### Bachelor of Information Technology COURSE CODE: NBIT

CAMPUS	Footscray Park (FP)
COLLEGE	College of Engineering and Science
STUDY MODE	Full Time or Part Time
DURATION	3 years Full Time or Part Time equivalent
FEE TYPE	For information on course fees, refer to http://vu.edu.au/fees
APPLICATION METHOD	VTAC - https://vtac.edu.au Direct Application - <u>https://gotovu.custhelp.com/app/landing</u>
TIMETABLE	vu.edu.au/timetables
COURSE REQUIREMENTS	<ul> <li>To attain the Bachelor of Information Technology, students will be required to complete 288 credit points consisting of:</li> <li>96 credit points of First Year Core studies;</li> <li>48 credit points of Graduating Core studies;</li> <li>96 credit points of Major studies*;</li> <li>48 credit points of Minor studies (discipline).</li> </ul>
FURTHER INFORMATION	Unit and course information is available from the University course search site at <a href="http://vu.edu.au/course-search">http://vu.edu.au/course-search</a> or go to <a href="https://askvu.vu.edu.au">https://askvu.vu.edu.au</a> or Phone VUHQ on 03 9919 6100
COURSE CHAIR	Course Chair: Dr Khandakar Ahmed Web and Mobile Application Development Major Coordinator: Dr Wenjie Ye Network and System Computing Major Coordinator: Dr Khandakar Ahmed
COURSE ADVICE	AskVU https://askvu.vu.edu.au/app/askcua

**Note:** Students are required to enrol in all units for semester 1 and 2, and are not permitted to enrol in more than 48 credit points per semester as a full-time load.

Core/Elective Core (a unit that must be completed) & Elective (you have some choice in what you select).

**Prerequisites** A number of units within the degree have 'prerequisites'. These prerequisites must be met before enrolment in the unit is permitted. Generally these prerequisites require the successful completion of a unit or units taken at an earlier stage in the course. Students should pay particular attention to these prerequisite requirements as failure to meet these can seriously hinder progression through the course.

**Date of Publication:** This information is current at the publication date: 20/10/2022. It is provided as information only and does not form part of a contract between any person and Victoria University.



### YEAR 1

UNIT CODE		UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NIT1102	Introduction to Programming	Core	1B1, 2B1	12	FP	
			1B1		ORT	
NIT1101	Web Development and CMS	Core	1B3, 2B2	12	FP	
			1B2		ORT	
NIT1103	Communication and Information Management	Core	1B2, 1B4	12	FP	
			1B4		ORT	
NIT1104	Computer Networks	Core	1B3, 1B4	12	FP	
			1B3		ORT	
NIT1201	Introduction to Database Systems	Core	1B1, 2B1	12	FP	
			2B2		ORT	
NIT1202	Operating Systems	Core	1B4, 2B2	12	FP	
			2B1		ORT	
NIT1203	Introduction to Project Management	Core	2B3, 2B4	12	FP	
			2B4		ORT	
NIT1204	Web Application and Server Management	Core	2B1, 2B3, 2B4	12	FP	NIT1101
			2B3		ORT	



### **YEAR 2**

UNIT CODE		UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
	Major 1 - Unit 1	Major		12		
	Major 1 - Unit 2	Major		12		
	Minor 1 - Unit 1	Minor		12		
	Minor 2 - Unit 1	Minor		12		
	Major 1 - Unit 3	Major		12		
	Major 1 - Unit 4	Major		12		
	Minor 1 - Unit 2	Minor		12		
	Minor 2 - Unit 2	Minor		12		

### YEAR 3

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
	Major 1 - Unit 5	Major		12		
	Major 1 - Unit 6	Major		12		
	Minor 1 - Unit 3	Minor		12		
	Minor 2 - Unit 3	Minor		12		
	Major 1 - Unit 7	Major		12		
	Major 1 - Unit 8	Major		12		
	Minor 1 - Unit 4	Minor		12		
	Minor 2 - Unit 4	Minor		12		



List of compulsory minor/s available in this course NMIITC Graduating Core

List of major/s available in this course NMANSC Network and System Computing NMAWMD Web and Mobile Application Development

List of minor/s available in this courseNMIASDSoftware DevelopmentNMIANMNetwork ManagementNMIICTICT ManagementAMITEMThe Entrepreneurial Mindset

Students in this course pick One Major and One Minor option as per below only. Once selected you can go to the page that relates to this option for the correct enrolment into your required sequence pattern.

Option 1: Major in NMANSC - Networking and System Computing / Minor in NMIASD - Software Development Option 2: Major in NMANSC - Networking and System Computing / Minor in NMIICT- ICT Management Option 3: Major in NMANSC - Networking and System Computing / Minor in NAMITEM - The Entrepreneurial Mindset Option 4: Major in NMAWMD - Web & Mobile Application Development / Minor in NMIICT - ICT Management Option 5: Major in NMAWMD - Web & Mobile Application Development / Minor in NMIANM - Network Management Option 6: Major in NMAWMD - Web & Mobile Application Development / Minor in NMIANM - Network Management

Recommended unit sequencing for 2<sup>nd</sup> year and 3<sup>rd</sup> year NBIT students who have chosen their Major and Minor is provided on the last page. Please refer here to assist you with 2023 Enrolment.

For students taking The Entrepreneurial Mindset Minor please enrol as per the unit offerings in the Course Delivery Plan.



#### **IT MAJORS**

#### **Network and System Computing NMANSC**

This major provides students with advanced knowledge and skills in network and system computing through an integrated set of units in networking and network management. It builds on the Bachelor of Information Technology foundations including computer networks, programming, database systems and operating systems. Students will study server management, enterprise network management, routing and switching, IPv6, mobile and wireless networks, network design, Internet of Things, network security and virtualisation. It will prepare students for Microsoft and Cisco certificates like Microsoft Server Administration, Microsoft Active Directory, Microsoft HyperV, CCNA, CCNA Wireless and CCNA Security. Furthermore, they will apply practical and contemporary technologies to develop solutions to real world problems in their capstone final year projects.

UNIT CODE		UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NIT2122	Server Administration and Management	Major	1B2, 1B4	12	FP	NIT1202
			1B1		ORT	
NIT2124	Network Management	Major	1B2		ORT	NIT1104
NIT2202	Big Data	Major	2B2, 2B3, 2B4	12	FP	NIT1102; or NIT1201
			2B1		ORT	
NIT2222	Networking Technologies	Major	2B2	12	FP	NIT1104
			2B3, 2B4		ORT	
NIT3114	Online Business System Development	Major	1B1, 1B4	12	FP	NIT1204; or NIT2112; or NIT2213
			1B2		ORT	
NIT3122	Enterprise Network Management	Major	1B3	12	FP	NIT2122
NIT3202	Data Analytics for Cyber Security	Major	2B1	12	FP	NIT2102; and NIT2202
			2B4		ORT	
NIT3222	Virtualisation in Computing	Major	2B3	12	FP	NIT2122; or NIT2222
			2B2		ORT	



#### Web and Mobile Application Development NMAWMD

This major provides students with advanced knowledge and skills in web and mobile application development through an integrated set of units in web and mobile application development. It builds on the Bachelor of Information Technology foundations including computer networks, programming, database systems and operating systems. Students will study object oriented programming, software engineering, web programming, mobile app programming, cloud app programming and database systems. Furthermore, they will apply practical and contemporary technologies to develop solutions to real world problems in their capstone final year projects.

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NIT2112	Object Oriented Programming	Major	1B2, 1B4	12	FP	NIT1102
			1B3		ORT	
NIT2113	Cloud Application Development	Major	1B1, 1B4	12	FP	NIT1102; or BCO1102
			1B3		ORT	
NIT2202	Big Data	Major	2B2, 2B3, 2B4	12	FP	NIT1102; or NIT1201
			2B1		ORT	
NIT2213	Software Engineering	Major	2B1, 2B4	12	FP	
			2B3		ORT	
NIT3112	Advance Web Application Development	Major	1B2, 1B4	12	FP	NIT2112; and NIT2213
			1B3		ORT	
NIT3114	Online Business System Development	Major	1B1, 1B4	12	FP	NIT1204; or NIT2112; or NIT2213
			1B2		ORT	
NIT3202	Data Analytics for Cyber Security	Major	2B1	12	FP	NIT2102; and NIT2202
			2B4		ORT	
NIT3213	Mobile Application Development	Major	2B2	12	FP	NIT2112; or NIT2213
			2B3		ORT	



#### **MINORS:**

Complete the Graduating Core Minor and select ONE (1) of the following Discipline Minors:

#### Graduating Core NMIITC

This minor provides students the opportunity to articulate the role of the IT profession within the local and global communities by bringing together the knowledge and skills acquired in earlier units and apply them to solve the real-world problems in Capstone IT projects. Students will also study core knowledge and skills such as security, ethics and other areas important for IT professionals.

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NIT2102	Cyber Security Essentials	Minor	1B1, 1B3, 1B4	12	FP	NIT1104
			1B2		ORT	
NIT2201	IT Profession and Ethics	Minor	2B1, 2B2, 2B4	12	FP	
			2B3		ORT	
NEF3001	Applied Project 1	Minor	1B1, 1B4, 2B1, 2B4, SB1, WB1	12	FP	
NEF3002	Applied Project 2	Minor	1B1, 1B4, 2B1, 2B4, SB1, WB1	12	FP	NEF3001

#### Software Development NMIASD

The minor prepares students for careers in software engineering. Students will be provided with broad and coherent knowledge in contemporary software modelling techniques and specialised software development technologies. Modules include object-oriented programming, web programming and mobile application development. Students will also have opportunity to work on a productive software development team by applying the core principles consistent in software design, construction and maintenance.

UNIT CODE		UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NIT2112	Object Oriented Programming	Minor	1B2, 1B4	12	FP	NIT1102
			1B3		ORT	
NIT2213	Software Engineering	Minor	2B1, 2B4	12	FP	
			2B3		ORT	
NIT3112	Advance Web Application Development	Minor	1B2, 1B4	12	FP	NIT2112; and NIT2213
			1B3		ORT	
NIT3213	Mobile Application Development	Minor	2B2	12	FP	NIT2112; or NIT2213



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ORT

#### **Network Management NMIANM**

The network management minor provides students with broad understanding of the operation, administration and maintenance of network systems. The students will study specialised and in depth technologies in network management, including routing algorithms and protocols, Network Address Translation (NAT), IPv6 networks, Microsoft server management, Microsoft enterprise network management and Microsoft HyperV virtualisation.

UNIT CODE		UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NIT2122	Server Administration and Management	Minor	1B2, 1B4	12	FP	NIT1202
			1B1		ORT	
NIT2222	Networking Technologies	Minor	2B2	12	FP	NIT1104
			2B3, 2B4		ORT	
NIT3122	Enterprise Network Management	Minor	1B3	12	FP	NIT2122
NIT3222	Virtualisation in Computing	Minor	2B3	12	FP	NIT2122; or NIT2222
			2B2		ORT	

#### **ICT Management NMIICT**

The ICT management minor provides students the opportunity to explore the depth and breadth in planning, risk management and change control in small IT business. It is designed to equip students with the analytic, communication and project management skills to tame the IT-business interface. Furthermore, students will develop ICT service agreements to manage a collaborative relationship between an IT department and others. They will exhibit professional capacity to promote sustainable procurement practice, ensure the desired organizational outcomes and reduce administrative overheads.

UNIT CODE		UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
NIT2171	Introduction to ICT Management	Minor	1B1, 1B3	12	FP	
			1B1, 1B4		ORT	
NIT2271	ICT Change Management	Minor	2B1	12	FP	
			2B2		ORT	
NIT3171	ICT Business Analytics and Data Visualisation	Minor	1B3, 1B4	12	FP	NIT2202; or BAO2001; and NIT2171; or NIT2271
			1B2, 1B4		ORT	
NIT3274	Small IT Business	Minor	2B3		ORT	NIT2171; or NIT2271



#### **The Entrepreneurial Mindset AMITEM**

The nature of work is changing. The rapid pace in which technology is developing is causing widespread disruption, both in organisational cultures and working practices. And with new technologies such as artificial intelligence and machine-learning, robotics, nanotechnology, 3-D printing, and genetics and biotechnology coming up, this disruption is only getting started.

Success in this new world is increasingly dependent on personal initiative; a self-starting, future-oriented and persistent proactive mindset. Such a mindset combined with effective teamwork in a multidisciplinary context has been the driver of entrepreneurial success for decades. More and more employers are starting to demand these skills from their employees as well.

This unit set equips students with the skills and competencies to future-proof yourself, creating experiences that allow for a strong start to and succeeding in your chosen profession (be that as an employee or self-employed). Students work collaboratively on employing an evidence-based approach to identifying problems and implementing solutions, equipping themselves with the skills and knowledge to lead in the future of work.

The first unit explores how to come up with ideas and how to critically assess the potential of the idea. During this unit we introduce a number of key processes and concepts like where to start when exploring ideas, how to run user interviews and pretotyping. The second unit introduces the Minimum Viable Product (MVP) and allows students to experiment with the evidence-based, iterative approach of User Validation. The third unit focuses on how to effectively communicate the findings of the first two units in a compelling story to gather critical support. Finally, the last unit introduces students to growth strategies and how these strategies drive execution.

The unit set culminates in a pitch-style event where the students pitch their project in a live setting to an audience of stakeholders, integrating the knowledge, skills and understandings they have developed.

The Entrepreneurial Mindset unit set aims to provide career defining experiences. The minor is demanding and is a great fit for students who want to be part of something exciting and new while creating their own success.

UNIT CODE		UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
AEN2001	Problem Discovery	Minor	1B1, 2B1		ORT	
AEN2002	Solution Validation	Minor	1B2, 2B2		ORT	
AEN3001	Storytelling for Impact	Minor	1B3, 2B3		ORT	AEN2002
AEN3002	Hacking Growth	Minor	1B4, 2B4		ORT	AEN2002



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DESCRIPTION	ENTRY	1B1	1B2	1B3	1B4
Major in Network and System Computing and Minor in ICT Management	2023_1B1	NIT2171	NIT2124	NIT2122	NIT2102
Major in Network and System Computing and Minor in ICT Management	2023_1B1	NEF3001	NIT3171	NIT3122	NIT3114
Major in Network and Syst Computing and Minor in Software Dev	2023_1B1	NIT2112	NIT2102	NIT2124	NIT2122
Major in Network and Syst Computing and Minor in Software Dev	2023_1B1	NIT3122	NIT3114	NIT3112	NEF3001
Major in Web and Mobile App Dev and Minor in ICT Management	2023_1B1	NIT2102	NIT2112	NIT2171	NIT2113
Major in Web and Mobile App Dev and Minor in ICT Management	2023_1B1	NIT3114	NIT3112	NIT3171	NEF3001
Major in Web and Mobile App Dev and Minor in Network Management	2023_1B1	NIT2113	NIT2122	NIT2102	NIT2112
Major in Web and Mobile App Dev and Minor in Network Management	2023_1B1	NEF3001	NIT3122	NIT3114	NIT3112

DESCRIPTION	ENTRY	2B1	2B2	2B3	2B4
Major in Network and System Computing and Minor in ICT Management	2023_1B1	NIT2201	NIT2271	NIT2202	NIT2222
Major in Network and System Computing and Minor in ICT Management	2023_2B1	NIT2201	NIT2271	NIT2202	NIT2222
Major in Network and System Computing and Minor in ICT Management	2023_1B1	NEF3002	NIT3274	NIT3222	NIT3202
Major in Network and System Computing and Minor in ICT Management	2023_2B1	NEF3002	NIT3274	NIT3222	NIT3202
Major in Network and Syst Computing and Minor in Software Dev	2023_1B1	NIT2202	NIT2222	NIT2213	NIT2201
Major in Network and Syst Computing and Minor in Software Dev	2023_2B1	NIT2202	NIT2222	NIT2213	NIT2201
Major in Network and Syst Computing and Minor in Software Dev	2023_1B1	NIT3222	NIT3202	NIT3213	NEF3002
Major in Network and Syst Computing and Minor in Software Dev	2023_2B1	NIT3222	NIT3202	NIT3213	NEF3002
Major in Web and Mobile App Dev and Minor in ICT Management	2023_1B1	NIT2271	NIT2202	NIT2201	NIT2213
Major in Web and Mobile App Dev and Minor in ICT Management	2023_2B1	NIT2271	NIT2202	NIT2201	NIT2213
Major in Web and Mobile App Dev and Minor in ICT Management	2023_1B1	NIT3202	NIT3213	NIT3274	NEF3002
Major in Web and Mobile App Dev and Minor in ICT Management	2023_2B1	NIT3202	NIT3213	NIT3274	NEF3002
Major in Web and Mobile App Dev and Minor in Network Management	2023_1B1	NIT2213	NIT2201	NIT2213	NIT2202
Major in Web and Mobile App Dev and Minor in Network Management	2023_2B1	NIT2213	NIT2201	NIT2213	NIT2202
Major in Web and Mobile App Dev and Minor in Network Management	2023_1B1	NEF3002	NIT3222	NIT3202	NIT3213
Major in Web and Mobile App Dev and Minor in Network Management	2023_2B1	NEF3002	NIT3222	NIT3202	NIT3213

