UNIVERSITY OF EAST LONDON

UNDERGRADUATE PROGRAMME SPECIFICATION
BSc (Hons) Computing

Final award	BSc (Hons) Computing
Intermediate awards available	Cert. H. E, Dip. H. E., BSc
Mode of delivery	On Campus AMC
Details of professional body accreditation	
Relevant QAA Benchmark statements	Computing
UEL Academic School	School of Architecture, Computing and Engineering
Date specification last up-dated	January 2017

Alternative locations for studying this programme

Location	Which elements?	Taught by UEL staff	Taught by local staff	Method of Delivery
AMC, Greece	Entire programme	No	Yes	Full-time & Part-time

The summary - UCAS programme profile-

BANNER BOX:

Are you interested in making a difference in the field of Computing? With a degree in Computing at UEL, you can! Our programme has been designed around core themes computer systems Administration and Management, System Analysis/Design techniques, software application design, modelling and practical development, Databases, Mobile Application /Web development, Computer security/risk management and skills. 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 training which you can use to further your studies and knowledge.

At UEL, our BSc (Hons) Computing programme will provide you with the requisite ability to be a multi-skilled Computing professional with hands-on skills and technical knowledge to enable you, to design and manage computer systems and develop application software.

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

- Successful completion of the IVT (IEK) Applications Technician programme for entry to level 5 of the BSc (Hons) Computing programme.

- Greek Lykeion completion, with an “Apolytirion” grade of at least 10/20

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

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.

For International Students:

- From A Level:

including passes at A2 in at least 2 subjects, must include Maths minimum grade C

- From Btec:

Extended Diploma (QCF) or Diploma (QCF) in a related subject grade MMM. Must include Merit in both Mathematics and Further Mathematics.

- From International Baccalaureate:

Diploma with 27 points including a minimum of 15 points at Higher Level and must include Maths and Physics at Higher Level

We would normally expect you to have Grade C in GCSE Mathematics, English and either Physics or Double Science.

English language requirements for all students:

Overall IELTS 6.0 with a minimum of 6.0 in Writing and Speaking; minimum 5.5 in Reading and Listening (or recognised equivalent).

ABOUT THE PROGRAMME

What is computing?

Computing is the practical application of computer science theories and technologies to solve problems in our everyday lives. The term computing also covers the use of information technology (IT) and emerging technologies such as cloud computing, mobile application development and distributed computing among others to solve practical problems or achieve business goals. Computing professionals develop, maintain and manage computer systems as well as practically

implement computing/IT solutions. Computing is challenging, enjoyable and rewarding, and deals with the practical application of computer technologies to meet users' requirements and needs.

Computing at UEL

Computing at UEL allows you to study a variety of computing subjects, which provide the core themes for developing knowledge in specialised areas that includes the following:-
Computer system development techniques, computer systems administration and management, enterprise architecture and mobile application development, software application modelling and practical development, databases, web development, computer security/risk management and skills. This wide coverage provides students with the professional skills required for a career in computing.

Programme structure

The Computing programme is three years full time or four years in the case of the sandwich degree which includes an optional one-year work placement. Full time and sandwich students will study 120 credits per year. Part time students study a maximum of 90 credits per year and typically take five years to complete the programme. Most of the modules are compulsory but many are shared with our other Computing programmes making the transfer between programmes possible, particularly during level 4.

Learning environment

In addition to the usual teaching and learning facilities such as laboratories, lecture and seminar rooms and a well-resourced library, students have access to a wide range of computing resources. Specialised labs are used for study of networking and operating system environments such as Windows, Linux and UNIX. Students are provided with software tools for programming, database development, computer-aided software engineering, internet access and web-based development. The virtual learning environment Moodle is used to give extra support to students and allow easy communication between students and staff.

Assessment

A variety of assessment methods are used. Some modules are entirely assessed by coursework, although most modules are assessed by a 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. Examinations might be multiple choice tests or more traditional unseen questions. In all cases, you will be given opportunities to prepare for your assessments and post-assessment you will receive detailed feedback, identifying your strengths and areas in which the standard of your work could be improved. Students will be given formative and summative forms of assessment each academic year as well as continuous feedback to enhance their progression.

Students with disabilities and/or particular learning needs should discuss assessments with the Programme Leader to ensure they are able to fully engage with all assessment within the programme.

Work experience/placement opportunities

Students have the option to undertake a year long industrial placement following completion of level 5 studies. 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, but note that securing a placement is a competitive process and cannot be guaranteed.

Project work

Students complete an academic year-long project at level 6. This is a major piece of individual work that allows the students to choose the direction of their study, allowing students to develop their own ideas and integrate the various subjects studied. Students are 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.

Added value

In addition to the IT-related skills and knowledge acquired during the programme, you will develop a wide range of personal and professional skills including communication, presentation, negotiation, team working and time management skills. 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 computer science theories and technologies can be used to practically implement and deploy the applications/services we see every day on the computer screen.
- Understanding the working principles of contemporary/emerging computer technologies and developing the technical ‘hands-on’ skills to use them.
- Acquiring specialised skills to develop and manage computing/ IT systems, applications and services.
- Developing and using technical skills.
- Using specialised skills to develop programs / application software.

If you enjoy....

- Solving technical computer related problems.
- Designing and developing computer/IT solutions.
- Solving practical technical problems using computer technologies and their applications

- The challenges of finding solutions to insoluble computer/IT problems and using emerging technologies.
- Working and sharing ideas with others to identify and develop these computer/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 combine your interest in computers and application software with other subjects.
- To communicate and work with a wide variety of people to solve their IT technical problems and provide them with their IT requirements.

Your future career

There is still a significant shortage of up-to-date Computing professionals with multi- skills in the UK. Organisations need to have access to these skills to make best use of their computing and internet resources.
Graduates of the Computing degree programme combine their technical skills with systems administration and management knowledge and qualify for a range of jobs including:

1. Computing/ IT Systems Administrator
2. Computing/IT consultant/ IT strategist or Application and Infrastructure Deployment Engineer
3. Computing/IT Field Engineer and IT Service Manager
4. Software Application Solution developer and Architect
5. Infrastructure and Application Testing Engineer / IT Infrastructure Specialist
6. Computing Operations Support Analyst / IT Support Engineer
7. Computing/IT Application Support Team leader or IT Support Technician
8. Integrated Web designer and developer
9. Mobile Application developer
10. Computer security and risk managers

For graduates who wish to continue their studies at postgraduate level, the programme provides a basis for application to a variety of postgraduate 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.
- Provide practical hands-on training on the use of different application software.

Programme aims and learning outcomes

What is this programme designed to achieve?
This programme is designed to give you the opportunity to:

- Develop knowledge through the study of models, theories and concepts associated with the application of Computer Technology and the development of its related software.
- Gain an appropriate knowledge and skills base to pursue a career developing, managing, and administrating computer 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 computer 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 computer solutions.
- Provide the opportunity for students to develop software modelling, web development and other vocational skills relevant to employment within the Computing area.
- 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?

Knowledge
- How to design and implement computer systems and develop applications/solutions using various computing principles and techniques.
- How computer hardware and software work together to provide a platform for computer based systems.
- How computer technology and emerging applications can be used for Computer/IT solutions.
- How computer application/projects can be strategically developed, managed and deployed.
- How to develop desktop, mobile and web front ends for computer applications.
- How to develop database back ends for computer applications and distributed systems.

Thinking skills
- Problem solving.
- Evaluation and critical analysis.
- Self-appraisal and review of personal practice.

Subject-Based Practical skills
- Use of a range of specialised computer technology, object-oriented system development, databases, website design, dynamic web development and other application development packages.
- Apply a range of computing principles and techniques in development of software applications.
- Preparation of essays, reports and presentations.
- Production of a major self-directed project.

Skills for life and work (general skills)
- Communication skills.
- Team player and time management.
- Learning and working both independently and in groups.

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:

3 equivalent in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme
4 equivalent in standard to the first year of a full-time undergraduate degree programme
5 equivalent in standard to the second year of a full-time undergraduate degree programme
6 equivalent in standard to the third year of a full-time undergraduate degree programme
7 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 three (3) years full-time, four (4) years sandwich or five (5) years part-time.

It is possible to move from full-time to part-time 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. A

student cannot normally continue study on a programme after 4 years of study in full time mode unless exceptional circumstances apply and extenuation has been granted. The limit for completion of a programme in part time mode is 8 years from first enrolment.

How the teaching year is divided

The teaching year begins in September and ends in June.

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 90 credits in any academic year.

What you will study when

A student registered in a full-time attendance mode will take 120 credits per year. Typically, this will be comprised of four 30 credit modules. The exact number may differ if the programme is comprised of 15, 45 or 60 credits modules. An honours degree student will complete modules totalling 120 credits at level four, modules totalling 120 credits at level five and modules totalling 120 credits at level six.

Level	Module Code	Module Title	Distance learning Y/N	Credits	Status
4	CN4101	Information Systems Modelling and Design	N	30	Core
4	CN4102	Introduction to Software Development	N	30	Core
4	CN4106	Introduction to Web Technologies	N	15	Core
4	CN4104	Introduction to Computer Systems and Networks	N	30	Core
4	CN4107	Maths for Computing	N	15	Core
5	CN5101	Database Systems	N	30	Core
5	CN5108	System Administration	N	15	Core
5	CN5104	Computing in Practice	N	15	Core
5	CN5109	Web Applications Development	N	30	Core
5	CN5110	Information Systems Management and Strategy	N	30	Core
6	CN6111	Enterprise Architecture Development	N	15	Core
6	CN6211	Mobile Application Development	N	15	Core
6	CN6112	Project Management	N	15	Core
6	CN6103	Project	N	45	Core
6	CN6107	Computer /Network Security	N	15	Core

6	CN6113	Information Security and Risk Management	N	15	Core

Please Note – A core module for a programme is a module which a student must have passed (i.e. been awarded credit) in order to achieve the relevant named award. An optional module for a programme is a module selected from a range of modules available on the programme.

Requirements for gaining an award

In order to gain an honours degree you will need to obtain 360 credits including:

- A minimum of 120 credits at level four or higher
- A minimum of 120 credits at level five or higher
- A minimum of 120 credits at level six 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 four or higher
- A minimum of 120 credits at level five or higher
- A minimum of 60 credits at level six 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 four or higher and 120 credits at level five or higher

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

Degree Classification

Where a student is eligible for an Honours degree by passing a valid combination of module to comprise an award and has gained the minimum of 240 UEL credits at level 5 or level 6 on the current enrolment for the programme, including a minimum of 120 UEL credits at level 6, the award classification is determined by calculating;

The arithmetic mean of the best 90 credits at level 6	x	0.8	+	The arithmetic mean of the next best 90 credits at levels 5 and/or 6	x	0.2

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

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 the Internet or Learning Resources 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 software development tools and environments and CASE tools.
- Research skills-based activities with feedback

Skills for life and work (general skills) are developed through
- Planning activities with feedback
- Project work
- 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
- extended essays and reports
- multiple choice tests

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

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 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.

The external examiner reports for this programme are located on the UEL virtual learning environment (Moodle) on the school notice board under the section entitled 'External Examiner Reports & Responses'. You can also view a list of the external examiners for the UEL School by clicking on the link below.

http://www.uel.ac.uk/qa/externalexaminersystem/currentexaminers/

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 and programme leader
- Student representation on programme committees (meeting each semester)

Students are notified of the action taken through:

- Circulating the minutes of the programme committee
- 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 Placements Officer and visiting tutors
- Liaison with placement employers
- Information provided by the British Computer Society
- Liaison with schools and colleges whose students apply for places on our programmes

Further information

Where you can find 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
- 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 Modular Programmes
- School of Architecture, Computing and Engineering at UE http://www.uel.ac.uk/ace/
- External examiner reports (available from UEL virtual learning environment (Moodle))