

Level 7 - CH3866 Bachelor of Information and Communication Technologies (BICT) - 2019



The following information applies to students starting the Bachelor of ICT in 2019. Students who started prior to 2019 should refer to the pre-2019 version of this document

1st Semester	BCIS105 IT Practitioner Fundamentals	BCDE101 Introduction to Programming	BCCS199 Operating Systems	BCCS153 Computer Systems Architecture
2nd Semester	BCIS106 Computational Methods	BCDE102 Introduction to Software Engineering	BCDE103 Database Design	BCCS191 Introduction to Networks

What courses do you need to take?

Everyone does the same eight compulsory courses in the first two semesters.

Entry requirements (in brief): 60 NCEA Level 3 credits including 14 credits at Level 3 in each of:

- mathematics or physics or statistics or accounting
- English or history or art history or classics or geography or economics
- one other subject from the list of approved subjects

Please check formal documents for full details and alternatives.

After the first two semesters you choose your preferred specialist pathway - **Software Development, Networking and Infrastructure** or **Information Systems**.

The compulsory courses in each of these pathways are listed below. See the next page for information about Elective courses.

	Software Development Pathway				Networking and Infrastructure Pathway				Information Systems Pathway			
3rd Semester	BCIS207 Enterprise Solutions Deployment	BCDE211 Best Program. Practices (Web & Mobile Dev.)	BCDE215 Web Development	ELECTIVE See options next page	BCIS207 Enterprise Solutions Deployment	BCCS283 Network Infrastructure	BCCS292 Routing & Switching Essentials	ELECTIVE See options next page	BCIS207 Enterprise Solutions Deployment	BCIS211 Research of Information Solutions	BCIS212 Intro. to Enterprise Solutions Architecture	ELECTIVE See options next page
4th Semester	BCIS208 IT Service Management	BCDE214 Database Administration	BCDE213 Interactive Media Development	ELECTIVE See options next page	BCIS202 IT Service Management	BCCS254 System Infrastructure	BCCS293 Scaling Networks	ELECTIVE See options next page	BCIS202 IT Service Management	BIS213 Intro. to Enterprise Intelligence & Analytics	BCIS312 Enterprise Solutions Architecture	ELECTIVE See options next page
5th Semester	BCIS303 Information Technology Governance	BCDE311 Software Development Project	ELECTIVE see options next page	ELECTIVE see options next page	BCIS303 Information Technology Governance	BCCS355 Cloud Services	ELECTIVE see options next page	ELECTIVE see options next page	BCIS303 Information Technology Governance	BIS313 Enterprise Intelligence & Analytics	ELECTIVE see options next page	ELECTIVE see options next page
6th Semester	BCIS302 Managing Information & Cybersecurity	BCIS309 Work Integrated Learning Project (45 credits - equivalent to 3 courses)			BCIS302 Managing Information & Cybersecurity	BCIS309 Work Integrated Learning Project (45 credits - equivalent to 3 courses)			BCIS302 Managing Information & Cybersecurity	BCIS309 Work Integrated Learning Project (45 credits - equivalent to 3 courses)		

Colour code:

- Compulsory courses that everyone must do.
- Compulsory courses for that particular specialist pathway - everyone choosing that pathway must do these.
- Elective courses - see the next page for possible options.

How do the levels work?

BCXX course codes starting with a 1 are at Stage 1 of the degree which is Level 5, codes starting with a 2 are at Stage 2 which is Level 6, codes starting with a 3 are at Stage 3 which is Level 7, eg BCIS105 is a Level 5 course, BCDE211 is a Level 6 course, BCIS303 is a Level 7 course. For non-BCXX course codes the level of the course is the 1st digit in the code, eg DNET601 is a Level 6 course.

For advice about courses contact:

Information Systems pathway or general information: Mehdi Asgarkhani - room N215, phone 940 8126, email Mehdi.Asgarkhani@ara.ac.nz

Software Development pathway: Dr Mike Lance - room S661, phone 940 8318, email Michael.Lance@ara.ac.nz

Networking pathway: Dr Ed Correia - room S259, phone 940 8272, email Eddie.Correia@ara.ac.nz

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Electives ('green' boxes on previous page)

You must complete 60 credits of elective courses, this usually means choosing 4 elective courses worth 15 credits each. It is possible to include up to 30 credits as unspecified electives from other Ara qualifications, or qualifications from other institutions, subject to approval by the Academic Leader Mehdi Asgarkhani, to ensure alignment of the graduate profile outcomes and that content is not replicated in courses. It is also possible to use compulsory courses from another specialist pathway as an elective course in your specialist pathway. The following list shows the courses offered by the Department of Computing that can be used as electives, each of these is worth 15 credits. For each specialist pathway the table below indicates how strongly staff recommend the course for someone seeking to specialise in each area.

Code and Course Title		Pre-requisite	How suitable is the elective for this specialist pathway?		
			Software Development	Networking and Infrastructure	Information Systems
BCCS253	Directory Services	BCCS191	Not that relevant	Recommended	Not that relevant
BCCS254	System Infrastructure	BCCS283	Not that relevant	Compulsory can't be elective	Not that relevant
BCCS283	Network Infrastructure	BCCS191	Not that relevant	Compulsory can't be elective	Recommended
BCCS292#	Routing & Switching Essentials	BCCS191	Not that relevant	Compulsory can't be elective	Not that relevant
BCCS293#	Scaling Networks	BCCS292	Not that relevant	Compulsory can't be elective	Not that relevant
BCCS294#	Connecting Networks	BCCS292	Not that relevant	Recommended	Not that relevant
BCCS350	Advanced Networking	BCCS294	Not that relevant	Recommended	Not that relevant
BCCS355	Cloud Services	BCCS283 or L6 Programming course	Recommended	Compulsory can't be elective	Not that relevant
BCCS381	Spec. Topic - Networking Infrastructure	60 credits of L6 Networking pathway courses	Not that relevant	Recommended	Not that relevant
BCDE211	Best Prog. Practices (Web & Mobile Dev)	BCDE102	Compulsory can't be elective	Not that relevant	Recommended
BCDE213	Interactive Media Development	BCDE215	Compulsory can't be elective	Not that relevant	Recommended
BCDE214	Database Administration	BCDE103	Compulsory can't be elective	Recommended	Recommended
BCDE215	Web Development	Nil	Compulsory can't be elective	Not that relevant	Recommended
BCDE221	Software Engineering	BCDE102	Recommended	Not that relevant	Suitable
BCDE222	Best Programming Practices (C# .NET)	BCDE102	Recommended	Not that relevant	Suitable
BCDE223	Best Programming Practices (Java)	BCDE102	Recommended	Not that relevant	Suitable
BCDE224	Best Prog. Practices (Server-side Prog. PHP)	BCDE102	Recommended	Not that relevant	Suitable
BCDE311	Software Development Project	45 credits of L6 Soft. Dev. pathway courses	Recommended	Not that relevant	Suitable
BCDE321	Advanced Programming	45 credits of L6 Soft. Dev. pathway courses	Recommended	Not that relevant	Suitable
BCIS206	Professional Practice	Nil	Suitable	Suitable	Suitable
BCIS211	Research for Information Solutions	BCIS105 & BCIS106	Suitable	Not that relevant	Compulsory can't be elective
BCIS212	Intro. to Enterprise Solutions Architecture	Nil	Suitable	Not that relevant	Compulsory can't be elective
BCIS213	Intro. to Enterprise Intelligence & Analytics	BCIS105 & BCIS106	Suitable	Not that relevant	Compulsory can't be elective
BCIS312	Enterprise Solutions Architecture	BCIS212	Suitable	Not that relevant	Compulsory can't be elective
BCIS313	Enterprise Intelligence & Analytics	BCIS213	Suitable	Not that relevant	Compulsory can't be elective
BCIS321	Special Topic in Information Systems	60 credits of L6 Info. Systems pathway courses	Suitable	Not that relevant	Recommended
BCIT388	Mobile Technology	60 credits at Level 6	Suitable	Not that relevant	Recommended
DNET601	Wireless Local Area Networks	BCCS191	Not that relevant	Recommended	Not that relevant
DNET602	Network Security	BCCS292	Not that relevant	Recommended	Not that relevant
DNET603	Unified Communication	BCCS191	Not that relevant	Recommended	Not that relevant
DSYS601	Systems Deployment	BCCS283 & BCCS253	Not that relevant	Recommended	Not that relevant

#Collectively BCCS191, BCCS292, BCCS293 and BCCS294 cover the curriculum required for the Cisco Certified Network Associate (CCNA) certification.

Note: Some elective courses may not be offered every semester.