

BACHELOR OF COMPUTING SYSTEMS 2022



Information for International applicants

Napier Campus

If you are looking for an applied computing qualification that will give you a wide range of IT skills together with the ability to cope with technological changes in the IT world, then look no further. Your IT future starts here.

The Bachelor of Computing Systems (BCS) will equip you with foundation knowledge of computer hardware, networking communications and security, data and databases, information systems and IT management, systems analysis, design, and development, and internet and mobile technologies.

Depending on the stream of courses you select, you will develop the ability to design and implement high quality IT solutions within your specialisation, and apply the professional processes necessary to achieve successful outcomes for organisations.

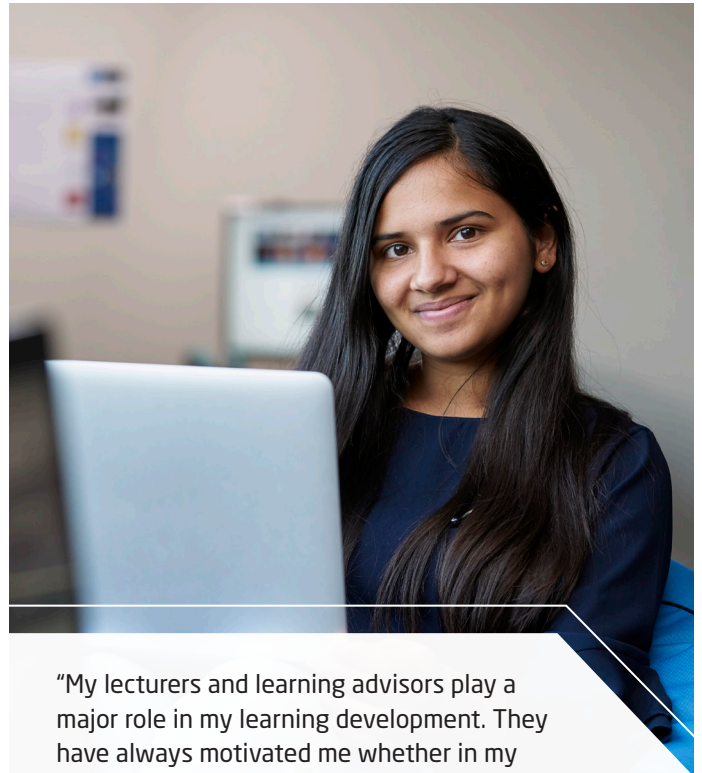
To graduate with an endorsed degree in one of the following majors, you will need to ensure selection and passes in the required course of study.

Systems Development

Support & Infrastructure

Information Systems

Intelligent Systems



“My lecturers and learning advisors play a major role in my learning development. They have always motivated me whether in my personal development or in my learning.”

PARNEET SAINI | India

CAREER OUTCOMES

Possible job and career opportunities can include:

- IT Support / Helpdesk
- Systems Analyst
- Web Designer
- Project Management
- Data Analyst
- Network Support
- Database Administrator
- E-commerce
- Software Developer
- IoT Technician

CAREER OUTLOOK

Visit the following websites for the latest information about job opportunities in New Zealand for your chosen career path.

CareersNZ offers a range of tools to help you explore jobs and plan your career: careers.govt.nz

For extensive information on labour supply and demand for occupations visit: occupationoutlook.mbie.govt.nz

For information about the Long Term Skill Shortage List visit: skillshortages.immigration.govt.nz

Qualification

Bachelor of Computing Systems (with majors in Systems Development, Support and Infrastructure, Information Systems, Intelligent Systems, or unendorsed)

Level

Level 7

Length

Three years

Start dates

14 Feb, 18 July

Fees

NZ\$ 21,100 per year

IELTS

6.0 (academic) with no band score lower than 5.5 or equivalent.

Total credits

3 years (360 credits) - 120 credits per year

Class times

Classes are scheduled between 8.00am and 5.00pm Monday - Friday. Full-time study would include FOUR concurrent courses per semester. Each course will ordinarily have 4-hours of scheduled classroom and laboratory on-campus teaching each week.

Self-directed Study

Approximately two hours for each classroom hour

WHAT YOU WILL LEARN

The BCS programme equips graduates with the skills and practices to achieve entry-level IT positions to pursue a professional career in the industry. In particular, the programme is designed to:

- prepare graduates to be effective in a variety of professional roles, applying the technical expertise required by their endorsed discipline;
- provide a well-defined and relevant curriculum, whilst incorporating flexibility to enable rapid adoption of new technologies;
- promote professionalism and independence in learning;
- provide flexible study modes and the capacity to develop individual study initiatives and directions;
- provide components which incorporate problem solving, analysis and research.

WORK EXPERIENCE

The Bachelor of Computing Systems aims to produce graduates who have a broad range of practical skills. The majority of courses have a significant practical component.

The compulsory Level 7 Project, which is viewed as the “capstone” of the degree, requires students to either complete an internship embedded within a local organisation, or undertake analysis and development work for a business client. The project is taken in the last semester of study and is equivalent to 600 hours of work.

FACILITIES

In the state-of-the-art Information Technology Complex there are nine networked computer laboratories with between 24 and 30 student stations in each. The rooms are environmentally controlled, with data show equipment in each room. There are specific labs for software development, hardware, multimedia and a room for computer study. The facility also has a 50-seat tiered lecture theatre.

ENTRY CRITERIA

ACADEMIC ENTRY REQUIREMENTS

Students must have successfully met degree entry-level standards equivalent to NZ University Entrance Level 3, including sufficient mathematics and english credits.

ENGLISH LANGUAGE ENTRY REQUIREMENTS

PTE (Academic) score of 50 with no band score lower than 42 or IELTS (Academic) score of 6.0 with no band score lower than 5.5 (or equivalent) achieved within the last 2 years.



COURSE LIST

To qualify for the BCS, students must have passed degree courses at Level 5 to 7 worth 360 credits, including an industry-based project course of 60 credits, which is taken in the last semester of study. The structure of the degree is summarised in the following table. Please note, compulsory subjects and pre-requisites will apply to some courses.

Level	5	6	7	6 to 7	Total
Credits	120	120	90	30	360

LEVEL 5

		CREDITS
ITIS5.450	Information Systems	15
ITUX5.210	UX and UI Fundamentals	15
ITDT5.220	Introduction to Data Concepts	15
ITPM5.240	Agile Projects	15
ITPF5.110	Programming Fundamentals	15
ITWD5.130	Website Development	15
ITCS5.100	Computer System Architecture	15
ITCT5.120	IT Concepts and Tools	15

LEVEL 6

		CREDITS
ITPM6.318	Project Management	15
ITSD6.348	Systems Analysis	15
ITSD6.349	Systems Design	15
ITPR6.508	Advanced Object Oriented Programming	15
ITHW6.238	Electronics and IoT	15
ITPR6.358	User Experience & User Interfaces	15
ITPR6.518	Enterprise Software Development	15
ITDB6.208	Database Management Systems	15
ITOS6.608	Operating Systems	15
ITAE6.100	Automation and Embedded Systems	15
ITMA6.240	Maths in IT	15
ITKM6.398	Knowledge Management	15
ITWD6.408	Advanced Internet and Web Page Development	15
ITDC6.218	Data Communications and Networking	15
ITNA6.258	Advanced Networking and the Cloud	15
ITDF6.100	Digital Forensics Fundamentals	15

LEVEL 7

		CREDITS
ITST7.408	Special Topic	15
ITSY7.668	Cybersecurity	15
ITDA7.240	Data analytics	15
ITPR7.508	Business Application Programming	15
ITWD7.358	Web Application Programming	15
ITEC7.398	E-Business Strategies	15
ITHW7.238	Enterprise Support and Infrastructure	15
ITAI7.110	Machine Learning and Artificial Intelligence	15
ITFM7.120	Mechatronics in IT	15
ITCP7.001	Capstone 1	30
ITCP7.002	Capstone 2	30
ITGA7.100	GIS Analytics	15

COURSE DESCRIPTIONS

NB: Courses are offered subject to sufficient enrolments being received. In the following descriptions:

P= Pre-requisite – courses which must be studied before

C= Co-requisite – courses which can be studied before or at the same time

LEVEL 5 COURSE NO.	BRIEF DESCRIPTION	CREDITS	LEVEL
ITIS5.450	Information Systems To provide students with an economic and organisational context and the skills to identify requirements and suitable solutions in the application of Information Technologies and Systems.	15	5
ITUX5.210	UX and UI Fundamentals To equip students with knowledge and skills to elicit requirements for human-computer interfaces, and to design, prototype, and evaluate user experiences and interface designs.	15	5
ITDT5.220	Introduction to Data Concepts To provide students with fundamental knowledge and skills of the data concepts central to all Information Systems.	15	5
ITPM5.240	Agile Projects To provide students with fundamental project management concepts and skills experienced in an IT context.	15	5
ITPF5.110	Programming Fundamentals To provide students with the core knowledge and skills to use software development tools to create a working application to meet given requirements	15	5
ITWD5.130	Website Development To provide students with the knowledge and skills to create a static website that meets a specific client brief.	15	5
ITCS5.100	Computer Systems Architecture This course provides students with the knowledge and skills required to successfully plan, construct, optimise and maintain a modern PC-based computer system, with emphasis placed on safe and effective industry practices.	15	5
ITCT5.120	IT Concepts and Tools To provide students with the knowledge and skills of IT tools and concepts used within organisations and their impact on business and professional communication practices.	15	5
LEVEL 6 COURSE NO.	BRIEF DESCRIPTION	CREDITS	LEVEL
ITAE6.100	Automation and Embedded Systems To introduce students to the theory and application of automation with some focus on how to build solutions to real-world problems using embedded systems. P: ITCS5.100 Computer System Architecture C: ITHW6.238 Electronics and IoTT	15	6
ITDB6.208	Database Management Systems To provide the students with the knowledge and skills to apply the principles of data design and management using database software, and enable them to create and implement a database with standard development tools. P: ITDT5.228 Introduction to Data Concepts	15	6
ITDC6.218	Data Communications and Networking To equip students with practical skills in switched networking environments. Students will apply the knowledge from level 5 Computer System Architecture to design and implement and networks using modern data communications tools and equipment. P: ITCS5.100 Computer System Architecture	15	6
ITHW6.238	Electronics and Internet of Things Technology To provide students with the knowledge of electronics and the technical skills to work in a computing hardware setting P: ITCS5.100 Computer System Architecture	15	6
ITKM6.398	Knowledge Management To provide students with the knowledge and skills of explicit mechanisms to retain and use institutional knowledge and the practical strategies to implement KM programmes into the workplace. P: ITIS5.450 Information Systems	15	6

ITMA6.240	Maths in Information Technology To provide students with the knowledge and skills of mathematics theory and its use in general and applied IT. P: ITDT5.228 Introduction to Data Concepts	15	6
ITNA6.258	Advanced Networking and the Cloud To provide the students with general knowledge of a Network Operating System and the necessary skills to install and carry out various administrative tasks P: ITCS5.100 Computer System Architecture C: ITDC6.218 Data Communications and Networking	15	6
ITOS6.608	Operating Systems To provide the students with a general understanding of a modern operating system and the necessary skills to install and carry out various administrative tasks. P: ITCS5.100 Computer System Architecture	15	6
ITPM6.318	Project Management To provide students with the knowledge and skills in formal project methodologies in business and IT and the applications of best-practice project management frameworks and techniques to select, plan, execute, and control projects to successful conclusion.	15	6
ITPR6.358	User Experience & User Interfaces To provide the students with knowledge and skills of industry based theory and methods for the design and development of successful user interfaces, user experience (UX) design and prototyping.	15	6
ITPR6.508	Advanced Object Oriented Programming To provide students with the knowledge and skills to design and develop software using all the facilities of an object-oriented programming language and design modelling and concepts P: ITPF5.110 Programming Fundamentals	15	6
ITPR6.518	Enterprise Software Development To provide students with the knowledge and skills to design, develop, maintain and deploy software to support enterprise systems applications. P: ITPR6.508 Advanced Object-Oriented Programming	15	6
ITDF6.100	Digital Forensics Fundamentals To equip students with the knowledge and skills to use appropriate computer forensics tools and techniques to contribute towards evidence gathering. P: ITSD6.348 Systems Analysis	15	6
ITSD6.348	Systems Analysis To provide students with the knowledge and skills to analyse complex information systems, identify problems and requirements as well as document and model these findings using appropriate methods, tools, and diagrams. P: ITIS5.540 Information Systems ITDT5.228 Introduction to Data Concepts	15	6
ITSD6.349	Systems Design To provide students with the knowledge and skills to design and document simple and complex information systems solutions using the appropriate modelling, prototyping, and documentation tools and methods. P: ITSD6.348 Systems Analysis	15	6
ITWD6.408	Advanced Internet & Web Page Development To provide the students with the knowledge and skills of the client-side web development and website management. P: ITWD5.130 Website Development	15	6
LEVEL 7 COURSE NO.	BRIEF DESCRIPTION	CREDITS	LEVEL
ITAI7.110	Machine Learning and Artificial Intelligence To provide students with the knowledge and skills to apply machine learning and artificial intelligence theories and technologies to solve real-world problems P: ITAE6.100 Automation and Embedded System ITHW6.238 Electronics and IoT	15	7
ITDA7.240	Data Analytics To provide students with the knowledge and skills to use industry standard data analysis tools and techniques and present meaningful and useful information. P: ITPF5.110 Programming Fundamentals ITDT5.228 Introduction to Data Concepts ITDB6.208 Database Management Systems ITMA6.240 Maths in IT	15	7

ITEC7.398	E- Business Strategies To provide students with the knowledge and skills to evaluate and analyse the drivers of successful e-business strategies for organisations. P: ITEC6.398 Knowledge Management	15	7
ITFM7.120	Mechatronics in IT To provide students with knowledge and skills of feedback control, electro-mechanical system interfaces, software and electronics that enable robotics. P: ITAE6.100 Automation and Embedded System ITHW6.238 Electronics and IoT C: ITAI7.110 Machine Learning and artificial intelligence	15	7
ITHW7.238	Enterprise Support and Infrastructure To provide students with the technical knowledge and skills to plan, prepare and manage a range of enterprise technologies, configurations, and infrastructure. P: ITET6.238 Electronics and Technology in IT ITDC6.218 Data Communications and Networking	15	7
ITPR7.508	Business Application Programming To provide students with the knowledge and skills to develop a business application from a specification. P: ITPR5.518 Introduction to Object Oriented Programming ITPR6.508 Advanced Object Oriented Programming ITWD6.408 Advanced Internet and Web Page Development	15	7
ITSY7.668	Cybersecurity To provide students with the knowledge and skills to apply information systems security/ forensics concepts, identify security risks and make contingency plans and policies. P: ITDC6.218 Data Communications & Networking	15	7
ITWD7.358	Web Application Programming To provide students with the knowledge and skills to develop client-server web-based applications. P: ITPR5.518 Introduction to Object Oriented Programming ITIM5.238 Internet and Mobile Technology ITWD6.408 Advanced Internet and Web Page Development	15	7
ITST7.408	Special Topic	15	7
ITGA7.100	GIS Analytics To provide students with the knowledge and skills to use appropriate GIS analytics tools and techniques to present meaningful and useful GIS information. P: ITDB6.208 Database Management Systems	15	7
ITCP7.001	Capstone Part 1 To provide the students with the knowledge and skills to undertake an in-depth focussed investigation into aspects of a chosen Information Technology domain. P: A pass in ALL Level 5 and 6 courses	30	7
ITCP7.002	Capstone Part 2 To provide students with the opportunity to apply the knowledge and skills gained during their computing studies in an organisational context P: A pass in ALL Level 5 and 6 courses	30	7

EIT is now part of Te Pūkenga - New Zealand Institute of Skills and Technology

Te Pūkenga will bring together New Zealand's Institutes of Technology, Polytechnics, and Industry Training Organisations to build a network of on-campus, online, offshore and work-based education and training. The quality of education we deliver will not only remain, it will be strengthened by being part of the extensive Te Pūkenga network. From 2023 your enrolment will transfer to Te Pūkenga and you will become part of the extensive Te Pūkenga network in New Zealand.



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