STUDENT HANDBOOK

GRADUATE DIPLOMA IN INFORMATION SYSTEMS

PROGRAMME CODE: 6402

SCHOOL OF COMPUTING AND MATHEMATICS

FACULTY OF COMPUTING AND ENGINEERING

JORDANSTOWN CAMPUS

UNIVERSITY OF ULSTER

COURSE DIRECTOR: Dr Donald McFall

SEPTEMBER 2009 ENTRY

PROGRAMME AIMS

The main purpose of the Graduate Diploma in Information Systems is to prepare students from other disciplines for a career in Computing and Information Technology. As a student on this course you will develop your computing skills by studying technical subjects that will expose you to fundamental areas within the computing field. You will also be provided with an opportunity to put your technical and managerial skills into practice by embarking upon a six-week period of work based learning. The course aims are to:

- facilitate student transition into the Computing Subject domain;
- equip students with fundamental computing knowledge and skills;
- provide exposure to an information technology oriented working environment;
- develop expertise in key computing subject areas;
- ensure students are prepared for embarking on a career in computing or information technology;
- develop in students a professional ethos that adheres to legal guidelines and standards.

PROGRAMME SPECIFICATION

COURSE TITLE: Graduate Diploma in Information Systems

PLEASE NOTE. This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he or she takes full advantage of the learning opportunities provided. More detailed information on the specific learning outcomes, content and the learning, teaching and assessment methods of each module can be found at http://www.scis.ulster.ac.uk and in the Student Handbook.

1	**AWARDING INSTITUTION/BODY**	**UNIVERSITY OF ULSTER**
2	**TEACHING INSTITUTION**	**UNIVERSITY OF ULSTER**
3	**LOCATION**	**Jordanstown and Magee**
4	**COURSE ACCREDITED BY**	**-**
5	**FINAL AWARD**	**Graduate Diploma in Information Systems**
6	**MODE OF ATTENDANCE**	**Full-Time**
7	**SPECIALISMS**	**Information Systems**
8	**COURSE CODE**	**6402**
9	**DATE WRITTEN/REVISED**	**May 2009**

10 EDUCATIONAL AIMS OF THE COURSE

The main purpose of the course is to provide graduate education and training, for non-computing graduates, in the concepts and methods of computing and information systems, relevant to the needs of the commercial, industrial and public sectors.

The specific aims of the course are to:

- prepare graduates from other disciplines for a career in computing and information systems.
- instil a professional attitude to employment in the computing industry.

11 MAIN LEARNING OUTCOMES

The following reference points were used to inform the development of the programme and its learning outcomes:

- the University's Vision and core strategic aims, teaching and learning strategy and policies;
- current research or other advanced scholarship carried out by academic staff;
- subject benchmark statement in Computing;

- National and University qualifications and credit frameworks.

The course provides opportunities for students to achieve and demonstrate the following learning outcomes:

11 K **KNOWLEDGE AND UNDERSTANDING OF SUBJECT**

Students will be able to demonstrate knowledge and understanding of:

K1	The fundamental concepts, principles, theories and practices underlying computing as an academic discipline.
K2	The criteria and specifications appropriate to specific problems and strategies for their implementation.
K3	How information systems are used as business and industrial tools.
K4	The legal and social issues involved in the exploitation of computer technology.

Learning and Teaching Methods:
Lectures, tutorials, seminars and practical sessions including online delivery.

Assessment Methods: Coursework, written unseen examinations.

11 I **INTELLECTUAL QUALITIES**

Students will have the ability to:

I1	Design and construct computer-based information systems.
I2	Evaluate such systems with respect to general quality and possible trade-offs within the parameters of the problem.
I3	Assess the implications, and consequences of applying a computing-based solution to a selected application domain.

Learning and Teaching Methods:
Lectures, tutorials, seminars and practical sessions including online delivery.

Assessment Methods: Coursework, written unseen examinations.

11 P PROFESSIONAL/PRACTICAL SKILLS

Students will have the ability to:

P1 Work effectively as part of a team.

P2 Deploy effectively computer based tools towards the construction and documentation of Information Systems.

P3 Write reports for various audiences including management, technical, users or the academic community.

Learning and Teaching Methods:
Lectures, tutorials, seminars and practical sessions including online delivery.

Assessment Methods: Coursework, written unseen examinations.

11 T TRANSFERABLE SKILLS

Students will have the ability to:

T1 Learn in both familiar and unfamiliar situations making effective use of information-retrieval skills and of learning resources.

T2 Make effective use of general Information Technology facilities.

T3 Manage one's own learning and development including time management and organisational skills.

T4 Appreciate the need for continuing professional development in recognition of the requirement for Life Long Learning.

Learning and Teaching Methods:
Lectures, tutorials, seminars and practical sessions including online delivery.

Assessment Methods: Coursework, written unseen examinations.

11 PROGRAMME LEARNING OUTCOME MAP

Please Note: The matrix displays only the measurable programme outcomes and where these are developed and assessed within the modules offered in the programme.

MODULE TITLES	LEVEL	CODE	K1	K2	K3	K4	I1	I2	I3	P1	P2	P3	T1	T2	T3	T4
Object Oriented Programming	5	COM401	√	√			√		√		√		√	√	√	
Database Systems	6	COM620	√	√			√	√	√	√	√	√	√	√	√	
Advanced Interaction	6	COM621	√			√	√	√	√		√	√		√	√	√
Information Systems Strategic Planning and Asset Management	6	COM519		√	√			√	√			√	√		√	
Informatics Entrepreneurship	5	COM418			√	√			√	√		√		√	√	√
Work-Based Learning Project	6	COM526			√	√			√	√		√	√	√	√	√

12 PROGRAMME STRUCTURE AND REQUIREMENTS FOR THE AWARD

The course material is arranged so that there is one main teaching semester (Semester 1) followed by a second semester consisting of 6 weeks of teaching followed by 6 weeks of Work-based Learning (Semester 2). The learning is divided into study units called modules. The full-time mode of study and presentation of the modules is depicted below.

Semester ←---------- **Full-Time Course** ----------→

1	Object Oriented Programming
1	Database Systems
1	Advanced Interaction
2	Information Systems Strategic Planning and Asset Management
2	Informatics Entrepreneurship (10 credit points)
2	Work-based Learning (30 credit points)

The language of instruction is English.

The credit weighting of a module is in proportion to the effort required from the student, thus a 20 point module corresponds to 200 hours of attending lectures, tutorials, seminars, practical classes, coursework, assignment work and self-study. The Work-based Learning normally builds upon the learning that has taken place during the taught elements of the course. The study units within the course, the levels at which they are studied, the credit ratings and awards that may be gained are shown below.

Module Code	Module Title	Credit Level	Credit Points	Core or Option
COM401	Object Oriented Programming	5	20	C
COM620	Database Systems	6	20	C
COM621	Advanced Interaction	6	20	C
COM519	Information Systems Strategic Planning and Asset Management	6	20	C
COM418	Informatics Entrepreneurship	5	10	C
COM526	Work-based Learning	6	30	C

13 SUPPORT FOR STUDENTS AND THEIR LEARNING

- An Induction programme is held in the first few weeks of Semester one. It includes talks by the Course Director and Student Support Services, Computing Laboratory Induction, a tour of the Learning Resource Centre (LRC) and library and information skills induction.
- The Course Director is available for information and advice as requested.
- Course information is provided on the School of Computing and Intelligent Systems website, including an electronic version of the Student Handbook, module specifications, module co-ordinator contact details and links to other resources (timetables, Careers, Academic Affairs).

- The School of Computing and Intelligent Systems is resourced by a number of state-of-the-art computer laboratories with a wide range of software. New software is introduced as required per semester.
- Students are given access to Personal Development Planning (PDP) through the PDS system.
- Students have access to an extensive library and other learning resources.
- Each module has a website or is supported in WebCT to provide on-line support material (lecture and practical notes, coursework specifications, web links and so on).
- Academic staff advertise hours of availability.
- A course notice board provides support for important notices and information.
- Students are given e-mail accounts and full access to the Internet.
- Each student is allocated a Studies Advisor whom they meet twice a semester.
- Every student receives a hard copy of the Student Handbook (incorporating this document) which contains details of the following university services:
  - Careers Development Centre
  - Information Services Department
  - Student Support Department
  - Sport and Recreation Department
  - International Office
  - Students' Union
  - Chaplaincy

14 CRITERIA FOR ADMISSION

Applicants must hold a degree or equivalent in a non-computing discipline at a 2:2 level or higher from the University of Ulster and have graduated in 2009, or demonstrate their ability to undertake the course through the accreditation of prior experiential learning (APEL). An interview may form part of the admission process.

15 EVALUATING AND IMPROVING THE QUALITY AND STANDARD OF TEACHING AND LEARNING

- Staff Student Consultative Committee
- Course committee
- Board of Examiners
- School Board
- Faculty Academic Affairs Committee
- Views of graduates in the National Student Survey
- Views of employers
- Views of external examiners
- Student performance data and career progression
- University processes for initial approval, periodic re-approval and annual monitoring

In addition, there are University/Faculty/School strategies for teaching and learning.

16 REGULATION OF STANDARDS

Assessment rules

- The pass mark for each module is 40%.
- Each module will use the appropriate combination of Examination and or Coursework to assess the learning outcomes.
- Full details of module assessment are set out in this Student Handbook.
- To qualify for the award of the Graduate Diploma, students must pass, or receive compensation for, the five taught modules and complete the Work-based Learning module (40%+ for pass; 60%+ for pass with commendation for the Level 6 modules).

Role of the external examiner

- An External Examiner is appointed by the University's Teaching and Learning Committee and reports annually to the University.
- The role of the external examiner is to report on quality and standards of the course.
- The full roles and responsibilities are set out in the university's Handbook for External Examiners.
- External examiners are offered training on appointment.

17 INDICATORS OF QUALITY AND STANDARDS

- The Faculty consistently achieves highly positive outcomes from the Quality Assurance Agency audits and Professional Body Accreditation visits
- A significant number of Faculty staff are members of the Higher Education Academy and/or engage in pedagogic research
- The 2008 RAE noted that 90% of our research in Computer Science was internationally recognised and we are now ranked 15th out of 81 universities in the UK for Research Power (league table independently calculated by "Research Fortnight") and we submitted the 8th largest submission in the UK.

PROGRAMME REGULATIONS

UNIVERSITY OF ULSTER
SCHOOL OF COMPUTING AND INTELLIGENT SYSTEMS
GRADUATE DIPLOMA IN INFORMATION SYSTEMS

1 PROGRAMME TITLE **CODE**
Graduate Diploma in Information Systems 6402

2 MODE OF ATTENDANCE
FULL-TIME

3 DURATION
FULL-TIME: Normally 2 semesters of study

4 LOCATION
Jordanstown . The same course is offered at the Magee campus [Course code 6403]

5 FACULTY
Computing and Engineering

6 ADMISSION REQUIREMENTS

Applicants must have:

(a) an Honours degree in a non-computing discipline from the University of Ulster at classification 2:2 or higher;

(b) provide evidence of competence in written and spoken English (GCSE grade C or equivalent);

or, as an alternative to (a) and/or (b):

(c) provide evidence of their ability to undertake the programme through the accreditation of prior experiential learning.

7 EXEMPTIONS

7.1 Studies pursued and examinations passed in respect of other qualifications awarded by the University or by another university or other educational institution, or evidence from the accreditation of prior experiential learning, may be accepted as exempting candidates from part of the programme provided that they shall register as students of the University for modules amounting to at least the final 50% of the credit value of the award at the highest level.

8 ATTENDANCE REQUIREMENTS

8.1 Students are expected to attend all classes associated with the programme and be punctual and regular in attendance.

8.2 A student who has not been in attendance for more than three days through illness or other cause must notify immediately the Course Director. The student shall state the reasons for the absence and whether it is likely to be prolonged. Where the absence is for a period of more than five working days, and is caused

by illness which may affect their studies, the student shall provide appropriate medical certification in accordance with the General Regulations for Students.

8.3 Students who are absent without good cause for a substantial proportion of classes may be required to discontinue studies, in accordance with the General Regulations for Students.

9 RULES GOVERNING STUDENT CHOICE

9.1 Modules are offered as indicated in the table at section 18. Revisions may be made in accordance with the University's quality assurance procedures. Module availability may vary.

10 EXAMINATION AND ASSESSMENT

10.1 The performance of candidates shall be assessed by the Board of Examiners in accordance with the Regulations Governing Examinations in Programmes of Study.

10.2 Candidates shall be assessed in the modules for which they have enrolled in each year of study. At the discretion of the Board of Examiners candidates may be required to attend a viva voce examination.

10.3 Within each module candidates shall be assessed by a combination of coursework and examination in accordance with the attached table.

10.4 The pass mark for the module shall be 40%. Where a module is assessed by a combination of coursework and examination a minimum mark of 35% shall be achieved in each element.

11 SUBMISSION OF COURSEWORK

11.1 Coursework shall be submitted by the dates specified by the Course Committee.

11.2 Students may seek prior consent from the Course Committee to submit coursework after the official deadline; such requests must be accompanied by a satisfactory explanation and in the case of illness by a medical certificate. This application shall be made to the Course Director.

11.3 Coursework submitted without consent after the deadline shall not normally be accepted.

12 PROGRESS

12.1 Progress from semester 1 to semester 2 is automatic.

13 CONSEQUENCES OF FAILURE

13.1 Candidates who fail to satisfy the Board of Examiners in assessment may be permitted at the discretion of the Board to re-present themselves as specified in 13.2 for one or more supplementary examinations and repeat such coursework or

other assessment requirements as shall be prescribed by the Board. Such candidates may be exempted at the discretion of the Board from the normal attendance requirements. Where candidates are required to repeat coursework or to take a supplementary examination the original mark in the failed coursework component or examination shall be replaced by a mark of 40% or the repeat mark whichever is the lower for the purpose of calculating the module result.

13.2 In each year, the consequences of failure shall normally be as follows:

Failure in module(s) with an overall value up to and including 60 credit points	Repeat *once only* of specified examination(s) and/or coursework in the failed module(s) (examinations August).
Failure in module(s) with an overall value of 70 or 80 credit points	Repeat *once only* of specified examination(s) and/or coursework in the failed module(s) in the next academic year (examinations January/May) with or without attendance, OR withdraw from the programme.
Failure in module(s) with an overall value of more than 80 credit points	Withdraw from the programme.

14 CLASSIFICATION OF FINAL RESULT

14.1 The results of candidates who have successfully completed the Graduate Diploma shall be graded by order of merit as Pass with Distinction, Pass with Commendation and Pass.

14.2 The assessment results for the final level of the programme (Level 6) shall determine the overall grading. The weighting of each module's contribution to the final result shall be determined by the module's credit value. (See table at section 17).

14.3 The following shall be the minimum overall percentages used to determine the final gradings of candidates:

Pass with Distinction	70%
Pass with Commendation	60%
Pass	40%

14.4 Candidates admitted with advanced standing shall be assessed in accordance with these programme regulations using the evidence from the accredited prior learning.

15 ILLNESS AND OTHER EXTENUATING CIRCUMSTANCES

15.1 The Board of Examiners may in the case of candidates who are prevented by illness or other sufficient cause from taking or completing the whole or part of the assessment or whose results are substantially affected by illness or other sufficient cause:

(a) permit the candidate to complete, take, or repeat the examination or course work or both at an approved subsequent date **or**

(b) deem the candidate to have passed and recommend the award of an Aegrotat Graduate Diploma.

15.2 Before an Aegrotat award is recommended a candidate must have indicated that he or she is willing to accept the award.

16 REVISIONS TO REGULATIONS

These regulations may be revised during the student's period of registration in accordance with the procedures approved by Senate.

17 TABLE

Year	Semester	Level	Module Title	Code	Credit Value	Status Compulsory (c) Optional (o)	Assessment Methods % Examination	% Coursework	Contribution to overall mark of the Final Award
1	1	5	Object Oriented Programming	COM401	20	C	75	25	
1	1	6	Database Systems	COM620	20	C	50	50	2/9
1	1	6	Advanced Interaction	COM621	20	C		100	2/9
1	2	6	Information Systems Strategic Planning and Asset Management	COM519	20	C	75	25	2/9
1	2	5	Informatics Entrepreneurship	COM418	10	C		100	
1	2	6	Work-based Learning	COM526	30	C		100	1/3

10.7.09

Ref: M:academicoffice/web-special/website/graduate_dip_09_10

PROGRAMME STRUCTURE DIAGRAM

Graduate Diploma in Information Systems

Semester 1	Semester 2
Object Oriented Programming (Credit Value = 20; Level 5; Status=Compulsory; Pre-requisites=none)	**Information Systems Strategic Planning and Asset Management** (Credit Value = 20; Level 6; Status=Compulsory; Pre-requisites=none)
Database Systems (Credit Value=20; Level=6; Status=Compulsory; Pre-requisites=none)	**Informatics Entrepreneurship** (Credit Value = 10; Level 5; Status=Compulsory; Pre-requisites=none)
Advanced Interaction (Credit Value = 20; Level 6; Status=Compulsory; Pre-requisites=none)	**Work-based Learning** (Credit Value = 30; Level 6; Status=Compulsory; Pre-requisites=none)

MODULE DESCRIPTIONS

Object Oriented Programming COM401

Familiarity with objected-oriented programming techniques provides students with employment and other opportunities given its widespread use in modern software development. This module introduces the basic concepts of object-oriented design and development and encourages students to solve problems using this approach.

Database Systems COM620

The module covers the fundamental principles and theory database design and provides practical experience in designing and developing database systems using a range of techniques, tools and technologies. It emphasises the important role of databases within an organisation and addresses the use of relational database management systems to facilitate the development of software systems involving large volumes of data.

Advanced Interaction COM621

This module provides a thorough understanding of the fundamental theory, concepts, methodology and strategy to design and implement a wide variety of computer-based, interactive systems. Students are introduced to algorithms and data structures used in highly interactive programs and discover how these can be applied to improving usability.

Information Systems Strategic Planning and Asset Management COM519

In today's information age it is necessary to have a clear understanding of the role of IS/IT systems in support of meeting business needs with particular reference to competitive advantage, added value and resource management. An in-depth understanding of the manner in which IT may be harnessed from a managerial rather than technical perspective and an understanding of information systems strategy and its relationship to the business and organisational context are therefore required.

Informatics Entrepreneurship COM418

This module deals with issues relating to the identification, exploitation and development of new venture opportunities. The module aims to increase the students' understanding of entrepreneurship and develop his/her competencies in applying entrepreneurial skills in enterprise development. The module is divided into four distinct areas covering, the entrepreneurial process, identifying and exploiting the entrepreneurial opportunity, managing the resources necessary for the process and finally the transition from idea to launch. Students

also develop essential skills such as writing business plans, managing financial resources and team development.

Work Based Learning **COM526**

Students benefit enormously from work experience that gives them the opportunity to apply the fundamental skills they have already acquired to real tasks and projects in the workplace. In turn this allows the students to further develop the technical knowledge, understanding and skills gained through the taught components of the programme as well as enhancing their generic employability skills. This will also enhance their personal development and life-long learning skills.

PROGRAMME MANAGEMENT

Course Director

Name	Office	Email	Ext. No.
Dr Donald McFall	16J08	d.mcfall@ulster.ac.uk	66558

Teaching Team

Semester 1

Module Code	Module Title	Module Co-Ordinator	Contact Details
COM401 CRN: 18292	Object Oriented Programming	Dr Haiying Wang	Room 16E15 Jordanstown Ext. No:68908 Email: hy.wang@ulster.ac.uk
COM620 CRN: 11860	Database Systems	Dr. Ammar Belatreche	Room MS104 Ext. No:75185 Email: a.belatreche@ulster.ac.uk
COM621 CRN: 11862	Advanced Interaction	Dr. Jose Santos	Room MG238 Ext. No:75034 Email: ja.santos@ulster.ac.uk

Semester 2

Module Code	Module Title	Module Co-Ordinator	Contact Details
COM418 CRN: 18296	Informatics Entrepreneurship	Dr. Jose Santos	Room MG238 Ext. No:75034 Email: ja.santos@ulster.ac.uk
COM519 CRN: 18295	Information Systems Strategic Planning and Assets Management	Mr S. O'Kane	Room 16G04 Jordanstown Ext. No:68895 Email: jp.o'kane@ulster.ac.uk
COM526 CRN: 18298	Work-Based Learning	Dr Edwin Curran	Room 16E09 Jordanstown Ext. No:68162 Email: ep.curran@ulster.ac.uk

Day-to-day administration of the course is the responsibility of the Course Director. All major decisions in the running of the course are taken at Course Committee meetings.

Course Committee

The Course Committee is essentially a committee formed by those members of academic staff who have teaching responsibilities on the course as well as the nominated Studies Advisors. The Course Committee reports to the Faculty's Academic Affairs Committee, which in turn reports to the Faculty of Computing and Engineering Board. This is the normal route for all of the Faculty's Course Committee meeting minutes.

Student progression (i.e. assessing the performances of students and determining whether or not they should be allowed to proceed to the next stage of the course) is the responsibility of the Board of Examiners. The Board of Examiners is essentially the Course Committee plus an External Examiner.

The Course Committee meets on a regular basis - normally at least once per semester, although other special meetings may be arranged should a need be identified.

Student-Staff Consultative Committee

Part of the Course Committee meeting is devoted exclusively to the consideration of general student problems associated with the course. The Staff-Student Consultative Committee invites students to elect a Class Representative and to participate in the Committee. This elected representative is invited to express the views of their peers in relation to the organisation and delivery of the course.

The Staff-Student Consultative Committee is a formal forum for students to express their opinions. The Faculty's policy is to encourage the early identification of problems and to bring these to the attention of staff as soon as possible.

Assessment

Criteria for assessing and grading course work

These are specific to each module and will be provided when each assignment is issued.

Assessment methods used may include:

- Formal timed limited, unseen examination paper;
- Open book class test;
- Group project;
- Individual project;

- Written report;
- Presentations.

Health and Safety

Students are expected to take all reasonable precautions to protect their own health and safety at all times. In addition to the information and guidance provided in the general Faculty guide to Health and Safety, students should be aware of issues particularly associated with using the specialist multimedia equipment, such as the digital cameras. For example, you should never climb on an unstable platform to capture aerial photographs or place yourself in other precarious circumstances, such as in the middle of a road seeking footage of traffic flows, or on a slippery riverbank. If you have any health and safety concerns, please speak to the appropriate module coordinator in the first instance. Alternatively, an appointment with the Course Director should be sought immediately. You should always remember the need to assess the safety of any activities that you plan in order to collect materials, and to discuss potential hazards with staff before undertaking them.

Student Support & Guidance

Students are supported in a number of ways within the Course:

- WebCT
- Induction
- Studies Advisors
- PDSystem
-

SCIS Website

The website gathers together and organises a range of materials to help and support students throughout their studies.

Programme specific resources

Individual module coordinators will advise on any key texts which must be purchased for each module.
Students are charged for printing. Print cards are available for purchase from a card dispenser in the print room.

UNIVERSITY OF ULSTER

DATES OF ATTENDANCE/EXAMINATIONS/VACATIONS: 2009/10

UPDATE WHEN PUBLISHED