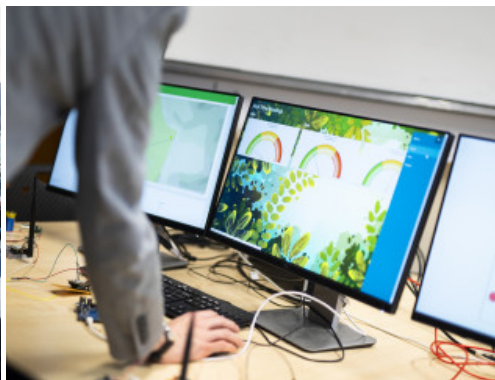# Graduate Diploma in Information Technology - Auckland delivery

## Develop your skills for the New Zealand IT and business environment!

Specifically designed for international students, this programme will provide you with the professional skills that you will need to work effectively in the New Zealand IT and business environment.

These industries are constantly evolving and an up-to-date qualification is essential.

Small class sizes allow for better interaction with our experienced teachers and you will have the chance to practise your new skills with a range of excellent equipment and software applications.

This programme is offered by Future Skills Academy due to a sub-contract arrangement with Otago Polytechnic.

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| **Location** | Auckland<br>This programme is for international students only. |
| **Duration** | One year full-time |
| **Delivery** | On campus |

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| **Credits** | 120 |
| **Level** | 7 |
| **Start** | February<br>April<br>July<br>October |
| **Apply** | Anytime |

Entry requirements

- You must hold a recognised bachelor's degree in computing or a related discipline OR an equivalent qualification supported by practical, professional or scholarly experience. Click here for your country's equivalent academic entry requirements.
- If English is not your first language, you must provide:
  - New Zealand University Entrance OR
  - Overall Academic IELTS 6.0 with no individual band score lower than 5.5 (achieved in one test completed in the last two years), OR
  - Acceptable alternative evidence of the required IELTS (see here for NZQA proficiency table and here for list of recognised proficiency tests).

If you need to improve your English Language skills, we offer a wide range of English programmes.

You will study

To successfully achieve this programme, you'll need to complete 120 credits at Level 5 or above with a minimum 75 credits at Level 7. Studio 6 is a compulsory course for everyone.

The flexibility of the programme design means there will inevitably be a range of customised pathways. You'll discuss your tailored pathway with the Programme Leader during your enrolment process. You may be required to undertake specific courses as pre-requisites to other courses in this qualification.

## Level 5 courses

| Course name | Credits | What will I learn? |
| --- | --- | --- |
| Programming 1 | 15 | Learn about concepts of program design and programming fundamentals. |
| Programming 2 | 15 | Build event-driven, GUI (Graphical User Interface) applications using pre-built controls. Be introduced to the theoretical issues involved in Object-Oriented analysis, design and programming, and the principles of correct design and implementation for applications of this type. |
| Fundamentals of Web Development | 15 | Use basic technologies for the development of web-based functionality. Learn components of web pages and client/server web communication. Develop simple web-based applications using industry relevant client/server-side programming languages. Use industry-relevant tools and workflows to develop web-based applications. |
| Introduction to Networks | 15 | Learn about fundamental networking concepts and technologies, by covering the basics of network theory and the skills needed to implement a simple network. |
| Devices and Platforms | 15 | Learn to use a range of devices, platforms and concepts utilised within the Information Technology industry. |
| Maths for IT | 15 | Learn about the mathematical concepts and methods that underpin and are directly applicable to the theory of information systems. This course is primarily sited within the field of discrete mathematics. |
| Year One Special Topic | 15 | Pursue an individual course that will focus in-depth on a particular aspect of IT. |
| Studio 1 | 15 | Learn the fundamentals of professionalism in a technical environment. |
| Studio 2 | 15 | Be introduced to user-centric and technical project planning techniques to create solutions to simple IT problems. |
| Unspecified credits | 15 | This course is intended to act as a repository for "unspecified credits" where you can undertake courses from outside the BIT. |

## Level 6 courses

| Course name | Credits | What will I learn? |
| --- | --- | --- |

| Databases 2 | 15 | Learn the fundamentals of relational database theory and how to design, build and use a database on a modern database management system. |
| Switching, Routing and Wireless Essentials | 15 | Learn how to describe the architecture, components, and operations of routers and switches in a small network and to configure a router and a switch for basic functionality. |
| Operating Systems Concepts | 15 | Learn about the major components of operating systems and the basic organisation of computer systems. |
| Embedded Systems | 15 | Be introduced to the core principles of computer hardware and architecture and become acquainted with a range of embedded application contexts. |
| Automation and Robotics | 15 | Use microprocessors and sensors to build mobile, context-aware robots. Learn to programme classic robotic behaviours and add wireless communication to explore basic swarm algorithms. |
| Year Two Special Topic | 15 | Carry out semi-independent exploration into a specific IT topic. |
| Studio 3 | 15 | Use an industry-relevant project management approach to produce simple, functional group outputs. |
| Studio 4 | 15 | Produce a professional, high-quality group project, following industry-relevant quality assurance and ethical practices. |
| Introductory Application Development (Dev3) | 15 | Learn the concepts of application development, including algorithms, data structures and design patterns required to use a simple, industry-relevant development framework. |
| Intermediate Application Development (Dev4) | 15 | Extend the concepts of application development, including algorithms, data structures and design patterns required to use complex, industry-relevant frameworks or libraries. |
| Operations Engineering 1 | 15 | Gain the knowledge and hands-on skills to perform systems administration tasks securely within different computing platforms, using the command line interface. |
| Unspecified credits | 15 | This course is intended to act as a repository for "unspecified credits" where you can undertake courses from outside the BIT. |

# Level 7 courses

| Course name | Credits | What will I learn? |

| | | |
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| Studio 5 | 15 | Apply technical skills within complex Information Technology projects. Extend professional behaviour through group work, professional development activities and external engagement. |
| Studio 6 | 15 | Extend your skills within a complex IT project. |
| Developing Flexible IT Courses | 15 | Prepares students for the training role that is often performed by information technology professionals. |
| Databases 3 | 15 | Gain the skills and understanding necessary to design and implement enterprise databases and to administer database management systems. Use a range of tools and platforms for developing large databases and explore current areas of research in database implementation, use and management. |
| Advanced Algorithms | 15 | Use a wide variety of advanced algorithms and tools to develop efficient solutions to complex computational problems. |
| Operations Engineering 2 | 15 | Look at, and practice the configuration, management and troubleshooting of systems within an enterprise network including aspects of both applications and operating system components. |
| Administering a Virtual Infrastructure | 15 | An in-depth knowledge and techniques used to efficiently implement, optimise and troubleshoot a virtual infrastructure. |
| Mobile Application Development | 15 | Explore the design and implementation of applications for mobile devices. |
| Advanced Networking | 15 | Provides students with an understanding of how to evaluate and apply advanced networking protocols, services and concepts to the design, deployment and maintenance of medium to large scale networks. |
| Year Three Special Topic | 15 | Carry out an independent exploration into a specific IT topic. |
| UX Engineering | 15 | Build on your front-end development skills to design and build screens with inclusive, flexible and sound user experience. |

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| Security | 15 | Gain the theoretical knowledge and technical skills in the field of information security. Learn to identify security threats and vulnerabilities, then mitigate them by implementing robust, industry-accepted solutions. |
| AI and Data Science | 15 | Choose and deploy the appropriate machine intelligence tool to solve problems that demand a cognitive component. For example: computer vision, natural language processing, recommendation systems, data analytics, anomaly detection, conversational agents (ie chatbots), machine translation, autonomous navigation, robotic control etc. |
| Advanced Application Development Concepts | 15 | Build and deploy optimised and efficient applications using a range of advanced industry tools and frameworks. |
| Quality Assurance and Software Testing | 15 | Lay the foundation for a potential craeer in the information technology field as a software tester. Understand the fundamental principles and processes of software testing. |
| Enterprise Networking, Security and Automation | 15 | Understand and apply knowledge of architectures and considerations related to designing, securing, operating and trouble shooting enterprise scale networks. |
| Game Development | 15 | Apply game programming techniques and tools to develop an effective game. |
| Internet of Things and Cloud Computing | 15 | Investigate and analyse the applicability of an IoT solution for a real-world problem and develop an IoT application involving cloud computing. |
| Business Analysis and Intelligence | 15 | Apply the theories, methods and tools for analysing business processes, and propose solutions for a variety of organisational problems. |
| Unspecified credits | 15 | This course is intended to act as a repository for "unspecified credits" where you can undertake courses from outside the BIT. |

## Your workload

You will be expected to spend about 300 hours per study block on your course work. This includes both scheduled class time and self-directed study. Some of these hours may be spent in a workplace gaining hands-on experience and developing important industry and business connections.

## Further study options

Increase your career prospects with postgraduate study in Information Technology in New Zealand.

Apply Now

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