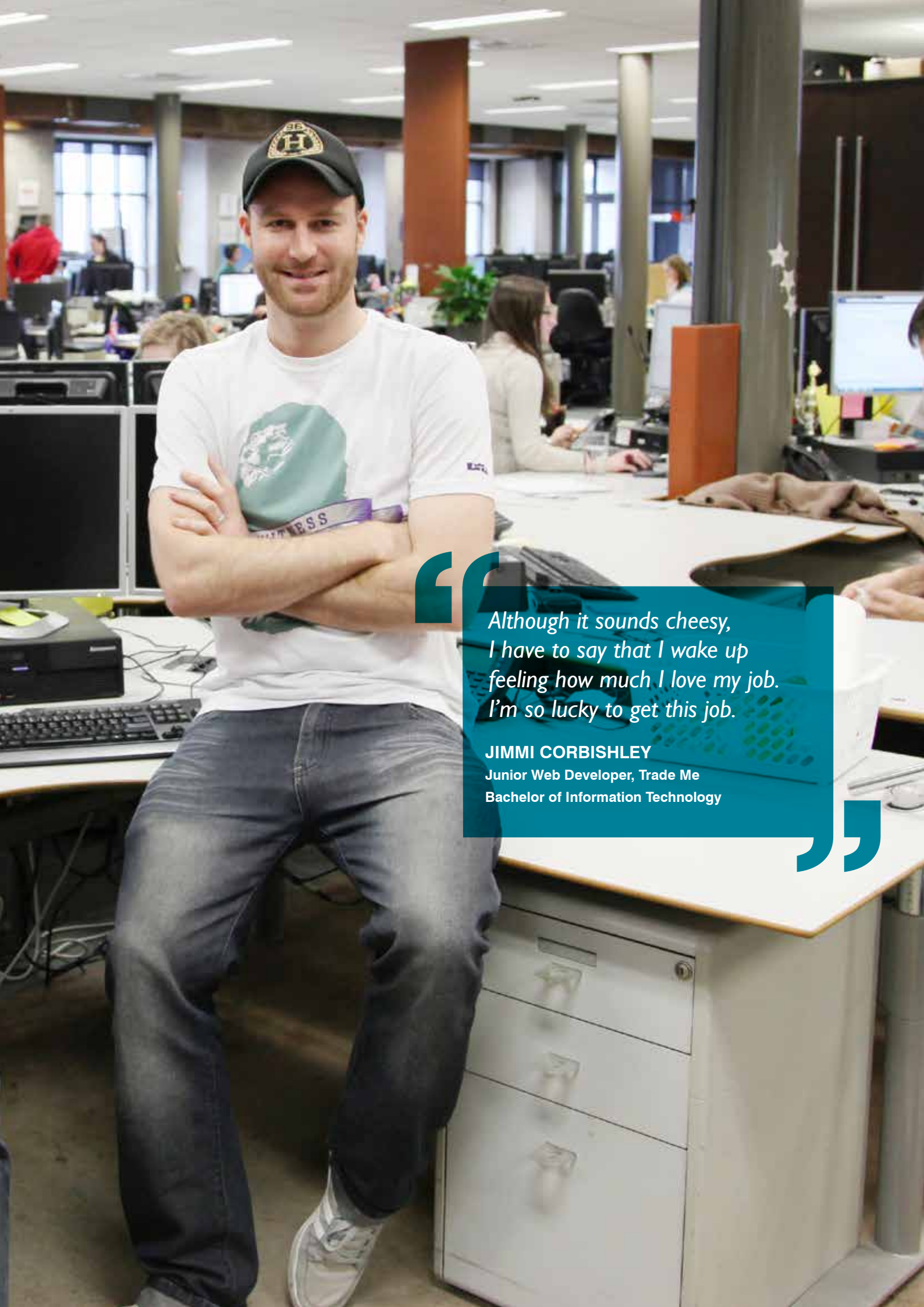# Information Technology

WelTec
2014 PROGRAMME GUIDE

SOFTWARE ENGINEERING | INFORMATION SECURITY
NETWORK ADMINISTRATION | WEB TECHNOLOGIES
PROGRAMMING | INTERACTIVE COMPUTING
GAME DESIGN | COMPUTER SERVICING

WelTec
Wellington Institute of Technology
Te Whare Wānanga o te Awakairangi

> "Although it sounds cheesy, I have to say that I wake up feeling how much I love my job. I'm so lucky to get this job.

JIMMI CORBISHLEY
Junior Web Developer, Trade Me
Bachelor of Information Technology

Information and Communication Technologies (ICT) is a booming industry worth an estimated $18 billion* in New Zealand alone. An IT qualification from WelTec provides you with a comprehensive and applied understanding of Information Technology to ensure you graduate work-ready and in-demand.

Gain a national qualification locally

As educators we understand that students often learn best by doing. That's why we provide students with the best of both theory and practice. Studying with WelTec you will gain a hands-on learning experience with practical lab-work and industry-based projects.

Real-world skills and Cadetships

Our close contact with industry ensures that you learn skills that are current and relevant to today's marketplace. Through WelTec you will also have the opportunity to apply for a cadetship. Cadetships with prominent IT companies may offer you the opportunity to gain paid work experience and a contribution towards your study fees.

The right tools to build your career in IT

Create your next IT project with access to a range of specialised facilities, equipment sets and resources. These include computer labs with PCs optimised for virtualised student environments, training servers (Linux, Cisco etc.), and a hardware lab with repair, maintenance and test facilities and specialised tool sets.

COURSE	LEVEL	LENGTH	OPTIONS	PAGE
Certificate in Computing	4	17 weeks	Full & Part-time	4
Diploma in Computer Servicing	5	34 weeks	Full & Part-time	4
Certificate in Network Administration (CiNA)	6	34 weeks	Part-time	6
Software Testing (Foundation)	6	21 weeks	Part-time	6
Certificate in Web Technologies	6	39 weeks	Part-time	7
Bachelor of Information Technology	7	3 years	Full & Part-time	7
Graduate Diploma in Information Assurance and Security	7	34 weeks	Full & Part-time	18
Graduate Diploma in Information Technology	7	34 weeks	Full & Part-time	18

Test centre

Studying at WelTec you will also have the option to complement your studies with industry certifications at our Prometric, Pearson VUE Select, Kryterion HOST and Castleworldwide testing centres located on our Petone Campus.

Our qualifications satisfy employers

Results of WelTec's latest Employer Satisfaction Survey show our industry partners are confident our graduates meet their needs in the work-place. Employers tell us that WelTec students graduate with relevant skills ready to make an immediate contribution.

Certificate in Computing

Start Date: March and July
Duration: 17 weeks (Full-time) (Part-time options available)
Location: Petone Campus
Programme Code: HV4472 **Level 4**
Credits: 60

This introductory 17-week certificate will provide you with foundation knowledge of automated office applications by understanding macros and how to write and control office applications using the right software. Learn how to install, configure and maintain the standard technology required for a personal computer and grow your understanding of the internet and its applications for small offices and the home.

PROGRAMME OVERVIEW

> Gain knowledge of PC components
> Develop skills around installation and trouble shooting of operating systems
> Learn about networking
> Learn about use of technologies to access the internet
> Learn skills in IP addressing and routing
> Demonstrate and apply knowledge of the Web application
> Develop an understanding of security issues and IT ethics

PROGRAMME STRUCTURE

This programme comprises 60 credits:

CODE	COURSE	CREDIT
IC4000	Automating Office Systems	15
IC4001	Basic PC Maintenance	15
IC4003	Investigation using Computer Technology	15
IC4004	Internet Technology	15

For complete course descriptions please refer to
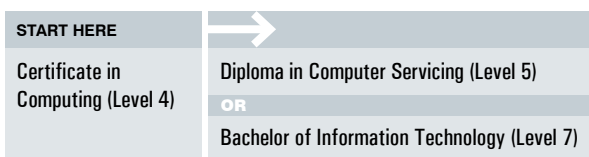**www.weltec.ac.nz/it**

ENTRY REQUIREMENTS

You will need to have a minimum of 48 credits at NCEA Level 1 including 8 credits in literacy (reading and writing) and 8 credits in numeracy (Maths) or relevant computing experience. If you are 20 years or older at the time you start your studies, you are entitled to apply to WelTec under special admission criteria.

If English is your second language, a minimum IELTS (Academic) score of 5.5 with no band score lower than 5, is required.

FURTHER STUDY OPTIONS

On completion of the Certificate in Computing (Level 4), you can continue on to further study with the Diploma in Computer Servicing (Level 5) (which includes Helpdesk Support), or the Bachelor of Information Technology (Level 7).

START HERE	
Certificate in Computing (Level 4)	Diploma in Computer Servicing (Level 5)
	OR
	Bachelor of Information Technology (Level 7)

CAREER OPPORTUNITIES

Your employment opportunities are enhanced within the field of Information Technology including Business/IT computing.

Diploma in Computer Servicing

Start Date: March and July
Duration: 34 weeks (Full-time) (Part-time options available)
Location: Petone Campus
Programme Code: HV4380 **Level 5**
Credits: 120

Gain the expertise required to work successfully in a technical help desk, computer servicing, and other technical roles within the IT sector. The Diploma prepares you for external certification exams to gain CompTIA qualifications such as: A+; Server+ and/or Network+, as well as the 'Help Desk Association' (HDA) and ITIL industry certifications.

PROGRAMME OVERVIEW

> Gain the skills you need to manage and operate a help desk which includes technical skills, such as electronics and softer skills such as effective communication and customer service
> Learn how to manage and operate a help desk
> Gain a foundational understanding of system architecture and security
> Gain an understanding of basic networking components and how to install, configure and troubleshoot hardware
> Gain an understanding of how to recover data from hard drives

PROGRAMME STRUCTURE

This programme comprises 120 compulsory credits:

CODE	COURSE	CREDIT
IT5162	Scripting I	15
IT5174	Networking I	15
IT5178	IT Communication Studies	15
IT5180	Service Desk	15
IT5181	PC Essentials I	15
IT5182	PC Essentials II	15
IT5183	Desktop Support	15
IT5184	Hard Drive Data Recovery	15

For complete course descriptions please refer to
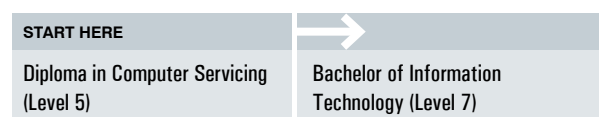**www.weltec.ac.nz/it**

ENTRY REQUIREMENTS

50 credits at NCEA level 2 or above with at least 12 credits in each of three subjects, or successful completion of the Certificate in Computing (Level 4) (formerly Certificate in Interactive Computing), or an equivalent qualification or experience.

If you are 20 years or older at the time you start your studies, you are entitled to apply to WelTec under special admission criteria. You need the physical capability to complete the programme.

If English is your second language, a minimum IELTS (Academic) score of 5.5 with no band score lower than 5, is required.

FURTHER STUDY OPTIONS

START HERE	
Diploma in Computer Servicing (Level 5)	Bachelor of Information Technology (Level 7)

CAREER OPPORTUNITIES

Excellent opportunities exist in the areas of computer servicing, help desk and electronic repair and support. You can also progress onto further IT related study with the Bachelor of Information Technology.

Technology Cadetships

Get the best of both worlds and earn while you learn with a Technology Cadetship. If you are enrolled in an eligible technology-focused diploma or degree programme at WelTec, you'll have the opportunity to apply for a range of Cadetships offered by some of New Zealand's leading companies. Once accepted, you will be matched with an employer and you may receive assistance with your tuition fees, gain valuable work experience and may receive paid part-time or holiday work, enhancing your employment opportunities on completion of your studies.

Want to know more?

Contact **0800 935 832** or visit **www.weltec.ac.nz**

Certificate in Network Administration (CiNA)

Start Date: March and July
Duration: 34 weeks (Part-time, 3hr classes 2 evenings per week)
Location: Petone Campus
Programme Code: HV4247   **Level 6**
Credits: 40

Upgrade your career in Microsoft network administration with a qualification recognised by industry. Your studies will enhance your proficiency in the administration of networks and gain the skills you need to sit the MCTS (Microsoft Certified Technical Support) examinations.

PROGRAMME OVERVIEW

> Learn how to administer Microsoft Windows in a Network environment

> Learn how to administer Windows Servers in a networking environment, with respect to active directory, network and applications infrastructure

PROGRAMME STRUCTURE

This programme comprises 40 credits:

CODE	EXAM	COURSE	CREDIT
NA 6006	**70-640**	Windows Server 2008 Active Directory Configuring	10
NA 6007	**70-642**	Windows Server 2008 Network Infrastructure Configuring	10
NA 6008	**70-643**	Windows Server 2008 Applications Infrastructure Configuring	10
NA 6009	**TBA**	Configuring Microsoft Windows Client	10

Microsoft curricula content is updated regularly.

For complete course descriptions please refer to
www.weltec.ac.nz/it

ENTRY REQUIREMENTS

You need to have successfully completed the Diploma in Information Technology (Level 5) or an equivalent qualification or have relevant IT industry experience in the Help desk, Network Administration and/or Computer support areas.

In addition, it is preferred that you have attended an equivalent course or have relevant IT industry experience in TCP/IP and variable length sub-netting.

If you are 20 years of age or older at the time you start your studies, you are entitled to apply to WelTec under special admission criteria.

If English is your second language, a minimum IELTS (Academic) score of 6 with no band score lower than 5.5, is required.

FURTHER STUDY OPTIONS

START HERE	
Certificate in Network Administration (Level 6)	Bachelor of Information Technology (Level 7)

CAREER OPPORTUNITIES

Excellent opportunities exist in intermediate or senior roles within the helpdesk and computer support areas. You will also have developed the skills necessary to apply to sit the MCTS examinations.

Software Testing (Foundation)

Start Date: July and November*
Duration: 17 weeks (July) and 5 weeks (November), (Part-time)
Location: Petone Campus
Programme Code: HV4414   **Level 6**
Credits: 20

Enhance your career in IT with a specialist qualification in Software Testing. This course will provide you with a fantastic foundation to enter or progress within the software testing industry. You will learn sound testing theory and get ready to sit internationally recognised certification exams such as ISTQB (International Software Testing Board) or ISEB (Information Systems Examination Board).

*Subject to availability.

PROGRAMME OVERVIEW

> Learn best practice in software testing, theory and application

> Discover the fundamental issues of software testing and develop a test management plan and risk management strategy

> Learn to identify and describe software development models

> Gain an understanding of how to select appropriate test levels and test types for different situations

> Develop your ability to evaluate and recommend testing tools and procedures

PROGRAMME STRUCTURE

This programme comprises 20 credits:

CODE	COURSE	CREDIT
IT6223	Software Testing (Foundation)	20

For complete course descriptions please refer to
www.weltec.ac.nz/it

ENTRY REQUIREMENTS

You need a background of experience and/or education in computing, science, engineering or testing at Level 5 or above. If you are 20 years or older at the time you start your studies, you are entitled to apply to WelTec under special admission criteria.

CAREER OPPORTUNITIES

Excellent opportunities exist in specialist areas within software engineering. Roles include; software development, software planning, quality assurance, performance and integration testing as well as debugging and software maintenance.

Certificate in Web Technologies

Start Date: March and July
Duration: 34 weeks (Part-time)
Location: Petone Campus
Programme Code: HV4458   **Level 6**
Credits: 60

Launch your career into cyberspace with studies in web technologies. Learn how to design, create and maintain a wide range of complex website technologies and applications.

PROGRAMME OVERVIEW

> Learn how to design, create and maintain a wide range of complex website technologies and applications

> Gain a comprehensive understanding of web technologies

> Explore the world of the web, and learn more about the internet, intranets and extranets

PROGRAMME STRUCTURE

This programme comprises of 45 compulsory credits and 15 elective credits (60 credits in total)

Compulsory Courses

CODE	COURSE	CREDIT
IT5176	Web Media	15
IT6261	E Commerce Web Application Development	15
IT6262	Web Site Scripting Foundation	15

Elective Courses - (Only 15 credits required)

CODE	COURSE	CREDIT
IT6276	Web Technology Integration	15
IT7381	Rich Internet Applications	15

For complete course descriptions please refer to
www.weltec.ac.nz/it

ENTRY REQUIREMENTS

Completion of Year One of the Bachelor of IT or an equivalent academic qualification or relevant work experience in the IT industry.

If you are 20 years or older at the time you start your studies, you are entitled to apply to WelTec under special admission criteria.

If English is your second language, a minimum IELTS (Academic) score of 6 with no band score lower than 5.5, is required.

Bachelor of Information Technology

Start Date: March and July
Duration: 3 years (Full-time) (with Part-time options available[1])
Location: Petone Campus
Programme Code: HV4395   **Level 7**
Credits: 360

Get your degree in applied IT to graduate work-ready and in-demand. WelTec's Bachelor of Information Technology includes majors in Networking, Programming, Software Engineering and Information Assurance and Security. This allows you to specialise in the area of study that best suits your interest. Alternatively, you can choose to have a 'no major' option and gain a broad-based range of skills from across the disciplines[2] (see below for more details). You also have the option to undertake a double major in IT.

The Bachelor of Information Technology allows you to gain a second major with an additional year of study. Take on Networking and Information Assurance and Security, Programming and Software Engineering or Software Engineering and Information Security to further enhance your career options.

ENTRY REQUIREMENTS

42 credits at NCEA Level 3 or higher, including a minimum of 14 credits at level 3 or higher in each of 2 subjects with a further 14 credits at level 3 from one or two additional subjects; and a minimum of 14 numeracy credits at level 1 or higher and 8 literacy (4 reading and 4 writing) at level 2 or higher or the Certificate in Computing (Level 4) (formally Certificate in Interactive Computing Level 4) with an "A" pass.

If you are 20 years of age or older at the time you start your studies, you are entitled to apply to WelTec under special admission criteria.

If English is your second language, a minimum IELTS (Academic) score of 6 with no band score lower than 5.5, is required.

PROGRAMME STRUCTURE

The degree consists of 360 credits[3]. Each course generally consists of 15 credits with selected papers comprising 45 credits. It is recommended that students complete 120 credits during Year 1 of the degree, 120 credits during Year 2 and 120 credits during Year 3.

1. Part-time study must be completed within five years unless a longer period is approved by the Head of School.

2. Course selection must adhere to specified pre-requisites and co-requisites and will also be timetable dependent.

3. Students studying towards a double major will need to complete 405 credits.

Bachelor of Information Technology

Major: Networking

Demand for qualified networking specialists is predicted to increase significantly in relation to New Zealand's investment in high-speed networking infrastructure. Networking specialists are required to meet the need for an upgrading of broadband services and the adoption of wireless technologies for commercial and residential customers.

Specialise with a major in networking and gain an advanced qualification, recognised and relevant to industry. WelTec is accredited to teach Cisco, Linux and Microsoft Network Support, and has specialised facilities including Cisco, Microsoft, Linux, Allied Telesis and cable management equipment to aid your learning.

A specific focus on experiential learning means you will learn how networking works and how to apply this knowledge to meet customer needs.

	TRIMESTER 1				TRIMESTER 2			
YEAR 1	IT Communication Studies IT5178 15 CREDITS	Operating Systems Fundamentals IT5159 15 CREDITS	IT Mathematics IT5186 15 CREDITS	Networking I IT5174 15 CREDITS	Linux System Administration I LPIC-1 IT5190 15 CREDITS	Scripting I IT5162 15 CREDITS	Networking II IT5175 15 CREDITS	Desktop Support IT5191 15 CREDITS
YEAR 2	Systems Analysis and Design IT6259 15 CREDITS	Management Process IT6267 15 CREDITS	Networking III IT6265 15 CREDITS	Principles of Information Security IT6222 15 CREDITS	Networking IV IT6270 15 CREDITS	Networking Infrastructure Support IT6281 15 CREDITS	Logical Database IT6256 15 CREDITS	Digital Forensics IT6266 15 CREDITS
YEAR 3	Project Management IT6268 15 CREDITS	Advanced Networking I IT7369 15 CREDITS	Advanced Networking II IT7371 15 CREDITS	Any BIT Course from Year Three 15 CREDITS	Project IT7351 45 CREDITS			Any BIT Course from Year One, Year Two or Year Three 15 CREDITS

Note: Electives may be selected from any IT degree course for which you have the required pre-requisites and does not clash with the timetable of your other courses. Electives are selected on consultation.

= Compulsory   = Electives   = Open Electives

For complete course descriptions please refer to
www.weltec.ac.nz/it
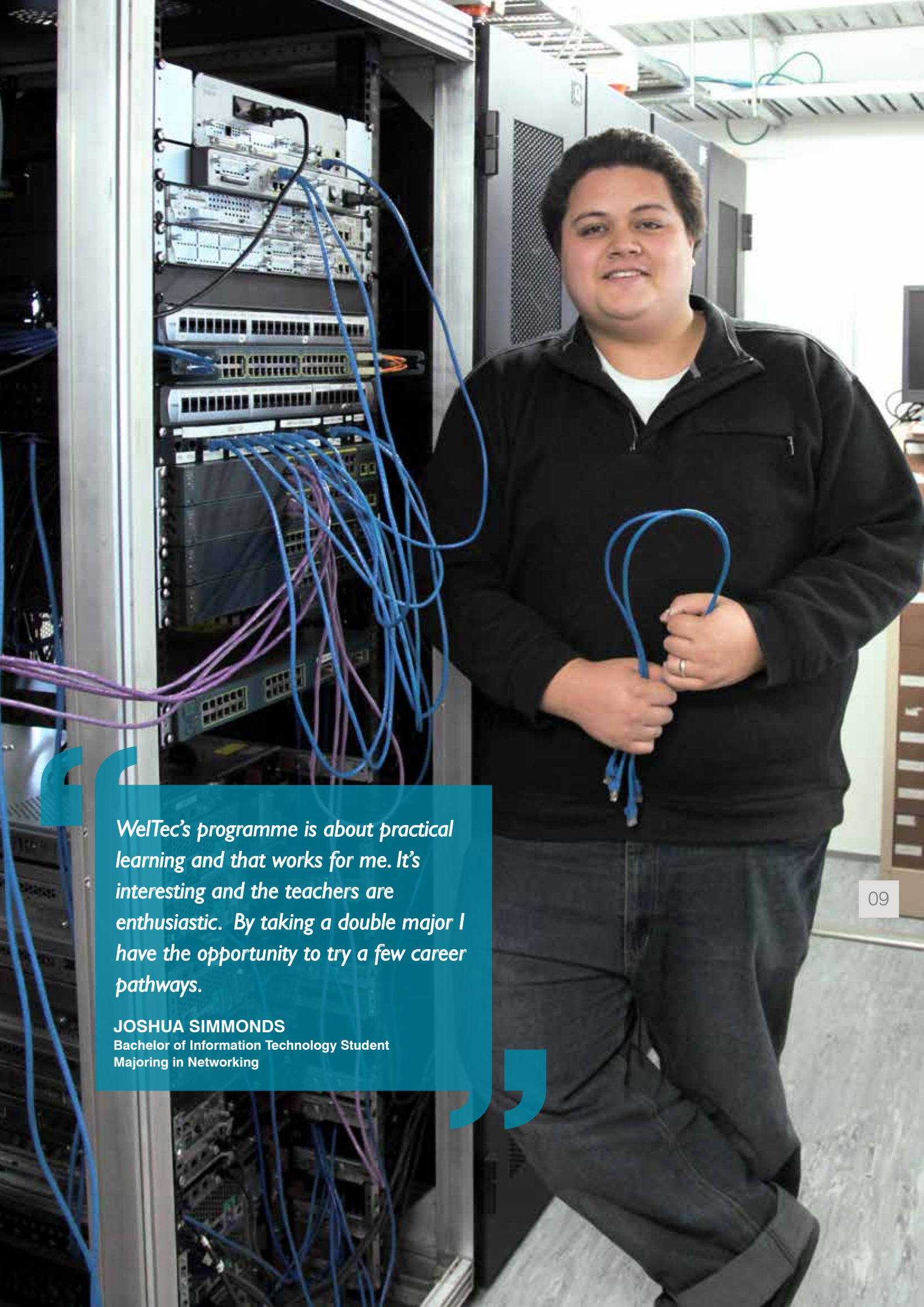
PROGRAMME OVERVIEW

> Gain skills in the implementation and support of computer networks and management systems
> Learn about networking fundamentals
> Gain knowledge in switching and wireless networks
> Learn advanced security applications
> Gain knowledge of advanced switching and routing
> Gain the ability to apply technical skills to solve customer needs
> Develop your insight into emerging technologies
> Learn about open source systems

CAREER OPPORTUNITIES

Fantastic opportunities exist within the Information Technology industry in areas including: Software Development, Software Engineering, Software Testing, Business/IT Analysis, Network Engineering, Senior Help Desk, Web Systems Development, Project Management, IT Management, Database Management, Forensics and Security Engineering.

WelTec's programme is about practical learning and that works for me. It's interesting and the teachers are enthusiastic. By taking a double major I have the opportunity to try a few career pathways.

JOSHUA SIMMONDS
Bachelor of Information Technology Student
Majoring in Networking

> " It's easier for me to learn in a hands-on, practical way. The tutors here are really approachable and know their stuff. I'm glad I chose WelTec for my programming major.

ANA BOYD
Bachelor of Information Technology student
Majoring in Programming

Bachelor of Information Technology

Major: Programming

Enter a new world of communication with the opportunity to become conversant in programming languages. As the translators of the IT world, programmers interpret business issues to create IT solutions using a range of codes or languages.

A career in programming will allow you to utilise your logical and analytical talents and offers fantastic employment opportunities both in New Zealand and around the globe.

Our strong focus on applied learning means you'll get the right kind of learning to equip you for the industry. Individual and group projects for real clients let you test out your solutions with access to genuine feedback and application.

	TRIMESTER 1				TRIMESTER 2			
YEAR 1	IT Communication Studies **IT5178 15 CREDITS**	Operating Systems Fundamentals **IT5159 15 CREDITS**	IT Mathematics **IT5186 15 CREDITS**	Programming Principles **IT5187 15 CREDITS**	Programming 1A **IT5185 15 CREDITS**	Programming 1B **IT5186 15 CREDITS**	Software Engineering **IT5169 15 CREDITS**	Emerging Technologies **IT5177 15 CREDITS**
YEAR 2	Systems Analysis and Design **IT6259 15 CREDITS**	Management Process **IT6267 15 CREDITS**	Web Systems Integration **IT6276 15 CREDITS**	Software Development **IT6260 15 CREDITS**	Software Testing **IT6280 15 CREDITS**	Programming II **IT6253 15 CREDITS**	Logical Database Design **IT6256 15 CREDITS**	Any BIT Course from Year One, Year Two or Year Three* **15 CREDITS**
YEAR 3	Project Management **IT6268 15 CREDITS**	Advanced Database Systems **IT7359 15 CREDITS**	Programming III **IT7374 15 CREDITS**	Human Interface Technology **IT7358 15 CREDITS**	Project **IT7351 45 CREDITS**			Development and Testing Software **IT7320 15 CREDITS**

* Subject to timetable.

■ = Compulsory   ■ = Electives   ■ = Open Electives

For complete course descriptions please refer to
www.weltec.ac.nz/it

PROGRAMME OVERVIEW

> Learn how to configure and maintain operating systems and applications

> Gain skills in switching and wireless networks

> Develop your ability in prototyping techniques

> Understand logic methods

> Develop your skills in problem analysis

> Learn modelling techniques

> Gain skills in commercial software applications

> Become proficient in a variety of programming languages and software solutions

CAREER OPPORTUNITIES

Fantastic opportunities exist within the Information Technology industry in areas including: Software Development, Software Engineering, Software Testing, Business/IT Analysis, Network Engineering, Senior Help Desk, Web Systems Development, Project Management, IT Management, Database Management, Forensics and Security Engineering.

Major: Information Assurance and Security

Look ahead to a bright future with a career in information security. Security specialists are in high demand within government, commercial and banking sectors, who require skilled professionals to future proof information and network access.

This major will provide you with the ability to analyse and discover the risks and potential vulnerabilities of business systems.

You'll develop skills such as policy and strategy development as well as technical skills in network maintenance and repair. You'll also become competent in the detection of current and future security risks, graduating confident to meet the needs of the rapidly changing business environment.

	TRIMESTER 1					TRIMESTER 2		
YEAR 1	IT Communication Studies IT5178 15 CREDITS	Operating Systems Fundamentals IT5159 15 CREDITS	IT Mathematics IT5186 15 CREDITS	Networking I IT5174 15 CREDITS	Linux System Administration I LPIC-1 IT5190 15 CREDITS	Programming IA IT5185 15 CREDITS	Networking II IT5175 15 CREDITS	Desktop Support IT5191 15 CREDITS
YEAR 2	Systems Analysis and Design IT6259 15 CREDITS	Management Process IT6267 15 CREDITS	Principles of Information Security IT6222 15 CREDITS	Web Technology Integration IT6276 15 CREDITS	Secure Coding IT6221 15 CREDITS	Networking Infrastructure Support IT6281 15 CREDITS	Digital Forensics IT6266 15 CREDITS	Logical Database Design IT6256 15 CREDITS
YEAR 3	Project Management IT6268 15 CREDITS	Information Security and Assurance IA7301 15 CREDITS	Information Assurance and Network Fundamentals IA7302 15 CREDITS	Security Testing and Network Defence IA7308 15 CREDITS	Project IT7351 45 CREDITS			Incident Response and Computer Security IA7306 15 CREDITS

For complete course descriptions please refer to **www.weltec.ac.nz/it**

☐ = Compulsory   ☐ = Electives   ☐ = Open Electives

PROGRAMME OVERVIEW

> Learn the principles of contemporary engineering

> Increase your knowledge of security and forensics

> Gain an understanding of networking fundamentals

> Develop skills in programming and software development skills

> Learn about scripting languages

> Gain knowledge of object oriented and agile development methods

> Learn the techniques of prototyping

> Gain understanding of logic methods

> Learn about problem analysis

> Learn how to use modelling techniques

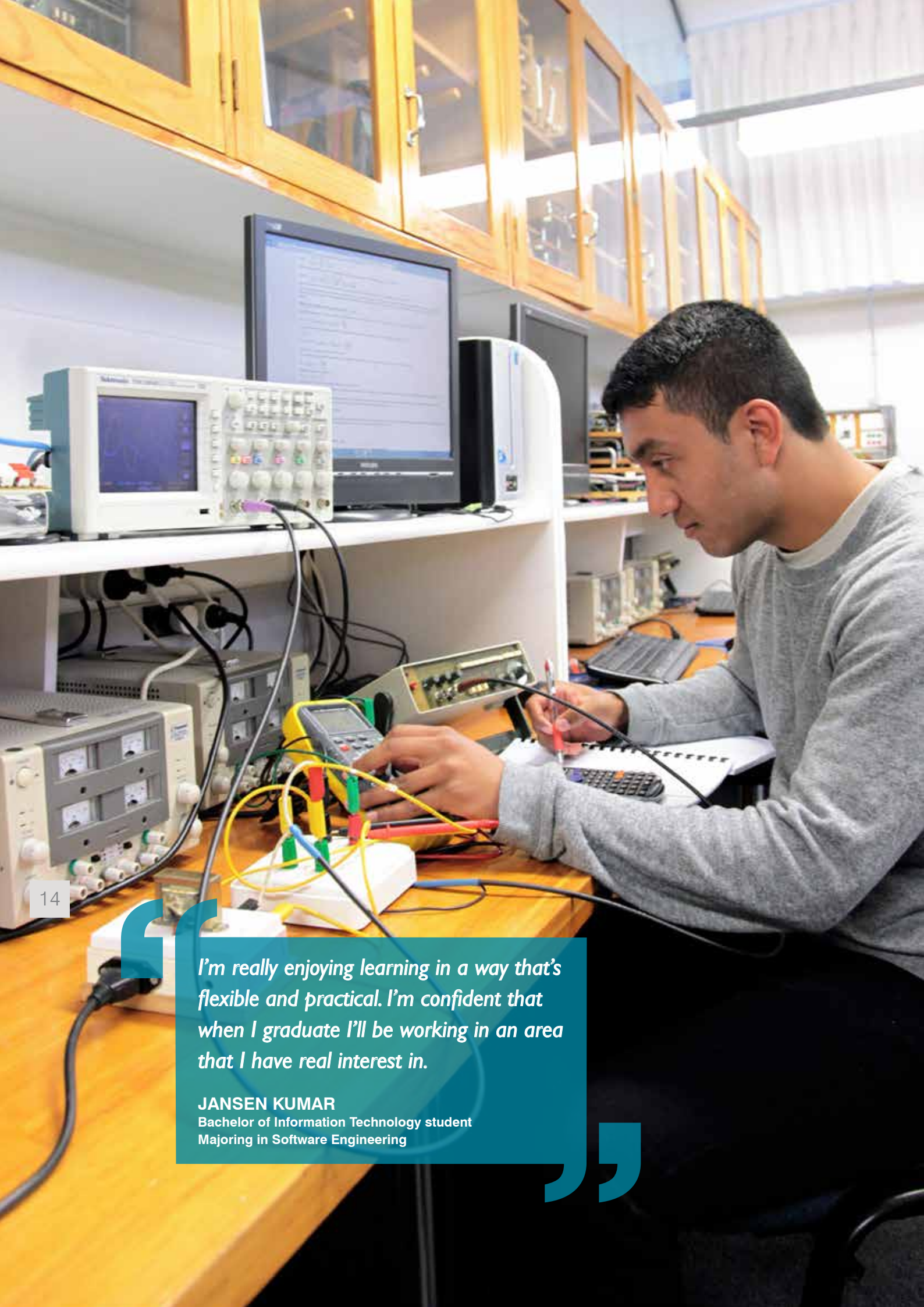> Gain skills in developing and testing commercial software applications

CAREER OPPORTUNITIES

Fantastic opportunities exist within the Information Technology industry in areas including: Software Development, Software Engineering, Software Testing, Business/IT Analysis, Network Engineering, Senior Help Desk, Web Systems Development, Project Management, IT Management, Database Management, Forensics and Security Engineering.

> "As a tutor for WelTec, I take part in training to keep my skills up with the latest needs of industry. That way I can offer students the knowledge they need to enter the IT sector work-ready.

PAUL BRYANT
Information Assurance and Security Tutor

> *I'm really enjoying learning in a way that's flexible and practical. I'm confident that when I graduate I'll be working in an area that I have real interest in.*

JANSEN KUMAR
Bachelor of Information Technology student
Majoring in Software Engineering

Bachelor of Information Technology

Major: Software Engineering

Where information technology meets engineering, a career in this specialist area will enable you to put your ideas into action. With the growing adoption of programming technologies in modern appliances, toys and other intelligent products, qualified software engineers are in high demand both here and abroad.

WelTec is a great place to start your career in Software Engineering. Get the right kind of technical training to develop skills that are practical and relevant to today's industry.

Studying towards a major in Software Engineering you will gain access to leading technologies including electronics labs, 3D scanner and digitizer and our automated robotic assembly production facility.

	TRIMESTER 1				TRIMESTER 2			
YEAR 1	IT Communication Studies **IT5178 15 CREDITS**	Operating Systems Fundamentals **IT5159 15 CREDITS**	IT Mathematics **IT5186 15 CREDITS**	Electronics I **IT5152 15 CREDITS**	Programming 1A **IT5185 15 CREDITS**	Programming 1B **IT5186 15 CREDITS**	Software Engineering **IT5169 15 CREDITS**	Electronics II **IT 5153 15 CREDITS**
YEAR 2	Systems Analysis and Design **IT6259 15 CREDITS**	Management Process **IT6267 15 CREDITS**	Microcomputer Systems II **IT6277 15 CREDITS**	Software Development **IT6260 15 CREDITS**	Programming II **IT6253 15 CREDITS**	Embedded Systems I **IT6273 15 CREDITS**	Software Testing **IT6280 15 CREDITS**	Secure Coding **IT6221 15 CREDITS**
YEAR 3	Project Management **IT6268 15 CREDITS**	Programming III **IT7374 15 CREDITS**	Embedded Systems II **IT7375 15 CREDITS**	Any BIT Course from Year One, Year Two, Year Three* **15 CREDITS**	Project **IT7351 45 CREDITS**			System Engineering **IT7368 15 CREDITS**

* Subject to timetable.

For complete course descriptions please refer to
www.weltec.ac.nz/it

☐ = Compulsory   ☐ = Electives   ☐ = Open Electives

PROGRAMME OVERVIEW

> Learn the principles of contemporary engineering
> Learn about software design, development and maintenance
> Gain an understanding of a systems engineering approach
> Get skilled in electronics
> Learn about programming
> Develop skills in networking
> Gain insight into systems design and analysis

CAREER OPPORTUNITIES

Fantastic opportunities exist within the Information Technology industry in areas including: Software Development, Software Engineering, Software Testing, Business/IT Analysis, Network Engineering, Senior Help Desk, Web Systems Development, Project Management, IT Management, Database Management, Forensics and Security Engineering.

Bachelor of Information Technology

No Major: Design your BIT

Customise your degree and choose the subjects that most interest you. The un-endorsed BIT means you can select your own courses without choosing a major. This gives you the option to graduate with a broad and varied understanding of information and communication technology.

	TRIMESTER 1				TRIMESTER 2			
YEAR 1	IT Communication Studies IT5178 15 CREDITS	Operating Systems Fundamentals IT5159 15 CREDITS	IT Mathematics IT5186 15 CREDITS	Open Elective (Level 5 or above*) 15 CREDITS	Open Elective (Level 5 or above*) 15 CREDITS	Open Elective (Level 5 or above*) 15 CREDITS	Open Elective (Level 5 or above*) 15 CREDITS	Open Elective (Level 5 or above*) 15 CREDITS
YEAR 2	Systems Analysis and Design IT6259 15 CREDITS	Management Process IT6267 15 CREDITS	Open Elective (Level 6 or above*) 15 CREDITS	Open Elective (Level 6 or above*) 15 CREDITS	Open Elective (Level 6 or above*) 15 CREDITS	Open Elective (Level 6 or above*) 15 CREDITS	Open Elective (Level 6 or above*) 15 CREDITS	Open Elective (Level 6 or above*) 15 CREDITS
YEAR 3	Project Management IT6268 15 CREDITS	Open Elective (Level 7*) 15 CREDITS	Open Elective (Level 7*) 15 CREDITS	Open Elective (Level 7*) 15 CREDITS	Project IT7351 45 CREDITS			Open Elective (Level 5 to 7*) 15 CREDITS

* Subject to timetable.

☐ = Compulsory ☐ = Electives ☐ = Open Electives

For complete course descriptions please refer to
www.weltec.ac.nz/it

Double Majors

Have the option to select a second major, with an additional year of study.
Refer to **www.weltec.ac.nz/IT** for course outlines.

Industry Certifications

Throughout your studies, you will gain the knowledge and skills required to sit a number of industry certifications. These certifications are recognised worldwide and are highly sought after by employers. WelTec's Prometric; Pearson VUE Select; Kryterion and Castleworldwide Testing Centre is conveniently located at our Petone campus, 7th floor of the Tower Block, offering industry certification exams in all areas of IT and non-IT related areas.

Below are just a few of the IT certifications available to sit:

> Microsoft — MCSA, MCSD, MCP and MCITP

> CompTIA —A+   > Linux

> ITIL   > HDA

> CCNA

Many of our programmes have embedded industry certification training, particularly desktop/user support and networking related courses. For further information, please contact our Test Centre Administrator on **0800 WelTec (935 832).**

Unless expressly indicated to the contrary, the cost of external industry certification examinations is not included in the course fees.

Graduate Diploma in Information Assurance

Start Date: March and July
Duration: 34 weeks (Full-time), (with Part-time options available)
Location: Petone Campus
Programme Code: HV4378 **Level 7**
Credits: 120

Upgrade your career in Information Security and gain a comprehensive understanding of information security and maintenance. Learn how to integrate security policy, practices and technologies into operational structures and explore the principles of survivability and information assurance.

PROGRAMME OVERVIEW

> Gain a comprehensive understanding of information security and assurance within an enterprise system

> Develop your ability to recognise and assess cyber threats and learn how to carry out incident response and digital forensic related activities

> Learn the design requirements of secure systems and gain technical skills to conduct security tests against networks

> Explore the importance of information security and the role it plays in the modern organisation

PROGRAMME STRUCTURE

Compulsory Courses

CODE	COURSE	CREDIT
IA7301	Information Security and Assurance	15

Elective courses*

CODE	COURSE	CREDIT
IA7302	Information Assurance Networking Fundamentals	15
IA7303	Security Models and Architecture	15
IA7304	Survivable Functional Units	15
IA7305	Computer Crime and Digital Forensics	15
IA7306	Incident Response and Computer Security	15
IA7307	Cryptography and Security Mechanisms	15
IA7308	Security Testing and Network Defence	15
IA7309	Enterprise Data Storage Technologies	15

For complete course descriptions please refer to
www.weltec.ac.nz/it

ENTRY REQUIREMENTS

You will need to have a degree in Computer Science or in Information Technology, preferably with networking or equivalent practical, professional or educational experience in the IT industry as a Systems or Network Administrator.

If English is your second language, a minimum IELTS (Academic) score of 6 with no band score lower than 5.5, is required.

CAREER OPPORTUNITIES

Excellent opportunities exist within the field of Information Security, including Computer Security Consulting, Forensic Investigation and Security Testing.

Graduate Diploma in Information Technology

Start Date: March and July
Duration: 34 weeks (Full-time), (with Part-time options available)
Location: Petone Campus
Programme Code: HV4437 **Level 7**
Credits: 120

Take your career to the next level and undertake additional specialisation in Information Technology. The graduate diploma will provide a comprehensive understanding of specialist areas within IT, which will give you the right tools to apply your knowledge to an IT project.

PROGRAMME OVERVIEW

> Gain a comprehensive understanding of Information Security

> Learn how to develop and test software

> Learn about systems engineering

> Gain knowledge of database design & implementation

> Learn about human computer interaction

> Gain an understanding of information systems in management

> Learn skills in software development (Java)

PROGRAMME STRUCTURE

Compulsory Courses

CODE	COURSE	CREDIT
IT7351	Project	45

Elective courses*

CODE	COURSE	CREDIT
IT6268	Project Management	15
IT7320	Development and Testing Software	15
IT7358	Human Interface Technology	15
IT7359	Advanced Database Systems	15
IT7368	Systems Engineering	15
IT7369	Advanced Networking I	15
IT7370	Advanced Networking II	15
IT7371	Advanced Networking III	15
IT7372	Advanced Networking IV	15
IT7374	Programming III	15
IT7375	Embedded Systems II	15
IT7380	Special Topic	15
IA7301	Information Security and Assurance	15
IA7302	Information Assurance Network Fundamentals	15
IA7306	Incident Response and Computer Security	15
IA7308	Security Testing and Network Defence	15

For complete course descriptions please refer to
www.weltec.ac.nz/it

ENTRY REQUIREMENTS

See Graduate Diploma in Information Assurance.

CAREER OPPORTUNITIES

Excellent opportunities exist within the field of Information Technology including Business/IT Analysis, Project Management, Database Management, Information Security or Consultancy.

* Elective courses are not offered every trimester and are offered subject to sufficient numbers of enrolments.

Facilities

Studying IT at WelTec you will gain access to a range of specialised facilities, equipment and resources. You will be supported with unrestricted internet access, local printers, and access to specialised school-supported servers through the WelTec research, education and development network (WREDnet).

Specialised services provided include:

> File and print services
> Databases
> Web platforms
> Open Sim (3-d worlds platform)
> Infrastructure support (DNS, DHCP, WSUS, anti-virus distribution, domain services, active directory, key management etc)
> Learning recourses such as CBT nuggets
> Training servers (Linux etc)

The School of IT facilities include:

> Specialised networking facilities, with sets of Cisco and Allied Telesis equipment and cable management
> Labs with PCs optimised for virtualised student environments
> Specialised electronics facilities with soldering environments, test equipment and tools
> A hardware lab with repair, maintenance and test facilities and tool sets
> Adaptable project lab spaces
> External Test Centre for IT certifications

FACILITIES: (ABOVE) – A HARDWARE LAB, EXTERNAL TEST CENTRE FOR IT CERTIFICATIONS, SOFTWARE ENGINEERING CLASS

Contact Us

For more information or assistance in deciding what to study before you enrol, you can contact our Student Advisors who can guide you through the enrolment process.

📞 **0800 WelTec (935 832)**
✉ **information@weltec.ac.nz**
🌐 **www.weltec.ac.nz**

Costs and Fees

All fees are available under the individual subject areas on our website:
www.weltec.ac.nz

Campus Locations

Petone Campus

11 Kensington Avenue, Petone
Private Bag 39814, Wellington

Telephone: (04) 920 2400
Facsimile: (04) 920 2401

Wellington Hospitality Campus

54 Cuba Street, Wellington CBD
Private Bag 39814, Wellington

Telephone: (04) 920 2400
Facsimile: (04) 920 2401

Wellington Church St Campus

11–17 Church Street (off Boulcott Street)
Private Bag 39814, Wellington

Telephone: (04) 920 2400
Facsimile: (04) 931 6959

Auckland Campus

Level 2, 3 Wakefield Street, Auckland CBD
P.O.Box 6413, Wellesley St, Auckland 1141

Telephone: (09) 915 8930
Facsimile: (09) 915 8940

www.weltec.ac.nz
www.facebook.com/weltec

WelTec
Wellington Institute of Technology
Te Whare Wānanga o te Awakairangi