

COMPUTER SCIENCE AT UC WHICH DEGREE IS RIGHT FOR ME?

UC offers several ways to study Computer Science. The programme you choose will depend on your interests, career goals, and areas you want to focus on.

This flyer explains the degrees that allow you to pursue Computer Science at UC, outlining the differences between them and helping illustrate which path is best suited to you.

Bachelor of Computer Science (BCompSc)*

The Bachelor of Computer Science* is a dedicated degree built entirely around computing, with a strong emphasis on software development. It offers optional majors in Artificial Intelligence and Cybersecurity & Networking. A final-year capstone project offers a real-world challenge, where students apply their computer science knowledge to design, build and deliver an innovative solution, and gain industry-relevant experience employers are looking for.

Who the BCompSc suits:

- Students who are sure of their focus and are looking for a more direct and industry-aligned pathway that allows them to specialise early.
- Students who want depth in computing without the broader requirements of an accredited engineering degree.
- Students focused on computing innovation, research, or tech industry roles.

Bachelor of Science (BSc), Computer Science major

The Bachelor of Science with a Computer Science major is a science degree with a computing specialisation. It is a flexible degree that allows students to explore interdisciplinary subjects, with the option to add a second major.

Who the BSc (Computer Science major) suits:

- Students who want the option to double major (e.g. in psychology or math).
- Students who want breadth or are exploring multiple disciplines.
- Students pursuing a tech career who aren't yet sure of their direction or focus and want the flexibility to explore other disciplines alongside computing.
- Students who may prefer a lower mathematics workload in first year.

Bachelor of Engineering with Honours (BE Hons) in Software Engineering

The Bachelor of Engineering with Honours in Software Engineering is a professional engineering degree with a software engineering focus. It is an accredited degree that is structured around engineering principles and provides excellent industry experience via 800 hours of practical work.

Who the BE (Hons) in Software Engineering suits:

- Students who want to become a professional engineer with a software engineering focus.
- Students who want a specific pathway to becoming a Chartered Professional Engineer.
- Students interested in a deeper focus on the engineering practices needed to develop software at scale.

Comparing UC's Computer Science pathways

	Bachelor of Computer Science (BCompSc)	Bachelor of Science (BSc) (Computer Science major)	Bachelor of Engineering, Honours (BE (Hons)) in Software Engineering
Description	A dedicated, standalone computing degree.	A science degree with a computing specialisation.	A professional engineering degree with a Software Engineering focus.
Learning experience	Specialised and focused	Flexible and customisable	Practical, project-based and hands-on
Specialisations	AI and Cybersecurity majors available. Option to add minor (from another discipline).	Flexible with option to double major with other subjects	Engineering First Year (broad focus). Offering eight engineering disciplines, including Software Engineering
Career pathways	Developer, software specialist roles, AI/ML engineer, cybersecurity analyst, researcher.	Broader science-adjacent roles; computing may be core component.	Software architect, senior developer, QA specialist, team lead. Accredited pathway to Chartered Professional Engineer (CPEng).
Structure	Curriculum designed around computing from year one; includes capstone project component. Length: 3 years	Core science requirements plus majoring requirements. A minor in another discipline can be added. Length: 3 years	Flexible First Year with option to select one of eight engineering disciplines. Software Engineering specialisation from 2nd-4th year. Students gain substantial industry experience (800 hrs of practical work) and team work (final year-project). Length: 4 years
Postgraduate opportunities	BCompSc prepares students well for BSc (Hons) or the Master of Software Engineering. Students who have selected the AI major are also well placed for the Master of AI.	The BSc can go on to the BSc (Hons) or the Master of Software Engineering, but student preparation will depend on their course selection and how many credits of COSC they take in 3rd year.	BE(Hons) in Software Engineering provides an excellent pathway to a wide range of postgraduate programmes, including a PhD

Example First Year

Bachelor of Science (Computer Science major with a Psychology minor example)

SCIE 101	COSC 121	COSC 122	MATH 120	MATH 102	ELECTIVE PSYC105	ELECTIVE PSYC106	ELECTIVE PSYC107
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Bachelor of Computer Science

COSC 101	EMTH 118	EMTH 119	COSC 131	COSC 122	MATH 120	ELECTIVE Eg: INFO123	ELECTIVE Eg: PHYS101
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Bachelor of Engineering (First Year – Software Engineering)

ENGR 101	EMTH 118	EMTH 119	PHYS 101	COSC 131	COSC 122	MATH 120	ELECTIVE Eg: DIGI101 Eg: PROD112
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Find out more

If you'd like to discuss your options further, you can speak with one of our friendly Future Student Advisors.

Email: futurestudents@canterbury.ac.nz

Phone: 0800 VARSITY (0800 827 748)



Learn more
about Computer
Science at UC