D101 PROGRAMMING FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To provide an introduction to the fundamentals of programming and to enable students to develop quality software.

Learning Outcomes
On successful completion of this course students will be able to:

1. Develop an application using an industry standard language
2. Debug, test and document a software application
3. Explain the fundamentals of programming

Content

- History of software development
- Phases of software development lifecycle (SDLC)
- Concepts of problem solving and abstraction
- Design concepts
- Programming concepts: control structures, expressions, use of APIs, data types, classes, and inheritance
- Debugging and exception handling
- Testing: black box and white box

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	15%	3	Gain a minimum of 50% overall
Assessment Two	35%	1, 2	
Assessment Three	35%	2	
Assessment Four	15%	3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts

The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

D111 DATABASE FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To provide students with a broad operational knowledge of database design and administration.

Learning Outcomes
On successful completion of this course students will be able to:

1. Design a relational database to meet organisational requirements
2. Apply interaction design concepts to a user interface
3. Store and retrieve organisational data using query and reporting tools
4. Explain database design and administration

Content

- Data organisation approaches
  Examples may include: data types, tables, keys, relationships
- Entity Relationship Diagrams
- Common Database models
  Examples may include: (distributed, centralised) hierarchical, network, relational, object-oriented
- Concepts of Data Manipulation Language (DML), Data Definition Language (DDL), and Data Control Language (DCL)
- Data Integrity
  Examples may include: entity integrity, domain integrity, referential integrity

Learning and Teaching Approaches
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Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	25%	1	Gain a minimum of 50% overall
Assessment Two	40%	2, 3	
Assessment Three	35%	4	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts

The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I101 INFORMATION SYSTEMS FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To introduce students to business systems and essential components of the ICT profession.

Learning Outcomes
At the successful completion of this course students will be able to:

1. Describe information systems principles, roles and functional business areas
2. Communicate effectively and professionally using industry standard tools
3. Apply and explain professional, legal, and ethical principles relevant to the ICT industry

Content

- Organisational entities and structures including communication processes and mediums
- Consumer law, privacy law, relevant computing legislation, ethical considerations, Treaty of Waitangi
- Collaborative document editing, virtual team organisation
- Information systems and IT roles
- APA referencing

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	20%	2	Gain a minimum of 50% overall
Assessment Two	40%	2, 3	
Assessment Three	40%	1, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, on-line databases, and the Internet to increase their knowledge

and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I102 TECHNICAL SUPPORT FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To enable students to deliver organisational technical support based on best practice in IT Service Management

Learning Outcomes
At the completion of this course students will be able to:

1. Apply a user needs analysis to identify organisational requirements
2. Create, deliver and evaluate a training session
3. Develop technical documentation to a professional standard
4. Explain IT service management best practice

Content

- Adult learning concepts
- Learning preferences
- Training styles and methods
- User needs analysis
- Resources and tools for training
- Technical documentation
- Lesson planning
- User support services and roles
- ITIL Service Operation

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	20%	1, 2	Gain a minimum of 50% overall
Assessment Two	30%	1, 3	
Assessment Three	50%	4	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts

and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I111 WEB FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To provide an introduction to the fundamentals of web development and to enable students to produce quality websites.

Learning Outcomes

At the successful completion of this course students will be able to:

1. Design a website according to UX design principles that meets organisational requirements
2. Develop a website using an industry standard approach
3. Explain the fundamentals of website development

Content
- History of the Internet
- Principles of Web design
- Internet protocols
  Examples may include: TCP/IP, HTTP, FTP, SMTP
- Web development techniques
  Examples may include: HTML, XHTML, DHTML, XML, JavaScript, CSS, server-side scripting

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	20%	1	Gain a minimum of 50% overall
Assessment Two	45%	2	
Assessment Three	35%	3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to

increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I121 SYSTEMS ANALYSIS FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To provide an introduction to the principles of systems analysis and systems requirements elicitation techniques

Learning Outcomes
At the successful completion of this course students will be able to:

1. Analyse situations requiring problem solving
2. Elicit and model user requirements using a variety of techniques
3. Construct accurate systems analysis documentation reflecting requirements

Content

- Problem analysis techniques
  Examples may include: user interviews, observation, problem definition
- Requirements elicitation techniques
  Examples may include: user interviews, observation, surveys, prototyping, walkthroughs
- Requirements Modelling
  Examples may include: user stories, use-case diagrams
- Systems analysis phases of Systems Development Lifecycle
- Modelling principles
  Examples may include: abstraction, decomposition, user views, explicitness (eg, state all assumptions or make no assumptions)
- Data Modelling
- Process Modelling

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1, 2	Gain a minimum of 50% overall
Assessment Two	40%	2, 3	
Assessment Three	30%	2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts

The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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T101 NETWORK FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To provide an introduction to the fundamentals of computer networks as they currently exist in industry and to enable students to configure, test and troubleshoot local area networks.

Learning Outcomes
On successful completion of this course students will be able to:

1. Describe the operation of current network technologies
2. Select the most appropriate network technologies for a given scenario
3. Apply testing and troubleshooting techniques to networking problems

Content

- Computer network classification: LAN, MAN, WAN and PAN.
- LAN copper, wireless and fibre media; their characteristics and usage.
- Ethernet hardware, performance and operation.
- IP addressing and operation.
- TCP operation, performance and uses.
- UDP operation, performance and uses.
- Symmetric and asymmetric key encryption characteristics and usage.
- Authentication and hashing.
- Network configuration of operating systems in current use.

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	10%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	45%	1, 2, 3	
Assessment Three	45%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts

The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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T111 COMPUTER HARDWARE FUNDAMENTALS

Course Level	5
Credits	15
Duration	60 Lecturer supported learning hours 90 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To develop students' understanding of the fundamentals of computer hardware, operating systems and troubleshooting techniques.

Learning Outcomes
On successful completion of this course students will be able to:

1. Describe the purpose and operation of major computer components
2. Demonstrate use of a command line interface (CLI)
3. Select, install, troubleshoot and configure IT hardware and systems software

Content

- Numbering systems and data representation used in computer systems
- Computer hardware and operating system fundamentals
- Troubleshooting tools and techniques relating to hardware and operating systems
- File Systems
- Memory Management
- Concurrency

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessment Type	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1, 3	Gain a minimum of 50% overall
Assessment Two	30%	1, 2, 3	
Assessment Three	40%	2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the

objective of learning and developing their referencing skills and their general academic writing skills.

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D211 DATABASE DEVELOPMENT

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	D111
Co-requisite	none

Course Aim
To effectively design an information system for a complex business application.

Learning Outcomes
At the successful completion of this course students will be able to:

1. Evaluate alternative design solutions
2. Design a complex information system
3. Create a prototype from a design
4. Formulate quality processes

Content

- Normalisation and De-normalisation
- Conceptual, Logical, and Physical diagrams
- Client/Server Architecture
- Prototyping approaches
- Distributed Database design
- Input/Output design

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1	Gain a minimum of 50% overall
Assessment Two	25%	2, 3	
Assessment Three	45%	4	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts

The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I202 IT PROJECT MANAGEMENT

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	I102
Co-requisite	none

Course Aim
This course will enable the student to learn the basic principles and terminology of the profession of project management, and apply this to create project plans. Students will also be given a brief introduction to using project management software.

Learning Outcomes
At the completion of this course students will be able to:

1. Examine, discuss and apply the knowledge areas of project management.
2. Develop a project plan for an IT related project.
3. Use project management software to create a Gantt chart for scheduled activities and assigned resources, including people, equipment and their relevant costs.
4. Use project management software to analyse project data and produce reports.

Content

- Knowledge areas of Project Management including; Integration, Scope, Time, Cost, Quality, Resources, Stakeholders, Communications, Risk, and Procurement
- Project Management terminology
- Project planning
- Project management software

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

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Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	25%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	25%	2, 3	
Assessment Three	50%	1, 2, 4	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I221 ANALYSIS AND DESIGN

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	I121
Co-requisite	none

Course Aim
This course will enable students to analyse the requirements for an information system and evaluate different methodologies used in systems analysis.

Learning Outcomes
At the successful completion of this course students will be able to:

1. Create analysis documentation for a moderately complex system
2. Create design documentation for the system under investigation
3. Implement quality processes to ensure accuracy of analysis and design documentation

Content

- Analysis methodologies
- Requirements Management
- Data and Process modelling
- Quality processes

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	30%	1, 2, 3	
Assessment Three	40%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the

objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

D201 ADVANCED PROGRAMMING

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	D101
Co-requisite	none

Course Aim
To introduce standard algorithms required for business application programming

Learning Outcomes
At the successful completion of this course students will be able to:
1. Design and Construct small applications using a variety of algorithms
2. Devise test plans to ensure quality software
3. Create system maintenance documentation

Content
- Standard algorithms
  Examples may include: Searching, Sorting, Recursion
- File input/output
- Database access
- Testing strategies
  Examples may include: white-box, black-box
- Maintenance documentation
- Web applications

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1, 2	Gain a minimum of 50% overall
Assessment Two	40%	1	
Assessment Three	30%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

D202 SOFTWARE PROCESS

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	D101
Co-requisite	none

Course Aim
To create quality software applications utilising a modern development approach

Learning Outcomes
At the successful completion of this course students will be able to:

1. Undertake a team based iterative development project
2. Effectively manage an individual development task
3. Implement processes to ensure quality
4. Compare and select an appropriate development method for a given problem

Content

- Iterative development approaches
  Examples may include: RAD, Agile
- Team based development approaches
- Quality Assurance techniques
  Examples may include: Testing, Inspection and Review, Maintenance documentation, User documentation
- Adapting to user requirements changes

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	15%	4	Gain a minimum of 50% overall
Assessment Two	45%	1, 3	
Assessment Three	40%	2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a

source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I203 DIGITAL MULTIMEDIA

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	I101 Information Systems
Co-requisite	none

Course Aim
To apply principles and techniques relating to the application of digital multimedia technologies

Learning Outcomes
At the successful completion of this course students will be able to:

1. Describe the concepts of digital images, video and audio
2. Create and manipulate digital image, video and audio files according to a technical specification for distribution across the ICT infrastructure
3. Optimise digital multimedia for commonly used ICT mediums

Content

- Digital Images
  Examples may include: Editing, 2D, 3D, Raster type, Vector type, Lossy and Lossless compression, Resolution, Conversion, Common file types, Medium Optimisation
- Digital Video
  Examples may include: Editing, Recording, Frame rate, Interlacing, Resolution, Aspect Ratio, Bit rate, Compression, Codecs, Common formats, Conversion, Common file type, Medium Optimisation
- Digital Audio
  Examples may include: Editing, Recording, Sample rate, Word size, Bit rate, Dithering, Aliasing, Compression, Conversion, Common file type, Medium Optimisation

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria

Assessment One	30%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	20%	1, 2, 3	
Assessment Three	20%	1, 2, 3	
Assessment Four	30%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I209 INDUSTRY PLACEMENT

Course Level	6
Credits	15
Duration	15 Lecturer Supported 135 Independent learning hours
Pre-requisite	120 compulsory credits at level 5
Co-requisite	none

Course Aim
To enable students to undertake an ICT industry based work placement. The industry placement course is subject to availability and approval from the Head of School.

Learning Outcomes
On successful completion of this paper students will be able to:

1. Work within an ICT industry based environment
2. Meet work placement expectations and requirements
3. Record and evaluate work and progress
4. Present placement outcomes to academic supervisors

Content

- Placement documentation, e.g. job description, roles, and responsibilities
- Industry based work which complements and enhances existing ICT skills and knowledge
- Development and maintenance of weekly work logs
- Written reporting on placement outcomes
- Reflective formal presentations of placement experiences

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is standards-based and achievement is described by grades. This paper will have a minimum of three and generally a maximum of five pieces of assessment. A student must achieve a C grade (50-54) or higher in order to successfully pass this paper.

The specific assessments will be specified in the Paper Outline as provided by the lecturer at the beginning of the semester. Assessment activities will be selected from the following range: theory test, practical test, practical demonstration, project, assignment, exercise, interview, debate, report, portfolio, presentation, journal, work log.

Off Campus Learning
Refer to 1.12 in Programme Overview

Resources and Prescribed / Recommended Texts

Students will access a learning management system to obtain templates and learning resources for the generic assessments. As each placement is unique, students will use experience gained throughout the degree to source their own specific resources. The library is also a source of information and guidance in the use of academic referencing and writing techniques.

I211 eCOMMERCE SYSTEMS

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	I111
Co-requisite	none

Course Aim
To introduce principles and application of electronic commerce technologies

Learning Outcomes
At the successful completion of this course students will be able to:

1. Define Electronic Commerce and describe its various categories
2. Describe the major types of Electronic Commerce transactions
3. Describe the limitations of Electronic Commerce
4. Implement an online commercial Web site for selling products
5. Implement user security and session management for the Web site

Content

- Overview of Electronic Commerce
  Examples may include: B2B, B2C, M-Commerce, Electronic tendering systems, Affiliate marketing, Electronic Storefronts, E-Malls, Information portals, Supply chains
- Web Programming languages
  Examples may include: ASP.NET, Visual Basic.NET, C#.NET, PHP
- Electronic Commerce Web site development
  Examples may include: workflow design, simulating credit card processing facilities, data validation
- Web application security

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is standards-based and achievement is described by grades. This course will have a minimum of three and generally a maximum of five pieces of assessment. A student must achieve a C grade (50-54) or higher in order to successfully pass this course.

The specific assessments will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Assessment activities will be selected from

the following range: theory test, practical test, practical demonstration, project, assignment, exercise, interview, debate, report, portfolio, presentation, journal.

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I213 DYNAMIC WEB SOLUTIONS

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	I111
Co-requisite	none

Course Aim
To create a dynamic web application utilising a variety of open-source technologies

Learning Outcomes
At the successful completion of this course students will be able to:

1. Design and document a web application
2. Secure critical business data within the web application
3. Interface with a web based database management system
4. Implement user security and session management

Content

- Open source web technologies
- Scripting languages
- Web Server software
- Web application security
- Data validation

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	25%	1	Gain a minimum of 50% overall
Assessment Two	30%	3, 4	
Assessment Three	45%	2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and

other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

T201 NETWORK SERVICES

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	T101
Co-requisite	none

Course Aim
To implement key network services as used in modern LANs and to explain the network protocols that these services use.

Learning Outcomes
On successful completion of this course students will be able to:

1. Analyse and evaluate network services
2. Implement and configure network services
3. Analyse and diagnose faults within network services

Content

- DNS server configuration of forward and reverse resolution
- DHCP server configuration
- LDAP compliant directory service
- Web proxy implementation and automatic client configuration
- File sharing with SMB

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	35%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	30%	1, 2, 3	
Assessment Three	35%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and

other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

T205 NETWORKS (CISCO ITN)

Course Level	6
Credits	15
Duration	45 Lecturer Supported 105 Independent learning hours
Pre-requisite	none
Co-requisite	none

Course Aim
To enable students to gain practical and technical networking knowledge that will assist in designing, building and analysing networks and their protocols.

Learning Outcomes
On successful completion of this course students will be able to:

1. Describe the devices and services used to support communications in data networks and the internet
2. Describe the role of protocol layers in data networks
3. Describe the importance of addressing and naming schemes at various layers of data networks in IPv4 and IPv6 environments
4. Design, calculate, and apply subnet masks and addresses to fulfil given requirements in IPv4 and IPv6 networks
5. Explain fundamental Ethernet concepts such as media, services, and operations
6. Build a simple Ethernet network using routers and switches
7. Use CISCO command-line interface (CLI) commands to perform basic router and switch configurations
8. Utilise common network utilities to verify small network operations and analyse data traffic

Content

- The CISCO Network Academy (CNA) Introduction to Networks curriculum:
  - Exploring the Network
  - Configuring a Network Operating System
  - Network Protocols and Communications
  - Network Access
  - Ethernet
  - Network Layer
  - Transport Layer
  - IP Addressing
  - Subnetting IP Networks
  - Application Layer

Learning and Teaching Approaches
The course may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web based technology, email and telephone. This will enhance the opportunity for students to access learning materials, communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access all possible assistance so that they can succeed at their chosen course of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	10%	1, 2, 3, 4, 5, 6, 7, 8	Gain a minimum of 50% overall
Assessment Two	45%	1, 2, 3, 4, 5, 6, 7, 8	
Assessment Three	45%	1, 2, 3, 4, 5, 6, 7, 8	

Off Campus Learning
Not applicable

Resources and Prescribed / Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

T206 NETWORKS (CISCO RSE)

Course Level	6
Credits	15
Duration	45 Lecturer Supported 105 Independent learning hours
Pre-requisite	T101
Co-requisite	none

Course Aim
To enable students to gain practical and technical networking knowledge that will allow them to configure and troubleshoot routers, switches and resolve common issues with networks.

Learning Outcomes
On successful completion of this course students will be able to:

1. Describe basic switching concepts and the operation of CISCO switches
2. Describe the purpose, nature, and operations of a router, routing tables, and the route lookup process
3. Describe how VLANs create logically separate networks and how routing occurs between them
4. Configure and troubleshoot static routing

Content
The CISCO Network Academy (CNA) Routing and Switching Essentials curriculum:

- Introduction to Switched Networks
- Basic Switching Concepts and Configuration
- VLANs
- Routing Concepts
- Inter-VLAN Routing
- Static Routing
- DHCP
- STP
- EtherChannel
- FHRP
- WLAN concepts

Learning and Teaching Approaches
The course may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web based technology, email and telephone. This will enhance the opportunity for students to access learning materials, communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access all possible assistance so that they can succeed at their chosen course of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria

Assessment One	10%	1, 2, 3, 4	Gain a minimum of 50% overall
Assessment Two	45%	1, 2, 3, 4	
Assessment Three	45%	1, 2, 3, 4	

Off Campus Learning
Not applicable

Resources and Prescribed / Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

T211 SYSTEMS SECURITY

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 105 Independent learning hours
Pre-requisite	T111
Co-requisite	none

Course Aim
To analyse and implement computer systems security, including operating systems, server applications and networks; and to enable students to explain the fundamentals of computer forensics.

Learning Outcomes
On successful completion of this course students will be able to:

1. Analyse and evaluate the security of IT systems
2. Implement and configure the security of IT systems
3. Diagnose IT systems security and mitigate weaknesses

Content

- Operating systems securityFirewalls and content filtering
- Virtual Private Networks (VPNs)
- Tunnelling
- Operating Systems Security
- Networking devices and protocols
- Encryption and Authentication

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

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Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	40%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	30%	1, 2, 3	
Assessment Three	30%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts

The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I212 ENTERPRISE DATA MANAGEMENT

Paper Level	6
Credits	15
Duration	45 Lecturer Supported 105 Independent learning hours
Pre-requisite	I101 & I111
Co-requisite	None

Course Aim
To enable students to design and implement enterprise data management systems.

Learning Outcomes
On successful completion of this paper students will be able to:

1. Compare and select appropriate enterprise data management systems
2. Design an enterprise data management system structure
3. Implement an enterprise data management system including automated processes

Content
This paper will cover the following:

- Content Management Systems
- Document Management Systems
- Business Intelligence Systems
- Cloud-based platforms

Learning and Teaching Approaches
The student will meet with the academic supervisor for up to one hour per week, or by negotiation with the academic supervisor. This meeting ensures that the placement is progressing in accordance with the agreed expectations and enables discussion of any issues/problems that may arise. The student is responsible for any extra learning that is required for their industry placement.

The overall management of the placement is the responsibility of the student, who must keep all parties informed of any issues that arise that may affect their commitment to the placement. This includes regular communication with the placement sponsor.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	40%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	30%	2, 3	
Assessment Three	30%	1, 2, 3	

Off Campus Learning
Refer to 1.12 in Programme Overview

Resources and Prescribed / Recommended Texts
The required and recommended reading material will be specified in the Paper Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques.

Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I263 INTRODUCTION TO FINANCE

Course Level	6
Credits	15
Duration	45 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	
Co-requisite	none

Course Aim
Students will apply financial management knowledge and skills to a small or medium size business for decision-making purposes

Learning Outcomes
At the successful completion of this course students will be able to:

1. Demonstrate an understanding of the business finance environment.
2. Calculate, interpret and evaluate capital budgeting techniques and apply them to the appraisal of investment decisions.
3. Apply understanding of working capital and current assets management to given business situations.
4. Evaluate short term and long term financing alternatives for businesses.
5. Analyse principles of capital structure including the cost of capital.
6. Demonstrate application of different aspects of business finance to case studies and offer recommendations.

Content

- Financial management, financial planning and financial control
- Impact of stakeholder demands and agency theory on financial goals
- Basic concepts of working capital management
- Cash, accounts receivable, inventory and accounts payable management
- Capital expenditure (capital budgeting) techniques including risks in investments
- Capital structure, debt and equity consideration, weighted average cost of capital and capital asset pricing model
- Short- and long-term financing

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	19%	1, 3, 4	Gain a minimum of 50% overall
Assessment Two	15%	2	
Assessment Three	20%	6	
Assessment Four	46%	2, 4, 5	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I301 PROFESSIONAL PRACTICE

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	240 Credits including all Level 5 and 6 compulsory courses
Co-requisite	none

Course Aim
To prepare students for an industry project/internship related to their area of study.

Learning Outcomes
On successful completion of this course, students will be able to:

1. Demonstrate the work-place skills and attributes required to obtain a role in a New Zealand business.
2. Identify and critically analyse business-related processes and issues relating to an organisation and apply theoretical knowledge to processes or problems.
3. Develop and present a proposal for a project on a specific organisational issue.

Content

- Organisational communication
- Curriculum Vitae preparation
- Interview skills
- Client management
- Presentation skills
- Team roles and managing teams
- Industry project overview and project sourcing
- Ethics and professional conduct
- Employment and remuneration

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	35%	1	Gain a minimum of 50% overall
Assessment Two	35%	2	
Assessment Three	30%	3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

To support students who may choose to study off campus, all of the formal material provided in face-to-face sessions will be available in a web-based format. Resource based material may also include computer-assisted instruction, print based workbooks for independent study, multimedia packages, streaming video and streaming audio.

I302 INDUSTRY PROJECT

Course Level	7
Credits	45
Duration	15 Lecturer supported learning hours 435 Independent learning hours
Pre-requisite	280 credits including all compulsory level 5, 6 and 7 courses
Co-requisite	none

Course Aim
To enable students to undertake an industry based project of a complex nature.

Learning Outcomes
At the completion of this course students will be able to:

1. Manage an ICT project for industry
2. Produce original work and project deliverables
3. Consider and apply professional work ethics
4. Meet project timelines and goals
5. Record and evaluate project work and progress
6. Present project outcomes to sponsors and academic supervisors

Content

- Project documentation including terms of reference for project
- Industry based work which integrates skills and knowledge gained throughout the degree and of a suitably complex level
- Written report on project outcomes
- Formal presentations

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	5%	1, 2	Gain a minimum of 50% overall
Assessment Two	60%	1, 2, 3, 4, 5, 6	
Assessment Three	5%	6	
Assessment Four	15%	6	
Assessment Five	15%	5	

Off Campus Learning
Refer to 1.12 in Programme Overview

Resources and Prescribed/Recommended Texts
Students will access a learning management system to obtain templates and learning resources for the generic assessments. As each project is unique, students will use experience gained throughout the degree to source their own specific resources. The library is also a source of information and guidance in the use of academic referencing and writing techniques.

D301 SOFTWARE ENGINEERING

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	I101; and D201 or D202
Co-requisite	none

Course Aim
To design and construct quality software ready for distribution

Learning Outcomes
At the successful completion of this course students will be able to:

1. Work in a team to deliver a software product
2. Conduct effective and efficient inspections
3. Evaluate software user interfaces for accessibility and usability
4. Design and implement testing to ensure a quality product

Content

- Software engineering and its place as an engineering discipline
- Software reuse: Frameworks and APIs
- Human-Computer interaction
- User-Interface evaluation techniques:
  Examples may include: heuristic, cognitive walkthroughs
- Task Analysis. User-centred design
- Securing applications
- Testing strategies
  Examples may include: unit testing, integration testing, profiling, test driven development
- Problem / defect reporting and tracking

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	3	Gain a minimum of 50% overall
Assessment Two	55%	1, 4	
Assessment Three	15%	2	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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D303 MOBILE APPLICATION DEVELOPMENT

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	D101
Co-requisite	none

Course Aim
To develop mobile applications for current and emerging mobile computing devices using industry standard tools and frameworks

Learning Outcomes
At the successful completion of this course students will be able to:

1. Design and develop mobile applications in a major mobile platform
2. Apply current software technologies, framework architecture and standards used in mobile application development
3. Securely transfer local data to a remote real-time database

Content

- Mobile app design
- Developing apps for Android or other mobile operating systems
- Local Data storage on mobile devices
- Mobile Frameworks
- Mobile Design Patterns
- Web services

Learning and Teaching Approaches
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Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	20%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	20%	1, 2	
Assessment Three	30%	1, 2, 3	
Assessment Four	30%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts

The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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D311 ADVANCED DATABASE CONCEPTS

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	D211
Co-requisite	none

Course Aim
To enable students to successfully design, create and administer a data warehouse using a server-based database management system.

Learning Outcomes
At the successful completion of this course students will be able to:

1. Discuss and argue an advanced database topic
2. Install a server-based database management system
3. Design and create a data warehouse schema
4. Transfer and transform data from more than one data source into a data warehouse
5. Analyse and process data for management reporting
6. View pre-processed information from the data warehouse from a separate application

Content

- Overview of data warehousing
- Installing and securing a server-based database management system
- The data warehouse schema
  Examples include: fact tables, dimensions tables, star schemas, snowflake schemas
- Data transfer and transformation with Data Transfer Services
- Data analysis and processing with Analysis Services

Learning and Teaching Approaches
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Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	45%	2, 3, 4	Gain a minimum of 50% overall
Assessment Two	25%	1	
Assessment Three	30%	5, 6	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I303 MANAGEMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite or Co-requisite	I202

Course Aim
To provide students with the skills and knowledge to analyse organisations and make management decisions relating to the organisation's IT.

Learning Outcomes
At the completion of this course students will be able to:

1. Discuss and analyse practices associated with managing and structuring ICT services within an organisation
2. Recommend and design a service continuity plan for an organisation
3. Apply best practice human resource management techniques
4. Develop and recommend strategies and plans to improve an organisation's IT service

Content

- IT Service Management best practice and frameworks
- Workforce Management Incident Management
- Service Desk
- Information Security Management
- Service Continuity Management
- Strategy Management
- Contemporary and emergent technologies

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

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Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	25%	3	Gain a minimum of 50% overall
Assessment Two	25%	2	
Assessment Three	50%	1, 4	

Off Campus Learning

Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I321 ADVANCED SYSTEMS ANALYSIS

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	I221
Co-requisite	none

Course Aim
To introduce tools and techniques used to assess feasibility and present a business case; to complete an analysis of a complex information system based on the recommendation from the feasibility phase.

Learning Outcomes
At the successful completion of this course students will be able to:

1. Undertake a feasibility study to recommend a solution to business problems
2. Present a business case to project stakeholders
3. Develop a model of the proposed complex system
4. Implement quality processes to ensure accuracy of analysis and design documentation

Content

- Assessing Feasibility
  Examples may include: candidate systems, economic feasibility, technical feasibility, schedule feasibility, operational feasibility
- Creating a convincing business case
- Business Process Automation
- Business Process Improvement
- Business Process Re-engineering
- Alternative process mapping techniques
  Examples may include: IDEF0, ASME
- Quality processes
  Examples may include: version control, model checking, inspection, CASE tool use

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access assistance so that they can succeed at their chosen programme of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures
Assessment is achievement based.
321 Advanced

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1, 2	

Assessment Two	40%	3, 4	Gain a minimum of 50% overall
Assessment Three	30%	1, 3, 4	

Off Campus Learning
Refer to Section 1.12.

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I309 SPECIAL TOPIC

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	240 credits including all compulsory level 5 and 6 courses
Co-requisite	none

Course Aim
To allow students to pursue an area of special interest under the guidance of a UCOL academic staff member. The Special Topic course is subject to availability and approval from the Head of School.

Learning Outcomes
At the completion of this course students will be able to:

1. Explore a new or additional topic which will extend skills to a higher level

Content

- Dependent on special interest topic.

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

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Assessment Procedures
Assessment is standards-based and achievement is described by grades. This course will have a minimum of three and generally a maximum of five pieces of assessment. A student must achieve a C grade (50-54) or higher in order to successfully pass this course.

The specific assessments will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Assessment activities will be selected from the following range: theory test, practical test, practical demonstration, project, assignment, exercise, interview, debate, report, portfolio, presentation, journal.

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
As each topic is unique, students will use experience gained throughout the degree to source their own specific resources. The supervising lecturer will also provide additional guidance on resources relevant to the topic.

T301 NETWORK DESIGN

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	I101 and T201
Co-requisite	none

Course Aim
To recommend network and service architectures and to design and implement, or simulate chosen architectures. Students will be able to analyse and evaluate network designs, select an appropriate technology and design for a given situation, and justify their selection.

Learning Outcomes
On successful completion of this course students will be able to:

1. Assess and recommend appropriate network hardware and configuration/s for given scenario/s
2. Assess, evaluate and recommend the deployment of virtualisation/cloud/containerised infrastructure
3. Assess and respond to infrastructure requirement change/s
4. Implement network/virtualisation/cloud/containerised infrastructure for given scenario/s

Content

- Automated network and service provisioning and management
- Installation and configuration of thick and thin client technologies
- Installation and configuration of a network simulator
- Installation and configuration of virtualised infrastructure
- Configuration of cloud infrastructure
- Business continuity planning
- Network design and documentation

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

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Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1, 3, 4	Gain a minimum of 50% overall
Assessment Two	45%	1, 2, 3, 4	

Assessment Three	25%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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T302 CISCO SCALING & CONNECTING

Course Level	7
Credits	15
Duration	30 Lecturer Supported 120 Independent learning hours
Pre-requisite	T206
Co-requisite	none

Course Aim
To gain practical and technical networking knowledge that will assist in designing, building and analysing networks and their protocols using advanced technologies.

Learning Outcomes
On successful completion of this course students will be able to:

1. Configure and troubleshoot routers in a complex routed IPv4 or IPv6 network using single area OSPF
2. Describe different WAN technologies and QoS mechanisms
3. Describe the operations and benefits of virtual private networks (VPNs) and IPSec
4. Configure, and troubleshoot Access Control Lists (ACLs)
5. Configure, and troubleshoot Network Address Translation (NAT) for IPv4
6. Describe enterprise-scale network-management techniques including software-defined networking, virtualisation, monitoring and automation

Content
The CISCO Network Academy (CNA) Scaling and Connecting Networks curriculum:

- Single-Area OSPF concepts
- Single-Area OSPF configuration
- Security concepts
- ACL concepts
- ACL configuration
- Network Address Translation for IPv4
- WAN concepts
- VPN and IPSec concepts and configuration
- QoS concepts
- Network management concepts and configuration
- Network design concepts
- Network troubleshooting
- Network virtualisation
- Network Automation

Learning and Teaching Approaches
The course may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web based technology, email and telephone. This will enhance the opportunity for students to access learning materials, communicate with one another and with their lecturers.

UCOL's learning philosophy is founded on its ability to provide all students with opportunities to access a wide range of support services. Students are able to access all possible assistance so that they can succeed at their chosen course of study. Learning support is intended to diminish or eliminate barriers to learning and academic success.

Assessment Procedures

Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	15%	1, 2, 3, 4, 5, 6	Gain a minimum of 50% overall
Assessment Two	45%	1, 2, 3, 4, 5, 6	
Assessment Three	40%	1, 2, 3, 4, 5, 6	

Off Campus Learning
Not applicable

Resources and Prescribed / Recommended Texts
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T311 SYSTEMS ADMINISTRATION

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	T211
Co-requisite	none

Course Aim
To provide the ability to design and construct a complex multi-user client/server network. Students will gain skills needed to configure and integrate complex systems.

Learning Outcomes
On successful completion of this course students will be able to:

1. Configure and administer multi-user implementation of a client/server network
2. Implement strategies that will ease administrative burden
3. Implement remote administration of central services

Content

- Client/Server configuration using current operating systems such as Windows and Linux desktop and server editions
- Automating administrative tasks such as creating users and log file checking
- Management of system policies
- Configuring various application deployment techniques
- Automating administrative tasks through scripting
- Centralised authentication of various software and operating systems

Learning and Teaching Approaches
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Assessment Procedures
Assessment is achievement based.

Assessments	**Weightings**	**Learning Outcomes Assessed**	**Pass Criteria**
Assessment One	35%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	35%	1, 2, 3	
Assessment Three	30%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
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T312 NETWORK SECURITY

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	T206
Co-requisite	none

Course Aim
To enable students to understand and configure the components, and operation of Virtual Private Networks, firewalls and network security.

Learning Outcomes
At the successful completion of this course students will be able to:

1. Explain the operation of Virtual Private Networks (VPNs), firewalls, router security, switch security and network security
2. Configure and troubleshoot Virtual Private Networks (VPNs)
3. Configure and troubleshoot Firewalls
4. Analyse, configure and troubleshoot router and switch security in an IP network

Content
- Virtual Private Networks
- Cisco CCNA Security
- Network security threats
- Securing network devices
- Authentication, Authorisation and Accounting (AAA)
- Firewall technologies
- Network security
- Intrusion prevention systems (IPS)
- Cryptographic Systems
- Cisco ASA
- SBA Practice

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

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Assessment Procedures
Assessment is achievement-based

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	10%	1, 2, 3, 4	Gain a minimum of 50% overall
Assessment Two	45%	1, 2, 3, 4	
Assessment Three	45%	1, 2, 3, 4	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I304 DATA ANALYTICS AND INTELLIGENCE

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	D211
Co-requisite	none

Course Aim
To enable students to use data analytics and business intelligence tools and techniques in order to provide decision support within an organisational context

Learning Outcomes
At the successful completion of this course students will be able to:

1. Demonstrate how data analytics techniques and tools are used to support business decision making
2. Apply data analytics tools and techniques on organisational data
3. Provide meaningful representation of organisational data

Content

- Data analytics
- Business intelligence tools
- Visual data representation
- Data exploration
- Decision support reporting
- Big data
- Power Pivot
- Power BI
- SSRS, SSIS, SSAS

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	40%	1, 2, 3	Gain a minimum of 50% overall
Assessment Two	30%	1, 2, 3	
Assessment Three	30%	1, 2, 3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and

other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I311 ADVANCED WEB SOLUTIONS

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	I213
Co-requisite	none

Course Aim
To enable students to investigate, implement, and critique influential, new, and emerging web technology solutions

Learning Outcomes
At the successful completion of this course students will be able to:

1. Demonstrate advanced understanding of new, emerging, and influential web technologies
2. Investigate and critically present on a new or influential web technology
3. Develop systems demonstrating advanced application of new or influential web technology

Content

- Server-side languages
- Client-side languages
- Web presentation frameworks
- Development frameworks and libraries
- Everything as a service
- Data security
- Traffic Analysis Tools
- Content management systems

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	25%	1	Gain a minimum of 50% overall
Assessment Two	30%	2	
Assessment Three	45%	3	

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
The required and recommended reading material will be specified in the Course Outline as provided by the lecturer at the beginning of the semester. Students will use texts and

other books, journals, CD–ROM databases, on-line databases, and the Internet to increase their knowledge and awareness of the subject material. The library is also a source of information and guidance in the use of academic referencing and writing techniques. Students engage with the library staff, throughout their studies, with the objective of learning and developing their referencing skills and their general academic writing skills.

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I367 ADVANCED PROJECT MANAGEMENT

Course Level	7
Credits	15
Duration	30 Lecturer supported learning hours 120 Independent learning hours
Pre-requisite	I202
Co-requisite	none

Course Aim
This course will enable the student to learn advanced principles of the project management body of knowledge and cover the content of the Project Management Institute PMBOK® and its application and evaluation to the workplace

Learning Outcomes
At the successful completion of this course students will be able to:

1. Discuss how project management process groups and processes are used to manage projects
2. Evaluate the project environment, and identify the factors that may impact the outcome of a project
3. Consider the role of the project manager and their sphere of influence.
4. Consider the purpose, key concepts, inputs, and outputs for each project management knowledge area.
5. Integrate the techniques defined in the knowledge management areas to solve project management problems.
6. Create key project management plan components, and project documents.

Content

- Project Management Framework
- Project Environment
- Role of the Project Manager
- Stakeholder Management
- Integration Management
- Scope Management
- Schedule Management
- Cost Management
- Quality Management
- Resource Management
- Communications Management
- Risk Management
- Procurement Management

Learning and Teaching Approaches
The programme may be taught both on campus and through blended delivery. Timetabled classes may include, but are not limited to: theory delivery, discussion, practical application, video, web-based information, off-site visits, guest speakers and project work. Blended delivery will be supported by a Learning Management System, other web-based technology, email and telephone. This will enhance the opportunity for students to access learning materials, and communicate with one another and with their lecturers.

Assessment Procedures
Assessment is achievement based.

Assessments	Weightings	Learning Outcomes Assessed	Pass Criteria
Assessment One	30%	1, 4, 5, 6	Gain a minimum of 50% overall
Assessment Two	40%	1, 2, 3, 4, 5, 6	
Assessment Three	30%	1, 4, 5, 6	

Off Campus Learning
Not applicable

Learning and Teaching Strategies
This course is delivered by lectures, and through blended delivery.

Off Campus Learning
Not applicable

Resources and Prescribed/Recommended Texts
Project Management Institute (2018) *A guide to the project management body of knowledge: PMBOK guide* (6th ed.). Newton Square, PA. Project Management Institute.