

Programme Specification
Programme title: BSc (Hons) Forensic and Medical Sciences

Academic Year:	2019/0
Degree Awarding Body:	University of Bradford
Partner(s), delivery organisation or support provider (if appropriate):	
Final and interim award(s):	<p>BSc (Honours) Forensic and Medical Sciences [Framework for Higher Education Qualifications (FHEQ) level 6]</p> <p>BSc (Ordinary) Forensic and Medical Sciences [Framework for Higher Education Qualifications (FHEQ) level 6]</p> <p>Diploma of Higher Education Forensic and Medical Sciences [Framework for Higher Education Qualifications (FHEQ) level 5]</p> <p>Certificate of Higher Education Forensic and Medical Sciences [Framework for Higher Education Qualifications (FHEQ) level 4]</p>
Programme accredited by (if appropriate):	<p>The Chartered Society of Forensic Sciences [component standards: IEPE (Interpretation, Evaluation and Presentation of Evidence); LA (Laboratory Analysis)]</p>
Programme duration:	3 or 4 years full-time
UCAS code:	3 year FB49 4 year FBK9
QAA Subject benchmark statement(s):	Forensic Science (2012)
Date last confirmed and/or minor modification approved by Faculty Board	March 2019

Please note: This programme specification has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but changes may occur given the interval between publishing and commencement of teaching. Any change which impacts the terms and conditions of an applicant's offer will be communicated to them. Upon commencement of the programme,

students will receive further detail about their course and any minor changes will be discussed and/or communicated at this point.

Introduction

The School of Archaeological and Forensic Sciences in the Faculty of Life Sciences is a UK pioneer in the development of education and training in the forensic sciences in undergraduate courses. Our courses have acquired a strong reputation and they derive benefit from the successes of strong contributions from the School of Chemistry and Biosciences. Forensic investigation draws on virtually every branch of science including all of the disciplines of chemistry, biology, physics and mathematics, and those derived from them, such as medicine, computing, engineering and archaeology. The discipline also encompasses subjects which are better defined within the humanities and arts including for example psychology, ethics and law, and a great many vocational subjects such as profiling, photography, nursing and reconstruction. By far the greatest requirement of the professional forensic and police scientific sectors in addressing crimes against a person (serious crime) and identifying individuals are skills in the biosciences, and for crimes against property (volume crime), the skills of the chemical scientist.

The course has been designed to deliver education and training in the essential core biomedical and forensic sciences to meet these requirements. Forensic investigation is integrated within each year of the course. A wide range of transferable skills are embedded within the scientific programme as well as being delivered through modules in professional development. Students are provided with opportunities to focus on topics of particular interest in their final year of study.

Degrees based on the biosciences prepare graduates for a wide range of careers including those in the professional medical and forensic sectors because of their broad basis and application. Throughout the programme, students will acquire skills that will be useful in their future career. These include project and time management, critical review and analytical thinking, presentational skills, computer and other applied IT skills and the management of data. These will be taught, practised and assessed. Students enrolled on the 4 year programme will be offered the opportunity to either undertake a placement or study abroad between the second and final years of study. The placement allows students to develop their professional and transferable skills whereas study abroad allows students to explore their discipline from a different cultural perspective.

Crime scene investigation and processing is taught through a series of simulated exercises based in our specially appointed Crime Scene Facility. Forensic Laboratory science is taught from our specialist Forensic Examination Laboratory and the analytical facilities in the School of Chemistry and Biosciences. Teaching on Forensic Taphonomy is based around lectures and practical classes in our specialist Forensic Taphonomy Laboratory (including

autopsy tables, fume extraction and insect colony) and the Oxenhope Taphonomy Field Station. Forensic Anthropology is taught in our state of the art osteology laboratories, supported by an extensive collection of human skeletal remains, Anatomage table and virtopsy.

Programme Aims

The programme is intended to:

- provide opportunities for students to develop a systematic knowledge and understanding, including analytical techniques, of biomedical and forensic sciences, and enable them to apply these to forensic examination and analysis;
- develop students' ability to think critically and creatively;
- develop collaborative and group working skills;
- enable students to develop skills in a range of analytical techniques essential in analytical, biomedical and forensic investigation;
- enable students to become an autonomous learner and prepare them for the lifelong learning skills required to be adaptable over the course of their career;
- provide students with the opportunity to enhance their learning and professional and scientific skills by applying their knowledge and understanding in employment through a sandwich placement year (4 year programme);

Programme Learning Outcomes

To be eligible for the award of Certificate of Higher Education at FHEQ level 4, students will be able to:

- LO1 Describe the basic principles of cellular biology and human genetics
- LO2 Describe the basic principles of microbiology and biological molecules
- LO3 Recall a range of methods of forensic enquiry and recognise the importance of rigorous scientific process
- LO4 Manage time and learning effectively both independently and when working as part of a group

Additionally, to be eligible for the award of Diploma of Higher Education at FHEQ level 5, students will be able to:

- LO5 Employ appropriate numerical and statistical techniques, scientific formulae and calculations
- LO6 Evaluate methods of scientific investigation within a forensic context
- LO7 Demonstrate understanding of human anatomy and compare relative methods of identification and autopsy
- LO8 Assess and apply a range of forensic and biomedical methods within different contexts

- LO9 Apply forensic examination techniques to a variety of physical evidence
- LO10 Undertake critical thinking and data evaluation within a range of biomedical and forensic scenarios

Additionally, to be eligible for the award of Ordinary Degree of Bachelor at FHEQ level 6, students will be able to:

- LO11 Critically evaluate the importance and function of quality assurance and employ it within forensic contexts
- LO12 Critically evaluate forensic recording protocols and defend a witness statement
- LO13 Critically evaluate forensic evidence and its shortcomings in miscarriages of justice

Additionally, to be eligible for the award of Honours Degree of Bachelor at FHEQ level 6, students will be able to:

- LO14 Plan and undertake a substantial piece of independent research
- LO15 Present written and oral evidence in a professional manner

Curriculum

Stage 1

FHEQ Level	Module Title	Type	Credit	Study Period	Module Code
4	Independent Study for Forensic Scientists	Core	20	1+2	ARC4014-B
4	Principles of Forensic and Crime Scene Investigation	Core	20	1+2	ARC4016-B
4	Cell & Tissue Biology	Core	20	1+2	BIS4008-B
4	Introductory Biochemistry	Core	20	1+2	BIS4007-B
4	Introductory Microbiology	Core	20	1+2	BIS4013-B
4	Human Genetics & Developmental Biology	Core	20	1+2	BIS4010-B

At the end of stage 1, students will be eligible to exit with the award of Certificate of Higher Education if they have successfully completed at least 120 credits and achieved the award learning outcomes.

Stage 2

FHEQ Level	Module Title	Type	Credit	Study Period	Module Code
5	Forensic Examination and Analysis of Physical Evidence	core	20	1+2	ARC5020-B
5	Virtual Anatomy for Forensic Sciences	core	20	1+2	ARC5017-B
5	Statistics and Databases for Forensic Scientists	core	20	1+2	ARC5022-B
5	Molecular Genetics	core	20	2	BIS5014-B
5	Biometrics and Human Identification	core	20	1	ARC5006-B
5	Medical Microbiology	option	20	1	BIS5008-B
5	Pathology	option	20	2	BIS5015-B
5	Elective		20		

At the end of stage 2, students will be eligible to exit with the award of Diploma of Higher Education if they have successfully completed at least 240 credits and achieved the award learning outcomes.

Placement or Study Abroad (4-year programme)

This programme provides the option for students to undertake a work placement or period of study abroad between Stages 2 and 3. Students wishing to take this option will be registered for the 4 year programme.

Students registered on the 4 year programme who successfully progress to stage 3 at the stage 2 board of examiners will be eligible to take the placement year or study abroad. Students who progress to stage 3 but have a referral in one or more modules will not normally be able to go on placement or study abroad, particularly if that referral requires attendance. In such cases students on the 4 year course should discuss options with the Placement Tutor.

FHEQ Level	Module Title	Type	Study Period	Module Code
5	Placement	Option	Between stages 2&3	ARC5013-Z
5	Study Abroad Experience	Option	Between stages 2&3	ARC5014-Z

On successful completion of ARC5013-Z, students will be eligible for the award of University Diploma in Professional Studies.

On successful completion of ARC5014-Z, students will be eligible for the award of University Diploma in Professional Studies (International).

For further information about study abroad opportunities please refer to <http://www.bradford.ac.uk/international/erasmus-and-international-exchanges/>

Stage 3

FHEQ Level	Module Title	Core/Option/Elective	Credit	Study Period	Module Code
6	Interpretation & Presentation of Forensic Evidence for Forensic Science	core	20	1+2	ARC6024-B
6	Dissertation	core	40	1+2	ARC6025-D
6	Professional Development: Forensic Enquiry and Critical Case Study	core	20	1	ARC6026-B
6	Medical Genetics	core	20	1	BIS6011-B
6	Forensic Anthropology	option	20	1	ARC6011-B
6	Forensic Taphonomy	option	20	2	ARC6013-B
6	Elective				

Students will be eligible to exit with the award of Ordinary Degree of Bachelor if they have successfully completed 120 credits in both Level 4 and 5 and 60 credits at level 6 and achieved the award learning outcomes.

Students will be eligible for the award of Honours Degree of Bachelor if they have successfully completed at least 360 credits and achieved the award learning outcomes.

Learning and Teaching Strategy

The programme articulates with the Teaching and Learning strategies of the University. Students will be exposed to a variety of teaching methods designed to develop the learning outcomes and to cater for different preferences for learning. A wide variety of teaching methods appropriate to the learning outcomes of the individual modules is employed throughout the programme. These methods progressively focus on student-centred approaches to learning. Thus, students will be expected to take responsibility for their learning as they progress through the programme. In this way, students will develop the attributes needed for life-long learning and continuing professional development.

Learning outcomes 1-13, will be developed in a number of modules, through a mix of lectures, seminars, laboratory practicals, workshops, case studies and directed study. Directed study will include directed reading of selected textbooks, specified source literature and open learning materials, directed Web-based materials, report writing and other assignments. In addition individual project/dissertation work will further help to develop learning outcomes 14 and 15.

Where appropriate the disciplines of the medical sciences are brought together within the context of forensic science through the forensic science modules, studied at each Stage of the course.

Assessment Strategy

Assessments have been designed to allow students to demonstrate achievement of the learning outcomes of an individual module appropriate to their level of study and the learning outcomes of the programme. A wide range of formative and summative assessment methods are used, including laboratory reports, portfolios, expert witness statements, case reports, witness reports, mock court exercise (oral cross examination), essays, worksheets, critiques, group-work, poster and oral presentations, research designs, reflective journals and examinations (essays, short answers, MCQ). Students will develop their professional skills and personal development through the production of a CV, covering letter and skills audit. The research design and dissertation develops students' ability to undertake independent research and plan this research effectively.

Assessment Regulations

This Programme conforms to the standard University Regulations which are available at the following link:

<http://www.bradford.ac.uk/agpo/ordinances-and-regulations/>

Admission Requirements

The University welcomes applications from all potential students and most important in the decision to offer a place is our assessment of a candidate's potential to benefit from their studies and of their ability to succeed on this particular programme. Consideration of applications will be based on a combination of formal academic qualifications and other relevant experience.

The **minimum** entry requirements for the programme are as follows:

A typical offer to someone seeking entry through the UCAS scheme would be 112 UCAS points (equivalent to BBC; old tariff 280 points). This must include A-level Chemistry or Biology.

We also require GCSE English, Mathematics and a Science at grade C or 4, or above.

Details of other acceptable qualifications are given here <http://www.brad.ac.uk/study/courses/info/forensic-and-medical-sciences-bsc-3-years>

<http://www.brad.ac.uk/study/courses/info/forensic-and-medical-sciences-bsc-4-years>

Applications are welcome from students with non-standard qualifications or mature students (those over 21 years of age on entry) with significant relevant experience.

On completion of a UCAS form students will be invited to the School for an Open Day when they will have the opportunity to meet staff, view the facilities and discuss "the Bradford experience" with current students.

In addition, students whose first language is not English must have a Minimum IELTS of level 6.0, with no sub-test less than 5.0, or the equivalent.

Recognition of Prior Learning

If applicants have prior certificated learning or professional experience which may be equivalent to parts of this programme, the University has procedures to evaluate and recognise this learning in order to provide applicants with exemptions from specified modules or parts of the programme.

Minor Modification Schedule

Version Number	Brief description of Modification	Date of Approval (Faculty Board)
2	Change to delivery period for BIS4008-B and BIS4010-B in response to Periodic Review outcomes for BSc Biomedical Science	07/03/2018
3	Change to delivery period for BIS4007-B and BIS4013-B to align with BSc Biomedical Science	March 2019