330 Theory Of Computation (<i>p.15</i>)	1
433-332 Operating Systems (<i>p.15</i>)	1
433-341 Software Engineering Process & Practice (<i>p.15</i>)	1
433-351 Database Systems (<i>p.16</i>)	1
433-353 Networks & Communications (<i>p.16</i>)	1 rep 2
433-361 Programming Languages Implementation (<i>p.16</i>)	2

Third year	Sem.
433-371 Interactive System Design (<i>p.16</i>)	2
433-380 Graphics and Computation (<i>p.17</i>)	2
433-385 Modelling, Analysis and Visualisation (<i>p.17</i>)	2

For more information

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