Forensic Science (Single and Combined Honours)

This version of the programme is no longer recruiting. Please refer to the updated programme specification for the programme of the same name.

Final award	BSc (Hons)
Intermediate awards available	Cert HE, Dip HE, BSc
UCAS code	F410
Details of professional body accreditation	N/A
Relevant QAA Benchmark statements	Biosciences
Date specification last up-dated	September 2012

Profile

The summary - UCAS programme profile

BANNER BOX:

This programme offers excellent employment prospects, particularly for students taking the sandwich option.

ENTRY REQUIREMENTS

- 240 UCAS tariff points or equivalent

We also accept Access to Science, Advanced GNVQ in Science at merit grade, and BTEC National Diploma in Science with a minimum of 6 modules at merit grade or higher. All students should also have a minimum of grade C at GCSE, or equivalent, in English language, mathematics and double science.

Applicants with overseas or alternative qualifications are considered on an individual basis. For mature students, credit may be given for relevant work experience.

Direct entry to the second year of the programme is available for students with Higher National Certificate or Diploma in an appropriate area, or for those who have successfully completed study equivalent to level one at another University.

If you want to study Forensic Science but have not achieved the right entry qualifications, why not start with our extended degree programme in Applied Biology (feeds in at Level 1).

ABOUT THE PROGRAMME

What is Forensic Science?

Essentially Forensic Science is the application of science to law enforcement, so the forensic scientist uses a range of scientific techniques to provide admissible evidence in a court of law.

Forensic Science at UEL

- The programme at UEL aims to provide students with a broad background to a large number of scientific techniques used by forensic scientists and also an introduction to the relevant aspects of law.
- Offers extensive laboratory training through all years of the programme
- Shares a common first year with other Bioscience degrees at UEL, leaving you an option to transfer at the end of the first year

Programme structure

- Most students follow a 4-year sandwich degree pathway - however 3-year full-time and part-time routes and combined honours are also available
- Level 1 is essentially a foundation year, designed to cement and extend areas of study which should already be at least partly familiar to students. In two Skills modules students will develop the study skills and IT skills required in any modern degree programme together with the more specialist background knowledge in areas such as chemistry, cell biology and statistics, which are required by a Forensic Scientist. A module on legal methods and skills provides an introduction to the relevant aspects of law.
- At Level 2, four modules are essential: Biological Evidence, Biochemical Techniques, Introduction to Toxicology and the Environment and Criminal Law. Two further modules are chosen from a selection of law, pharmacology and biochemistry modules.
- The third year of study can be spent away from the University in an agreed work placement
- The final year (Level 3) has further modules specialising in aspects of Forensic Science with options of further study in law or toxicology.
- In your final year, you do an individual research project, involving original work

Learning environment

Learning is encouraged through participation in a wide variety of activities including lectures, seminars, workshops, laboratory-based practicals, external visits, distance learning, web-based learning etc. Each module has 5 to 6 hours contact per week, and may need up to 10 hours further individual study per week on each module.

Success at university depends on developing your ability to study independently using library resources, Computer-assisted learning (CAL), handouts and web-based study activities. The first year has a Skills module in each semester. These help you make the major shift to independent learning needed at university, compared to schools and FE colleges, and also help to develop those transferable skills so important in working life.

Assessment

Students are assessed in practical work and theory. In most modules 50% of the module mark is derived from coursework during the semester (this can take a variety of forms including laboratory work, data analysis, essays, oral presentations etc.) and 50% (50-100% for Law modules) from unseen written theory examination at the end of the semester. Some modules also include laboratory practical exams.

- Level 1 (Year 1) modules introduce you to the standards and types of assessment used at university. Some have theory exams staged at intervals through the semester. Although they do not contribute to your final Honours grade, you are expected to achieve at least 40% in all Level 1 modules.
- Your final Honours grade uses marks from Level 2 and Level 3 modules only. Your Level 1 modules prepare you to do your best in these later years.
- If a module is not passed at the first opportunity, marks from later opportunities are not capped.

Work experience/placement opportunities

- The 4-year Sandwich programme offers a year working in a laboratory and maybe in a forensic lab, hospital, research institution or in a medical, industrial or food company. Placements are available nationwide and sometimes abroad.
- Your experience can be written up to pass a Work Experience module that will appear on your degree transcript. You also have the opportunity to take a work-based learning module which can contribute to your final degree classification.

Project work

- Project work is an essential component of an Honours degree programme and one that most students enjoy. Small projects and group work exercises feature throughout the programme.
- Up to one third of your final year is spent on an individual research project. If a double project module is chosen this will contribute over 20% to your total Honours mark.
- Project work encourages students to show initiative in their individual work under supervision in a laboratory, using appropriate analytical techniques to generate and interpret new data.
- Library based research projects may also be undertaken.

Added value

- Extensive personal support throughout the programme.
- Sound practical as well as academic training.
- The sandwich year working in a laboratory will add value to your job prospects at the end of the programme.
- Effective careers advice and support available.

IS THIS THE PROGRAMME FOR ME?

If you are interested in...

- Developing your knowledge of Law and Biology as applied to Forensic Science.

- Studying practical methods relevant to Forensic Science.
- Understanding how current procedures in Forensic Science depend on study at many levels: humans, cells, other organisms and Law.
- Improving your scientific skills of logical argument and analysis.

If you enjoy...

- TV programmes on forensic investigations.
- Reading or hearing about research and/ or medicine (do you already enjoy TV documentaries like Horizon or Equinox, radio science programmes, New Scientist articles?).
- The challenge of increasing not just your knowledge of facts, but also your understanding of how science may contribute to solving crimes and the criminal justice system.
- Doing scientific procedures and experiments in laboratories and IT labs with precision.
- Working in groups in laboratories using standard and new techniques to solve problems.
- Being able to study quietly and individually away from formal staff-led sessions.

If you want...

- The chance of reviewing your degree programme at the end of the first year and possibly changing to Biomedical Sciences, Biochemistry, Immunology, and other Biosciences degrees.
- The option of a year's work experience in a laboratory away from the University.
- To be able to spend up to one third of your final year on your own individual research project at the university (usually developing laboratory skills, but IT, survey or library projects also negotiable).

Your future career

The programme will enable you to pursue careers in forensic science and related occupations, such as diagnostics, scientific support for the police, consumer protection/trading standards, health and safety, public health, environmental monitoring and control, accident investigation and quality assurance in the manufacturing industries including food and pharmaceutical. It can also be utilised by those students who have less specific career aspirations but who wish to study a rigorous scientific programme. One rapidly growing field of work is in the insurance industry providing the technical support in claims assessment.

How we support you

The School of Health and Bioscience provides immediate contact with University support systems.

- In your first year, you are allocated a Personal Tutor (a member of staff familiar with your degree). You will see your Tutor at regular intervals to discuss progress and life in general.
- Module leaders and Degree pathway leaders also give support on academic matters, and advice about other specialist help available through the University.

- The School also has a Help Desk to provide administrative assistance and advise how to get the right help.
- Internet homepages are used by many staff to support their teaching and your learning.
- Lecture and practical files, quizzes, mark summaries and much more is now available for several modules via UEL UELPlus Online Programme links.

Throughout the programme you will find a number of scheduled support activities devoted to specific aspects e.g. how to write your project report, or more general aspects such as careers.

Support for students on a University level includes:

- Libraries and Learning Resource Centres
- Childcare for students with children aged 21/2 years to 5 years.
- Careers advice and information
- Counselling and Advice for practical problems
- Health Centre with a nurse regularly on duty.
- Language tuition
- Dyslexia support
- Accommodation

Bonus factors

- A School of Biosciences with staff and facilities to match to the wide interests and backgrounds of students.
- Sports facilities at the Atherton Centre, which is just a few minutes walk away.
- Multiplex cinema, theatre, supermarkets, high street shops, restaurants, cafes and pubs a few minutes walk away in Stratford - a major site of new development in East London.
- Central London only 20 minutes away by underground and extensive transport links with all parts of London.

Outcomes

Programme aims and learning outcomes

What is this programme designed to achieve?

This programme is designed to give you the opportunity to:

- acquire a sound understanding of the theory and practice of Biochemistry.
- critically evaluate the concepts, techniques and applications of Biochemistry
- develop the practical and transferable skills necessary for a career in Biochemistry and related areas.
- develop responsibility for independent learning.

What will you learn?

Knowledge

- All students gain a broad overview of the biology field at level one. Thereafter you will acquire more detailed specialist knowledge in your chosen areas.
- The programme aims to provide a background to a large number of the scientific techniques used in biological investigations.
- Students will acquire an understanding of the laboratory procedures and techniques used, which will allow the rapid acquisition of more specialist skills later in their career.
- An awareness of the wider implications of scientific research on society as a whole.

Thinking skills

- The ability to comprehend, analyse and criticise published information in biology.
- The ability to formulate hypotheses with the minimum of assistance.
- The ability to use integrated approaches to problem solving.

Subject-Based Practical skills

- The ability to analyse data from your own and other people's experiments and to interpret them in the light of published work.
- The ability to select and apply a range of practical skills relevant to your chosen areas of biology.
- The ability to design and carry out experimental work.
- The ability to effectively communicate your work to scientists and the general public.
- The ability to select and utilise appropriate computer software.
- The ability to carry out literature searches effectively to find information on a specific topic.

Skills for life and work (general skills)

- The development of your own style of independent learning.
- The ability to communicate ideas and experiments to others and to debate relevant scientific and /or ethical issues.
- IT skills.
- Communication skills.
- Team work.
- Time management.
- Confidence.

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 duration of this programme is three years full-time (four years sandwich) or five 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.

How the teaching year is divided

The teaching year begins in September (or February) and ends in June (or January). A typical full-time student will study the equivalent of 120 credits over the year. A typical part-time student will study for one day and one evening per week and will complete 60-80 credits.

What you will study when

This programme is part of a modular degree scheme. A typical full-time student will take six 20 credit modules per year. An honours degree student will complete six modules at level one, six at level 2 and six at level 3.

It is possible to bring together modules from one subject 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 modules across the University

The following are the core and optional requirements for the single and major pathways for this programme

LEVEL	TITLE	CREDITS	STATUS SINGLE	STATUS MAJOR
1	Skills for Biociences	20	Core	Core
1	Cellular Biology	20	Core	Core
1	Human Physiology	20	Core	-
1	Human Health and Disease	20	Core	-
1	Cellular Processes	20	Core	Core
1	Legal Methods and Skills	20	Core	Core
2	Biological Evidence	20	Core	Core
2	Practical and employability skills	20	Core	Core
2	Introduction to Toxicology	20	Core	Option
2	Criminal Law	20	Core	Option
2	Introductory Pharmacology	20	Option	-
2	Molecular Biology	20	Option	-
2	Tort	20	Option	-
2	Work Based Learning	20	Option	-
3	Forensic Analysis	20	Core	Core
3	Forensic Pathology and Serology	20	Core	Core
3	Applied Toxicology and the Environment	20	Core	Option
3	Evidence	20	Core	Option
3	Biochemical and Cellular Toxicology	20	Option	-
3	Medicine and Law	20	Option	Option
3	Independent Study and Research project (*Core if double module not taken)	20	Option*	Option*
3	Individual Research Project (double module)	40	Option*	Option*

*One of these options must be taken

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 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 a Foundation Degree you will need to obtain a minimum of 240 credits including:

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

(A foundation degree is linked to a named Honours degree onto which a student may progress after successful completion of the Foundation degree.)

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:

The arithmetic mean of the best 100 credits at level 3	× 2/3 +	The arithmetic mean of the next best 100 credits at levels 2 and/or 3	× 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

- Lectures
- Tutorials
- Workshops
- Practicals
- Reading
- Internet, UELPlus and CAL

Thinking skills are developed through

- Computer aided learning
- Presentations
- Preparing for tutorials and seminars/workshops
- Completing coursework assignments (including data analysis essays, presentations etc)
- Independent reading

Practical skills are developed through

- Laboratory Practical and/or fieldwork
- Computer simulations and use of IT

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

- Managing time
- Presenting ideas and arguments in a structured manner - written and oral communication
- Problem solving
- Team work

Assessment

A wide variety of assessment methods are used including

- Written examinations
- Practical reports
- Essays
- Data analysis
- Poster presentations
- Oral presentations
- Portfolios
- Final year research project and dissertation
- MCQ tests
- Database searches
- Library exercises

Knowledge and Thinking Skills are assessed by

- Evidence of reading and comprehension of the topics covered in the module being assessed. This will be particularly apparent in essay work and examinations.
- Ability to describe, explain and discuss various aspects of the programme material in the context of class tutorials, group work, presentations and other pieces of assessed coursework for the module.
- In the final year particularly, thinking skills will be assessed by the ability to take information presented in any module out of its original context and to utilise this information in the construction of arguments, comparisons, hypotheses etc as required to address the specific assessments in each module.

Practical skills are assessed by

- The ability to carry out laboratory practical work effectively, within the timeframe allocated.
- The ability to interpret and report on work carried out in the laboratory.
- The ability to complete assignments using appropriate resources.
- Evidence of logical planning and management of time in the preparation of materials for assessment.

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

- The ability to work to strict deadlines
- The ability to select and utilise appropriate problem solving skills
- Demonstration of effective oral and written communication skills
- Evidence of interpersonal skills such as teamwork and /or team leadership
- Evidence of general numeracy skills

Quality

How we assure the quality of this programme

Before this programme started

Before the 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 University's Quality Standing 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.

Listening to the views of students

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Listening to the views of students

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Listening to the views of others

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Listening to the views of others

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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

Further information about this programme is available from:

- The UEL web site
- The student handbook
- Module study guides http://www.uel.ac.uk/hab/
- UEL Manual of Regulations and Policies 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/
- School web pages http://www.uel.ac.uk/hab/