SYSTEMS PROGRAMMING, MAJOR (0064)

Western Sydney University Major Code: 0064

Previous Code: M3114.1

Available to students in other Western Sydney University programs?
No

This major aims to develop graduates with sound skills in the discipline of programming. The focus is on programming at the level of system calls to the underlying operating system and many of the subjects use the industry standard language for systems programming, namely C/C++, as the vehicle of instruction. There is a strong emphasis on the development of highly efficient and reliable code that can provide support services for higher level application oriented programs, as well as the development of programs suitable for systems administration and management. Practical work utilises the Unix environment. This major is appropriate where a career in systems programming or systems administration is planned, or where the student wishes to develop advanced systems programming skills.

Location

Campus	Mode	Advice
Parramatta Campus - Victoria Road	Internal	A/Prof Yun Bai (https://directory.westernsydney.edu search/email/y.bai@westernsydney.edu.au)
Penrith Campus	Internal	A/Prof Yun Bai (https://directory.westernsydney.edu search/email/y.bai@westernsydney.edu.au)

Major Structure Current

This major structure applies to students who commenced in 2024 or later. If you commenced prior to 2024 please refer to the Structure 2022-23 tab for details.

This major is only available to students in Bachelor of Computer Science or Bachelor of Computer Science (Advanced).

Students must complete 80 credit points as follows.

Subject	Title	Credit Points
COMP 3013	Mobile Applications Development	10
COMP 3015	Operating Systems Programming	10
COMP 3027	Robotic Programming	10
COMP 2019	Systems Programming 1	10
Select three of the following:		30
COMP 3006	Computer Graphics	
INFO 3002	Ethical Hacking Principles and Practice	
COMP 2025	Introduction to Data Science	
COMP 3032	Machine Learning	
COMP 3020	Social Web Analytics	
COMP 2021	Software Engineering Fundamentals	
COMP 3028	Software Construction	
COMP 3033	Quantum Computing and Communication	
Select one of the following:		10
COMP 2009	Data Structures and Algorithms	
COMP 2030	Data Structures and Algorithms (Advanced)	
Total Credit Points		**80**

Major Structure 2022 - 2023

If you commenced in 2024 or later please refer to the Structure 2024 tab for details.

This major is only available to students in Bachelor of Computer Science or Bachelor of Computer Science (Advanced).

Students must complete 80 credit points as follows.

Subject	Title	Credit Points
COMP 2009	Data Structures and Algorithms	10
COMP 3013	Mobile Applications Development	10
COMP 3015	Operating Systems Programming	10
COMP 3027	Robotic Programming	10
COMP 2019	Systems Programming 1	10
INFS 3017	Web Systems Development	10
Select two of the following:		20
COMP 3006	Computer Graphics	
INFO 3002	Ethical Hacking Principles and Practice	
COMP 2025	Introduction to Data Science	
COMP 3032	Machine Learning	
COMP 3020	Social Web Analytics	
Total Credit Points		**80**

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

MATH 2009 Introduction to Data Science, replaced by COMP 2025 Introduction to Data Science

Related Programs

Bachelor of Computer Science (3506) (https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-computer-science/)

Bachelor of Computer Science (Advanced) (3634) (https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-computer-science-advanced/)