

BACHELOR OF COMPUTER SCIENCE (C2001) – 2025

(Specialisation : Algorithms and software)

Year 1 / Level 1 (48 credit points)

July/Oct Semester	FIT1045 Introduction to programming	FIT1047 Introduction to computer systems, networks and security	FIT1058 Foundations of computing Replace with: MAT1830 Discrete mathematics for computer science	Elective
February Semester	FIT1008 Fundamentals of algorithms Replace with: FIT2115 Data structures and algorithms 1	FIT1055 IT professional practice and ethics [12 points of FIT units]	Elective	Elective

Year 2 / Level 2 (48 credit points)

July Semester	FIT2014 Theory of computation [FIT1008 & (FIT1058 or MAT1830)]	FIT2102 Programming paradigms [FIT1008]	FIT2109 Computer science workshop [FIT1008]	Elective
February Semester	FIT2004 Algorithms and data structures Replace with: FIT3234 Data structures and algorithms 2	FIT2099 Object-oriented design and implementation [One of FIT1045, FIT1048, FIT1051, FIT1008]	FIT2094 Databases [FIT1045 or FIT1051]	Elective

Year 3 / Level 3 (48 credit points)

Year 3 / Levels (48 credit points)				
July Semester	FIT3161 Computer science project 1 [FIT1055, FIT2004, FIT2094, FIT2099 & 72 pts of study inc. 60 pts of FIT/MAT units]	FIT3155 Advanced data structures and algorithms [FIT2004]	FIT3143 Parallel computing [FIT2004]	Elective
Summer Semester	FIT3162 Computer science project 2 [FIT3161]			
February Semester	FIT3045 Industry-based learning (18 points) FIT3045 is equivalent to ONE Level 3 Algorithms and software Approved Elective (6 points) + TWO Level 3 Electives (12 points)			

List of elective units offered at the School of Information Technology, Monash University Malaysia.

The following electives are offered at both the Australia and Malaysia campuses. If you intend to apply for the [global intercampus program](#), please refer to the [course handbook](#) for electives which are offered specifically at the Australia campus. In addition to the minimum one level 3 computer science approved elective, you can utilize the elective slots in the course map to enrol for additional level 3 computer science electives.

Apart from the listed electives below, you may opt to enrol for electives offered by other courses at Monash University, provided that you fulfill the unit prerequisites. ***Please note that elective unit offerings may vary from year to year.***

Level 1 Electives

FIT1043 Introduction to data science
FIT1051 Programming fundamentals in JAVA

FIT1056 Introduction to software engineering
FIT1059 Artificial intelligence for everyone

Level 2 Electives

FIT2081 Mobile application development
FIT2086 Modelling for data analysis
FIT2093 Cybersecurity tools and techniques

FIT2100 Operating systems
FIT2101 Software engineering process & management
FIT2107 Software quality and testing

*Level 3 Algorithms and software Approved Electives

FIT3080 Artificial intelligence
FIT3159 Computer architecture

FIT3182 Big data management and processing

Level 3 Electives

FIT3003 Business intelligence & data warehousing
FIT3077 Software engineering: Architecture and design
FIT3134 Entrepreneurship
FIT3152 Data analytics
FIT3154 Advanced data analysis
FIT3179 Data visualisation
FIT3181 Deep learning
FIT3183 Malicious AI & dark side security

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Additional Notes

Credit points	Unless specified, all units are worth 6 credit points Bachelor of Computer Science 24 units x 6 credit points = Total of 144 credit points
Year Level Requirements	1) Normally 48 points and a maximum of 60 points of first year level units will be counted. 2) At least 36 points must be completed at third year level.
Unit requisites	All pre-requisite and co-requisite requirements must be undertaken to be able to enrol into a specific unit.
Duration of degree	3 years full-time
Course duration	You have a maximum of 8 years to complete this course including any periods of intermission and suspension and must be continuously enrolled throughout.
Monash University handbook	Students should follow the course requirements for the year the course was commenced https://www.monash.edu/students/handbooks/faculty-info/undergrad/it

The placement and offering of units may be rearranged or revised based on school resources or faculty planning.

If you opt for the IBL and the semester placement of FIT3045 differs from the above, and/or opt for an overseas exchange program, you may need to either overload a semester, undertake a summer unit or extend an additional semester in order to complete your course. Please consult the course coordinator.