COMPUTATIONAL MATHEMATICS, TESTAMUR MAJOR (T118)

Western Sydney University Major Code: T118

Previous Code: MT3040.1

Available to students in other Western Sydney University programs? No

The power of modern computers adds substantial clout to traditional mathematical and statistical techniques — provided that you know how to make use of the opportunities that computers offer. Building on the Bachelor of Mathematics, this major equips graduates with the skills to make the best use of computational tools. You will learn how to use computers effectively as a mathematician or a statistician, with a focus on efficiency, reliability, and security. These skills are absolutely indispensable if you consider enrolling for an HDR degree, but they will also help you make a case in your next job application.

Location

Campus	Mode	Advice
Campbelltown Campus	Internal	Associate Professor Volker Gebhardt (https://directory.westernsydney.edu.au/search/email/v.gebhardt@westernsydney.edu.au)
Parramatta Campus - Victoria Road	Internal	Associate Professor Volker Gebhardt (https://directory.westernsydney.edu.au/search/email/v.gebhardt@westernsydney.edu.au)
Penrith Campus	Internal	Associate Professor Volker Gebhardt (https://directory.westernsydney.edu.au/search/email/v.gebhardt@westernsydney.edu.au)

Recommended Sequence

Students must successfully complete 80 credit points as per the recommended sequence below.

Full-time intake

Course	Title	Credit Points
Year 1		
Spring session		
COMP 2008	Computer Organisation	10
COMP 2014	Object Oriented Programming	10
	Credit Points	**20**
Year 2		
Autumn session		
COMP 2009	Data Structures and Algorithms	10
	Credit Points	**10**
Spring session		
INFO 3006	Information Security	10
	Credit Points	**10**

Course	Title	Credit Points
Year 3		
Autumn session		
MATH 3011	Probabilistic Models and Inference	10
COMP 3033	Quantum Computing and Communication	10
	Credit Points	**20**
Spring session		
INFS 3003	Artificial Intelligence	10
COMP 3020	Social Web Analytics	10
	Credit Points	**20**
	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

Part-time intake

Course	Title	Credit Points
Year 1		
Spring session		
COMP 2014	Object Oriented Programming	10
	Credit Points	**10**
Year 2		
Spring session		
COMP 2008	Computer Organisation	10
	Credit Points	**10**
Year 4		
Autumn session		
COMP 2009	Data Structures and Algorithms	10
	Credit Points	**10**
Spring session		
INFO 3006	Information Security	10
	Credit Points	**10**
Year 5		
Autumn session		
COMP 3033	Quantum Computing and Communication	10
	Credit Points	**10**
Spring session		
COMP 3020	Social Web Analytics	10
	Credit Points	**10**
Year 6		
Autumn session		
MATH 3011	Probabilistic Models and Inference	10
	Credit Points	**10**
Spring session		
INFS 3003	Artificial Intelligence	10
	Credit Points	**10**
	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 Mathematics (3778) (https://
hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-
mathematics/)