

Bachelor of Computer and Information Sciences BCIS 2025

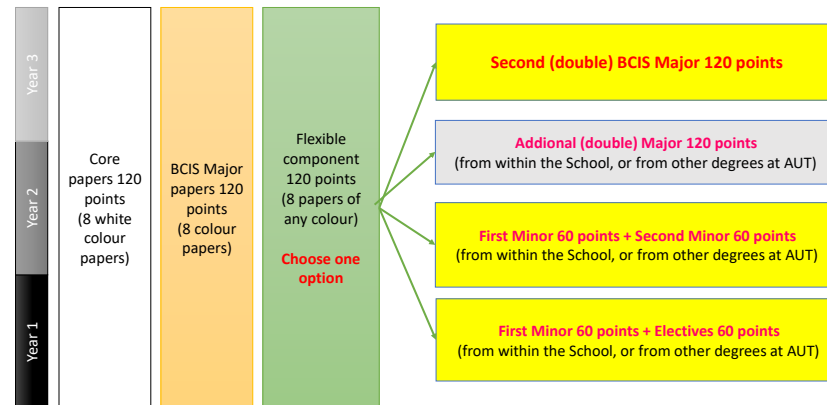
		Digital Services (DiS)	Networks and Cybersecurity (NC)	Software Development (SD)	Data Science (DaS)	Computer Science (CS)		
Year 1	CORE	COMP500 Programming Concepts and Techniques (S1, S2, SS)						
		COMP501 Computing Technology in Society (S1, S2)						
		DIGD507 Mahi Tahi: Collaborative Practices (S1, S2)						
		Choose ONE : MATH502 Algebra and Discrete Mathematics (S2), or MATH503 Mathematics for Computing (S1, S2, SS)					Artificial Intelligence (AI) Minor Only	
		COMP507 IT Project Management (S1, S2)					Students doing Data Science major cannot do AI minor	
	MAJOR	INF5502 Digital Services in IT (S2)	COMP504 Networks and Internet (S1, S2)	COMP503 Object Oriented Programming Programming (S1, S2) <i>Pre-req: COMP500/ENSE501</i>	COMP517 Data Analysis (S2)	COMP503 Object Oriented Programming (S1, S2) <i>Pre-req: COMP500/ENSE501</i>	COMP517 Data Analysis (S2)	
Year 2	MAJOR	INF5603 Needs Analysis, Acquisition and Training (S1)	COMP604 Operating Systems (S1, S2) <i>Pre-req: [COMP503/ENSE502/ENSE504] or COMP504</i>	COMP603 Program Design and Construction (S1, S2) <i>Pre-req: COMP503/COMP610/ENSE502</i>	COMP615 Foundations of Data Science (S1) <i>Pre-req: COMP517</i>	COMP610 Data Structures and Algorithms (S1, S2) <i>Pre-req: COMP503/ENSE502/ENSE602</i>	Choose TWO	
		INF5604 Service Modelling (S1)	COMP607 Information Security Technologies (S2) <i>Pre-req: COMP501</i>	COMP610 Data Structures and Algorithms (S1, S2) <i>Pre-req: COMP503/ENSE502/ENSE602</i>	COMP616 Statistics for Data Science (S1) <i>Pre-req: MATH502 or MATH503</i>	COMP611 Algorithm Design and Analysis (S2) <i>Pre-req: COMP610</i>	COMP610 Data Structures and Algorithms (S1, S2) <i>Pre-req: COMP503/ENSE502/ENSE602</i>	
		INF5605 Microservices (S2)	COMP609 Network and System Administration (S1) <i>Pre-req: COMP500 and COMP504</i>	COMP602 Software Development Practice (S1, S2) <i>Pre-req: COMP603 or COMP610</i>	STAT603 Forecasting (S2) <i>Pre-req: MATH502 or MATH503</i>	COMP613 Combinatorics and Graph Theory (S1) <i>Pre-req: COMP500 and [MATH502 or MATH503]</i>	COMP613 Combinatorics and Graph Theory (S1) <i>Pre-req: COMP500 and [MATH502 or MATH503]</i>	
		COMP603 Program Design and Construction (S1, S2) <i>Pre-req: COMP503/COMP610/ENSE502</i> (or) COMP607 Information Security Technologies (S2) <i>Pre-req: COMP501</i>	ENEL611 Computer Network Applications (S1) <i>Pre-req: COMP504 or ENEL504</i>	COMP604 Operating Systems (S1, S2) <i>[COMP503/ENSE502/ENSE504] or COMP504</i> (or) COMP611 Algorithm Design and Analysis (S2) <i>Pre-req: COMP610</i>	COMP610 Data Structures and Algorithms (S1, S2) <i>Pre-req: COMP503/ENSE502/ENSE602</i> (or) COMP613 Combinatorics and Graph Theory (S1) <i>Pre-req: COMP500 and [MATH502 or MATH503]</i>	COMP612 Computer Graphics Programming (S2) <i>[MATH503 or MATH502] and [COMP603 or COMP610]</i>	COMP615 Foundations of Data Science (S1) <i>Pre-req: COMP517</i>	
Year 3	CORE	COMP702 Research and Development Project (Part 1) (S1, S2)						
		COMP703 Research and Development Project (Part 2) (S1, S2)						
	MAJOR	Choose THREE		COMP715 Network Security (S2) <i>Pre-req: ENEL611</i>	COMP719 Applied Human Computer Interaction (S1)	COMP717 Artificial Intelligence (S1) <i>Pre-req: COMP500 or equivalent; 60 points at level 6 major</i>	COMP711 Theory of Computation (S2) <i>Pre-req: COMP610 or COMP613</i>	
		INF5704 Service Innovation and Design (S1) (or)		COMP714 Advanced Network Technologies (S2) <i>Pre-req: COMP609</i>				COMP700 Text and Vision Intelligence (S2) (or)
		COMP718 Information Security Management (S1) (or)		COMP729 Enterprise Networks (S2) <i>Pre-req: COMP504/ENEL504</i>	ENSE701 Contemporary Issues in Software Engineering (S1, S2) <i>Pre-req: COMP603 or [COMP610/ENSE600]</i>	COMP723 Data Mining and Knowledge Engineering (S2)	COMP712 Programming Languages (S2) <i>Pre-req: COMP603/ENSE502</i>	COMP701 Nature Inspired Computing <i>Pre-req: COMP500 (S1)</i> (or)
		COMP726 Blockchains and Cryptocurrencies (S2) (or)		COMP716 Highly Secure Systems (S1) <i>Pre-req: COMP611 or [ENGE501 and COMP610]</i>	COMP713 Distributed and Mobile Systems (not running) <i>Pre-req: COMP611</i> (or)	COMP700 Text and Vision Intelligence (S2) (or)	COMP713 Distributed and Mobile Systems (not running) (or)	COMP717 Artificial Intelligence (S1) <i>Pre-req: COMP500 or equivalent; 60 points at level 6 major</i>
COMP728 IoT and Applications (S2)		COMP718 Information Security Management (S1)	COMP721 Web Development (S1) <i>Pre-req: COMP603/ENSE600</i>	COMP701 Nature Inspired Computing <i>Pre-req: COMP500 (S1)</i>	COMP719 Applied Human Computer Interaction (S1)			

S1: Offered in Semester 1
 S2: Offered in Semester 2
 SS: Offered in Summer Semester
 Pre-req: Prerequisite paper(s)
 Note:

All courses are 15 points
 MATH502 is highly recommended for Computer Science major as a replacement for MATH503 (core)

Software Development Major (Game programming pathway)
(COMP612 and COMP710) can replace (COMP602 and COMP713/COMP721) only if BOTH (COMP612 and COMP710) are taken
COMP612 Computer Graphics Programming (S2) <i>Pre-req: [MATH503 or MATH502] and [COMP603 or COMP610]</i>
COMP710 Game Programming (S2) <i>Pre-req: COMP612</i>

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Notes:

- **Additional Major:** Subject to the conditions set out on the Additional Major requirements, students can take up an additional major (120 points) from either within the School or from other degrees at AUT <https://www.aut.ac.nz/study/study-options/Additional-majors-and-minors-for-bachelors-degrees>
- **Minors:** Students can choose at least one (up to two) additional minor (60 points each) within the School or from other degrees in AUT but subject to the conditions set out on the Minor requirements <https://www.aut.ac.nz/study/study-options/Additional-majors-and-minors-for-bachelors-degrees>
- **Electives:** Students who are doing a single major and single minor can choose 4 elective papers (60 points) at any level (5, 6 or 7) to make up the 120 points in the flexible component. They can be from within the School or from other degrees in AUT as long as the content doesn't overlap with any of the completed papers.
- **Artificial intelligence minor** is not available to students taking the Data Science major.
- **Double major** student, your two majors can have up to 30 points in common to meet the major requirement (i.e., COMP503 count toward Software Development and Computer Science Major). **You still need 360 points in total from different courses to complete your degree.**
- **Software Development Major and Computer Science Minor** students cannot count COMP503 towards both major/minor, they must take an additional level 6/7 course in their CS minor, and vice versa.
- **COMP702 and COMP703:** Students can enrol in the Research and Development Project courses once they have completed all level 5 and 6 core and major courses.
- **Course level** is the first digit of the numeric part of the alphanumeric paper code (E.g., COMP607 is a level 6 course). Generally you can take the courses during any year of study as long as you met the pre-prerequisite

Please contact the CMS Undergrad Team (program administrators): cmsundergrad@aut.ac.nz for further details and help with enrolment.