Bachelor of Information Technology (BIT)

Course Selection Sheet 2020 – School of IT and Business

Make your selections, scan and send to either:
Whitireia: SITAdmin@Whitireia.ac.nz
WelTec: studentadvisors@weltec.ac.nz

Or drop off to your nearest Campus

Please tick institute enrolling at:

Whitireia (PR5006)		**WelTec (HV4701)**	

Name: **Student ID:**

Signature **International Students only** **Date of Birth:**

Bachelor of Information Technology (BIT)

Requires successful completion of courses to a total of 360 credits (including compulsory courses), with a minimum of 90 credits at level 7 and a maximum of 135 credits at level 5. All courses 15 credits unless stated otherwise.

Note:

(C) Compulsory
* Returning 2019 students only
** Completion of 240 credits at level 5 and above
*** 240 credits at level 5 and above with one course at level 7
If a course is offered at both campuses, please cross out the campus that you will **NOT** be attending

Trimester One (March 2020)				**Trimester Two (July 2020)**			
Course Code & Title	**Pre-req**	**Campus**	**√**	**Course Code & Title**	**Pre-req**	**Campus**	**√**
Level 5 courses							
IT5501 Mathematics for IT (C)	*	Porirua		**IT5501** Mathematics for IT (C)		Porirua	
IT5501 Mathematics for IT (C)		Petone		**IT5502** Communications for IT (C)		Petone	
IT5502 Communications for IT (C)		Porirua		**IT5503** Programming I		Petone	
IT5503 Programming I		Porirua		**IT5504** Information Security I		Porirua	
IT5504 Information Security I		Petone		**IT5505** Interaction Design Fundamentals		Petone	
IT5505 Interaction Design Fundamentals		Porirua		**IT5506** Introduction to Networking		Porirua	
IT5506 Introduction to Networking		Petone		**IT5507** Fundamentals of Data Science		Porirua	
IT5507 Fundamentals of Data Science		Petone		**IT5509** SW Testing Fundamentals		Petone	
IT5510 Introduction to OS		Porirua		**IT5510** Introduction to OS		Petone	

Office Use Only

Signed off by:	Signature:	Approved / Declined	Date:

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Trimester One (March 2020)				Trimester Two (July 2020)			
Course Code and Title	**Pre-req**	**Campus**	**√**	**Course Code and Title**	**Pre-req**	**Campus**	**√**
Level 6 courses							
IT6501 Systems Analysis and Design (C)	IT5507 IT5503	Petone		**IT6501** Systems Analysis & Design (C)	IT5507 IT5503	Porirua	
IT6502 Project Management (C)	IT5502	Porirua		**IT6502** Project Management (C)	IT5502	Petone	
CS6501 Information Security II		Petone		**CS6503** Digital Forensics	IT5504, IT5506	Petone	
CS6502 Linux System Administration	IT5504 IT5506	Petone		**CS6504** Cryptography & Block chain	IT5504 IT5506	Petone	
DS6501 Social Data Analytics	IT5507	Porirua		**DS6503** Data Mining Tools & Techniques	IT5507	Porirua	
DS6502 Data Analysis and Visualisation	IT5507	Porirua		**DS6504** BI & Big Data	IT5507	Porirua	
DS6504 Business Intelligence and Big Data	IT5507	Petone		**ID6501** Responsive Website Design		Petone	
ID6501 Responsive Website Design		Porirua		**NI6502** Networking III Campus	NI6501	Petone	
NI6501 Networking II LAN	IT5506	Petone		**NI6504** Cloud Computing	IT5506	Petone Porirua	
NI6503 Unified Infrastructure Services	IT5506	Petone		**SD6501** Mobile App Development	IT5503 IT5507	Porirua	
SD6501 Mobile App Development	IT5503, IT5507	Petone		**SD6503** Testing and Secure Coding	SD6502	Porirua Petone	
SD6502 Programming II	IT5503	Porirua Petone		**SD6504** Game Development	IT5501 IT5503	Petone	
SD6504 Game Development	IT5501 IT5503	Porirua					
Level 7 courses							
IT7502 Digital Ethics (C)	IT5502	Porirua Petone		**CS7502** Special Topic in Cyber Security	IT5504, IT5506	Petone	
CS7501 Information Security III	IT5504, IT5506	Petone		**DS7502** Data Warehouse Design and Implementation	DS6503	Porirua	
DS7501 Data Mining for Business Analytics	DS6502	Porirua		**ID7502** Human Computer Interaction	IT5505	Petone	
ID7502 Human Computer Interaction	IT5505	Porirua		**NI7502** Emerging topic in Networking and Infrastructure	NI6501, NI6502	Petone	
NI7501 Current topic in Networking and Infrastructure	NI6501, NI6502	Petone		**SD7501** Web Application Development	IT5507 SD6502	Porirua	
SD7501 Web Application Development	IT5507 SD6502	Petone		**SD7502** Intelligent Systems Development	IT5501, SD6502	Petone	
SD7502 Intelligent Systems Development	IT5501, SD6502	Porirua		**IT7508** Internship (30 credits)	*	Petone Porirua	
IT7508 Internship (30 credits)	**	Porirua Petone		**IT7501** Capstone Project (C) (45 credits)	**	Petone Porirua	
IT7501 Capstone Project (C) (45 credits)	***	Porirua Petone		**IT7502** Digital Ethics (C)	IT5502	Porirua	

Course aims for 2020 offerings, for more detail ask to see the full course outline

Core Courses (CC)	
Level 5	
IT5501 Mathematics for IT	• Learners will be introduced to topics in discrete mathematics that are important for studies in computing and to topics in statistics that are directed to the needs of the IT industry.
IT5502 Communications for IT	• To introduce learners to the theories, principles and practical skills associated with effective communication in relation to Information Technology contexts.
Level 6	
IT6501 Systems Analysis and Design	• To enable learners to evaluate and apply the important procedures involved in systems analysis and systems design.
IT6502 Project Management	• To enable learners to explain the requirements of project planning and control, and use best practice project management techniques and software to manage tasks • To enable learners to incorporate typical IT industry practices into project management activities.
Level 7	
IT7501 Capstone Project	• To provide learners the opportunity to research, select, integrate and apply a range of techniques and technology to solve a workplace problem • To provide learners the opportunity to demonstrate workplace-ready skills, attitudes and aptitudes suited to the IT industry.
IT7502 Digital Ethics	• To enable learners through careful research and analysis to identify and manage ethical issues related to the use and advancement of digital technologies.

Cyber Security (CS) Major	
Level 5	
IT5504 Information Security I	• To understand basic information security principles and approaches as well as to recognise the major information security threats and countermeasures.
Level 6	
CS6501 Information Security II	• Learners should be able to demonstrate an understanding of the foundations of cyber security, threats towards information system, and perform risk assessment and management.
CS6502 Linux System Administration	• To provide a practical introduction to junior and intermediate level Linux/Unix system administration and deliver skills required to manage small-sized Linux networks.
CS6503 Digital Forensics	• To provide learners with a comprehensive understanding of digital forensic principles and the collection, preservation, and analysis of digital evidence.
CS6504 Cryptography and Blockchain Fundamentals	• This course exposes learners to blockchain technology, smart contracts, fundamentals of cryptocurrency and applications. Learners will also learn the fundamentals of cryptography.
Level 7	
CS7501 Information Security III	• This course covers the key technologies and systems required to implement defence in depth and protect organisational information infrastructures from threats and attacks.
CS7502 Special Topic in Cyber Security	• To enable learners to select a focus area of study in cyber security to reach their desired career and/or graduate study goals.

Applied Data Science (ADS) Major	
Level 5	
IT5507 Fundamentals of Data Science	• To provide learners with a basic understanding of how data is modelled, stored, manipulated and analysed using databases and visualisation techniques.
Level 6	
DS6501 Social Data Analytics	• To introduce learners to the analysis of social data using tools and techniques to extract knowledge and insights from social media networks.
DS6502 Data Analysis and Visualisation	• To introduce learners to a range of data analysis and visualisation techniques used in statistical inference and exploratory data analysis.
DS6503 Data Mining Tools and Techniques	• To introduce learners to the data science process and the application of data mining tools and techniques.
DS6504 Business Intelligence and Big Data	• To introduce learners to the techniques used in the design and implementation of business intelligence solutions and the issues relating to big data.
Level 7	
DS7501 Data Mining for Business Analytics	• To provide learners with practical experience in developing analytical tools that provide insight and understanding of business performance based on data mining methods.
DS7502 Data Warehouse Design and Implementation	• To provide learners with practical experience in the design and implementation of data warehouses and the development of OLAP tools.

Software Development (SD) Major	
Level 5	
IT5503 Programming I	• A learner will be able to design software using appropriate **syntax**, implement software designs and **apply** basic object-oriented concepts.
Level 6	
SD6501 Mobile App Dev	• To equip learners with the knowledge and fundamental skills of mobile application development using a contemporary programming language and mobile platform.
SD6502 Programming II	• To allow learners to extend their programming skills with the introduction of advanced concepts.
SD6503 Testing & Secure Coding	• To provide learners with an advanced level of knowledge and skills required for developing secure software that is designed and tested using appropriate testing and security tools.
SD6504 Game Development	• Provide learners with a foundation of effective game design and development using tools, algorithms, and game programming techniques.
Level 7	
SD7501 Web Application Development	• Evaluate and apply the use of appropriate platform and architecture, for the development of web applications. • Integrate applications with a database and learn how to access web data using managed data providers and objects. • Investigate the security challenges and security models for web applications.
SD7502 Intelligent Systems Development	• To provide learners with an advanced level of knowledge and skills required for development artificially intelligent applications.

Interaction Design (ID) Major	
Level 5	
IT5505 Interaction Design Fundamentals	• To provide learners with the skills to utilise design principles to evaluate digital interactive products. To provide learners with skills and knowledge to design and develop a digital interactive product.
Level 6	
ID6501 Responsive Web Design	• Learners will be able to design and build websites that respond to any device for example, phone, tablet desktop or headset.
Level 7	
ID7502 Human Computer Interaction	• To enable learners to understand the principles of human-computer interaction (HCI) in relation to design and implementation of computer systems and to experience different application tools in the design, implementation and documentation of user interfaces.

Networking & Infrastructure (NI) Major	
Level 5	
IT5506 Introduction to Networking	• To introduce fundamental networking concepts, technologies, and basics of network theory and skills needed to implement a simple network.
Level 6	
NI6501 Networking II - LAN	• This course introduces the essential knowledge and skills of a networker. To develop knowledge of the logic and algorithms involved in routing and switching traffic. • Learners will develop an understanding of individual routing protocols and concepts and learn to configure RIP, NAT, ACL and DHCP and to analyse, verify and troubleshoot routing and switching operations.
NI6502 Networking III	• To provide a comprehensive, theoretical and practical approach and resolve common issues with routing and switching implementation for a larger sized network using IPv4 and IPv6.
NI6503 Unified Infrastructure Services	• To introduce fundamental network infrastructure components necessary to implement a small to medium sized network.
NI6504 Cloud Computing	• To develop an understanding of the incorporation and management of cloud technologies as part of broader systems operations. Learning about new technologies that support the changing cloud market as more organisations depend on cloud-based technologies to run mission critical systems, where hybrid and multi-cloud have become the norm.
Level 7	
NI7501 Current Topic in Networking and Infrastructure	• To enable learners to understand the underlying principles of a current topic relating to Networking and Infrastructure, apply the underlying principles and concepts to the identification and solution of a variety of problems in various settings, research the topic, evaluate, and implement methods of solving problems related to the topic.
NI7502 Emerging Topic in Networking and Infrastructure	• To enable learners to understand the underlying principles of an emerging topic relating to Networking and Infrastructure, apply the underlying principles and concepts to the identification and solution of a variety of problems in various settings, research the topic, evaluate, and implement methods of solving problems related to the topic.