

Course Handbook: MSci Forensic Science and Molecular Biology 2019/2020

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School of Forensic and Applied Sciences



Please read this Handbook in conjunction with the University's Student Handbook.

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1. Welcome to the course

Welcome to the School of Forensic and Applied Sciences. Forensic Science at UCLan is outstanding amongst other UK programmes by merit of its breadth and depth, the expertise of staff, and its facilities. The course covers forensic investigation, forensic biology, forensic chemistry and forensic anthropology. In addition to fitting the student for a wide range of forensic careers, the course has a strong emphasis on transferable, employable skills, and it is expected that graduates will be well prepared for careers in a number of areas. The School is vibrant, friendly, diverse and busy, and houses a wealth of staff experience. We were the first UK department to have a dedicated crime scene simulation house and now have three properties representing different scenarios. We have state-of-the-art laboratory facilities and an impressive skeletal collection, comprised from both teaching specimens and archaeological material; and our final year students always organise one of the best graduation balls in the university!

1.1 Rationale, aims and learning outcomes of the course



All courses at the University have overall aims and learning outcomes, which describe what you will achieve on your course of study. Your course has been designed by academics and forensic practitioners to ensure the material covered prepares you with the appropriate knowledge and skills for the future. The MSci Forensic Science and Molecular Biology programme and has been accredited by the Chartered

Society of Forensic Sciences and has achieved recognition across the key component standards of Interpretation, Evaluation and Presentation of Evidence (IEPE) and Crime Scene Investigation (CSI).

1.1.1 What are the Aims of the Course?

It is important that you and the teaching team are clear about exactly what we are aiming to achieve. The aims of the course are:

- to develop the skills necessary to take part in a forensic investigation;
- to provide experience of examining forensic evidence and case work;
- to develop students' skills in communicating both verbally and in writing, in self organisation and motivation, and in acquiring and maintaining a professional approach to their work;
- to encourage development of a critical and analytical mind-set and skills of personal reflection;
- to provide students with detailed contextual knowledge of subjects underpinning forensic science in the broad areas of biology, chemistry, law and methods of forensic investigation
- to develop practical skills in the underpinning forensic sciences (biology, chemistry and search and recovery)
- to develop an understanding of quality assurance procedures in forensic science
- to provide students with the skills necessary to allow them to carry out an independent research project

- to instil a critical awareness of advances at the forefront of the forensic science and molecular biology disciplines.

1.1.2 What are the Learning Outcomes of the Course?

This list of the major learning outcomes of the course will give you an idea of the global learning goals. However, in the module booklets you will see the syllabuses of the individual modules and their learning outcomes that will give your more information. You could also refer to the module descriptions which are in effect summaries of the module booklets and are available through our website or on BlackBoard.

At the end of the course you will have a knowledge and understanding of:

- The basic principles of forensic science;
- The underpinning science applicable to forensic science;
- The methods of forensic investigation and law relevant to forensic science;
- Application of understanding in areas of forensic chemistry and forensic biology
- Assessing an unfamiliar problem and be able to design and implement a suitable solution.
- The application of skills developed on the course to a relevant individual project
- How to identify research questions and design and implement solutions.

At the end of the course you will have obtained the following cognitive skills and will be able to:

- Select and interpret information from a range of sources;
- Formulate and test appropriate scientific concepts and hypotheses;
- Present results and structured arguments;
- Plan and carry out independent learning.
- Evaluate technical and theoretical information
- Assimilate, evaluate and present research results objectively.

Undertake an individual research project

At the end of your course you will be able to:

- Describe and critically evaluate methods used in crime scene science;
- Independently carry out practical techniques important in forensic science;
- Work safely in the laboratory and at crime scenes;
- Critically interpret data, write reports and apply the basics of rules of evidence;
- Apply specialist knowledge of forensic practices to investigations and cases.
- Demonstrate competence in design, planning and execution of experiments
- Work independently, under minimum supervision, and be self-critical in the evaluation of risks, experimental procedures and outcomes.

During the course you will also develop transferable skills and be able to:

- Communicate effectively
- Work independently and in co-operation with others
- Perform calculations and appropriate statistical analysis
- Use ICT effectively
- Retrieve information from a range of sources, such as books, scientific reports, journals, case studies and the internet
- Work independently under minimum supervision
- Show problem solving skills including demonstrating self-direction and originality
- Demonstrate an ability to exercise initiative and personal responsibility

Most students registered on the MSci programmes will go on to achieve an MSci degree with Honours; however, you may also exit your degree scheme with a Bachelor of Science degree with Honours, a Bachelor of Science degree without honours, a Diploma in Higher Education (DipHE) Diploma or a Certificate in Higher Education (CertHE).

1.2 Course Team

You will be taught by staff from the University and Forensic Science Practitioners. This list represents those co-ordinating particular areas, or who have particular roles in the delivery of the Course. We have included their qualifications so that you can see where their expertise lies.

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1.3 Expertise of staff

The School of Forensic and Applied Sciences is a vibrant, friendly and diverse environment. One of our many strengths is the staff within the school who are drawn from those who have had careers as forensic practitioners, crime scene investigators or police officers and whose wealth of real life experience is used to ensure the subjects that we teach and the skills you develop are fully applicable to a career in forensic science. Other staff are drawn from more academic backgrounds and bring with them a wide range of academic and research skills to inform their teaching. Staff are research active in areas of Forensic Taphonomy (the factors that influence the rate and pattern of decomposition), Forensic DNA analysis (human population genetics and the application of genetic analysis in wildlife crime), Evidence Based Policing and Chemistry ensuring you are exposed to the cutting edge areas of research in this rapidly developing field of science.

1.4 Academic Advisor

You will be assigned an Academic Advisor who will provide additional academic support during the year. They will be the first point of call for many of the questions that you might have during the year. Your Academic Advisor will be able to help you with personal development, including developing skills in self-awareness, reflection and action planning.



1.5 Administration details

Campus Admin Services provides academic administration support for students and staff and are located in the following hubs which open from 8.45am until 5.15pm Monday to Thursday and until 4.00pm on Fridays. The hub can provide general assistance and advice regarding specific processes such as extenuating circumstances, extensions and appeals.

Foster Building

Forensic and Applied Sciences

Pharmacy and Biomedical Sciences

Psychology

Physical Sciences

telephone: 01772 891990 or 891991 (internal: 1990 or 1991)

email: FosterHub@uclan.ac.uk

1.6 Communication



The University expects you to use your UCLan email address and check regularly for messages from staff. If you send us email messages from other addresses they risk being filtered out as potential spam and discarded unread.

We will normally communicate with you by email so you must check your university email account daily. Staff should respond to emails within 48 hours (although please note that at certain of year staff are extremely busy and it may take longer). Please communicate using formal language and include appropriate details to help us deal with your enquiry (e.g. your student number, course or module details). We may also send text messages (especially if there are timetable changes) so please make sure your contact details are correct or contact you through the Blackboard virtual learning environment. Staff have an open door policy and you may just drop in to see us (if we are available) and some staff will have appointment sheets on their office doors. Contact details and normal working hours for each member of staff should be displayed by their offices.

1.7 External Examiners

The University has appointed two External Examiners to your course who help to ensure that the standards of your course are comparable to those provided at other higher education institutions in the UK. The names of these people, their positions and home institutions can be found below. If you wish to make contact with your External Examiners, you should do this through your Course Leader and not directly. You can access the external examiners report via the Course site on Blackboard. The School will also send a sample of student coursework to the external examiner(s) for external moderation purposes, once it has been marked and internally moderated by the course tutors. The sample will include work awarded the highest and lowest marks and awarded marks in the middle range.

The external examiners for BSc (Hons) Forensic Science are:

Dr Suzanne McColl, Principle Lecturer, Liverpool John Moores University, Liverpool. School of Pharmacy and Biomolecular Science.

Dr Sunny Bagga, Senior Lecturer and Curriculum Head of the Health and Life Sciences Faculty within the Coventry University Group



2. Structure of the course

2.1 Overall structure

The MSci Forensic Science and Molecular Biology degree is delivered over a four-year full time period of study. The course can also be taken part-time over a proportionately longer period. Your degree is composed of modules, which can be full modules with a weighting of 1.0, half modules (weighting 0.5), or double modules (weighting 2.0). To achieve a MSci degree you must study the equivalent of 24 modules over the course (typically 6 modules a year full time or 3-4 modules a year part time).

At the core of the course is **Forensic Investigation**. This provides education and training in the management and processing of crime scenes, the collection and analysis of evidence from crime scenes and law for forensic scientists. It is delivered through lectures, tutorials, seminars, practical sessions, crime scene simulations and courtroom experiences. Students are introduced to simulations of crime scenes for photography, processing and collection of forensic evidence and to laboratory based case simulations for the analysis of a range of different types of evidence, such as fingerprints, footwear impressions, hairs and fibres, glass fragments and tool marks.

The course also has two compulsory streams for the first three years that complement the compulsory modules in Forensic Investigation: **Forensic Biology and Forensic Chemistry**. In the fourth year you will specialise in Molecular biology.

Forensic Biology examines the recovery and analysis of biological evidence such as blood, semen, saliva, hairs or bones to determine individuality, which is vital information in the investigation of many crimes. Individuality is manifested at the molecular level in terms of our DNA and can be detected and analysed using a range of molecular techniques. Forensic Biology can also provide information in other ways such as by the analysis of insect activity on corpses and botanic or pollen analysis. The subject also explores the information that can be obtained from pathological and medical examinations.

Forensic Chemistry uses chemical and physical techniques to examine material of evidential importance such as fire debris, explosives, drugs, domestic and automotive paint, inks and other trace material. Evidence of this type may be important in a range of crimes including hit-and-run, arson and burglary. In particular the School has a strong interest in the analysis of fire evidence on which it collaborates with the University's Centre for Fire and Explosion Studies. Forensic Toxicology is also studied within this stream as it uses chemical techniques to identify drugs and poisons, both in biological samples and in their purer forms.

There is a foundation entry route available for these courses, details of which can be found at

http://www.uclan.ac.uk/courses/msci_forensic_science_and_molecular_biology.php#foundation

There may be opportunities to take a sandwich placement between your second and final year. This is optional, but will give you valuable work experience that will make you stand out when you are looking for a career. The course team may help you find the placement(s), however **it is ultimately the student's responsibility to find and secure appropriate employment** if they wish to undertake the sandwich option.

There may also be opportunities to participate in an Erasmus exchange with a European Partner institution. This would involve studying abroad in Semester 2 of your second year.

2.2 Modules available

Each module is a self-contained block of learning with defined aims, learning outcomes and assessment. A standard module is worth 20 credits. It equates to the learning activity expected from one sixth of a full-time undergraduate year. Modules may be developed as half or double modules with credit allocated up to a maximum of 120 credits per module.

Year 1

The modules that you take in your first year (stage 1) are shown in the table below. In addition to the compulsory modules (designated C in the table) you must take an **elective** module of the value 1.0 (or two half-sized level 1 electives).

We have two elective modules, Introduction to Biology (FZ1016) and Introduction to Chemistry (FZ1063). These two modules are specifically designed for those students entering the course without either A2 (or equivalent) Biology and Chemistry and if you lack the knowledge of biology or chemistry to A2 standard, then it is compulsory for you to take the relevant module as an elective. All students (even if you have A2 Biology and/or Chemistry) may undergo an evaluation in welcome week to assess your knowledge in these subject areas. Those students who require enhancement of their chemistry and/or biology skills will have to take FZ1063 and FZ1016 as their electives.

There are compulsory biology, chemistry and anthropology modules for all forensic science students in the second semester. It is for this reason that students who have less experience in biology and/or chemistry must take the introductory modules in the first semester so that all students are at a similar level when the compulsory modules start in the second semester. It is assumed that all students are starting anthropology from a position of no prior knowledge.

If you are not required to take FZ1016 and FZ1063 then you are free to choose electives from the University's elective catalogue. Other recommended electives would include those that enhance your ICT skills if you are weak in this area, or an archaeology module which would enhance your anthropological studies. However, you should refer to the University electives [Electives Catalogue](#) (on-line) for the full range of options.

Year 1 Modules (Level 4)			
Module Title	Size	Semester	Compulsory(C) or Optional (O) or Elective (E)
FZ1014 - Biology for Forensic Scientists	1	2	C
FZ1024 - Chemistry for Forensic Scientists	1	2	C
FZ1033 - Skills for Forensic Science	1	Year long	C
FZ1034 - Volume Crime Scene Science	1	Year long	C
FZ1054 - Introduction to Osteology and Anthropology	1	Year long	C
MAXIMUM	5		
Possible electives			
FZ1016 - Introduction to Biology	0.5	1	O
FZ1063 - Introduction to Chemistry	0.5	1	O
Elective from the electives catalogue	1		E
MAXIMUM	1		

Year 2

In your second year you must take the five compulsory modules. You have forensic science based option from the list below for your sixth second year module. You will be advised further on your options towards the end of first year of your course.

Year 2 Modules (Level 5)			
Module Title	Size	Semester	Compulsory(C) or Option (O)
FZ2030 - Criminalistics	1	Year long	C
FZ2236 - Forensic Practice	2	Year long	C
FZ2011 - Introduction to Forensic Genetics	1	Year long	C
FZ2023 - Forensic Chemistry	1	Year long	C
MAXIMUM	5		
Possible options			
FZ2051 - Forensic Anthropology	1	Year long	O
FZ2052 - The Science and Management of Death	1	Year long	O
FZ2717 – Environmental Forensics	1	Year long	O
MAXIMUM	1		

Placement Year (Optional)

For the placement year you will spend up to 48 weeks working for a relevant employer following the successful completion of year 2.

COMPULSORY MODULES AT LEVEL 6	Module Size	Semester	Compulsory(C) or Option (O)
FZ2055 Sandwich Placement	1	Year long	O

Erasmus Exchange (Optional)

Students undertaking an Erasmus exchange in Semester 2 of their second year will study 60 credits making up the required credits with an appropriate programme at our Erasmus partner.

Year 2 Modules (Level 5)			
Module Title	Size	Semester	Compulsory(C) or Option (O)
FZ2130 – Aspects of Criminalistics	0.5	Semester 1	C
FZ2036 – Introduction to Forensic Practice	1.0	Semester 1	C
FZ2111 - Introduction to Forensic Genetics	0.5	Semester 1	C
FZ2123 – Aspects of Forensic Chemistry	0.5	Semester 1	C
MAXIMUM	2.5		
Possible options			
FZ2151 – Aspects of Forensic Anthropology	0.5	Semester 1	O

FZ2152 - Introduction to the Science and Management of Death	0.5	Semester 1	O
MAXIMUM	0.5		

Year 3

In your third year, you will take six compulsory modules.

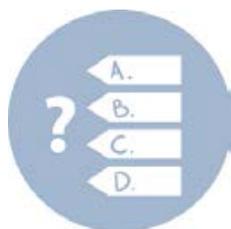
Year 3 Modules (Level 6)			
Module Title	Size	Semester	Compulsory(C) or Option (O)
FZ3035 - Application of Forensic Science	1	Year long	C
FZ3011 - Forensic Genetics	1	Year long	C
FZ3023 - Advances in Forensic Chemistry	1	Year long	C
FZ3500 - Forensic Science Dissertation	1	Year long	C
FZ3015 - Forensic Medicine	1	Year long	C
FZ3024 - Forensic Toxicology	1	Year long	C
MAXIMUM	6		

Year 4

In your fourth year, you will take six modules, (including the triple research project module, and two modules within your chosen discipline.

Year 4 Modules (Level 7)			
Module Title	Size	Semester	Compulsory(C) or Option (O)
FZ4001 - Research Methods	1	Year long	C
FZ4003 - Research Project	3	Year long	C
FZ4201 - Forensic Genetics 1	1	Year long	C
FZ4202 - Forensic Genetics 2	1	Year long	C
MAXIMUM	6		

You will have access to a Blackboard space for each module that will contain information about the module (a module handbook and descriptor outlining the learning and teaching strategy) and module material (lecture and tutorial notes, practical guides, past papers and assessment details).



2.3 Course requirements

Compulsory modules are indicated in the tables above, certain modules have pre-requisites and your module choices will determine different progression routes through your course. Progression is dependent on passing all modules with a minimum grade of 40% in years 1-3, and 50% in year 4, the exact weighting of each assessment and its contribution to the overall module mark can be found in the module descriptor.

Entry requirements for the MSci Forensic Science and Molecular Biology courses and links for international students can be found here

http://www.uclan.ac.uk/courses/msci_forensic_science_and_molecular_biology.php

2.4 Module Registration Options

Discussions about your progression through the course normally take place in February each year. It is an opportunity for you to make plans for your study over the next academic year. The course team will tell you about the various modules / combinations available and you will both agree on the most appropriate (and legal) course of study for you.

Progression requires successful completion of the year (i.e. passing all modules) and you are expected to build on the knowledge and skills developed from year to year. The key subject areas (Biology, Chemistry and Forensic Investigation) run through all three years of your programme of study, with each year (level) we expect a progression in terms of your depth of understanding and the detail given within your academic work. Year 1 assessments typically ask for a description of the theories or principles involved, year 2 requires more detailed explanations and in Year 3 we expect you to be able to critically discuss and evaluate the issues and challenges in Forensic Science. Year 4 requires a higher level of independence and critical analysis as you complete the masters level of study

To proceed to the next year of your programme of study, normally you must pass ALL six modules. If you do not pass all the modules you cannot normally progress into the next year of the degree. If you fail one or more modules you may be permitted to re-take just the failed modules in the subsequent academic year as a part-time student. Once you have passed those modules you could then be allowed to progress to the next stage of the course in the subsequent academic year (you should, however, be aware that some types of funding are not available as a part-time student).

2.5 Study time

2.5.1 Weekly timetable

A timetable will be available once you have enrolled on the programme, through the student portal. It is important to check your timetable daily for any changes.

2.5.2 Expected hours of study

20 credits is a standard module size and equals 200 notional learning hours. As a rough guide the normal amount of work involved in achieving a successful outcome to your studies is to study for 10 hours for each credit you need to achieve – this includes attendance at UCLan and time spent in private study.

On average, you should be planning to do between 36 and 40 hours per week. Any lesser commitment is unlikely to produce a good degree. You should bear this in mind if you intend to undertake part-time employment or pursue other interests outside the curriculum. A typical week may have around 15 hours of class contact (lectures, tutorials workshops or practicals) so you need to spend at least as much time in independent study.

There is no check on this, no-one to test whether you are doing the private study – but it will become apparent through your assessments and at exam time if you have not put in the right amount of work. Developing the self-motivation and discipline needed to succeed is an

important life skill and being able to work independently is a key graduate skill that employers will be looking for.



2.5.3 Attendance Requirements

You are required to attend all timetabled learning activities for each module. Notification of illness or exceptional requests for leave of absence must be made to: FosterHubAttendance@uclan.ac.uk

Attendance is essential for success to help you develop both the subject specific knowledge as well the skills necessary to progress through your course. A poor attendance record will have a negative impact on your academic achievement (there is a strong correlation between attendance and grade), and any future reference from academic members of staff when you come to apply for jobs in the future.

Attendance will be monitored (you must remember to sign any attendance registers or log your attendance through the scanners in each classroom). To enter any other names or scan in for another student would result in inaccurate records and be dishonest. Any student who is found to make false entries can be disciplined under the student guide to regulations

If your attendance falls below an acceptable level you will be called in to see your Academic Advisor to discuss any issues (we appreciate that sometimes there are legitimate reasons for absence and we would want to put support mechanisms in place to better support you if necessary). You may check your own attendance record through myUCLAN.

If you are an international student under the Visa and Immigration (UKVI) Points Based System (PBS) we are legally obliged to tell UKVI if you fail to attend regularly.

3. Approaches to teaching and learning

3.1 Expertise of staff

One of our many strengths is the staff within the school who are drawn from those who have had careers as forensic practitioners, crime scene investigators or police officers and whose wealth of real life experience is used to ensure the subjects that we teach and the skills you develop are fully applicable to a career in forensic science. Other staff are drawn from more academic backgrounds and bring with them a wide range of academic and research skills to inform their teaching. The strength and depth of experience and expertise together with our partnership with the Lancashire Forensic Science Academy means the School of Forensic and Applied Sciences is a vibrant and diverse environment providing you with unique opportunities for work experience and research ensuring you are exposed to the cutting edge of this exciting and rapidly evolving area of science.

3.2 Learning and teaching methods

Forensic Science is a practical-based subject that covers a wide range of disciplines and the School therefore uses a diverse portfolio of teaching and assessment methods to reflect the nature of this subject. There are formal lectures followed up by small group tutorials in which the subject of the lecture is explored in detail. Practical skills are developed through practical sessions which may incorporate simulations, laboratory experiments or case studies based

on real investigations of major crimes. You are also encouraged to engage in independent study.

Most of the course is delivered by University staff but where appropriate external speaker who are experts in their own field are brought in to speak with authority from their own experiences.

As with all university education **you** are responsible for your own learning; the lectures are merely the starting point and you will have to undertake a substantial amount of study in order to succeed.

The School has specialist teaching facilities such as crime scene houses, forensic investigation laboratories and dedicated forensic biology and forensic chemistry laboratories and an extensive anthropological collection.

The aim of the School is to promote deep and active learning and for the students to achieve an appropriate balance between (a) the accumulation of subject specific knowledge (b) the understanding of subject-specific concepts (c) the application of these and (d) the development of general investigative and presentational skills.

In year 1 (Level 4), sessions will normally be a combination of lectures, tutorials and practicals. In practice the lectures provide the theoretical background to the subject and tutorials often include problem exercises managed through pair or group work. The tutorials will also introduce you to the use of basic techniques and reinforce concepts introduced as theory. In addition tutorial work may also include the development of teamwork, planning, understanding accuracy and variability and the generation and testing of hypotheses.

Modules in years 2 and 3 (levels 5 and 6) will also be delivered via a mixture of teaching methods, with increased emphasis on independent study followed by discussions, presentations and data-interpretation and problem-solving exercises. A range of other skills will be developed, e.g. debating skills through discussions and oral presentations.

These learning experiences are designed to help you to master the many aspects of forensic science during the course of your degree and are assessed through an equally wide range of exercises designed to develop and improve your key skills (e.g. writing, referencing, report writing) as well as to assess your knowledge.

The first year (level 4) of your Forensic Science Degree introduces you to a number of aspects of the multi-disciplinary subject of Forensic Science. Therefore during the level 4 of your course you will be:

- Introduced to basic practical skills involved in laboratory work, including safety issues, data manipulation and experience of biological and chemical techniques
- Have your knowledge of basic biology and chemistry expanded to aid your understanding of forensic techniques
- Introduced to the ideas behind anthropological and archaeological investigations
- Given forensic search experience with guidance from forensic practitioners, in crime scene investigations and in the laboratory examination of single forensic-type exhibits
- Introduced to various aspects of forensic science by lectures given by members of School staff who will share their expertise and experiences of forensic science

Much of the work at level four aims to develop key skills and build a solid foundation of knowledge, as well as to help with the transition to higher education and provide you with extra guidance in the early stages of your course.

In the second year (level 5) you will continue to increase your knowledge of forensic techniques by building on your previous experience, for example, the search skills will now move to look at forensic cases rather than single items. In addition, your studies into Forensic Biology and Forensic Chemistry will help you understand how these aspects are applied to forensic case work (e.g. identification of individuals by genetic analysis).

The written assignments undertaken will be guided, but will involve more independent study than required at level 4. We will teach the subject by use of lectures, tutorials, discussion groups and, most importantly, through practical demonstration and hands on investigations.

A forensic scientist must be able to express themselves well, particularly verbally, and we will help you to develop these skills by asking you to prepare presentations and engage in debates.

By the third year (level 6) you are expected to have developed the practical skills and other transferable skills such as planning and time management to enable you to undertake the final year Dissertation. The Dissertation will be carried out on your own and will be either laboratory or literature-based. Your supervisor will guide and advise you, but will expect you to come up with ideas. This level of independence will have been supported by work in earlier modules.

The Forensic Investigation stream continues with an emphasis on novel and modern techniques and the interpretation of evidence rather than methods of searching for evidence. The science-based modules build on the knowledge gained in earlier years whilst at the same time allowing you to gain breadth of experience, for example, by looking at Forensic Medicine and Forensic Toxicology.

In your fourth year (level 7) you will specialise in molecular biology (forensic DNA profiling). You are expected to demonstrate a mastery of your subject and be a much more independent learner in order to rise to the challenge of the masters phase of your programme of study. As well as specialist modules you will develop key research skills and undertake a lab-based research project.

3.3 Study skills

All of the courses within the school have a study skills module to assist with the development of your academic and employability skills. In year 1 you will undertake the FZ1033 (Skills for Forensic Scientists) module. This module will be linked to tutorials with your Academic Advisor whose role it is to support you through your academic development. The module will cover some of the key practical skills, maths and statistical skills, writing and referencing skills and presentation skills that you will need as you progress through your programme of study. In subsequent years these skills will be embedded within the subject specific modules.

The School of Forensic and Applied Sciences also has a dedicated team who run **Academic Skills Support (ASK)** giving one-to-one targeted support to help you get the most out of your feedback, and covers everything from library research and writing skills, through to maths skills and critical thinking. The team can be contacted by email at FASasksupport@uclan.ac.uk

There are a variety of other university-wide services including WISER (Study Skills Support) and Library Information Services (LIS) who can provide a huge range of IT and information

skills training, details can be accessed at
http://www.uclan.ac.uk/students/study/study_support.php



3.4 Learning resources

3.4.1 Learning Information Services (LIS)

Extensive resources are available to support your studies provided by LIS – library and IT staff. Take advantage of the free training sessions designed to enable you to gain all the skills you need for your research and study.

LIS provide access to a huge range of electronic resources – e-journals and databases, e-books, images and texts <http://www.uclan.ac.uk/students/study/library/index.php>

3.4.2 Electronic Resources

Course and module materials are **not** provided in 'hard copy' format. However, wherever practicable, lecture notes and/or presentations, seminar materials, assignment briefs and other relevant information are made available in electronic form via our on-line Virtual Learning Environment (VLE) BlackBoard.

All students can access the BlackBoard spaces for their course and modules that they are registered for. You can expect that, on the Course page, you will be able to access:

1. Course Handbook
2. Student Handbook
3. Minutes of Staff Student Liaison Committee (SSLC) Meetings
4. External Examiners Reports

You can expect that, on each module space, you will be able to access:

1. Module Description
2. Module Booklet
3. Assignment briefs (including a marking scheme), if not included in the module booklet
4. Generic feedback on coursework assignments
5. Handouts for tutorials and practicals
6. Lecture notes (no later than 48hrs **after** the date of the lecture).
7. A past exam paper (if there is an exam in the module)
8. Generic feedback on the examination paper

3.5 Personal development planning

While you are at university, you will learn many things. You already expect to learn lots of facts and techniques to do with Forensic Science, but you will also learn other things of which you might be unaware. You will learn how to study, how to work with other people, how to manage your time and to meet deadlines. If you are to be an employable graduate it is vital that you can demonstrate in your CV that you have the skills that employer's value.

Employers are looking for skills such as:

- self-organisation
- team work

- good written communication
- good oral communication
- problem solving

To demonstrate these abilities you will first need to:

- identify the range of **skills** you should be developing,
- **identify** your strengths and weaknesses,
- to take **action** to improve areas of weakness,
- provide **evidence** for the skills you have developed

This approach can broadly be described as **Personal Development Planning**..

Your Academic Advisor can help you identify your skills and the Careers team can also provide a wealth of experience and advice including:

- career and employability advice and guidance appointments
- CV clinics
- support to find work placements, internships, voluntary opportunities, part-time employment and live projects
- workshops, seminars, modules, certificates and events to develop your skills

Further details can be found at <http://www.uclan.ac.uk/students/careers/index.php>



3.6 Preparing for your career

Having been successful and gained your degree, perhaps the most important question is: what jobs can you apply for? It is likely that most people choosing to study forensic science will want to be forensic scientists or work in its allied subjects (e.g. as crime scene investigators). The main employers of forensic scientists in the UK are Eurofins, Key Forensic Services Ltd and Cellmark Forensic Services . They provide a service to the Police, HM Revenue and Customs and the Crown Prosecution Services. Scotland has an independent Forensic Science Service and other independent laboratories exist on a smaller scale. In addition many police forces employ their own forensic scientists.

A good Honours degree in science or technology is invariably the minimum requirement for appointment as a potential court-going officer in any of the laboratories mentioned and graduates should realise that for all of the above options it is usual to initially work alongside more senior staff and undertake further specialist training when and if their individual progress warrants it. Competition for posts such as those described is high but the courses run by the School are ideally suited to such careers.

You may wish to take up a career outside the laboratory environment. Scenes of Crime Investigators are employed by all of the UK police forces to investigate scenes of crimes from burglary and auto-crimes through to murder. This career is becoming more demanding and professional as technology and forensic science techniques are utilised in daily routines. Many Scenes of Crime Investigators are graduates and the job is now more of a career than ever before. Other positions within the Police Service are also a relevant to forensic science graduates, as are the insurance and fraud investigation industries, Home Office Immigration Service, Transport Police, Customs and Excise and the military.

In addition to forensic work the degrees awarded by the School develop a wide range of transferable skills that would support a variety of careers outside forensic science in, for example, other aspects of science (biotechnology, medical research or chemical industries), management or teaching and it is expected that many graduates will enter a range of related areas. The broad nature of scientific specialisms in your studies, coupled with key skills and practical training, provides you with a wide range of employment opportunities.

Your University experience is not only about achieving your chosen award, it is also about developing as a person and realising your potential. We want you to gain the skills and attitudes that will help you to achieve your goals and aspirations.

4. Student Support

There is a wide range of support available from both within the School and University-wide. Any problems you may choose to discuss with a member of staff, academic or otherwise, will be treated in strict confidence and will not be divulged to anyone without your permission (including parents). It is highly unlikely that you will have a problem we have not encountered before.

The important thing is not to sit on a problem and hope it will go away – it will not! As to whom you should ask, that depends on the nature of the problem:

- **Learning/teaching in a module.** Each module has a Module Tutor – a member of staff responsible for that module. The Module Tutor will be your first port of call for questions about the learning/teaching within the module.
- **Which options to take – Electives – structure of your course – progression (moving from year to year).** These are questions for your Academic Advisor or Course Leader. He or she will meet with you at the start of the course and will remain your Academic Advisor throughout your time throughout the course.
- **Welfare, money, housing, health, personal problems.** [The “i”](#) is a central Student Information Centre and your first point of contact. You can obtain information on a wide range of topics including Council Tax Exemption Certificates, Bank and Confirmation of Study Letters, Portable Financial Credits, (continuing students only, Printing and Printer Credit, UCLan Cards, the ‘i’ shop and UCLan Financial Support Bursary (first year students only). They can also direct you to medical and counselling services. Links to further areas of support can be found here <http://www.uclan.ac.uk/students/>
- **Administrative questions.** The School Office is in the Foster Hub: Room FB058. They can help you with your academic records and other administrative matters.



4.1 Academic Advisors

You will be assigned an Academic Advisor who will assist with Academic related problems. You will find out more about them and their role in Welcome week.

They are responsible for providing you with support and advice in relation to your programme of studies, assistance in accessing other services available to students within the University, and to offer whatever help they can to make your time at the University a satisfying and stimulating experience. Their job is not to have all the answers but they will be able to direct you to the person or place where they can be found. Your Academic Advisor should be

supportive, helpful and try to understand (but not necessarily share) your point of view when you need advice. At times it may be necessary for them to challenge you over your progress, performance or attendance, but it is not their role to constantly monitor you in these areas as may have happened at school or college.

You should meet your Academic Advisor during Welcome week and time has been allocated on the timetable to enable you to do this. During this meeting you should make arrangements about the process by which future regular contact will be maintained. You should meet with your Academic Advisor regularly.

Appointments will usually be arranged by email (contact details are at the front of this booklet) or through Starfish (our online system allowing you to connect to staff and services within the university). Some staff may keep an appointment sheet on their office door where you can select a meeting time. Throughout the year contact with your personal tutor is usually maintained through e-mail, you should check your UNIVERSITY e-mail account daily.

Both you and your tutors should keep appropriate records of meetings and this may form part of your Personal Development Process.

If you need to get advice in an emergency or when your Academic Advisor is not available then you can go and see your course leader (Judith Smith), or go to the School Office (Foster Hub: Room FB058) and staff there will endeavour to find a member of staff who can deal with your enquiry.

4.2 Students with disabilities

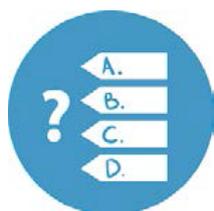
If you have a disability that may affect your studies, please either contact the Disability Advisory Service at disability@uclan.ac.uk, or let one of the course team know as soon as possible. With your agreement information will be passed on to the Disability Advisory Service. The University will make reasonable adjustments to accommodate your needs and to provide appropriate support for you to complete your study successfully. Where necessary, you will be asked for evidence to help identify appropriate adjustments.

The School has a named lead for students with disabilities – Mark Toogood. Mark can be contacted directly for further advice at mtoogood@uclan.ac.uk.

4.3 Students' Union

The Students' Union offers thousands of volunteering opportunities ranging from representative to other leadership roles. We also advertise paid work and employ student staff on a variety of roles. You can find out more information on our website: <http://www.uclansu.co.uk/>

5. Assessment



5.1 Assessment Strategy

The assessment methods vary from year to year and module to module; some will be by examination, some by written assessment, presentations or a combination of these. For example, in the first year, coursework will include formats such as short notes, practical reports, structured workbooks, short directed essays and data handling exercises which will help to prepare you for longer essays, independent practical reports and practical examinations in the second year. The third year will include dissertation or a project report and use longer essays and

more challenging data handling exercises. In terms of examinations, in the first year, multiple choice questions and short questions will be the preferred format. In the second year, essay questions and data handling will be introduced and the third year will comprise primarily longer essays and more challenging analysis of data.

All modules will be assessed. You are expected to attempt all required assessments for each module for which you are registered, and to do so at the times scheduled unless authorised extensions, special arrangements for disability, or extenuating circumstances allow you to defer your assessment.

The main purpose of assessment is:

- the diagnosis of strengths and weaknesses of individual students;
- encouragement to students to be involved in determining their own performance;
- evaluation as to whether or not the student has met the learning outcomes of the module and programme in order to progress to the next level or achieve an exit award.

Assessment is continuous and uses both formative and summative methods.

Formative assessment relates to the continuing and systematic appraisal of the degree of learning. This helps you by providing feedback on your progress in meeting the learning objectives. It also assists the academic staff by providing information as to the appropriateness of the learning environment in facilitating student learning. Formative assessment encourages the student to build on their strengths and to plan remedial action to correct weaknesses. Formative assessment encourages the development of personal self-awareness and self-evaluation such that corrective change can be instigated by the individual.

Summative assessment usually takes the form of end of module assessment where any feedback does not necessarily feed into future work.

It is important that we try to match assessment to the learning outcomes of each module. Sometimes we need to assess how well you have assimilated facts, sometimes we need to assess your understanding, and at other times your application of the facts. Often we need to test all of these learning outcomes at once. In addition, we need to assess skills, such as practical abilities or your ability to communicate ideas.

The assessment methods and what we are trying to assess are shown below:

Examinations: Short answer questions are usually looking for how well you have learned factual information. Longer essay questions are looking for your understanding and critical analysis skills.

Presentations: Your presentational skills under pressure are being assessed here, as is the ability to think on your feet using the facts that you have learned.

Essays: Non-examination situation essays assess your understanding of the subject as well as your research, written communication and critical analysis skills.

Case studies: These assess the application of theory to practical situations. They also assess either your written or oral presentation skills when communicating your deliberations to the class or marker.

Dissertation: This assesses the application of the information that you have gained and assesses your skills in bringing a large body of work together in a concise coherent report.

You will find a detailed breakdown of the assessments in the individual module booklets.

5.1.1 Presentation of Written Work

The way in which you present your work will be taken into account when arriving at the final grade for the assessment. Specific guidelines for presentation will be given in your assignment briefs. To assist you in this regard, also refer to the Student Handbook.

5.1.2 When will the Assessments take place?

The course team try to spread the assessment load. Nevertheless there is bound to be some bunching up towards the end of semester and it is important that you plan your work carefully in order to meet assessment deadlines. You may have more than one deadline at the same time and you are expected to manage your time sufficiently well to meet all deadlines whilst continuing with your attendance at classes.

5.1.3 Assessment arrangements for students with a disability

Arrangements are made for students who have a disability/learning difficulty for which valid supporting evidence can be made available. Contact the Disability Adviser for advice and information: disability@uclan.ac.uk.

5.1.4 Submission of Assessments

Normally all work should be submitted electronically through BlackBoard and Turnitin. Work submitted this way will generally be anonymised prior to marking. Information about the requirements for individual assessments and their respective deadlines for submission/examination arrangements will be provided in the assignment brief or in the module booklet that will be posted on BlackBoard.

Electronic submission is not applicable to all forms of assessment. If a hard copy needs to be submitted the work should be printed, a cover sheet attached and handed in to the Foster Hub: Room FB058.

5.1.5 Deadlines for Assessments

In the workplace you will be faced with many deadlines. Assessment deadlines will help you to develop a personal ethos, which will enable you to cope with tight work schedules. We expect work to be handed in on time.

A deadline is set at a particular time on a particular day and work submitted after this time without an extension granted by the relevant retention tutor will be penalised.

If you submit work late and unauthorised, a universal penalty will be applied in relation to your work:

- If you submit work within 5 working days following the published submission date you will obtain the minimum pass mark for that element of assessment.
- Work submitted later than 5 working days after the published submission date will be awarded a mark of 0% for that element of assessment.

- Unauthorised late submission at resubmission will automatically be awarded a mark of 0% for that element of assessment.

This regulation is not intended to be draconian. However, since in most cases work will be returned to students with specimen answers and feedback, it would delay the return of coursework to the rest of the group if this regulation were not adhered to. Rather than disadvantage the majority of students for the sake of the few, **this regulation will be strictly implemented.**

5.1.6 Extensions

If you have problems that prevent you meeting a deadline for submission, it is imperative that you contact Foster Hub **before** the deadline expires. Authorisation of the late submission of work requires written permission. Your School is authorised to give permission for **one extension period of between 1 and 10 working days** where appropriate evidence of good reason has been accepted and where submission within this timescale would be reasonable taking into account your circumstances ([Academic Regulations](#)). We aim to let you know if the extension has been granted within 1 working day of the receipt of the request.

You should complete and submit an [extension request form](#), with any supporting evidence, to the Foster Hub. Further information is available on the Student Portal at: https://www.uclan.ac.uk/students/study/examinations_and_awards/extenuating_circumstances.php

If you have missed an in-class test, you should contact the module tutor at the earliest opportunity to arrange an alternative date.

5.1.7 Extenuating Circumstances

Some students face significant events in their personal life that occur after their course has started, which have a greater impact on their students than can be solved by the use of an extension. If this applies to you, the University is ready to support you both with regard to your course and your personal wellbeing through a process called Extenuating Circumstances (see the Academic Regulations and Assessment Handbook).

Normally extenuating circumstances will relate to a change in your circumstances since you commenced your course, which have had a significant, adverse effect on your studies. Everyday occurrences such as colds or known conditions such as hay-fever will not qualify unless the effects are unusually severe and this is corroborated by a medical note. The University does not look sympathetically on absences or delays caused by holiday commitments or by work commitments in the case of full-time students. The normal work commitments of part-time students would not constitute an extenuating circumstance. A disability or learning difficulty does not constitute an extenuating circumstance (see [Academic Regulations](#)).

You can apply for extenuating circumstances online via myUCLan or the Foster Hub. Do not wait until you receive your assessment results to submit a claim. It is in your own interests to submit the claim as soon as possible.

You will be expected to re-submit claims for extenuating circumstances for each semester

Further information about the submission process is available at: https://www.uclan.ac.uk/students/study/examinations_and_awards/extenuating_circumstance_submission.php

In determining assessment recommendations, Assessment Boards will consider properly submitted claims from students who believe their performance has been adversely affected by extenuating circumstances. N.B. Assessment Boards are not permitted to alter individual assessment marks to take account of extenuating circumstances ([Academic Regulations](#) and [Assessment Handbook](#)).

5.1.8 Feedback

UCLan is committed to giving you clear, legible and informative feedback for all your assessments. You are expected to review and reflect on your feedback and learn from each experience to improve your performance as you progress through the course.

You will be provided with generic feedback for in-module formative and summative elements of assessment which contribute to a module within 15 working days of the scheduled submission or examination date. Generic feedback on end of module assessment and dissertations will be made available within 15 days of publication of results. Feedback may be oral, written or posted through BlackBoard.

5.1.9 Reassessment

If you fail an assessed component of a module, and are required to be reassessed in that component, the maximum mark you can be awarded for any reassessed component is the minimum pass mark and this mark will contribute to the overall aggregate mark for the module.

A module, or a component within it, may be reassessed only once, whether that is in-module reassessment or at the end of the module.

5.2 Notification of assignments and examination arrangements

Each assessment will have an assignment brief and marking criteria, the date and time of assessment deadlines and instructions for submission will be in the assignment brief which can be accessed through the BlackBoard module space.

Examinations are organised centrally. Exam weeks are clearly marked in the Academic Calendar exam times and venues should appear on your electronic timetable. Students with additional needs may have separate exam arrangements to cater for their individual circumstances and will be notified by the Foster Hub of any arrangements.

5.3 Referencing

Work submitted for an assessment must be in your own words. You will be required to find relevant information e.g. from text books, journal articles and web source and it is important that you acknowledge the source of material used in your assessments.

Whenever you refer to, summarise or paraphrase information from another individual (e.g. a book or journal article) you must acknowledge the source of this information by correctly citing the author and publication. There are several different referencing formats, the most common

being Harvard and Numeric. Individual modules may use different referencing formats relevant to the scientific discipline and tutors will advise you accordingly.

5.4 Confidential material

You may at times have access to confidential or sensitive information or e.g. as part of your dissertation carry out experimental work, interviews or surveys that require recruiting participants. There are legal and ethical considerations in these circumstances and projects will need to be assessed by the Schools Health, Safety and Ethics panel. If this is the case module tutors and dissertation supervisors will guide you through the process.

5.5 Cheating, plagiarism, collusion or re-presentation

If you attempt to influence the standard of the award you obtain through cheating, plagiarism or collusion, it will be considered as a serious academic and disciplinary offence as described within the [Academic Regulations](#).

- Cheating is any deliberate attempt to deceive and covers a range of offences described in the [Assessment Handbook](#).
- Plagiarism describes copying from the works of another person without suitably attributing the published or unpublished works of others. This means that all quotes, ideas, opinions, music and images should be acknowledged and referenced within your assignments.
- Collusion is an attempt to deceive the examiners by disguising the true authorship of an assignment by copying, or imitating in close detail another student's work - this includes with the other student's consent and also when 2 or more students divide the elements of an assignment amongst themselves and copy one another's answers. It does not include the normal situation in which you learn from your peers and share ideas, as this generates the knowledge and understanding necessary for each individual to independently undertake an assignment; nor should it be confused with group work on an assignment which is specifically authorised in the assignment brief.
- Re-presentation is an attempt to gain credit twice for the same piece of work.

The process of investigation and penalties which will be applied can be reviewed in the [Assessment Handbook](#). If an allegation is found to be proven then the appropriate penalty will be implemented:

In the case of a single offence of cheating, plagiarism, collusion or re-presentation:

- the penalty will be 0% for the element of assessment, and an overall fail for the module.
- the plagiarised element of assessment must be resubmitted to the required standard and the mark for the module following resubmission will be restricted to the minimum pass mark.
- when it is detected for the first time on a resubmission for an already failed module, no further resubmission for the module will be permitted, and the appropriate fail grade will be awarded

In the event of a repeat offence of cheating, plagiarism, collusion or re-presentation (irrespective of whether the repeat offence involves the same form of unfair means) on the same or any other module within the course:

- the appropriate penalty will be 0% for the module with no opportunity for re-assessment. This penalty does not preclude you being able to retake the module in a subsequent year.

The penalties will apply if you transfer from one UCLan course to another during your period of study and module credits gained on the former course are transferred to the current course.

Normally you will be required to submit your assignment through BlackBoard and Turnitin and its contents will automatically be scanned against a variety of resources to check the original source of the material.

Please refer to the information included in section 6.6 of the University Student Handbook for full definitions. The University uses an online Assessment Tool called Turnitin. A pseudo-Turnitin assignment will be set up using the School space on Blackboard to allow students to check as many drafts as the system allows before their final submission to the 'official' Turnitin assignment. Students are required to self-submit their own assignment on Turnitin and will be given access to the Originality Reports arising from each submission. In operating Turnitin, Schools must take steps to ensure that the University's requirement for all summative assessment to be marked anonymously is not undermined and therefore Turnitin reports should either be anonymised or considered separately from marking. Turnitin may also be used to assist with plagiarism detection and collusion, where there is suspicion about individual piece(s) of work.

6. Classification of Awards

The University publishes the principles underpinning the way in which awards and results are decided in [Academic Regulations](#). Decisions about the overall classification of awards are made by Assessment Boards through the application of the academic and relevant course regulations.

6.2 Appeals

If you consider that you have a reason to appeal against an assessment board decision, please bear in mind that your reasons must fall within the grounds specified in the University [Academic Regulations](#): Section I. You cannot appeal simply because you disagree with the mark given. The specified grounds for appeal are:

1. that an Assessment Board has given insufficient weight to extenuating circumstances;
2. that the student's academic performance has been adversely affected by extenuating circumstances which the student has, **for good reason**, been unable to make known to the Assessment Board;
3. that there has been a material administrative error at a stage of the examining process, or that some material irregularities have occurred;

4. that the assessment procedure and/or examinations have not been conducted in accordance with the approved regulations.

If you want to appeal, then you must do so within 14 days of your results being published. The onus is on you to find out your results and submit your appeal on time. Contact the [Students' Union Advice and Representation Centre](#) by emailing: suadvice@uclan.ac.uk for support and guidance.

The dates for the publication of results can be found on the [academic calendar](#).



7. Student Feedback

You can play an important part in the process of improving the quality of this course through the feedback you give. In addition to the on-going discussion with the course team throughout the year, there are a range of mechanisms for you to feedback about your experience of teaching and learning. We aim to respond to your feedback and let you know of our plans for improvement.

The Students' Union can support you in voicing your opinion, provide on-going advice and support, and encourage your involvement in all feedback opportunities. They will be asking that you complete the National Student Survey (during semester 2 for students in their final year of study) or the UCLan Student Survey (all other students).

The Students' Union and University work closely together to ensure that the student voice is heard in all matters of student-life. We encourage students to provide constructive feedback throughout their time at university, through course reps, surveys and any other appropriate means,

The Union's Student Affairs Committee (SAC), members of Students' Council and School Presidents each have particular representative responsibilities, and are involved with decision making committees as high as the University Board. Therefore it is very important students engage with the democratic processes of the Students' Union and elect the students they see as most able to represent them.

The SAC and the Students Union can support you in voicing your opinion, provide on-going advice and support, and encourage your involvement in all feedback opportunities. They will be requesting that you complete the National Student Survey (during semester 2 for students in their final year of study). Other feedback mechanism exist, such as the SSLCs, which are mentioned below, and staff are encouraged to get module feedback either through feedback sessions or MEQ's (Module Evaluation Questionnaires).

7.1 Course Representatives and School President

A course representative is a student who represents their fellow students' views and opinions to the course team, school, university and students' union. Course representatives work proactively and diplomatically to improve the academic and non-academic experiences of students.

The role of a course representative is extremely beneficial to both students on your course and the university. It enables students to have ownership of their student experience and voice their opinions and share positive practice with the course team, primarily the Student Staff Liaison Committee Meetings (see below).

Course representatives will be elected every year either in April or September. Alongside receiving recognition, support and respect being a course representative is a great opportunity to enhance your employability skills. If you are interested in becoming a course representative and wish to find out more about the role visit the [Students' Union](#) website or by emailing: coursereps@uclan.ac.uk.

School Presidents meanwhile are annually elected representatives who voice the opinions of students within each school. They communicate and engage with students in their school to gain feedback and work in partnership with senior management to create positive change. They are also trained to support and signpost course representatives where needed. If you wish to find out who is your School President or more about the role visit the [Students' Union website](#) or email: coursereps@uclan.ac.uk.

7.2 Student Staff Liaison Committee Meetings (SSLCs)

Details of the Protocol for the operation of SSLCs is included in section 8.2 of the University Student Handbook.

The purpose of a SSLC meeting is to provide the opportunity for course representatives to feedback to staff about the course, the overall student experience and to inform developments which will improve future courses. These meetings are normally scheduled once per semester.

Your Course Leader will facilitate the meetings using guidelines and provide a record of the meeting with any decisions and / or responses made and / or actions taken as a result of the discussions held. The meetings include discussion of items forwarded by course representatives, normally related to the following agenda items (dependent on time of year).

The course team encourage student feedback in all areas and recognise that additional items for discussion may also be raised at the meeting

- Update on actions completed since the last meeting
- Feedback about the previous year – discussion of external examiner's report; outcomes of National /UCLan student surveys.
- Review of enrolment / induction experience;
- Course organisation and management (from each individual year group, and the course overall);
- Experience of modules - teaching, assessment, feedback;
- Experience of academic support which may include e.g. Personal Development Planning, personal tutoring arrangements and The Card;
- Other aspects of University life relevant to student experience e.g. learning resources, IT, library;
- Any other issues raised by students or staff.

The minutes of the last SSLC meeting will be posted on the course space on BlackBoard.

8. Appendices

8.1 Programme Specification(s)

UNIVERSITY OF CENTRAL LANCASHIRE

Programme Specification

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided.

Sources of information on the programme can be found in Section 17

1. Awarding Institution / Body	University of Central Lancashire
2. Teaching Institution and Location of Delivery	University of Central Lancashire Preston Campus
3. University School/Centre	Forensic and Applied Sciences
4. External Accreditation	The Chartered Society of Forensic Sciences
5. Title of Final Award	MSci Forensic Science and Molecular Biology
6. Modes of Attendance offered	Full time Part Time Sandwich
7a) UCAS Code	F410
7b) JACS Code (only required for NEW programmes)	F400 100388
8. Relevant Subject Benchmarking Group(s)	http://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-forensic-science.pdf?sfvrsn=659ef781_10
9. Other external influences	National Occupational Standards
10. Date of production/revision of this form	April 2018
11. Aims of the Programme	
<ul style="list-style-type: none">• to develop the skills necessary to take part in a forensic investigation;• to provide experience of examining forensic evidence and case work;• to develop students' skills in communicating both verbally and in writing, in self organisation and motivation, and in acquiring and maintaining a professional approach to their work;• to encourage development of a critical and analytical and skills of personal reflection;• to provide students with detailed contextual knowledge of subjects underpinning forensic science in the broad areas of biology, chemistry, law and methods of forensic investigation;	

<ul style="list-style-type: none"> to develop practical skills in the underpinning forensic sciences (biology, chemistry and search and recovery)
<ul style="list-style-type: none"> to develop an understanding of quality assurance procedures in forensic science
<ul style="list-style-type: none"> to provide students with the skills necessary to allow them to carry out an independent research project
<ul style="list-style-type: none"> to instil a critical awareness of advances at the forefront of the forensic science and molecular biology disciplines.

12. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

- A1. Describe basic principles of forensic science
- A2. Apply underpinning science to forensic science
- A3. Apply and evaluate methods of forensic investigation and law relevant to forensic science
- A4. Demonstrate contextual knowledge of forensic chemistry and forensic biology
- A5. Assess an unfamiliar problem and be able to design and implement a suitable solution
- A6. Apply the skills developed on the course to a relevant individual project
- A7. Identify research questions and design, plan and implement solutions

Teaching and Learning Methods

Lectures, laboratory classes, directed reading, problem-solving, case studies, discussions, crime scene and case simulations. Detail dependent on module choice.

Assessment methods

Workbooks, preparation of short notes, essays, reports, practical reports, group and individual presentations and end of module seen and unseen examinations. Detail dependent on module choice.

B. Subject-specific skills

- B1. Describe methods used in crime scene science
- B2. Independently carry out practical techniques important in forensic science
- B3. Work safely in the laboratory and at crime scenes
- B4. Interpret data, write reports and apply the rules of evidence
- B5. Apply specialist knowledge of forensic practices to investigations and cases
- B6. Demonstrate competence in the design, planning and execution of experiments
- B7. Work independently under minimal supervision, be self-critical in the evaluation of risks, experimental procedures and outcomes

Teaching and Learning Methods

Laboratory classes with workbook or practical manuals; safe working practices described. Preparation of laboratory and incident/crime scene reports and interpretation of other data. Seminars covering forensic case work topics. Detail dependent on module choice.

Assessment methods

Practical reports, laboratory notebooks, recorded practices in moot court, crime scene, and case simulations, data interpretation, and report writing. Detail dependent on module choice.

C. Thinking Skills

- C1. Select, interpret and evaluate information from a range of sources
- C2. Formulate and test appropriate scientific concepts and hypotheses
- C3. Present results and structured arguments
- C4. Plan and carry out independent learning

- C5. Evaluate technical and theoretical information
- C6. Assimilate, evaluate and present research results objectively
- C7. Undertake an individual research project

Teaching and Learning Methods

Skills developed through lectures, data interpretation, case studies, practical work, research project, presentations, problem solving. Detail dependent on module choice.

Assessment methods

Workbooks, preparation of short notes, reports; practical reports; problem solving/data interpretation/case studies; presentations; end of module seen and unseen examinations. The highest level of assessment is via the dissertation. Detail dependent on module choice.

D. Other skills relevant to employability and personal development

- D1. Communicate effectively
- D2. Work independently and in co-operation with others
- D3. Perform calculations and appropriate statistical analysis
- D4. Use ICT effectively
- D5. Retrieve information from a range of sources, such as books, scientific reports, journals, case studies and the internet
- D6. Work independently under minimum supervision
- D7. Show problem solving skills including demonstrating self-direction and originality
- D8. Demonstrate an ability to exercise initiative and personal responsibility

Teaching and Learning Methods

Discussions and presentations such as moot court; numeracy and statistics in association with practical work; IT through coursework; teamwork through class work in tutorials/case studies/problem solving, and crime scene and case simulations. Details dependent on module choice.

Assessment methods

Written reports, oral presentations, word processed documents, PowerPoint presentations, data analysis and presentation, collating information from various sources, group projects and presentations; individual presentations. Detail dependent on module choice.

13. Programme Structures*				14. Awards and Credits*
Level	Module Code	Module Title	Credit rating	
Level 7	FZ4001 FZ4201 FZ4202 FZ4003	Research Methods Forensic Genetics I Forensic Genetics II Research project	20 20 20 60	MSci in Forensic Science and Molecular Biology Requires 480 credits including a minimum of 120 at Level 7 or above and 200 at Level 6 or above and 360 at level 5 or above Students who successfully complete the FZ2055 placement module will receive the award "in sandwich mode"
Level 6	FZ3011 FZ3023 FZ3035 FZ3500 FZ3015 FZ3024	Forensic Genetics Advances in Forensic Chemistry Application of Forensic Science Forensic Science Dissertation Forensic Medicine Forensic Toxicology	20 20 20 20 20 20	Bachelor Honours Degree in Forensic Science Requires 360 credits including a minimum of 220 at Level 5 or above and 100 at Level 6 Bachelor Degree in Forensic Science Requires 320 credits including a minimum of 180 at Level 5 or above and 60 at Level 6
Level 5	FZ2030 FZ2236 FZ2011 FZ2023 FZ2717 FZ2051 FZ2052 FZ2055 FZ2130 FZ2036 FZ2111 FZ2123	Criminalistics Forensic Practice Introduction to Forensic Genetics Forensic Chemistry Plus 20 credits from the following options: Environmental Forensics Forensic Anthropology The Science and Management of Death For a Sandwich award students will undertake the following module between years 2 and 3 assessed on a pass/fail basis: Placement Module Students on an Erasmus exchange programme will take the following modules in Semester 1: Aspects of Criminalistics Introduction to Forensic Practice Aspects of Forensic Genetics Aspects of Forensic Chemistry	20 40 20 20 20 20 20 120 10 20 10 10	Diploma of Higher Education in Forensic Science and Molecular Biology Requires 240 credits including a minimum of 100 at Level 5 or above

	FZ2151 FZ2152	Plus 10 credits from the following options: Aspects of Forensic Anthropology Introduction to the Science and Management of Death	10 10	
Level 4	FZ1033 FZ1034 FZ1014 FZ1024 FZ1054 FZ1016 FZ1063	Skills for Forensic Science Volume Crime Scene Science Biology for Forensic Scientists Chemistry for Forensic Scientists Introduction to Osteology and Anthropology Introduction to Biology* Introduction to Chemistry*	20 20 20 20 20 10 10	Certificate of Higher Education Requires 120 credits at Level 4 or above
Level 3	FZC013 FZC015 FZC016 FZC017 YOC001 YOC002 YOC003 YOC004 YOC005 YOC006	Students taking Foundation Year on Campus will take the following modules:- Skills for Science Biology Chemistry Mathematics & Physics Students taking Foundation Year at a partner college will take the following modules:- Skills for Science Biology Chemistry Physical Sciences Biochemistry Environmental Science	30 30 30 30 20 20 20 20 20 20	Requires completion of 120 credits at Level 3. Successful completion of the course leads to progression on to Year 1 (Level 4) Students who exit after the Foundation year will receive a transcript of their modules and grades.

*If chemistry or biology have not been studied to a sufficient level (e.g. to A2), FZ1016 and/or FZ1063 must be specified as option modules.

15. Personal Development Planning

This is a process undertaken by an individual to reflect upon their own learning, performance and / or achievement and to plan for their personal, educational and career development. Students are encouraged and supported by their Academic Advisor who will meet on a regular basis to guide them throughout their time at university, both in constructing their PDP and in making sure that they are developing the right skills, helping them to identify and address any issues.

16. Admissions criteria *

(including agreed tariffs for entry with advanced standing)

**Correct as at date of approval. For latest information, please consult the University's website.*

Applicants will normally be required to have, one of:

Chemistry, Biology, BBC at A2, ND with DMM, IB- 24P. Pass Access Course with Merits in 30 Level 3 Credits.

In addition applicants will be required to have five GCSE passes at Grade C or equivalent including Maths and English.

Applicants will be required to have a minimum level of proficiency in English Language equivalent to IELTS grade 6 with no sub score lower than 5.5

Applications from individuals with non-standard qualifications, relevant work or life experience and who can demonstrate the ability to cope with and benefit from degree-level studies are welcome. If candidates have not studied recently they may be required to undertake an Access Programme. APL/APEL will be assessed through standard University procedures.

FOUNDATION Year Entry (on campus)

Entry to this Programme requires DDD or above at A2 including Biology or Chemistry. BTEC ND DMM-DDM Access to HE, IB 25 - 27P including grade 5 in Biology or Chemistry.

In addition applicants will be required to have Maths and English GCSE at Grade C or equivalent.

International Applicants will be required to have a minimum level of proficiency in English Language equivalent to IELTS grade 6 with no sub score lower than 5.5.

For admission to Foundation Year (Level 3) at a partner college:-

In line with our support of Access to Higher Education, applications are considered without or with few formal qualifications. Applicants are interviewed and if it can be shown the applicant has the ability to enjoy and benefit from degree level study a place will be offered. We will consider alternative or professional qualifications, life experience, motivation, commitment and assessment of key skills.

Please consult the website or UCLAN admissions department for the most up to date requirements

17. Key sources of information about the programme

- University web site (www.uclan.ac.uk)
- UCAS web site (www.ucas.ac.uk)
- School website (www.uclan.ac.uk/forensic)
- Course Leader
- Admissions tutor

18. Curriculum Skills Map

Please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

Level	Module Code	Module Title	Core (C), Compulsory (COMP) or Option (O)	Programme Learning Outcomes																							
				Knowledge and understanding							Subject-specific Skills							Thinking Skills							Other skills relevant to employability and personal development		

				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	C5	C6	C7	D1	D2	D3	D4	D5	D6	D7	D8		
LEVEL 7	FZ4001	Research Methods	COMP		√		√			√	√				√	√		√				√			√		√		√		√			
	FZ4003	Research Project	COMP			√	√	√	√	√		√	√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√	√	√	√	
	FZ4601	Separation Science and Mass Spectrometry	COMP		√		√					√	√	√	√			√	√	√			√	√	√	√				√	√			
	FZ4603	Molecular Spectroscopy	COMP		√		√					√	√	√	√	√			√	√	√		√	√	√	√	√				√	√		
LEVEL 6	FZ3011	Forensic Genetics	COMP		√		√					√	√					√	√	√	√				√	√	√	√	√					
	FZ3015	Forensic Medicine	COMP		√		√					√	√					√	√	√	√				√	√		√	√					
	FZ3023	Advances in Forensic Chemistry	COMP		√		√					√	√					√	√	√	√				√	√	√	√	√					
	FZ3024	Forensic Toxicology	COMP		√		√					√	√						√	√	√	√				√	√	√	√	√				
	FZ3035	Application of Forensic Science	COMP	√		√					√		√	√	√				√		√	√					√	√		√				
	FZ3500	Forensic Science Dissertation	COMP		√		√		√					√					√	√	√	√				√			√	√				
LEVEL 5	FZ2055	Placement Module	O								√		√		√					√	√				√	√		√						
	FZ2717	Environmental Forensics		√	√													√		√					√			√	√					
	FZ2051	Forensic Anthropology	O		√		√						√					√		√					√			√	√					

Note: *Mapping to other external frameworks, e.g. professional/statutory bodies, will be included within Student Course Handbooks*

19. LEARNING OUTCOMES FOR EXIT AWARDS:

For **each exit award available**, list learning outcomes relating to the knowledge and understanding, subject specific skills, thinking, other skills relevant to employability and personal development that a typical student might be expected to gain as a result of successfully completing each level of a course of study.

For example, for a standard BA/BSc (Hons) award the exit award learning outcomes for CertHE (Level 4) and DipHE (Level 5), BA/BSc (Level 6) should be included; for a postgraduate Masters, this would normally be PGDip and PGCert.

Learning outcomes for the award of: Certificate of Higher Education

- A1. Describe basic principles of forensic science.
- .
B1. Describe methods used in crime scene science.
- .
B3. Work safely in the laboratory and at crime scenes.
- .
C4. Plan and carry out independent learning.
- D1. Communicate effectively.
- .
D4. Use ICT effectively.
- D5. Retrieve information from a range of sources, such as books, scientific reports, journals, case studies and the internet.

Learning outcomes for the award of: Diploma of Higher Education

- A1. Describe basic principles of forensic science.
- A2. Apply underpinning science to forensic science.
- .
A4. Demonstrate contextual knowledge of forensic chemistry and forensic biology.
- B1. Describe evaluate methods used in crime scene science.
- .
B3. Work safely in the laboratory and at crime scenes.
- .
B5. Apply specialist knowledge of forensic practices and forensic anthropology to investigations and cases.
- C1. Select, interpret and critically evaluate information from a range of sources.
- .
C3. Present results and structured arguments.
- C4. Plan and carry out independent learning.
- D1. Communicate effectively.
- D2. Work independently and in co-operation with others.
- .
D4. Use ICT effectively.
- D5. Retrieve information from a range of sources, such as books, scientific reports, journals, case studies and the internet.

Learning outcomes for the award of: Bachelor Degree in Forensic Science

- A1. Describe basic principles of forensic science.
- A2. Apply underpinning science to forensic science.
- A3. Apply and evaluate methods of forensic investigation and law relevant to forensic science.
- A4. Demonstrate contextual knowledge of forensic chemistry and forensic biology.
- B1. Describe methods used in crime scene science.

- B2. Independently carry out practical techniques important in forensic science y.
- B3. Work safely in the laboratory and at crime scenes.
- B4. Interpret data, write reports and apply the rules of evidence.
- B5. Apply specialist knowledge of forensic practices to investigations and cases.
- C1. Select, interpret and evaluate information from a range of sources.
- C2. Formulate and test appropriate scientific concepts and hypotheses.
- C3. Present results and structured arguments.
- C4. Plan and carry out independent learning.
- D1. Communicate effectively.
- D2. Work independently and in co-operation with others.
- D3. Perform calculations and appropriate statistical analysis.
- D4. Use ICT effectively.
- D5. Retrieve information from a range of sources, such as books, scientific reports, journals, case studies and the internet.

Learning outcomes for the award of: Bachelor Honours Degree in Forensic Science

- A1. Describe basic principles of forensic science.
- A2. Apply underpinning science to forensic science.
- A3. Apply and evaluate methods of forensic investigation and law relevant to forensic science.
- A4. Demonstrate contextual knowledge of forensic chemistry and forensic biology.
- A6. Apply the skills developed on the course to a relevant individual project
- B1. Describe methods used in crime scene science.
- B2. Independently carry out practical techniques important in forensic science.
- B3. Work safely in the laboratory and at crime scenes.
- B4. Interpret data, write reports and apply the rules of evidence.
- B5. Apply specialist knowledge of forensic practices to investigations and cases.
- C1. Select, interpret and critically evaluate information from a range of sources.
- C2. Formulate and test appropriate scientific concepts and hypotheses.
- C3. Present results and structured arguments.
- C4. Plan and carry out independent learning.
- D1. Communicate effectively.
- D2. Work independently and in co-operation with others.
- D3. Perform calculations and appropriate statistical analysis.
- D4. Use ICT effectively.
- D5. Retrieve information from a range of sources, such as books, scientific reports, journals, case studies and the internet.