Information Technology

*Please note that this programme specification is currently being revalidated and will be updated by end of July 2014.

Final award	**BSc (Hons)**
Intermediate awards available	Cert HE, Dip HE
UCAS code	G561
Details of professional body accreditation	
Relevant QAA Benchmark statements	**Computing**
Date specification last up-dated	July 2014

Profile

The summary - UCAS programme profile

BANNER BOX:

Thinking about making a difference in the field of Information Technology? With a degree in Information Technology at UEL, you can. Our programme has been designed around core themes. At each level a theme is introduced and built upon in subsequent levels. This provides you with a range of competencies with hands-on practical IT training which you can use to further your studies and knowledge.

ENTRY REQUIREMENTS

- 240 UCAS tariff points or equivalent

- Relevant Access programme

- Mature students, without appropriate academic qualifications but with relevant work experience, attend for interview and aptitude test.

- Students may be admitted through Accreditation of Experiential Learning (AEL) or Accreditation of Certificated Learning (ACL) processes.

- In the case of applicants whose first language is not English, then IELTS 6.0 (or equivalent) is required.

- Level 3 advanced entry students may have to take a 0 credit bridge module, CN20XZ: Ethics,   Safety and Legal Issues in Computing.

At UEL we are committed to working together to build a learning community founded on equality of opportunity - a learning community which celebrates the rich diversity of our student and staff populations. Discriminatory behaviour has no place in our community and will not be tolerated. Within a spirit of respecting difference, our equality and diversity policies promise fair treatment and equality of opportunity for all. In pursuing this aim, we

want people applying for a place at UEL to feel valued and know that the process and experience will be transparent and fair and no one will be refused access on the grounds of any protected characteristic stated in the Equality Act 2010

ABOUT THE PROGRAMME

What is Information Technology?

Information Technology is the practical application of computers and computing technologies to capture, store, retrieve and exchange information. The term IT also covers the use of emerging technologies such as cloud, mobile etc. for data acquisition, processing and information distribution using distributed computing to solve practical problems or achieve set goals. Thus IT infrastructure and services play crucial roles in all organisations and are integral parts of our everyday life. Therefore professionals who understand the theory of computer technologies and can develop, maintain and manage IT systems as well as possess the technical working knowledge to practically implement IT solutions are in constant demand. Studying Information Technology is challenging, enjoyable and leads to a rewarding career because it is lively and deals with the practical application of computer technologies to meet users' requirement and needs.

Information Technology at UEL

The programme at UEL concentrates on Systems Administration and Management, Analysis/ Design and Software modelling, Databases, Web Design/Development, Application Software Development and Skills. Emphasis is placed on practical hands-on application deployment, Distributed Computing, and a balance between theory and practice which leads to a solid foundation for a career in the field of Information Technology.

Programme structure

This programme may be studied full time or part time, as a sandwich degree, or as part of a combined honours route. You will study a combination of core and optional modules, as described further in subsequent sections.

Learning environment

As well as the usual teaching and learning facilities such as well-equipped laboratories, lecture and seminar rooms and well-resourced library, students have access to a wide range of computing resources. Specialised labs are used for the study of computer networking and operating system such as Windows and UNIX environment. Students are also provided with software tools for application deployment, database development, computer-aided software engineering, Internet access and Web-based development. The School has educational agreement with software companies such as Microsoft, OPNET etc to give students access to their software for modelling and development of IT solutions for training and research purposes.   The virtual learning environment Moodle is used to give extra support to students and allow easy communication between students and staff. The placement year (which can take place abroad) is the ideal opportunity to add to the skills gained during the first two years of the programme.

Assessment

A variety of assessment methods are used. Some modules are entirely assessed by coursework, although most are assessed by the combination of coursework and examination. Coursework assessment can take a number of different forms, including presentations, software demonstrations, research-based assignments and practical exercises involving system or program specification, coding and testing, and might be carried out individually or in group. Examinations might be multiple choice tests or traditional type examinations.

We are able to make special assessment arrangements for students with certain disabilities and/or particular learning needs to ensure they are able to fully engage with all assessment within the programme.

Work experience/placement opportunities

On our sandwich programmes, you will have the option to undertake a minimum 38 week industrial placement during their third year. This placement is normally paid. The university has long standing links with a large number of well-known employers who can provide UEL students with worthwhile work experience. Many students are offered permanent employment by their placement organisation when they graduate. In addition to enhancing employment prospects, the placement provides a valuable learning experience, the results of which feed into our students' final year of study.

Project work

Students on the single honours and major route complete an academic year long project in their final year. This is a major piece of work that allows students to choose the direction of their study, to develop their own ideas and to integrate the various subjects studied. Students are also encouraged to provide their own ideas for the project, but there is always a battery of topics provided by staff from which students can choose. The final project will be showcase in an open project exhibition which is held at the end of their studies.

Added value

In addition to the IT-related skills and knowledge acquired during your studies, you will develop a wide range of personal and professional skills including communication, presentation, negotiation, team working and time management. These sought-after skills will be useful throughout your working life and will increase your chances of finding a well-paid and interesting job after graduation.

IS THIS THE PROGRAMME FOR ME?

If you are interested in...

- How computers, internet and computer technologies can be used to design and develop applications to solve Information Technology problems or address IT challenges.
- Finding out more on how computing technologies can be used to practically implement and deploythe applications/services we see every day on the computer screen.
- Understanding the working principles of contemporary/emerging computer technologies and developing the technical 'hand-on' skills to use them.

- Acquiring specialised skills to develop and manage IT infrastructures, applications and services.

If you enjoy...

- Designing and developing IT solutions.
- Solving practical technical problems using computer technologies and their applications
- The challenges of finding solutions to insoluble IT problems and using emerging technologies.
- Working and sharing ideas with others to identify and develop these IT solutions

If you want...

- The opportunity to work in a well rewarded and fast growing area of emerging computer technology
- Sought-after and up-to-date skills
- To communicate and work with a wide variety of people to solve their IT technical problems and provide them with their IT requirements

...........then, the Information Technology (IT) programme could be for you

Your future career

There is still a significant shortage of up-to-date Information Technology (IT) skills in the UK. Organisations need to have access to these skills to make best used of their computing and internet resources.

Graduates of the Information Technology degree programme combine their technical skills with the Systems Administration and Management knowledge and qualify for a range of jobs including:

1. IT Systems Administrator

2. IT consultant/ IT strategist or Application and Infrastructure Deployment Engineer

3. IT Field Engineer and IT Service Manager

4. Software Application Solution developer/ architect

5. Infrastructure and Application Testing Engineer / IT Infrastructure Specialist

6. IT Operations Support Analyst / IT Support Engineer

7. IT Application Support Team leader or IT Support Technician

8. Integrated Web designer and developer

For graduates who wish to continue their studies at postgraduate level, the programme provides a suitable basis for application to a variety of Masters Programmes, both at UEL and elsewhere.

How we support you

- Personal tutor support throughout the programme
- Support for development and study skills, preparation for employment and research.
- Placement Office with well-established links with employers to provide support for finding placements.
- Specialist support for dyslexia and English as a second language
- Student advice services for accommodation, finance, career, IT training and learning resources.
- Give them practical hands-on training on the use of application software.

Outcomes

Programme aims and learning outcomes

What is this programme designed to achieve?

The programme is designed to help give you the opportunity to;

- Develop knowledge through the study of models, theories and concepts associated with the application of Information Technology (IT) and the development of its related software.
- Gain appropriate knowledge and skills base to pursue a career developing, managing, and administrating IT systems, infrastructure and services in contemporary organisations.
- Gain an understanding of the operational, strategic and practical issues associated with the implementation and deployment of emerging computer technologies to enterprises.
- Be aware of the management, economic, legal, social, professional, security and ethical issues relating to IT infrastructure, applications and services.
- Enable students to develop specialised hands-on skills in analysing and designing specifying, constructing, testing and evaluating specialist systems in a given context.
- Enable students to develop their specialised knowledge by means of examining appropriate tools, theoretical principles and methodologies for the provision of IT solutions.
- Provide the opportunity for students to develop software modelling, web development and other vocational skills relevant to employment within the Information Technology (IT).
- Develop a range of personal and transferable skills including communication, group and individual work, time management, delegation and negotiation skills.
- Develop in the student a well‑practised facility for relating theory and practice, such that they become more effective doers, thinkers and learners.
- Develop the necessary study skills and knowledge to pursue further study.

What will you learn?

All learning outcomes are covered in the programme's single honours route and where Maj, J and/or Min is shown against a learning outcome, this confirms that the learning outcome is covered in the Major, Joint and/or Minor routes offered.

Knowledge

- How to design (Maj, J, Min) and implement IT solutions and applications.
- How computer hardware and technology provides a platform for IT systems (Maj,)
- How computer technology and applications can be used for IT solutions. (Maj, J, Min)
- How IT projects and services/applications can be deployed and managed (Min).
- How to develop desktop and web front ends for Information Technology applications (Maj,)
- How to develop database back ends for IT applications and distributed systems (J,)

Thinking skills

- Problem solving (Maj,J, Min)
- Evaluation and critical analysis (Maj, J,)
- Self-appraisal and review of personal practice. (Maj,)

Subject-Based Practical skills

- Use of range of specialised computer technology, object-oriented system development (Maj, J, Min), databases (Maj, J,Min), website design (Maj, J,), dynamic web development (Maj,) and other application development packages (Maj, J,).
- Preparation of essays, reports and presentations (Maj, J and Min)
- Production of major self-directed project. (Maj,)

Skills for life and work (general skills)

- Communication Skills (Maj, J and Min)
- Time management (Maj, J and Min)
- Learning and working both independently and in groups (Maj, J and Min)

Structure

The programme structure

Introduction

All programmes are credit-rated to help you to understand the amount and level of study that is needed.

One credit is equal to 10 hours of directed study time (this includes everything you do e.g. lecture, seminar and private study).

Credits are assigned to one of 5 levels:

- 0 - equivalent in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme
- 1 - equivalent in standard to the first year of a full-time undergraduate degree programme
- 2 - equivalent in standard to the second year of a full-time undergraduate degree programme
- 3 - equivalent in standard to the third year of a full-time undergraduate degree programme
- M - equivalent in standard to a Masters degree

Credit rating

The overall credit-rating of this programme is 360 credits.

Typical duration

The expected duration of this programme is 3 years when attended in full-time mode or 5 years in part-time mode. It is possible to move from a full-time mode of study to a part-time mode of study and vice-versa, to accommodate any external factors such as financial constraints or domestic commitments. Many of our students make use of this flexibility and this may impact on the overall duration of their study period.

How the teaching year is divided

The teaching year begins in September and ends in June but some programmes also allow students to join at the start of Semester B, in February.

A typical student, in full-time attendance mode of study, will register for 120 credits in an academic year. A student in a part-time mode of study may register for up to 80 credits in any academic year.

What you will study when

This programme is part of a modular degree scheme. A student registered in a full-time attendance mode will take six 20 credit modules (or fewer, if any are 40 credit modules) per year. An honours degree student will complete modules totalling 120 credits at level one, modules totalling 120 credits at level 2 and modules totalling 120 credits at level 3.

It is possible to bring together modules from one field with modules from another to produce a combined programme. Subjects are offered in a variety of combinations:

Single   120 credits at levels one, two and three

Major   80 credits at levels one, two and three

Joint   60 credits at levels one, two and three

Minor   40 credits at levels one, two and three.

Modules are defined as:

Core   Must be taken

Option   Select from a range of identified modules within the field

University Wide Option   Select from a wide range of university wide options

The following are the core and optional requirements for the single, major, joint and minor routes for this programme

The Skills Modules listed in the Joint Route are Core, unless the equivalent Skills Modules are taken in your other combined subject.

Level	UEL Module Code	TITLE	SKILLS MODULESInsert Y where appropriate)	Distance learning Y/N	CREDITS	STATUS SINGLE	STATUS MAJOR	STATUS JOINT	STA MI
1	CN1041	Academic Skills for Computing	Y	N	20	Core	Core	Option*	
1	IM1045	Information Systems		N	20	Core	Core	Core	C
1				N	20	Core	Core	Core	Cor

Level	Code	Module			Credits					
	SD1046	Visual Programming								
1	IM1024	Web Development and Management		N	20	Core	Core	Option		
1	SD1333	Mathematics for Computing		N	20	Core				
1	CN1147	Introduction to Computer Systems and Networks		N	20	Core				
2	CN2041	Professional Issues	Y	N	20	Core	Core	Option*		
2	IM2042	Information Systems Modelling and Design		N	20	Core		Core	C	
2	IM2801	Web Application Programming		N	20	Core	Core	Option		
2	SD2052	Database Systems		N	20	Core	Core	Core	C	
2	IM2001	Practical Application Workshop		N	20	Core	Core			
2	CN2018	Systems Administration		N	20	Option				
2	IM2044	Usability Engineering		N	20	Option				
3	CN3070	Project research and Implementation	Y	N	40	Core				
3	SD3042	Advanced Database Development		N	20	Core	Core	Option	C	
3	IM3801	Distributed Systems and Applications		N	20	Core		Option		

3	IM3056	Management and information System		N	20	Core			C
3	IM3802	Issues in Internet Design and Development		N	20	Core	Core	Option	
3	CN3001	Computer Studies Project	Y	N	40		Core	Option*	

Level 1 Entry

* skills module: must be taken unless equivalent skills module is being taken in other half of programme
** one of these must be taken on the major route
*** can be replaced with a University Wide Option Module if required

Requirements for gaining an award

In order to gain anhonoursdegree you will need to obtain 360 credits including:

- A minimum of 120 credits at level one or higher
- A minimum of 120 credits at level two or higher
- A minimum of 120 credits at level three or higher

In order to gain an ordinary degree you will need to obtain a minimum of 300 credits including:

- A minimum of 120 credits at level one or higher
- A minimum of 120 credits at level two or higher
- A minimum of 60 credits at level three or higher

In order to gain a Diploma of Higher Education you will need to obtain at least 240 credits including a minimum of 120 credits at level one or higher and 120 credits at level two or higher

In order to gain a Certificate of Higher Education you will need to obtain 120 credits at level one or higher

In order to gain an Associate Certificate you will need to obtain a minimum of 20 credits at level one or higher

Degree Classification

Where a student is eligible for an Honours degree, and has gained a minimum of 240 UEL credits at level 2 or level 3 on the programme, including a minimum of 120 UEL credits at level 3, the award classification is determined by calculating:

$$\left(\text{The arithmetic mean of the best 100 credits at level 3}\right) \times 2/3 + \left(\text{The arithmetic mean of the next best 100 credits at levels 2 and/or 3}\right) \times 1/3$$

and applying the mark obtained as a percentage, with all decimals points rounded up to the nearest whole number, to the following classification

70% - 100% First Class Honours
60% - 69%   Second Class Honours, First Division
50% - 59%   Second Class Honours, Second Division
40% - 49%   Third Class Honours
0% - 39%   Not passed

Assessment

Teaching, learning and assessment

Teaching and learning

Knowledge is developed through

- Participation in lectures, tutorials and workshops
- Directed and general reading
- Primary and secondary research, e.g. using internet or Learning Resource Centre

Thinking skills are developed through

- Successful completion of set assessment tasks
- Self-appraisal and self-evaluation
- Critical evaluation of concepts, assumptions, arguments and data

Practical skills are developed through

- Use of general IT applications such as word processors and spreadsheets
- Use of specialised IT applications such as program development environments andCASE tools
- Investigation of website development

Skills for life and work (general skills) are developed through

- Working in groups to complete work set, such as presentations
- Working during sandwich year as placement student
- Managing time to complete assessments by deadlines

Assessment

Knowledge is assessed by

- Examinations, both unseen and based on previously supplied case studies
- Multiple choice tests
- Extended essays and reports

Thinking skills are assessed by

- All assessment tasks set, particularly those requiring critical evaluation
- Self-appraisal of performance
- Use of appropriate problem solving skills

Practical skills are assessed by

- Assessment tasks requiring use of general and specialised IT applications
- Use of equipment in practicals and presentations

Skills for life and work (general skills) are assessed by

- Evidence of group and team working
- Completion of placement year
- Ability to work to time constraints

Quality

How we assure the quality of this programme

Before this programme started

Before this programme started, the following was checked:

- there would be enough qualified staff to teach the programme;
- adequate resources would be in place;
- the overall aims and objectives were appropriate;
- the content of the programme met national benchmark requirements;
- the programme met any professional/statutory body requirements;
- the proposal met other internal quality criteria covering a range of issues such as admissions policy, teaching, learning and assessment strategy and student support mechanisms.

This is done through a process of programme approval which involves consulting academic experts including some subject specialists from other institutions.

How we monitor the quality of this programme

The quality of this programme is monitored each year through evaluating:

- external examiner reports (considering quality and standards);
- statistical information (considering issues such as the pass rate);
- student feedback.

Drawing on this and other information, programme teams undertake the annual Review and Enhancement Process which is co-ordinated at School level and includes student participation. The process is monitored by the Quality and Standards Committee. Once every six years an in-depth review of the whole field is undertaken by a panel that includes at least two external subject specialists. The panel considers documents, looks at student work, speaks to current and former students and speaks to staff before drawing its conclusions. The result is a report highlighting good practice and identifying areas where action is needed.

The role of the programme committee

This programme has a programme committee comprising all relevant teaching staff, student representatives and others who make a contribution towards the effective operation of the programme (e.g. library/technician staff). The committee has responsibilities for the quality of the programme. It provides input into the operation of the Review and Enhancement Process and proposes changes to improve quality. The programme committee plays a critical role in the University's quality assurance procedures.

The role of external examiners

The standard of this programme is monitored by at least one external examiner. External examiners have two primary responsibilities:

- To ensure the standard of the programme;
- To ensure that justice is done to individual students.

External examiners fulfil these responsibilities in a variety of ways including:

- Approving exam papers/assignments;
- Attending assessment boards;
- Reviewing samples of student work and moderating marks;
- Ensuring that regulations are followed;
- Providing feedback through an annual report that enables us to make improvements for the future.

Listening to the views of students

The following methods for gaining student feedback are used on this programme:

- Module evaluations involving the collection of data via questionnaires
- Informal discussions / meetings between students and teaching staff, year tutor and programme leaders
- Student representation on programme committees (meeting each semester)

Students are notified of the action taken through:

- Circulating the minutes of the programme committees
- Providing details on the programme notice board

Listening to the views of others

The following methods are used for gaining the views of other interested parties:

- Discussions with Placement officer and visiting tutors
- Discussions with placement employers
- Information provided by the ***British Computer Society*** (BCS)
- Liaison with schools and colleges whose students apply for places on our programmes

Further Information

Alternative locations for studying this programme

Location	Which elements?	Taught by UEL staff	Taught by local staff	Method of Delivery
-	-	-	-	-

Where you can find further information

Please contact the programme Leader for further information.

Further information about this programme is available from:

- The UEL web site (***http://www.uel.ac.uk***)
- The programme handbook
- Module study guides (*http://www.uel.ac.uk/qa/manual/index.htm*)
- UEL Manual of General Regulations ***http://www.uel.ac.uk/qa***/
- UEL Quality Manual ***http://www.uel.ac.uk/qa***/

- Regulations for the Academic Framework *http://www.uel.ac.uk/academicframework/*
- UEL Guide to Undergraduate Programmes
- *School web pages (http://www.uel.ac.uk/cite/index.htm)*
- UEL catalogue for the Undergraduate Degree Scheme