

## **Course Descriptors**

### **Bachelor of Information Technology**

#### **Qualifications:**

- **Bachelor of Information Technology with majors in Information Systems, Systems Development and ICT Infrastructure**
- **Graduate Diploma in Information Technology**
- **Diploma in Information Technology**

## VERSION CONTROL

Version	Date approved	Approved by	Effective from	Brief Description
08/2/1	30 Nov 2010		1 Jan 2011	
08/2/2	22 Oct 2010		July 2011	
08/2/3	3 Oct 2012		1 Jan 2012	
08/2/4	3 Oct 2012		16 Jul 2012	
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08/2/6	10 Jan 2013		Jan 2013	
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08/2/10	16 Jul 2014		1 Feb 2015	
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08/2/13	31 Mar 2016		1 Jan 2016	
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08/2/17	20 Jul 2018		23 Jul 2018	
08/2/18	12 Mar 2019	EDCEE	1 Jan 2019	<b>NMIT Class 3; NZQA Type 1</b> Update Regulations for 2019 delivery, updated assessment information, add indicative content, add RAC info, pre-req change for PRJ702, update INF755
08/2/19	2 Dec 2019	EDCEE	24 Feb 2020	Update Regulations for 2020 delivery, pre-req change for SDV602, WEB601, update course grade key Other Results section.
08/2/20 BIT NE4507-3 102333-4 GradDip IT NE4587-4 106817-2	23 Jul 2020 29 Jun 2020	NMIT AB NZQA (C42815)	01 Jul 2020	<b>NMIT Class 3, NZQA Type 2</b> Addition of fully online delivery mode for BIT and Grad Dip IT. Including offshore online delivery via distance.
08221 BIT 102333-4 NE4507-4 GradDip IT 106817-2 NE4587-5	27 Jul 2020 20 Aug 2020 BIT GradDip IT	ED CEE NZQA (C4402) (C4403)	22 Feb 2021	<b>NMIT Class 3, NZQA Type 2</b> Reword and minor updates to entry requirements NET603 assessment weightings changed
	2 Mar 2021 22 Mar 2021	ED PD NZQA	22 Feb 2021	<b>NMIT Class 2, 3 NZQA Type 1</b> Removal of specific assessment details, replaced with Assessment 1, 2, 3 Inclusion of information for online delivery of selected courses DAT701, NET702, PRJ701, RES701, SDV701, SYD701, WEB701, PFW601 INF755 Project Management (BCom 18106) Update of Special Assessment Circumstances – Inclusion of Resubmission for PRJ701 and PRJ702. Extension to include online, included Late Submission Penalty and Compassionate Consideration no mark limit COM502 assessment order changed NET702 assessment to LO mapping updated

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## COM502 COMMUNICATION FOR IT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Certificate in Information Technology (Level 5)</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>To provide students with the knowledge to apply professional, legal and ethical principles and practices in a socially responsible manner to act as an emerging IT professional. This course aims to develop communication skills for IT students. Particular emphasis is placed on understanding fundamental communication concepts and relating them to the contemporary IT environment and workplace.</p>
Indicative content	<ul style="list-style-type: none"> <li>• IITP Code of Ethics</li> <li>• Health and Safety Act</li> <li>• Contract management</li> <li>• Privacy Act, Copyright Act (copyright and copy left)</li> <li>• Specific business or organisation protocols</li> <li>• Digital citizenship</li> <li>• Professional, sustainable, socially responsible and ethical principles; ethical work practice and professional behaviour</li> <li>• Treaty of Waitangi</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Identify and explain how personal factors and behaviours can influence the communication process in business situations.
2	Apply effective interpersonal communication skills in business situations.
3	Demonstrate appropriate written and oral and visual presentation skills that are clear, concise, courteous and correct, using currently recognised business formats.
4	Discuss the influence of culture on communication in an IT context.
5	Identify and explain the professional, legal, and ethical principles and practices required to act in a socially responsible manner as an emerging IT professional.

## ASSESSMENTS

<b>Basis of assessment</b>	Achievement based assessment	
<b>Assessment A</b>	<b>Learning Outcomes</b>	<b>% Weightings</b>
Assessment 1	1 - 5	20%
Assessment 2	1	15%
Assessment 3	2, 3, 5	50%
Assessment 4	1, 3, 4, 5	15%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Attempt all assessments</li><li>• Gain a course result of C or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course site</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## CSA502 COMPUTER SYSTEMS ARCHITECTURE

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Certificate in Information Technology (Level 5)</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>To introduce students to the fundamentals of computer systems architecture. The students will develop the knowledge and skills required to successfully plan, construct, optimise and maintain a modern PC-based computer system. Emphasis is placed on safe and effective industry practises, with the student gaining practical experience by producing a reliable and efficient standalone machine at the course's completion.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Implementing internetworking protocols</li> <li>• Creating user manuals</li> <li>• Interpretation of physical and logical diagrams</li> <li>• Security concepts, tools and techniques e.g. firewalls, white listing and blacklisting, anti-virus applications, google hacking, web cameras, with the intention that students can prevent security issues</li> <li>• Ethical considerations</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Explain the principles of computer systems architecture.
2	Discuss the principles of operation of system hardware and software components for a current generation personal computer and explain how these components interact.
3	Construct a current generation PC-based computer system that satisfies the requirements of a case study.
4	Explain and apply safe working practices for computer systems construction.
5	Identify and apply problem solving processes relevant to troubleshooting for PC-based hardware and software components.
6	Use appropriate diagnostic tools, procedures and benchmark standards to optimise the configuration of components for a PC-based computer system.
7	Describe and implement protocols used in basic foundation networking including internet concepts.

## ASSESSMENTS

<b>Basis of assessment</b>	Achievement based assessment	
<b>Assessment</b>	<b>Learning outcomes</b>	<b>% Weightings</b>
Assessment 1	3 - 7	20%
Assessment 2	3 - 7	30%
Assessment 3	1, 2, 4 - 7	25%
Assessment 4	1, 2, 4 - 7	25%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Attempt all assessments</li><li>• Gain a course result of C or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course site</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## DAT502 DATABASE CONCEPTS

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>This course provides the student with an understanding of the way in which business organisations utilise information using computers to represent and store data. Fundamental data structures and organisation, and database concepts and applications are covered as well as management and administration of a relational database in line with organisational requirements.</p>
Indicative content	<ul style="list-style-type: none"> <li>• A broad knowledge of database concepts, including the difference between relational and non-relational databases, appropriate data type for keys, and the relationship between foreign and primary keys.</li> <li>• A broad knowledge of relational data management, including making use of basic SQL commands.</li> <li>• Relational Database Administration, including setting up database users, granting permissions, and backing up data as well as importing data from and exporting data to external systems.</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Discuss how data is used in organisations.
2	Outline the principles underlying database management systems.
3	Apply the basic processes and techniques of database design.
4	Describe the management and administration of a relational database.
5	Using a commercial database management system, create and use a small database.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning outcomes	% Weightings	
Assessment 1	1 - 4	40%	
Assessment 2	1 - 5	60%	

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Attempt all assessments</li> <li>• Gain a course result of C or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course site</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## DES501 DESIGN AND DEVELOPMENT CONCEPTS

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Certificate in Information Technology (Level 5)</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim:	<p>To assist students to develop knowledge and skills in the design and development of effective IT solutions for enterprise including interaction design concepts and practice to enhance interface design.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Business concepts - functions, structure and cultural context of business; impact of IT on Business</li> <li>• Development life cycles including migrating changes through environments; e.g. software development. game design, web development</li> <li>• Data modelling; designing and creating a simple (multiple tables) database application</li> <li>• User experience (Ux) and usability concepts in IT</li> <li>• Basic principles of interaction design and human computer interaction (including accessibility) employing current and emerging technologies</li> <li>• Information management and retrieval</li> <li>• Web design and interactivity</li> <li>• Media design, including graphics, sound, video, text.</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Explore the operation of IT businesses.
2	Identify a range of development life cycles used in IT.
3	Describe the importance of information management for an organisation and implement a solution for a specific case study.
4	Investigate the User experience (Ux) and usability concepts in IT and apply to a particular web case study using effective interface design .

### ASSESSMENTS

Basis of assessment	Achievement Based assessment		
Assessment	Learning outcomes	% Weightings	
Assessment 1	1 - 4	10%	
Assessment 2	2, 3	60%	
Assessment 3	4	30%	

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Attempt all assessments</li><li>• Gain a course result of C or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	Results for assessments are given in percentage marks
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course website</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## NET502 NETWORKING FUNDAMENTALS

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed activities	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>To provide the student with an introduction to the concepts of computer networking. It also provides an opportunity for practical experience in configuring a modern small office/home office Local Area Network (LAN). This practical work is related to issues of system security, performance and reliability, with the objective of setting up efficient and effective network systems.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Networking includes reference models, addressing, cabling, wireless, protocols, topologies, security, industry networking standards, LAN and WAN devices</li> <li>• Network services including name resolution, access to data, applications, printing, authentication</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Identify and discuss the main issues involved in computer networking in the business environment.
2	Explain and discuss the application of fundamental network principles to the design of computer networks.
3	Describe and use physical network components effectively within a computer network.
4	Describe and use software components effectively within a computer network.
5	Describe and explain the use of a range of Internetworking technologies
6	Implement a small client/server network, utilising a modern operating system.

### ASSESSMENTS

Basis of assessment	Achievement based assessment	
Assessment	Learning outcomes	% Weightings
Assessment 1	3 - 5	15%
Assessment 2	1 - 5	27.5%
Assessment 3	1 - 5	27.5%
Assessment 4	1 - 6	30%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Attempt all assessments</li> <li>• Gain a course result of C or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	Results for assessments are given in percentage marks
<b>Course results</b>	<ul style="list-style-type: none"> <li>• Individual assessments may cover one or more of the learning outcomes.</li> <li>• Each summative assessment is assigned a percentage weighting.</li> <li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"> <li>• Course website</li> <li>• Tutor</li> <li>• Tutorial assistant</li> <li>• Classrooms equipped with computer and data projector</li> <li>• NMIT Moodle</li> <li>• Specialist guest speakers</li> <li>• Hardware lab</li> <li>• Library including online resources</li> </ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"> <li>• Completion of course work, set assignments/projects</li> <li>• Reading of course materials</li> <li>• Study group work</li> <li>• Preparation for classes</li> <li>• Homework</li> <li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li> <li>• Discussions with colleagues/subject matter experts</li> <li>• Review application of information to course work</li> <li>• Practise of relevant practical and technical skills/methods/techniques</li> <li>• Self-evaluation of course work</li> <li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li> </ul>

## OSA501 OPERATING SYSTEMS AND APPLICATION SOFTWARE

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed activities	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to the graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>To introduce key operating systems concepts and configure and administer systems and applications to meet typical organisational IT support requirements.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Common computer architecture from personal to enterprise</li> <li>• Operating system internals, relationship between hardware and operating system</li> <li>• General purpose and specialist operating systems in current use, both proprietary and open source</li> <li>• Conceptual knowledge of cloud services and virtualisation.</li> <li>• Hardware resources, network connectivity, systems and application software</li> <li>• Using graphical (GUI) and command line interfaces (CLI)</li> <li>• Organisational requirements, which must include performance, capacity, and business continuity</li> <li>• Understanding of application types, such as standalone, client-server, peer to peer, web service, mobile</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Understand key operating system concepts focussed on the areas of processor, memory, disk and network.
2	Perform typical file management operations, including secure file access.
3	Perform attended and unattended installations.
4	Install and manage system software and services.
5	Control and manage the boot process.
6	Manage system disks.

### ASSESSMENTS

Basis of assessment	Achievement Based assessment	
Assessment	Learning outcomes	% Weightings
Assessment 1	2 - 6	20%
Assessment 2	2 - 6	40%
Assessment 3	1 - 6	20%
Assessment 4	1 - 6	20%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Attempt all assessments</li><li>• Gain a course result of C or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course website</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## SDV503 INTRODUCTION TO SOFTWARE DEVELOPMENT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Certificate in Information Technology (Level 5)</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>To provide the student with an overview of the software development process and the importance of design. The depiction of programme designs will be introduced using a variety of methods and students will develop programme designs for a variety of problems. Students will be introduced to fundamental programming skills and given experience in developing and maintaining applications in the chosen environment as well as the problem solving and decision making techniques required in software development.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Using the prototyping software methodology students will iteratively experience the principles of implementation, user testing and deployment</li> <li>• Problem solving and decision making techniques</li> <li>• Number and coding systems, correct choice and use of data types</li> <li>• Creating a simple single module application;</li> <li>• Fundamental programming constructs and principles; eg linking the concepts of software development into the basics of coding including sequence, selection and iteration and solving problems related to syntax, logic, coding standards, debugging and testing</li> <li>• Tools - text editors and/or integrated development environments (IDEs), logic diagrams and/or pseudo code; accessing and reading technical documentation e.g. reading and developing software plans and implementing them with the .net environment using visual studio</li> <li>• Design documentation e.g. storyboards, narratives, pseudo code and flow charts</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Outline the software design and development process.
2	Select and apply a suitable design methodology to the development of a software application to satisfy set requirements.
3	Select, explain and use number systems and data types in the design of software for set requirements.
4	Use a programming language correctly and effectively to develop software applications for set projects.
5	Compare and contrast selected examples of procedural and object oriented programming.



## ASSESSMENTS

<b>Basis of assessment</b>	Achievement based assessment		
<b>Assessment</b>		<b>Learning outcomes</b>	<b>% Weightings</b>
Assessment 1		1, 3, 5	30%
Assessment 2		1 - 4	15%
Assessment 3		1 - 4	55%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"> <li>Attempt all assessments</li> <li>Gain a course result of C or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	Results for assessments are given in percentage marks
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"> <li>Course website</li> <li>Tutor</li> <li>Tutorial assistant</li> <li>Classrooms equipped with computer and data projector</li> <li>NMIT Moodle</li> <li>Specialist guest speakers</li> <li>Hardware lab</li> <li>Library including online resources</li> </ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Study group work</li> <li>Preparation for classes</li> <li>Homework</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li> <li>Discussions with colleagues/subject matter experts</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li> </ul>

## SDV502 APPLICATION TESTING

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	To provide students with the skills to test and publish an application, and produce user documentation and training material.
Indicative content	<ul style="list-style-type: none"> <li>• Testing procedures in the software development lifecycle</li> <li>• Testing in relation to software development methodologies, e.g. test driven development</li> <li>• Unit testing</li> <li>• Regression testing</li> <li>• Test driven development</li> <li>• Revision control tool chains, i.e. Git HUB or similar</li> <li>• Functional testing</li> <li>• Usability testing</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Determine client acceptance requirements and data input and exports from existing system(s).
2	Create, use and document a test plan for a solution to meet client requirements.
3	Plan and implement a testing environment.
4	Produce technical documentation for users and technical staff.

### ASSESSMENTS

Basis of assessment	Achievement Based assessment		
Assessment	Learning outcomes	% Weightings	
Assessment 1	1, 3	20%	
Assessment 2	2	30%	
Assessment 3	3, 4	50%	

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Attempt all assessments</li> <li>• Gain a course result of C or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course website</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## SYD502 INTRODUCTION TO SYSTEMS ANALYSIS AND DESIGN

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to the graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>This course provides the student with an understanding of the systems development process and the need for effective systems analysis and design. Several techniques and tools used in current methodologies will be introduced and practised.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Business process modelling tools to understand and document business processes;</li> <li>• Analysis of requirements: stakeholder interaction and feasibility study, addressing security issues; investigating more than one pre-package solution e.g. content management system (CMS)</li> <li>• Use of design principles and processes; and considering design of user experience (Ux) including universal accessibility</li> <li>• Software development standards (e.g. proprietorial and/or in-house coding standards)</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Identify and discuss the principles of the systems development life cycle (SDLC).
2	Explain the need for systems analysis and design within the systems development process.
3	Explain the principles of effective IT systems analysis and design and the appropriate application of these in the systems development process.
4	Create and interpret systems design and analysis documentation.
5	Determine the need for and apply software development standards in analysis and design documentation.

### ASSESSMENTS

Basis of assessment	Achievement Based assessment	
Assessment	Learning outcomes	% Weightings
Assessment 1	3, 4	34%
Assessment 2	3 - 5	31%
Assessment 3	1 - 5	35%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Attempt all assessments</li><li>• Gain a course result of C or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course website</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## TEC501 TECHNOLOGY SUPPORT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Information Technology Technical Support (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>To introduce IT service management, and trouble shoot and resolve a range of common system, networking, application and security problems using appropriate tools and procedures.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Service management frameworks e.g. ITIL</li> <li>• Protecting against unauthorised access</li> <li>• Auditing, logging, authentication, authorisation</li> <li>• Human behaviour that affects security</li> <li>• Following standard procedures when providing IT services</li> <li>• Focusing on the delivery of best services to end user</li> <li>• Service Desk as a function               <ul style="list-style-type: none"> <li>○ Common system problems should include hardware, operating system, networking, application and security problems</li> <li>○ Systems and applications includes different application types such as standalone, client-server, peer to peer, web service, mobile</li> </ul> </li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Discuss the basics of service standards, monitor service standards, and understand how management standards support exceptional customer service.
2	Explain the core “best practices” of an IT service desk as a function and perform troubleshooting and resolve a range of common system problems using appropriate tools and procedures.
3	Manage systems and applications to meet the performance, capacity, and business continuity requirements of an organisation.
4	Identify and describe the issues of implementing service management processes into an organisation and creating a cycle of continuous improvement.

### ASSESSMENTS

Basis of assessment	Achievement based assessment	
Methods of assessment	Learning outcomes	% Weightings
Assessment 1	2, 3	25%
Assessment 2	1, 2, 4	30%
Assessment 3	1 - 4	45%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Attempt all assessments</li><li>• Gain a course result of C or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course website</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## WEB503 INTERNET DESIGN PRINCIPLES

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>This course gives the student a detailed view of the operation of the Internet that enables current generation systems to handle text, graphics and multimedia, using current generation commercial software.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Responsive design (device and platform independence) of user experience (Ux), including user interface (UI), HCI principles, and universal accessibility</li> <li>• Multi-media development for web, optimising media for web</li> <li>• Publishing of solution includes moving from a test environment to a live platform</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Describe and discuss the operation of Internet components and the interrelationships between these components.
2	Explain the design principles required for successful Internet web page development for static and dynamic Internet web pages and apply these principles to the development and evaluation of a range of different web pages.
3	Explain the development principles required for successful Internet website development and apply these principles to the design and evaluation of websites.
4	Apply the principles of development for web.

### ASSESSMENTS

Basis of assessment	Achievement based assessment	
Assessment	Learning outcomes	% Weightings
Assessment 1	1 - 4	25%
Assessment 2	1 - 3	25%
Assessment 3	2 - 4	50%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Attempt all assessments</li> <li>• Gain a course result of C or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"> <li>Course website</li> <li>Tutor</li> <li>Tutorial assistant</li> <li>Classrooms equipped with computer and data projector</li> <li>NMIT Moodle</li> <li>Specialist guest speakers</li> <li>Hardware lab</li> <li>Library including online resources</li> </ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Study group work</li> <li>Preparation for classes</li> <li>Homework</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li> <li>Discussions with colleagues/subject matter experts</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li> </ul>

## WEB502 FRAMEWORK CUSTOMISATION

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	75
Workplace learning hours	0
Total learner managed hours	75
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• New Zealand Diploma in Web Development and Design (Level 5)</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	<p>This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy</p>
Course aim	<p>To provide students with the skills to implement and customise a solution package using frameworks and libraries and scripts. Students will be able to select, install and configure appropriate modules to supplement functionality to meet organisational requirements.</p>
Indicative content	<ul style="list-style-type: none"> <li>• Framework sets: CMSs, but perhaps also running with other framework web systems, like Ruby on Rails, Angular.js . ASP.net, MVC</li> <li>• Client side web scripting such as JavaScript, cascading style sheets (CSS), and HTML, which must not undermine security</li> <li>• Consideration of multiple plug-in solutions</li> <li>• Addressing plug-in security and compatibility issues</li> <li>• Templating languages</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Select an appropriate framework set for a given brief.
2	Design a website for a particular framework.
3	Separate content from presentation in the development of a website.
4	Implement groups, roles and permissions within a website development.
5	Select and manage a host and domain names.
6	Identify and describe content types, entities and entity-relationships.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning outcomes	% Weightings	
Assessment 1	3 - 6	25%	
Assessment 2	1 – 4, 6	25%	
Assessment 3	1 - 6	50%	

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Attempt all assessments</li> <li>• Gain a course result of C or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	A variety of teaching and learning and learning approaches will be used in the course with an emphasis on student-centred learning. The following learning and teaching approaches may be used in this course: online learning programme; lectures; group discussions (online or face to face); workshops, tutorials; learner managed activities; research; projects, work based activity.
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Course website</li><li>• Tutor</li><li>• Tutorial assistant</li><li>• Classrooms equipped with computer and data projector</li><li>• NMIT Moodle</li><li>• Specialist guest speakers</li><li>• Hardware lab</li><li>• Library including online resources</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## SCM501 SOCIAL MEDIA

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	5
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total hours of learner managed activities	90
Total hours of student learning	150

Pre-requisites	None
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	Students will have a working knowledge of social media in action relevant to both individual and organisational online presence.
Indicative Content	<ul style="list-style-type: none"> <li>• Designing online presence by developing a blog site and social media accounts</li> <li>• Developing and maintaining online presence via blog site and social media accounts</li> <li>• Evaluating social media campaigns of businesses and organisations, especially via presentations by guest speakers from the industry</li> <li>• Developing a strategic social media plan for an existing business or organisation</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Create, develop and maintain a personalised online presence <ul style="list-style-type: none"> <li>- Use a personal domain to construct a professional social media presence,</li> <li>- Demonstrate familiarity with the range of social media vocabulary, tools and spaces</li> </ul>
2	Demonstrate effective engagement in online communities <ul style="list-style-type: none"> <li>- Demonstrate the use of social media tools for a range of information dissemination and communication purposes,</li> <li>- Demonstrate appropriate etiquette in social media use.</li> </ul>
3	Understand the fundamental issues around online identities and behaviour. <ul style="list-style-type: none"> <li>- Understand the ethical and, legal elements of social media use</li> <li>- Understand the safety and privacy issues of social media use.</li> </ul>
4	Demonstrate and critically evaluate the role of social media as a professional tool. <ul style="list-style-type: none"> <li>- Evaluate social media for use in a personal/professional capacity</li> <li>- Integrate social media into an overall communications strategy</li> <li>- Identify strategies for effective implementation of social media</li> <li>- Understand how to watch for, and adapt to, changes in the use of social media</li> </ul>

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (minimum)	% Weightings
Assessment 1	1, 3	40%	50%
Assessment 2	2, 3	40%	25%
Assessment 3	4	40%	25%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Mark of 40% or more in every summative assessment</li><li>• Gain a course result of C (50%) or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	<ul style="list-style-type: none"><li>• Students will create their own personal online space and use blogging and other social media tools throughout the course as part of the exploration of online presence and operation within an online community.</li><li>• Students will create their own personal online space and use blogging and other social media tools throughout the course as part of the exploration of online presence and operation within an online community.</li><li>• Group discussions in class and online will give the students the ability to critique the use of a personalised online presence and its implications.</li><li>• Learner managed activities, independent research and problem solving to encourage students to develop strategic and critical thinking skills.</li><li>• Other approaches may include: Lectures, tutorials, practical exercises, laboratories and case studies.</li></ul>
<b>Learning and teaching resources</b>	<ul style="list-style-type: none"><li>• Online textbooks and resources including NMIT Online, wikis, online journals and blogs.</li><li>• A wide variety of social media such as Blogs, Facebook, Twitter, Ning, Scoop.It and YouTube</li><li>• Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory, specialist hardware and software.</li></ul>
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## DAT601 DATABASE DESIGN AND ADMINISTRATION

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	DAT501 or DAT502 Database Concepts or equivalent skills and knowledge
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course is an introduction to the concepts, skills and issues of database management with an emphasis on management, design and implementation issues. Students will learn how to analyse the information requirements of a business system and design and build relational databases. Structured Query Language (SQL) will be used to give practical experience of database construction.
Indicative content	Content may include but is not limited to: <ul style="list-style-type: none"> <li>• Data modelling using Conceptual, Logical and Physical Models, for a business data management problem</li> <li>• Principles of a DBMS management tool, for assessing scale of a database , and speed of execution</li> <li>• SQL for DDL, and DML, up to and including an introduction to procedural and transact SQL concepts</li> <li>• Apply a well-established process for database design and implementation, and management</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Explain and evaluate the use of data modelling in information systems development.
2	Implement a suitable database development methodology.
3	Correctly use Structured Query Language (SQL) in the development of a relational database.
4	Outline the fundamental principles of effective data management within an organisation.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (minimum)	% Weightings
Assessment 1	1 - 4	40%	90%
Assessment 2	1 - 4	40%	10%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory and specialist software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## DAT602 DATABASE APPLICATION DEVELOPMENT

Version	08221
Effective from:	22 February 2021
Previous Version:	08/2/20

NMIT credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	DAT501 or DAT502 Database Concepts and either SDV501 or SDV503 Introduction to Software Development or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course is an introduction to the development of database applications, with an emphasis on providing students with practical experience developing single-user and multi-user database applications using a commercially significant current generation programming and database environment. Students will learn how to access and update databases using a wide range of facilities in Structured Query Language (SQL), and how to deal with issues of concurrent access by several users.
Indicative content	Content may include but is not limited to: <ul style="list-style-type: none"> <li>• Database driven application development in a database supportive code stack</li> <li>• Transact, and Procedural SQL that supports high volume and or iterative transactions from an application</li> <li>• Analysis of an existing database driven application</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Analyse and evaluate an existing database application design.
2	Apply Structured Query Language (SQL) to access and update a database.
3	Design and implement a prototype single-user database application.
4	Explain and compare different approaches to the management of effective concurrent data access.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1 - 4	40%	90%
Assessment 2	1 - 4	40%	10%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory and specialist software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## NET603 PRACTICAL NETWORK DEVELOPMENT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	NET501or NET502 Networking Fundamentals; or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course develops the student's knowledge in the field of computer networking and data communications principles and technologies. With emphasis on the medium sized corporate environment, it offers an opportunity for practical experience in analysing, designing and implementing a network system. This practical work is related to the concepts of system security, performance and reliability, with the objective of learning how to set up an efficient and effective network system.
Indicative content	This course includes, but is not limited to: <ul style="list-style-type: none"> <li>• IPv4 and IPv6 protocol understanding and work</li> <li>• Network Design</li> <li>• PowerShell</li> <li>• Build, verify, and document a SME network in a virtual environment</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Analyse and discuss corporate network and Internet-work principles, components and technologies.
2	Evaluate and undertake the design activities required for building effective network systems.
3	Evaluate and undertake the implementation and testing activities of network systems, by creating a complex client/server based network, utilising modern network operating systems.
4	Evaluate and undertake network administration activities.
5	Analyse and evaluate cloud solutions, then implement appropriate solutions into a complex client/server based network.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1 - 5	40%	20%
Assessment 2	1 - 5	40%	40%
Assessment 3	1 - 5	40%	40%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Mark of 40% or more in every summative assessment</li><li>• Gain a course result of C (50%) or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory, specialist hardware and software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## NET602 NETWORK MANAGEMENT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	NET501 or NET502 Networking Fundamentals; or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course focuses on the planning and implementation of secure and reliable Information and Communication Technology systems for Small and Medium Enterprises (SME). It addresses the technical issues surrounding fault tolerance and security for core networking services, as well as addressing the importance of core services as part of a larger service offering.
Indicative content	Secure Wireless Technologies Implement several features of Windows Server family to provide a secure and functional network for an organisation. Utilise technologies such as Sophos server, Microsoft Exchange Server, Microsoft Active Directory, IPSEC for domain isolation, and research technologies such as NAP.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Analyse requirements, plan and implement an SME network for a given business problem.
2	Understand, plan and implement fault tolerant core networking services.
3	Understand, plan and implement additional services dependent on the core ICT platform.
4	Analyse and critically evaluate technologies for an SME network.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning outcomes	Pass criteria (minimum)	%Weightings
Assessment 1	1 - 4	40%	50%
Assessment 2	1 - 4	40%	50%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory, specialist hardware and software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## PFW601 PROFESSIONAL AND TECHNICAL WRITING

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

<b>Pre-requisites</b>	COM540 Professional Communications or COM501 or COM502 Communication for IT or equivalent skills and knowledge.
<b>Co-requisites</b>	None
<b>Alignment to graduate profiles</b>	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
<b>Core transferable skills</b>	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
<b>Course aim</b>	This course aims to further develop students' understanding, skills, and independence in the use of advanced communication tools and techniques relevant to an appropriate workplace. The course will also provide students' with the opportunity to further develop their research, oral/written communication and presentation skills.
<b>Indicative content</b>	<ul style="list-style-type: none"> <li>• Evaluating different types of documentation in the business and IT contexts</li> <li>• Designing and developing manuals on a range of topics</li> <li>• Undertaking a research project on a business or IT-related field, including composing a research proposal, keeping a progress report, producing a literature review and a final secondary research report</li> <li>• Planning, preparing and presenting a persuasive talk on a controversial topic in business and IT</li> <li>• Identifying and interpreting a range of interpersonal communication skills at a workplace, especially in the context of business and IT</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Identify, discuss and apply a range of advanced interpersonal communication skills typically used in an appropriate professional environment.
2	Investigate and develop a persuasive case related to an appropriate and current issue and use advanced presentation skills, assisted by electronic media, to present that case.
3	Identify common issues for users of technical manuals and address those issues through the design and production of a technical manual that meets a specified audience's need.
4	Identify an appropriate topic for research, carry out the location, selection and analysis of information from a variety of sources and produce two professionally written outputs from that research.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	3	40%	25%
Assessment 2	4	40%	30%
Assessment 3	2	40%	25%
Assessment 4	1	40%	20%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>• Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>• Individual assessments may cover one or more of the learning outcomes.</li> <li>• Each summative assessment is assigned a percentage weighting.</li> <li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	Activities may include: Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and Teaching Approaches Online Delivery:</b>	Activities may include: <ul style="list-style-type: none"> <li>• Downloadable pre-recorded lectures</li> <li>• Online forums and discussion groups</li> <li>• Presentations with or without voice-over</li> <li>• Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>• Tutor</li> <li>• NMIT Moodle and Computer lab</li> <li>• Handouts</li> <li>• Case Studies</li> <li>• Library including online resources</li> <li>• Video conference facilities</li> <li>• Classrooms equipped with computer and data projection</li> <li>• Selected texts</li> <li>• Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>• NMIT Moodle online learning platform</li> <li>• Online facilitator</li> <li>• Scenarios and simulations may be used to meet these learning outcomes.</li> <li>• Online templates where applicable</li> <li>• Case studies</li> <li>• Specialist software</li> <li>• Online resources through NMIT library services</li> <li>• Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	Activities may include, but are not limited to: <ul style="list-style-type: none"> <li>• Completion of course work, set assignments/projects</li> <li>• Reading of course materials</li> <li>• Preparation for classes</li> <li>• Homework</li> <li>• Discussions with colleagues/subject matter experts,</li> <li>• Study group work</li> <li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>• Review application of information to course work</li> <li>• Practise of relevant practical and technical skills/methods/techniques</li> <li>• Self-evaluation of course work</li> <li>• Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>

## SDV601 SOFTWARE DEVELOPMENT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	SDV501 or SDV503 Introduction to Software Development or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course provides students with an introduction to the principles of object-oriented analysis, design, programming and testing, and offers them experience in applying these principles to software development using an object-oriented programming language in common use.
Indicative content	Content may include but is not limited to: <ul style="list-style-type: none"> <li>• OO principles and methodology, OOA, OOP</li> <li>• Unified Modelling Language</li> <li>• Practical case-study</li> <li>• The Visual Studio IDE</li> <li>• C# programming language</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Describe the principles of the object model and explain its application to software development.
2	Apply object-oriented analysis tools and techniques appropriately to the development of software applications.
3	Apply object-oriented design tools and techniques effectively to the design of software that meets the requirements of a set project brief.
4	Explain the features of an object-oriented programming language that supports the object model and use this language correctly in the development of software.
5	Apply the principles of object-oriented analysis (OOA) and object-oriented design (OOD) and object-oriented programming (OOP) to software development.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1, 4	40%	40%
Assessment 2	2, 3, 5	40%	60%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory and specialist software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## SDV602 SOFTWARE DEVELOPMENT 2

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	SDV501 or SDV503 Introduction to Software Development or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course will broaden the students' software development horizon by experiencing a new programming language and environment. By using a language, possibly from a different vendor and/or is aimed at a different hardware platform or environment the students will gain valuable and marketable expertise. Building on the prerequisite course(s), students will apply the learnt analysis and design methodologies to the new programming environment, and if necessary adapt them to suit the characteristics of the chosen programming language.
Indicative Content	Covers application development in a software development system not covered in other courses. For example: game development platforms Unity3D, UnrealEngine, or mobile programming systems such as Google Flutter.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Examine and show understanding of a new programming language and identify its purpose and characteristics.
2	Demonstrate independence in the investigation and effective application of language syntax features.
3	Effectively design and implement a software project in response to the requirements of a project brief. The software produced will be of an intermediate to advanced level.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass Criteria (minimum)	% Weightings
Assessment 1	1 - 4	40%	90%
Assessment 2	1 - 4	40%	10%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources, use of Internet, computer laboratory and specialist software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## SEC602 SYSTEMS SECURITY

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	NET501 or NET502 Networking Fundamentals; or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course provides the student with an introduction to protecting the corporate ICT environment from security breaches and their consequences. Successful industry based practices are analysed and evaluated, and the student gains practical experience in implementing relevant security strategies. This work is related to the fundamental concepts surrounding the security of systems, with the objective of setting up a secure infrastructure.
Indicative content	The course draws on content from: Security Threats and Controls (Systems security, Social Engineering. Threats and Attacks), Identity Access and Management(Crypto Access and Control, Cyphers, SSL.TLS, Radius Authentication),Network Security (FTP,SFTPS, SPF Domain Keys DMARC, MX Toolbox, Secure Network Design, Security and Applications, Wireless Network Security, VPN and Remote Access Security , IoT Compromise, DNSSec), Host, Data, and Application Security (Web Application Security, Data Security, CIS Controls MS Windows Cyber Hygiene, AWS Best Practices, Shared Responsibility Model, ASP.NET Application Security, SQL Injection – Damn Vulnerable Web Application(DWVA)), Operations Security( Mobilr and Embedded Device Security, Business Continuity Planning, Risk management, Incident Management, Security Policies and Training, Scoping Security Assessments, Physical Security Controls CompTIA Security). Defence In Depth( SANS Glossary of Security Terms, NIST Glossary of Security Terms, NSA Defence in Depth, SANS Institute InfoSec Reading Room)

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Identify network attack strategies and defences.
2	Discuss the principles of organisational security and describe the elements of effective security policies.
3	Outline the technologies and uses of cryptographic standards and products.
4	Identify network, and host based security technologies and practices.
5	Describe with examples how wireless and remote access security is enforced.
6	Describe the standards and products used to enforce security on web and communications technologies.
7	Identify strategies for ensuring business continuity, fault tolerance, and disaster recovery and discuss relative strengths and weaknesses.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass Criteria (minimum)	% Weightings
Assessment 1	1 - 7	40%	40%
Assessment 2	1 - 6	40%	40%
Assessment 3	1 - 7	40%	20%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Mark of 40% or more in every summative assessment</li><li>• Gain a course result of C (50%) or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory, specialist hardware and software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## SYD601 SYSTEMS ANALYSIS AND DESIGN

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	SYD501 or SYD502 Introduction to Systems Analysis and Design; or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course provides the student with an understanding of how various tools and techniques for object-oriented analysis and design of information systems are integrated and used within system development methodologies. Practical experience in the application of these tools and techniques is also provided.
Indicative content	Investigation and use of the unified process methodology, unified modelling language and software tools for managing and documenting the analysis and design of an information system from an object-oriented perspective.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Illustrate how different object-oriented tools and techniques are integrated within an information systems development methodology.
2	Use integrated object-oriented techniques for systems analysis and design of an information system for a given situation.
3	Use automated object-oriented tools for the recording and management of requirements for the analysis and design of an information system for a given situation.
4	Utilize a methodological approach to create comprehensive analysis and design documentation for the analysis and design of an information system for a given situation.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1	40%	25%
Assessment 2	1 - 3	40%	30%
Assessment 3	1 - 4	40%	45%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory and specialist software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## WEB601 DYNAMIC WEB TECHNOLOGY

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	WEB501 or WEB503 Internet Design Principles, plus SDV501 or SDV503 Introduction to Software Development or equivalent skills and knowledge and either DAT501 or DAT502 Database Concepts or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course provides the student with the skills necessary to produce a dynamically generated website suitable for use by business, computing or other specialist area.
Indicative Content	Covers web development using current server-side to client-side web application development techniques. Provides “full stack” website development using a relevant and up to date industry “full stack”, i.e. MEAN, or based on a single framework such as REACT, or other current stacks such as LAMP, or MVC .Net.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Compare and contrast server side environments, security mechanisms and protocols that are used to support a web server to serve dynamically generated content to a client web browser.
2	Create server side dynamically generated web pages for specific business, computing or other specialist area.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1, 2	40%	90%
Assessment 2	1, 2	40%	10%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory and specialist software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## MUV601 IMMERSIVE MULTI-USER VIRTUAL ENVIRONMENTS

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	6
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	Completion of 15 credits in IT Level 5
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> <li>• Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course will enable a student to develop technical skills in the creation of applications in complex immersive multi-user virtual environments (MUVs) and to develop an understanding of the communities, potential benefits and issues of working and operating in these environments. It will include an investigation of the relationship of MUVs to other multi-user technologies.
Indicative content	Students will research and analyse multi-user virtual environments and the communities that use them, including an evaluation of the potential and problems that such environments may have when used for supporting commercial, academic or entertainment activities. Students will design, build and evaluate their own interactive application with a MUV and provide reflective feedback on their own and others' work. A significant part of the class sessions will be conducted within a multi-user virtual environment.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Use appropriate techniques and software tools to develop and evaluate interactive applications in an immersive multi-user environment.
2	Investigate and evaluate interactive applications in immersive multi-user virtual environments.
3	Critically analyse their own and others' work and maintain a digital journal of their investigations and evaluations.
4	Critically reflect on the potential, limitations and issues of working and using immersive multi-user environments.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	2, 3	40%	30%
Assessment 2	3	40%	20%
Assessment 3	1, 3, 4	40%	50%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory and specialist software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>

## DAT701 ENTERPRISE DATABASE SOLUTIONS

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	DAT601 Database Design and Administration or DAT602 Database Application Development or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course will focus on both the application of advanced techniques in database design and on providing students with the opportunity to apply data modelling techniques and relational database design principles and database technology to solve business problems.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Design, document and implement conceptual, logical and physical models for a complex database system.
2	Reflect on and justify the reasons for decisions made during the design process including the choice of the specific Database Management System (DBMS).
3	Evaluate performance issues and methods of performance measurement for an enterprise database.
4	Investigate historical and contemporary developments in database models and systems.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1, 3	40%	40%
Assessment 2	1 - 4	40%	60%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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### RESULTS

Assessment results	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
Course results	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	Activities may include: Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and Teaching Approaches Online Delivery:</b>	Activities may include: <ul style="list-style-type: none"> <li>• Downloadable pre-recorded lectures</li> <li>• Online forums and discussion groups</li> <li>• Presentations with or without voice-over</li> <li>• Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>• Tutor</li> <li>• NMIT Moodle and Computer lab</li> <li>• Handouts</li> <li>• Case Studies</li> <li>• Library including online resources</li> <li>• Video conference facilities</li> <li>• Classrooms equipped with computer and data projection</li> <li>• Selected texts</li> <li>• Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>• NMIT Moodle online learning platform</li> <li>• Online facilitator</li> <li>• Scenarios and simulations may be used to meet these learning outcomes.</li> <li>• Online templates where applicable</li> <li>• Case studies</li> <li>• Specialist software</li> <li>• Online resources through NMIT library services</li> <li>• Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	Activities may include, but are not limited to: <ul style="list-style-type: none"> <li>• Completion of course work, set assignments/projects</li> <li>• Reading of course materials</li> <li>• Preparation for classes</li> <li>• Homework</li> <li>• Discussions with colleagues/subject matter experts,</li> <li>• Study group work</li> <li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>• Review application of information to course work</li> <li>• Practise of relevant practical and technical skills/methods/techniques</li> <li>• Self-evaluation of course work</li> <li>• Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>

## NET701 ENTERPRISE INFRASTRUCTURES

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	NET602 Network Management or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course focuses on the development and management of enterprise ICT infrastructures. It addresses the technical and strategic issues that are involved in the provision of ICT services in large organisations. Students investigate and evaluate the range of advanced technologies used to support large scale networked systems, and develop security strategies for them. New advances in technology are researched and their potential impact evaluated. Service management policies to support organisations to deliver well managed ICT services are explored.
Indicative content	This course focuses on the development and management of enterprise ICT infrastructures. It addresses the technical and strategic issues that are involved in the provision of ICT services in large organisations. Students investigate and evaluate the range of advanced technologies used to support large scale networked systems. New advances in technology are researched and their potential impact evaluated. Service management policies to support organisations to deliver well managed ICT services are explored.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Evaluate a range of advanced technologies used to support large scale networked systems.
2	Research emerging technologies and justify their potential role in enterprise ICT systems, and present this research in a well organised professional format.
3	Critically evaluate the role of an ICT framework(s) for effective management and delivery of an enterprise ICT service.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1 - 3	40%	50%
Assessment 2	1 - 3	40%	50%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	<p>Activities may include:</p> <p>Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.</p>
<b>Learning and Teaching Approaches Online Delivery:</b>	<p>Activities may include:</p> <ul style="list-style-type: none"> <li>Downloadable pre-recorded lectures</li> <li>Online forums and discussion groups</li> <li>Presentations with or without voice-over</li> <li>Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Tutor</li> <li>NMIT Moodle and Computer lab</li> <li>Handouts</li> <li>Case Studies</li> <li>Library including online resources</li> <li>Video conference facilities</li> <li>Classrooms equipped with computer and data projection</li> <li>Selected texts</li> <li>Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>NMIT Moodle online learning platform</li> <li>Online facilitator</li> <li>Scenarios and simulations may be used to meet these learning outcomes.</li> <li>Online templates where applicable</li> <li>Case studies</li> <li>Specialist software</li> <li>Online resources through NMIT library services</li> <li>Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	<p>Activities may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Preparation for classes</li> <li>Homework</li> <li>Discussions with colleagues/subject matter experts,</li> <li>Study group work</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>

## NET702 CLOUD SERVICES

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	NET603 Practical Network Development and NET602 Network Management or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course focuses on the planning, implementation and maintenance of corporate cloud services. Students investigate and evaluate the range of the cloud computing services and examine the typical architecture of cloud computing deployments. Typical issues of privacy and security are also investigated. Cloud solutions, utilising cloud services features will be planned and implemented, as well as and the migration of significant functions of an existing business.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Critically analyse cloud solutions.
2	Outline current issues pertaining to cloud environments.
3	Plan and configure a cloud solution.
4	Plan and perform a cloud transition.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1 - 3	40%	30%
Assessment 2	1 - 3	40%	30%
Assessment 3	1 - 4	40%	40%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	<p>Activities may include:</p> <p>Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.</p>
<b>Learning and Teaching Approaches Online Delivery:</b>	<p>Activities may include:</p> <ul style="list-style-type: none"> <li>Downloadable pre-recorded lectures</li> <li>Online forums and discussion groups</li> <li>Presentations with or without voice-over</li> <li>Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Tutor</li> <li>NMIT Moodle and Computer lab</li> <li>Handouts</li> <li>Case Studies</li> <li>Library including online resources</li> <li>Video conference facilities</li> <li>Classrooms equipped with computer and data projection</li> <li>Selected texts</li> <li>Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>NMIT Moodle online learning platform</li> <li>Online facilitator</li> <li>Scenarios and simulations may be used to meet these learning outcomes.</li> <li>Online templates where applicable</li> <li>Case studies</li> <li>Specialist software</li> <li>Online resources through NMIT library services</li> <li>Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	<p>Activities may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Preparation for classes</li> <li>Homework</li> <li>Discussions with colleagues/subject matter experts,</li> <li>Study group work</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>

## PRJ701 PROJECT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	45
Level	7
EFTS	0.375
Teaching hours	45
Workplace learning hours	0
Total learned managed hours	405
Total hours of student learning	450

Pre-requisite or Co-requisite	RES701 Research Methods or INF755 Project Management
Alignment to graduate profiles	<p>This course contributes to achievement of the graduate outcomes of the following qualifications:</p> <ul style="list-style-type: none"> <li>• Bachelor of Information Technology</li> <li>• Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	<p>The purpose of the project is to provide students with an opportunity to work, in depth, on a topic of individual interest within their specialist field. The project is intended to increase the individual's insights into the field and enhance their professional approach to problem solving. There is no taught component of this course. Instead, each student will work under the direction of a supervising staff member who assists the student in identifying and completing an appropriate piece of work.</p> <p>Bachelor of Information Technology students will be required to carry out their project within the subject area of their chosen major.</p> <p>There are several ways this Project can be undertaken including the following:</p> <ul style="list-style-type: none"> <li>• Research project</li> <li>• Development project</li> <li>• Proof of concept project</li> <li>• Workplace based practicum</li> <li>• Case study</li> </ul>
Indicative content	<ul style="list-style-type: none"> <li>• Independent research</li> <li>• Problem formulation</li> <li>• Case analysis</li> <li>• Critical decision making</li> <li>• Formal report writing</li> <li>• Journal keeping</li> <li>• Professional project presentation</li> <li>• Critical process- and result reflection</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Work independently and apply analytical and critical decision making in the development of a project within a specialist field.
2	Produce a comprehensive formal report recording all relevant project activity & outcomes.
3	Present aspects of the project activity to an invited and diverse audience in a professional and informative manner.
4	Reflect critically on the learning experiences of the project work.

*Note: specific learning outcomes may be related to types of projects, for example a development project would require the creation of a 'computing product'.*

## ASSESSMENTS

<b>Basis of assessment</b>	Achievement based assessment		
<b>Assessment</b>	<b>Learning Outcomes</b>	<b>Pass criteria (minimum)</b>	<b>% Weightings</b>
Assessment 1	1, 3, 4	40%	20%
Assessment 2	3, 4	40%	10%
Assessment 3	3, 4	40%	15%
Assessment 4	1, 3, 4	40%	5%
Final Report - Technical Examiner	2 - 4	40%	35%
Final Report - Report Examiner	2 - 4	40%	15%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	Activities may include: Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and Teaching Approaches Online Delivery:</b>	Activities may include: <ul style="list-style-type: none"> <li>Downloadable pre-recorded lectures</li> <li>Online forums and discussion groups</li> <li>Presentations with or without voice-over</li> <li>Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>Tutor</li> <li>NMIT Moodle and Computer lab</li> <li>Handouts</li> <li>Case Studies</li> <li>Library including online resources</li> <li>Video conference facilities</li> <li>Classrooms equipped with computer and data projection</li> <li>Selected texts</li> <li>Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>NMIT Moodle online learning platform</li> <li>Online facilitator</li> <li>Scenarios and simulations may be used to meet these learning outcomes.</li> <li>Online templates where applicable</li> <li>Case studies</li> <li>Specialist software</li> <li>Online resources through NMIT library services</li> <li>Online spaces for collaborative learning</li> </ul>

<b>Learner managed activities</b>	<p>Activities may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Completion of course work, set assignments/projects</li> <li>• Reading of course materials</li> <li>• Preparation for classes</li> <li>• Homework</li> <li>• Discussions with colleagues/subject matter experts,</li> <li>• Study group work</li> <li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>• Review application of information to course work</li> <li>• Practise of relevant practical and technical skills/methods/techniques</li> <li>• Self-evaluation of course work</li> <li>• Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>
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## PRJ702 GRADUATE DIPLOMA PROJECT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	30
Level	7
EFTS	0.25
Teaching hours	30
Workplace learning hours	0
Total learner managed hours	270
Total hours of student learning	300

Pre-requisites	RES701 Research Methods Graduate Diploma students only
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	The purpose of the project is to provide students with an opportunity to work, in depth, on a topic of individual interest within their specialist field. The project is intended to increase the individual's insights into the field and enhance their professional approach to problem solving. There is no taught component of this course. Instead, each student will work under the direction of a supervising staff member who assists the student in identifying and completing an appropriate piece of work. There are several ways this Project can be undertaken including the following: <ul style="list-style-type: none"> <li>Research project</li> <li>Development project</li> <li>Proof of concept project</li> <li>Workplace based practicum</li> <li>Case study</li> </ul>
Indicative content	<ul style="list-style-type: none"> <li>Independent research</li> <li>Problem formulation</li> <li>Case analysis</li> <li>Critical decision making</li> <li>Formal report writing</li> <li>Journal keeping</li> <li>Professional project presentation</li> <li>Critical process- and result reflection</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Work independently and apply analytical and critical decision making in the development of a project within a specialist field.
2	Plan, organise and implement the project in an effective and appropriate manner.
3	Produce a comprehensive formal report recording all relevant project activity & outcomes.
4	Make an oral presentation of the process and conclusions of the project.
5	Reflect on the learning process as experiences throughout carrying out the project work.

Note: specific learning outcomes may be related to types of projects, for example a development project would require the creation of a 'computing product'.

## ASSESSMENTS

<b>Basis of assessment</b>	Achievement based assessment		
<b>Assessment</b>	<b>Learning Outcomes</b>	<b>Pass criteria (Minimum)</b>	<b>% Weightings</b>
Assessment 1	1, 3, 4	40%	20%
Assessment 2	3, 4	40%	10%
Assessment 3	3, 4	40%	15%
Assessment 4	1, 3, 4	40%	5%
Final Report - Technical Examiner	2 - 4	40%	35%
Final Report - Report Examiner	2 - 4	40%	15%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory, specialist hardware and software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Study group work</li> <li>Preparation for classes</li> <li>Homework</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li> <li>Discussions with colleagues/subject matter experts</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li> </ul>

## RES701 RESEARCH METHODS

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	Completion of 60 credits at Level 6
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	The purpose of this course is to provide a comprehensive overview of rigorous research practice and to lay a foundation of research skills which will be relevant to both further study and professional practice.
Indicative content	<ul style="list-style-type: none"> <li>Critical thinking and analysis</li> <li>Research methods and methodologies</li> <li>Literature search and evaluation</li> <li>Formal academic presentation</li> <li>Creation of a research proposal</li> <li>Ethical research guidelines</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Critically evaluate of the nature of research and the research process, (including sources of bias and ethical considerations).
2	Critically analyse the sources of research evidence and demonstrate through critical appraisal how such evidence should be interpreted and evaluated.
3	Apply their understanding of the basic issues involved to the determination and scoping of a useful research question.
4	Apply their understanding of the basic principles of common research methods to the construction of an appropriate research design for a specific research question.
5	Create an appropriate research proposal for an individually selected research question and approach.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1 - 3	40%	25%
Assessment 2	1 - 3	40%	30%
Assessment 3	4, 5	40%	45%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	<p>Activities may include:</p> <p>Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.</p>
<b>Learning and Teaching Approaches Online Delivery:</b>	<p>Activities may include:</p> <ul style="list-style-type: none"> <li>Downloadable pre-recorded lectures</li> <li>Online forums and discussion groups</li> <li>Presentations with or without voice-over</li> <li>Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Tutor</li> <li>NMIT Moodle and Computer lab</li> <li>Handouts</li> <li>Case Studies</li> <li>Library including online resources</li> <li>Video conference facilities</li> <li>Classrooms equipped with computer and data projection</li> <li>Selected texts</li> <li>Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>NMIT Moodle online learning platform</li> <li>Online facilitator</li> <li>Scenarios and simulations may be used to meet these learning outcomes.</li> <li>Online templates where applicable</li> <li>Case studies</li> <li>Specialist software</li> <li>Online resources through NMIT library services</li> <li>Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	<p>Activities may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Preparation for classes</li> <li>Homework</li> <li>Discussions with colleagues/subject matter experts,</li> <li>Study group work</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>



## SDV701 TIERED SOFTWARE DEVELOPMENT

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	SDV601 Software Development or equivalent skills and knowledge, including fundamental database knowledge and basic SQL skills.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course provides the student with advanced software development concepts and practical experience. Using a suitable object-oriented language and its programming paradigm, a range of advanced programming concepts is introduced. This includes the application of design patterns and best practice for tiered software architectures as well as the use of different software technologies.
Indicative content	Content may include but is not limited to: <ul style="list-style-type: none"> <li>Revision of OO principles and UML</li> <li>Improving existing OO code through refactoring</li> <li>Applying software design patterns</li> <li>Organising code projects into tiers and layers</li> <li>Integrating software projects with a DBMS</li> <li>Combining disparate software front- and back ends</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Select appropriate design patterns for a software development project, apply the design patterns and justify the choices made.
2	Select an appropriate tiered application architecture design for a software development project, apply the design and justify the choices made.
3	Evaluate the usefulness of object-oriented programming language features in the development of software for a range of uses.
4	Design and develop a tiered software system using different software technologies that satisfies the requirements of a project brief.
5	Evaluate the usefulness of a range of models of software development for tiered applications.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1, 3, 5	40%	35%
Assessment 2	1 - 5	40%	65%

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"> <li>• Mark of 40% or more in every summative assessment</li> <li>• Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>• Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>• Individual assessments may cover one or more of the learning outcomes.</li> <li>• Each summative assessment is assigned a percentage weighting.</li> <li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	Activities may include: Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and Teaching Approaches Online Delivery:</b>	Activities may include: <ul style="list-style-type: none"> <li>• Downloadable pre-recorded lectures</li> <li>• Online forums and discussion groups</li> <li>• Presentations with or without voice-over</li> <li>• Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>• Tutor</li> <li>• NMIT Moodle and Computer lab</li> <li>• Handouts</li> <li>• Case Studies</li> <li>• Library including online resources</li> <li>• Video conference facilities</li> <li>• Classrooms equipped with computer and data projection</li> <li>• Selected texts</li> <li>• Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>• NMIT Moodle online learning platform</li> <li>• Online facilitator</li> <li>• Scenarios and simulations may be used to meet these learning outcomes.</li> <li>• Online templates where applicable</li> <li>• Case studies</li> <li>• Specialist software</li> <li>• Online resources through NMIT library services</li> <li>• Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	Activities may include, but are not limited to: <ul style="list-style-type: none"> <li>• Completion of course work, set assignments/projects</li> <li>• Reading of course materials</li> <li>• Preparation for classes</li> <li>• Homework</li> <li>• Discussions with colleagues/subject matter experts,</li> <li>• Study group work</li> <li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>• Review application of information to course work</li> <li>• Practise of relevant practical and technical skills/methods/techniques</li> <li>• Self-evaluation of course work</li> <li>• Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>

## SYD701 SYSTEMS DEVELOPMENT METHODOLOGIES

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total hours of learner managed activities	90
Total hours of student learning	150

Pre-requisites	SYD601 Systems Analysis and Design or equivalent skills and knowledge.
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course will take a holistic view of the information system development life cycle and several of the different methodologies, tools and techniques that can be used to support it. Students will have the opportunity to experiment with techniques from various methodologies and evaluate their appropriateness for specific situations.
Indicative content	<ul style="list-style-type: none"> <li>Introducing tools that are used in software development such as Git, GitHub, Trello, Slack</li> <li>Introducing system development lifecycle and its historical progress</li> <li>Introducing agile practices, tools, methods</li> <li>Applying agile concepts to devise a team project plan</li> <li>Overview of DevOps</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Examine and explain a range of different contexts in which information system development occurs
2	Explore and critically analyse the fundamental concepts and application of differing systems development methodologies
3	Select and apply methods and tools commonly used in the analysis and design of information systems
4	Evaluate the use of different methods and methodologies for the development of complex information systems.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1	40%	50%
Assessment 2	2	40%	25%
Assessment 3	3, 4	40%	25%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	<p>Activities may include:</p> <p>Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.</p>
<b>Learning and Teaching Approaches Online Delivery:</b>	<p>Activities may include:</p> <ul style="list-style-type: none"> <li>Downloadable pre-recorded lectures</li> <li>Online forums and discussion groups</li> <li>Presentations with or without voice-over</li> <li>Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Tutor</li> <li>NMIT Moodle and Computer lab</li> <li>Handouts</li> <li>Case Studies</li> <li>Library including online resources</li> <li>Video conference facilities</li> <li>Classrooms equipped with computer and data projection</li> <li>Selected texts</li> <li>Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>NMIT Moodle online learning platform</li> <li>Online facilitator</li> <li>Scenarios and simulations may be used to meet these learning outcomes.</li> <li>Online templates where applicable</li> <li>Case studies</li> <li>Specialist software</li> <li>Online resources through NMIT library services</li> <li>Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	<p>Activities may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Preparation for classes</li> <li>Homework</li> <li>Discussions with colleagues/subject matter experts,</li> <li>Study group work</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>

## WEB701 WEB TECHNOLOGIES

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Workplace learning hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	WEB601 Dynamic Web Technology
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course provides the student with the skills to select, implement and evaluate modern web technologies in a business context. Emerging technologies will be identified and their potential role assessed.
Indicative content	Content may include but is not limited to: <ul style="list-style-type: none"> <li>Web technologies</li> <li>Web frameworks</li> <li>Design and coding systems, for current exemplars of web stacks</li> <li>Laravel, Meteor, Angular, React, Node.js (JavaScript) based systems</li> <li>LAMP based systems</li> <li>Microsoft .Net MVC, Java Enterprise technologies</li> <li>Database systems (e.g. MS SQL, MySQL, and Oracle Rbs) and noSQL systems (e.g. Firebase and MongoDB)</li> <li>Blockchain interfaces (Ethereum) plus other non-currency based trust systems, AI – tensorflow.js, IBM Watson</li> <li>Cloud based Quantum computing interfaces</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Analyse and critically compare a number of existing web application frameworks.
2	Modify a database-driven dynamic application to meet specified requirements.
3	Implement and then critically assess the use of a modern web technology in a specific business context.
4	Research emerging web technologies and justify their potential role in advanced web systems in a range of different situations, and present the research in an appropriate format.

### ASSESSMENTS

Basis of assessment	Achievement based assessment		
Assessment	Learning Outcomes	Pass criteria (Minimum)	% Weightings
Assessment 1	1 - 3	40%	50%
Assessment 2	1 - 4	40%	10%
Assessment 3	3, 4	40%	40%

### REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

Requirements	<ul style="list-style-type: none"> <li>Mark of 40% or more in every summative assessment</li> <li>Gain a course result of C (50%) or higher</li> </ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"> <li>Results for assessments are given in percentage marks</li> </ul>
<b>Course results</b>	<ul style="list-style-type: none"> <li>Individual assessments may cover one or more of the learning outcomes.</li> <li>Each summative assessment is assigned a percentage weighting.</li> <li>The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li> <li>To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	<p>Activities may include:</p> <p>Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.</p>
<b>Learning and Teaching Approaches Online Delivery:</b>	<p>Activities may include:</p> <ul style="list-style-type: none"> <li>Downloadable pre-recorded lectures</li> <li>Online forums and discussion groups</li> <li>Presentations with or without voice-over</li> <li>Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Tutor</li> <li>NMIT Moodle and Computer lab</li> <li>Handouts</li> <li>Case Studies</li> <li>Library including online resources</li> <li>Video conference facilities</li> <li>Classrooms equipped with computer and data projection</li> <li>Selected texts</li> <li>Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	<p>Resources may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>NMIT Moodle online learning platform</li> <li>Online facilitator</li> <li>Scenarios and simulations may be used to meet these learning outcomes.</li> <li>Online templates where applicable</li> <li>Case studies</li> <li>Specialist software</li> <li>Online resources through NMIT library services</li> <li>Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	<p>Activities may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>Completion of course work, set assignments/projects</li> <li>Reading of course materials</li> <li>Preparation for classes</li> <li>Homework</li> <li>Discussions with colleagues/subject matter experts,</li> <li>Study group work</li> <li>Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>Review application of information to course work</li> <li>Practise of relevant practical and technical skills/methods/techniques</li> <li>Self-evaluation of course work</li> <li>Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>

## INF755 PROJECT MANAGEMENT

*Note: This course is part of the Bachelor of Commerce programme and is subject to the Programme Regulations for the Bachelor of Commerce.*

<b>Version Effective from:</b>	BCom 18106 22 February 2021
<b>Previous Version</b>	18105

<b>NMIT Credits</b>	15
<b>Level</b>	7
<b>EFTS</b>	0.125
<b>Teaching hours</b>	60
<b>Workplace learning hours</b>	0
<b>Learner managed hours</b>	90
<b>Total hours of student learning</b>	150

<b>Pre-requisites:</b>	Students must have successfully completed 180 credits of degree level (or 60 Graduate Diploma credits) study Or equivalent knowledge and skills	
<b>Co-requisites:</b>	None	
<b>Alignment to the Graduate Profile(s):</b>	This course contributes to the achievement of the Graduate Outcomes for the following qualifications: <ul style="list-style-type: none"> <li>• Bachelor of Commerce</li> <li>• Graduate Diploma in Accounting</li> <li>• Graduate Diploma in Management</li> <li>• Graduate Diploma in Marketing</li> <li>• Bachelor of Information Technology</li> </ul>	
<b>Alignment to the Core Transferable Skills</b>	This course contributes towards the development of the following Core Transferable Skills categories: Self/Others, Learning to Learn, Subject Specific, Literacy, Numeracy, Digital Literacy	
<b>Course Aim:</b>	Learners will develop the knowledge and skills to specify a project and take on a project manager role.	
<b>Indicative Content</b>	<ul style="list-style-type: none"> <li>• Project Management in Context</li> <li>• Project Integration</li> <li>• Scope Management and Time Management</li> <li>• Cost and Procurement Management</li> <li>• Stakeholder Management</li> </ul>	<ul style="list-style-type: none"> <li>• Communications Management</li> <li>• Risk Management</li> <li>• Human Resources Management</li> <li>• Quality Management</li> </ul>

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1.	Critically investigate contemporary software and tools used in current project management practice.
2.	Plan, implement and complete projects on time, within budget and scope
3.	Model the skills involved in project quality, scope, time, cost, human resources, communications, risk, procurement, and integration management

### ASSESSMENT AND RESULTS

<b>Basis of Assessment</b>	Achievement Based		
<b>Assessment</b>	<b>Learning Outcomes</b>	<b>% Weightings</b>	
Assessment 1	1, 2	30%	
Assessment 2	2, 3	25%	
Assessment 3	1, 2, 3	45%	

<b>Assessment Results</b>	Results for Achievement Based assessment are given in percentage marks.
<b>Course Results</b>	AC-NMIT-05
<b>Requirements for Successful Course Completion</b>	In order to pass a course, students must: <ul style="list-style-type: none"> <li>• Submit all summative assessments</li> <li>• Achieve an overall mark of at least 50%</li> </ul>

## LEARNING AND TEACHING

<b>Learning and Teaching Approaches Blended Delivery:</b>	Approaches equipping students with investigative, interpretative and, analytical skills consistent with the graduate outcomes and core transferable skills. <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Online activities</li> <li>• Inquiry and Project Based Learning</li> </ul>
<b>Learning and Teaching Approaches Online Delivery:</b>	Activities may include: <ul style="list-style-type: none"> <li>• Downloadable pre-recorded lectures</li> <li>• Online forums and discussion groups</li> <li>• Presentations with or without voice-over</li> <li>• Worksheets and other directed tasks</li> </ul>
<b>Learning and Teaching Resources Blended Delivery:</b>	Resources may include, but are not limited to: <ul style="list-style-type: none"> <li>• Programme Handbook</li> <li>• Tutor</li> <li>• NMIT Moodle and Computer lab</li> <li>• Handouts</li> <li>• Case Studies</li> <li>• Library including online resources</li> <li>• Video conference facilities</li> <li>• Classrooms equipped with computer and data projection</li> <li>• Selected texts</li> <li>• Open Education Resources</li> </ul>
<b>Learning and Teaching Resources Online Delivery:</b>	<ul style="list-style-type: none"> <li>• Programme Handbook</li> <li>• NMIT Moodle online learning platform</li> <li>• Online facilitator</li> <li>• Scenarios and simulations may be used to meet these learning outcomes.</li> <li>• Online templates where applicable</li> <li>• Online resources through NMIT library services</li> <li>• Online spaces for collaborative learning</li> </ul>
<b>Learner managed activities</b>	Activities may include, but are not limited to: <ul style="list-style-type: none"> <li>• Completion of course work, set assignments/projects</li> <li>• Reading of course materials</li> <li>• Preparation for classes</li> <li>• Homework</li> <li>• Discussions with colleagues/subject matter experts,</li> <li>• Study group work</li> <li>• Research - (e.g. exploration, location and selection of relevant information, review/ evaluation/analysis of information, recording information)</li> <li>• Review application of information to course work</li> <li>• Practise of relevant practical and technical skills/methods/techniques</li> <li>• Self-evaluation of course work</li> <li>• Gathering relevant contextual information/issues/ideas to build knowledge of the subject</li> </ul>



## SEC701 SYSTEMS SECURITY 2

Version	08221
Effective from	22 February 2021
Previous version	08/2/20

NMIT Credits	15
Level	7
EFTS	0.125
Teaching hours	60
Supervised and assessed work based training hours	0
Total learner managed hours	90
Total hours of student learning	150

Pre-requisites	SEC602 Systems Security
Co-requisites	None
Alignment to graduate profiles	This course contributes to achievement of the graduate outcomes of the following qualifications: <ul style="list-style-type: none"> <li>Bachelor of Information Technology</li> <li>Graduate Diploma in Information Technology</li> </ul>
Core transferable skills	This course contributes towards the development of the following core transferable skills categories: Self/Others - Manaakitanga, Learning to Learn, Specialist skills, Literacy, Numeracy, Digital Literacy
Course aim	This course builds upon existing student knowledge and skills of system security. It covers topics and skills that, when implemented, provide protection to IT networks and assets for businesses and organisations from IT security breaches. Industry practices are evaluated and critiqued, and students gain implementable skills in best-practice and real world security strategies. Students will engage with contemporary concepts that enable the establishment of IT security systems and be able to evaluate the effectiveness of IT infrastructure security policies, plans, and practices.

### LEARNING OUTCOMES

On successful completion of this course students will be able to:	
1	Analyse and critique a range of ICT system security concepts, issues, policies and techniques used in the contemporary corporate environment.
2	Select, develop and implement effective strategies for securely protecting the IT system infrastructure and evaluate their use in the corporate environment.
3	Develop and implement effective strategies to handle business system-security breaches and evaluate their use in a corporate environment.

### ASSESSMENTS

Basis of assessment	Achievement based assessment
Methods of assessment	A range of assessment methods may be used. The following are examples of appropriate methods of assessment: <ul style="list-style-type: none"> <li>Test (in-class test; larger test; informal or formal oral)</li> <li>Assignment (Laboratory exercise and written report; practical exercise; analysis; written essay; investigation and written report; folders of work; case study)</li> <li>Presentation (formal or informal)</li> <li>Project</li> <li>Journal</li> <li>Group Assessments</li> </ul>

## REQUIREMENTS FOR SUCCESSFUL COURSE COMPLETION

<b>Requirements</b>	<ul style="list-style-type: none"><li>• Mark of 40% or more in every summative assessment</li><li>• Gain a course result of C (50%) or higher</li></ul>
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## RESULTS

<b>Assessment results</b>	<ul style="list-style-type: none"><li>• Results for assessments are given in percentage marks</li></ul>
<b>Course results</b>	<ul style="list-style-type: none"><li>• Individual assessments may cover one or more of the learning outcomes.</li><li>• Each summative assessment is assigned a percentage weighting.</li><li>• The overall percentage mark for the course is calculated by adding the weighted results for all summative assessments.</li><li>• To derive the course result the overall percentage mark is converted into a grade using Course Result Key AC-NMIT-06</li></ul>

## LEARNING AND TEACHING

<b>Learning and teaching approaches</b>	Lectures, group discussions, tutorials, learner managed activities, laboratories, presentations, research, projects and case studies.
<b>Learning and teaching resources</b>	Textbooks, journals and Library Learning Centre resources; use of Internet; computer laboratory, specialist hardware and software.
<b>Learner managed activities</b>	<ul style="list-style-type: none"><li>• Completion of course work, set assignments/projects</li><li>• Reading of course materials</li><li>• Study group work</li><li>• Preparation for classes</li><li>• Homework</li><li>• Research - (e.g. exploration, location and selection of relevant information, review/evaluation/analysis of information, recording information)</li><li>• Discussions with colleagues/subject matter experts</li><li>• Review application of information to course work</li><li>• Practise of relevant practical and technical skills/methods/techniques</li><li>• Self-evaluation of course work</li><li>• Gathering relevant contextual information/ issues/ideas to build knowledge of the subject</li></ul>