



Course Handbook

MSc Forensic Science

2019/20

Course Leader: Dr William Goodwin
School of Forensic and Applied Sciences



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

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1.0 Welcome to the course

The School of Forensic and Applied Sciences at the University of Central Lancashire provides education in the areas of Forensic Science and Police and Criminal Investigation. It offers six main areas of specialist education within these programmes: forensic investigation (crime scene investigation, laboratory analysis and evidence interpretation), forensic biology, forensic anthropology, forensic chemistry, and policing. It has invested significantly in staff and physical resources in these areas since its establishment (initially as the Centre for Forensic Science) in September 2000. In the time since its inception, it has successfully established itself as the largest provider of higher education in this field in the UK, and now hosts some 700 undergraduate students and over 60 academic members of staff. Its specialist facilities, laboratories and equipment resources are arguably the best of any UK University.

The School has expanded its educational provision to the taught postgraduate arena through the validation and delivery of one-year MSc programmes in areas of particular staff expertise. The areas currently offered include Forensic Science, Forensic DNA Profiling, Fire Investigation, Forensic Anthropology, Forensic and Conservation Genetics and Forensic Toxicology. We are proud of our staff, courses and our students and I hope that, as well as benefiting from your postgraduate education, you will enjoy your time with us in the School.

1.1 Rationale, aims and learning outcomes of the course

The aims of the programmes are to:

- provide an in-depth study of Forensic Science
- develop the critical and analytical skills involving the principles, practices and techniques of Forensic Science
- develop competence in research methods and presentation of information
- develop skills in solving problems both independently and as a team member to a level commensurate to the master's level

Learning Outcomes of the Programme

The programme provides opportunity for learners to achieve the following outcomes:

Knowledge and Understanding

- Analyse a complex problem involving the specific aspects of Forensic Science and be able to design and implement a suitable solution.
- Present forensic information and be aware of the role of the expert witness.
- Apply data handling skills, effectively plan a project and use documentation skills in an appropriate manner.
- Design, plan and implement solutions to complex problems in Forensic Science and be capable of analysing the effectiveness of such solutions.
- Develop and write a research project within guidelines and be able to assess the success of such a project.
- Apply the skills developed on the course to a relevant individual project.
- Synthesise solutions to problems involving several aspects of the specialist topic either independently and/or as a team member.

Subject Specific Skills

- Implement scientific solutions to complex problems.
- Effectively communicate forensic science solutions with both experts and non-experts.
- Research information from literature/manuals/internet.
- Critically evaluate different potential solutions to a problem.

Thinking Skills

- Critically evaluate technical and non-technical information.
- Plan and conduct a practical research project.
- Communicate results and ideas to both experts and non-experts.
- Assimilate ideas quickly.

Other skills relevant to employability and personal development

- Work to deadlines.
- Work in a team.
- Work independently under minimum supervision.
- Generate original ideas.
- Synthesise knowledge

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.

William Goodwin BSc, PhD (Molecular Biology)
Reader (Forensic Genetics)
Course Leader
e-mail: whgoodwin@uclan.ac.uk Ext 4254 Room DB326

Steve Andrews BSc, MSc
Senior Lecturer (Fire Investigation)
email: spandrews@uclan.ac.uk Ext 4173 Room JBF002

Sibte Hadi M.B.B.S; DMJ; PhD
Senior Lecturer (Forensic Genetics and Medicine)
e-mail: shadi@uclan.ac.uk Ext 4395 Room MB131

Phil Houldsworth MSc, FIBMS
Lecturer (Forensic Toxicology)
e-mail: pehouldsworth@uclan.ac.uk Room to be confirmed

Kevin Pritchard	FSS Dip (Crime Scene Investigator), MSc Senior Lecturer (Forensic Science) e-mail: kpritchard@uclan.ac.uk Ext 4379 Room JBF001
Tapas Sen	BSc, MSc, PhD, MRSC Reader (Inorganic and Materials Chemistry) e-mail: tsen@uclan.ac.uk . Ext 4371 Room JBF107
Judith Smith	BSc, PhD (Genetics) Senior Lecturer (Forensic Genetics) e-mail: jasmith@uclan.ac.uk Ext 4257 Room MB057
Anna Stec	BSc, PhD (Fire Chemistry) Reader (Fire Chemistry) e-mail: aastec@uclan.ac.uk Ext 3759 Room JBF108

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 area 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

Course Administration Service provides academic administration support for students and staff and are located in the following hub which is 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.

Communications will be typically through notifications on the electronic learning environment (elearn) or email. If we need to contact you urgently text messaging may be used so please ensure the university has up-to-date contact details. 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 Examiner

The External Examiner to your course helps to ensure that the standards of your course are comparable to those provided at other higher education institutions in the UK. The name, their position 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 elearn.

The External Examiner for Forensic Science is Dr Eleanor Graham, Senior Lecturer in the Department of Applied Sciences, Northumbria University.

2. Structure of the course

2.1 Overall structure

The course is a three-semester full time programme which lasts for 46 weeks. The first two semesters are 13 weeks long and correspond to the two University teaching semesters and the third semester of 12 weeks is over the summer period, with Research Projects submitted in early August. There are two intermediate exit points designed into the course. A student who successfully completes Semester 1 may be eligible for a Postgraduate Certificate (PgCert). This is dependent on passing the modules required for the exit award as shown in the programme specification which can be found in the appendices at the back of this handbook. A student who successfully completes both Semesters 1 and 2 is eligible for a Postgraduate Diploma (PgDip) and upon completion of all three semesters, comprising 9 modules, the exit award is an MSc.

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 ninth of a full-time postgraduate year; the Research Project is a triple module and worth 60 credits.

Common Modules

There are three modules in common to most MSc courses: Research Methods (FZ4001) in Semester 1; Expert Witness in the Legal Process (FZ4002) in Semester 2; and MSc Research Project (FZ4003) in Semester 3

The content of the modules are outlined below.

FZ4001 Research Methods

Scientists are required to have a wide range of skills beyond the expertise in their specialist subject. This module provides the necessary skills in technical documentation, project management, data analysis and retrieval etc. that are required.

FZ4002 Expert Witness in the Legal Process

Communication skills are vital for a forensic scientist to pass on important information. Nowhere is this more important than when acting in the capacity of an expert witness. This module provides background and training in these important areas.

FZ4003 Research Project

You will spend the third semester undertaking a project, which uses and enhances many of the skills learnt on the course. The majority of students will undertake their project at the University, but the opportunity will exist for students to do their project at other relevant institutions.

Common Module to all Forensic MSC Streams FZ4007 Crime Scene Strategy

Provides students with an understanding of the roles and responsibilities of the Crime Scene Manager in the investigation of serious and major incidents and the co-ordination of multiple associated scenes.

Specific streams are available – choices will be made after enrolment, in discussion with the course team, assessing your objectives for the MSc and academic background.

Biology stream

FZ4201 Forensic Genetics 1

FZ4202 Forensic Genetics 2

AND

FZ4203 Evaluation of Genetic Data

Or

FZ4004 Laboratory Management and Accreditation

Chemistry stream

FZ4601 Separation Science and Mass Spectrometry

FZ4608 Forensic Toxicology

FZ4607 Advanced Forensic Toxicology

Fire Stream

FV4104 Practical Fire Investigation

FV4005 Fire and combustion

FZ4501 Forensic Analysis

Anthropology Stream (3 from)

FZ4305 Developmental Anatomy

FZ4306 Forensic Anthropology: Method and Context

FZ4307 Forensic trauma analysis

FZ4301 Biometrics and Identification

FZ4004 Laboratory Management and Quality Assurance

FZ4308 Forensic Archaeology and body recovery

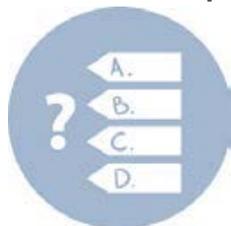
CSI stream

FZ4308 Forensic Archaeology and body recovery

FZ4004 Laboratory Management and Quality Assurance

FV4104 Practical Fire Investigation

2.3 Course requirements



Entry requirements are a 2.2 in a relevant degree. The Course Leader can give advice as to a candidate's suitability.

When English is not the student's first language they must obtain an IELTS of 6.5 with a minimum low score of 6.0 in any one element. In order to be valid the test must have been taken within two years of the application. The International Office will provide guidance when applying

for a visa.

2.3 Module Registration Options

Discussions about your module choices will normally take after assessment registration.

2.4 Study Time

2.4.1 Weekly timetable

A timetable will be available once you have enrolled on the programme, through the student portal.

2.4.2 Expected hours of study

20 credits is a standard module size and equals 200 notional learning hours. Contact hours vary from module to module – in the first Semester the contact is typically around 16 hours per week, dropping to around 12 hours in Semester 2 and by semester 3 there are very few timetabled hours. However, as the amount of timetables contact decreases through the Semesters the requirement for self-directed study increases. Throughout the course there is a requirement to spend a considerable amount of time reading around the subject and completing coursework/exam preparation.

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.

2.4.3 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:

FosterHub Attendance: FosterHubAttendance@uclan.ac.uk
Tel: 01772 891990/891991

It is imperative that any students on a Tier 4 visa attend regularly as part of the visa conditions. Students and staff can check attendance record through myUCLan.

3. Approaches to teaching and learning

3.1 Expertise of staff

Sections 1.2 and 1.3 provide an overview of the staff experience within the School.

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 also houses 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.

3.3 Study skills

Key study skills are provide in the Research Methods module. 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 your 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](mailto:FA Sasksupport@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)

In addition to the generic learning resources the School has invested heavily in equipment and facilities to ensure that you are exposed to and can use the latest equipment during your studies.

3.4.2 Electronic Resources

A wide range of material is available electronically, including most relevant peer-reviewed journals, text books, Microsoft software (e.g. Word and Excel) and databases. Course material will be made available through the elearn environment.

3.5 Personal development planning

While you are studying for your MSc, you will learn many new concepts, analyse them, evaluate them and apply them. You already expect to learn lots of facts and techniques to do with your subject specialism, but you will also learn other things of which you might not be aware. You will learn how to study more independently than you may have done previously, how to work with other people, how to manage your time to meet deadlines, and so on. If you are to be an employable individual it is vital that you can list the skills employers' value in your CV.

Employers are looking for skills such as:

- self-organisation
- team work
- good written communication

- good oral communication
- problem solving

In order to help you in this area, the school has introduced a system that aims to:

- help you to identify the **skills** you should be developing,
- help you to **identify** the ones you are weak in, and
- take **action** to improve those skills.

This approach can broadly be described as **Personal Development Planning**, and can be defined as:

A structured and supported 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.

The University puts a high priority on your personal development, and so keeping a record of your achievements is encouraged and will help when you are applying for jobs. When you ask staff for a reference, they could use this information to help them provide more rounded detail.



3.6 Preparing for your career

The University has active contacts with several employers, such as the Police's scientific support in Lancashire. In addition, placements have been arranged when possible, which has given students exposure to the work environment. Students from this and related Course have gone onto work in Forensic Science and also onto further study, e.g. PhD-level research. Other students have used the skills developed as part of their studies to pursue unrelated careers. Careers advice is provided as part of the course.

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 – structure of your course.** 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 "T"](#) is a central Student Information Centre and your first point of contact.

http://www.uclan.ac.uk/students/study/library/the_i.php

- 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.** Campus Administrative Services 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 appointed an Academic Advisor – this person will typically be Course Leader. You can also approach Module Tutors for assistance. Because of the small size of the class and the relative high contact, especially in the first semester, you will typically have a lot of opportunities to talk with your Module Tutors and Academic Advisor.

4.2 Students with disabilities

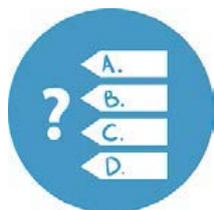
If you have a disability that may affect your studies, please either contact the Disability Advisory Service at disability@uclan.ac.uk, or let one of the course team know as soon as possible. With your agreement information will be passed on to the Disability Advisory Service. The University will make 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 – Charlie Ellis. Charlie can be contacted directly for further advice at CAEllis@uclan.ac.uk in MB223 or on extension 3536.

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 courses are assessed by both coursework and examination. To ensure that you do not have an excessive amount of assessment at any one time, the coursework assessment will take place throughout the course.

Semester 1 of the course is designed to ensure that you have the basic skills needed to obtain an MSc. It is important that you develop a range of skills that will be of benefit when you gain employment after the course. The main skills that you are developing will be in the areas of presentations, report writing, and experimental problem solving.

You will prepare reports during the Research Methods and Expert Witness in the Legal Process (FZ4002) modules and again in the Research Project module (FZ4003). Report writing will take several different forms to ensure that you develop different techniques according to the nature of the task being undertaken. These consist of the conventional report, articles of prescribed length, etc. In addition there will be problem-solving tasks that will involve literacy searches, use of the Internet and case studies.

Modules will be assessed by coursework assignments and/or an examination. Each assignment will be substantial and will be based upon work undertaken in laboratory and/or tutorial sessions. Modules assessed by coursework only will have additional assignments that may take the form of a mini project. A schedule of assignments will be drawn up ensuring that there is no more than one assignment in a particular week, whenever possible. The deadline for handing in of assignments will be rigorously adhered to as would be expected in a working environment.

The MSc Research Project (FZ4003) is conducted in three main stages. The first part involves preparing a project proposal in the second semester (as part of FZ4001 – Research Methods). The second part involves assessment of your progress during the project itself, which will be conducted by reviewing draft chapters of the dissertation. The final part is the assessment of a 10,000-word dissertation which is double clean marked by the university tutors.

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 elearn 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. 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

Confidential material may be generated/used as part of the Research Project. Students will be required to obtain appropriate ethical clearance for their Research Projects and have ethical and legal responsibilities to respect confidentiality and maintain the anonymity of individuals and organisations within their assignments

5.5 Cheating, plagiarism, collusion or re-presentation

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.



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 the past feedback from students has led to a change in the timing of assessments as well as the amount of assessed coursework. Feedback is possible through Module Evaluation Questionnaires and through the Course Representative. In addition, informal feedback is welcomed.

7.1 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. Each course has an elected representative that will raise any issues and also provide positive feedback at Staff-Student Liaison Committees, which take place each semester.

8. Appendices

8.1 Programme Specification(s)

Appendix A: Programme Specification

UNIVERSITY OF CENTRAL LANCASHIRE

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.

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 Investigative Sciences
4. External Accreditation	Chartered Society of Forensic Sciences
5. Title of Final Award	MSc Forensic Science
6. Modes of Attendance offered	Full-time, part-time
7a) UCAS Code	
7b) JACS Code	F410
8. Relevant Subject Benchmarking Group(s)	QAA Masters Degree Characteristics http://www.qaa.ac.uk/en/Publications/Documents/Masters-Degree-Characteristics-15.pdf
9. Other external influences	Forensic Science Society Chartered Society of Forensic Sciences
10. Date of production/revision of this form	April 2018
11. Aims of the Programme	
<ul style="list-style-type: none">• To provide an in-depth study of Forensic Science• To develop the critical and analytical skills involving the principles, practices and techniques of Forensic Science• To develop competence in research methods and presentation of information• To develop skills in solving problems both independently and as a team member to a level commensurate to the master's level	
12. Learning Outcomes, Teaching, Learning and Assessment Methods	

A. Knowledge and Understanding
A1. Analyse a complex problem involving the specific aspects of Forensic Science and be able to design and implement a suitable solution. A2. Present forensic information and be aware of the role of the expert witness. A3. Apply data handling skills, effectively plan a project and use documentation skills in an appropriate manner. A4. Design, plan and implement solutions to complex problems in Forensic Science and be capable of analysing the effectiveness of such solutions. A5. Develop and write a research project within guidelines and be able to assess the success of such a project. A6. Apply the skills developed on the course to a relevant individual project. A7. Synthesise solutions to problems involving several aspects of Forensic Science either independently and/or as a team member.
Teaching and Learning Methods
Lectures, seminars, structured laboratory classes, directed reading, presentations and demonstrations
Assessment methods
Preparation of case notes, essays, reports, practical reports, group and individual presentations and end of module seen and unseen examinations.
B. Subject-specific skills
B1. Implement scientific solutions to complex problems. B2. Effectively communicate forensic science solutions with both experts and non-experts. B3. Research information from literature/manuals/internet. B4. Critically evaluate different potential solutions to a problem.
Teaching and Learning Methods
Lectures, seminars, structured laboratory classes, directed reading, group and individual projects and presentations.
Assessment methods
Preparation of case notes, moot court exercises, practical reports, and group and individual presentations.
C. Thinking Skills
C1. Critically evaluate technical and non-technical information C2. Plan and conduct a practical research project. C3. Communicate results and ideas to both experts and non-experts. C4. Assimilate ideas quickly.
Teaching and Learning Methods
Skills developed through lectures, data interpretation, case studies, practical work, research projects, presentations, problem solving.
Assessment methods
Preparation of case notes, essays, reports, practical reports, group and individual presentations.
D. Other skills relevant to employability and personal development
D1. Work to deadlines. D2. Work in a team. D3. Work independently under minimum supervision. D4. Generate original ideas. D5. Synthesise knowledge.
Teaching and Learning Methods
Skills developed through lectures, data interpretation, case studies, practical work, research projects, presentations, problem solving.

Assessment methods					
Preparation of case notes, essays, reports, practical reports, group and individual presentations.					
13. Programme Structures*				14. Awards and Credits*	
Level	Module Code	Module Title	Credit rating		
Level 7	FZ4001	Research Methods	20	Master's Degree in Forensic Science Requires 180 credits at Level 7	
	FZ4002	The Expert Witness in the Legal Process	20		
	FZ4007	Crime Scene Strategy	20		
	FZ4003	Research Project	60		
	FZ4201	Biology stream	20		Postgraduate Diploma in Forensic Science Requires 120 credits at Level 7
	FZ4202		20		
	FZ4203	Forensic Genetics 1	20	Postgraduate Certificate in Forensic Science Requires 60 credits at Level 7	
	FZ4004	Forensic Genetics 2	20		
		AND			
	FZ4601	Evaluation of Genetic Data	20		
		Or			
		Laboratory Management and Accreditation			
	FZ4608	Chemistry stream	20		
	FZ4607		20		
	FV4104	Separation Science and Mass Spectrometry	20		
	FV4005	Forensic Toxicology	20		
	FZ4501	Advanced Forensic Toxicology	20		
	FZ4306	Fire Stream	20		
		Practical Fire Investigation			
	FZ4305	Fire and Combustion	20		
FZ4307	Forensic Analysis				
FZ4301	Anthropology stream	20			
FZ4004	3 from	20			
FZ4308	Forensic Anthropology: Method and Context	20			
	Developmental Anatomy	20			
FZ4308	Forensic Trauma Analysis	20			
FZ4004	Biometrics and Identification	20			
FV4104	Laboratory Management and Quality Assurance				

		Forensic Archaeology and Body Recovery CSI stream Forensic Archaeology and Body Recovery Laboratory Management and Quality Assurance Practical Fire Investigation	20	
15. Personal Development Planning				
<p>This is a supported 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.</p> <p>PDP is delivered and monitored through project modules and the academic advisor system. Students are provided with a PDP handbook and an introductory lecture on it during induction week.</p> <p>The topics discussed in meetings are constantly reviewed and updated in response to current practice in the workplace and to feedback from Academic Advisors and students. A completed PDP will be used to assist Academic Advisors when writing references.</p>				
16. Admissions criteria				
*Correct as at date of approval. For latest information, please consult the University's website.				
Applicants will normally be required to have: Undergraduate degree in a relevant subject, at 2(ii) level or higher, or equivalent. Applicants will be required to have a minimum level of proficiency in English Language equivalent to IELTS grade 6.5. with no subscore lower than 5.5 Please consult the UCLAN admissions department or website for the most up to date requirements.				
17. Key sources of information about the programme				
<ul style="list-style-type: none"> • University website (www.uclan.ac.uk) • School website (www.uclan.ac.uk/forensic) • Course Leader Will Goodwin 				

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	C1	C2	C3	C4	D1	D2	D3	D4	D5	
LEVEL 7	FZ4001	Research Methods	COMP		✓	✓							✓		✓		✓		✓					
	FZ4002	The Expert Witness in the Legal Process	COMP				✓				✓	✓	✓	✓	✓		✓	✓	✓				✓	
	FZ4003	Research Project	COMP				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	
	FZ4007	Crime Scene Strategy	COMP	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓	
	FZ4201	Forensic Genetics 1	O	✓	✓	✓				✓	✓	✓	✓	✓	✓		✓	✓	✓				✓	
	FZ4202	Forensic Genetics 2	O	✓		✓	✓			✓	✓		✓	✓	✓			✓	✓	✓				✓
	FZ4203	Evaluation of Genetic Data	O				✓	✓							✓		✓		✓	✓				
	FZ4004	Laboratory Management and Quality Assurance	O			✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	
	FZ4601	Separation Science and Mass Spectrometry	O	✓		✓	✓			✓	✓		✓	✓	✓				✓	✓	✓			✓
	FZ4608	Forensic Toxicology	O	✓			✓				✓	✓		✓	✓				✓	✓	✓			✓
	FZ4607	Advanced Forensic Toxicology	O	✓	✓		✓				✓	✓	✓	✓	✓			✓	✓	✓	✓			✓
	FV4104	Practical Fire Investigation	O	✓	✓	✓		✓		✓		✓	✓	✓	✓			✓	✓	✓	✓			✓
	FV4005	Fire and Combustion	O	✓	✓					✓			✓	✓	✓			✓	✓	✓	✓			✓
	FZ4501	Forensic Analysis	O	✓		✓	✓			✓	✓		✓	✓	✓			✓	✓	✓	✓			✓
	FZ4306	Forensic Anthropology Methods and Context	O	✓	✓					✓	✓	✓	✓	✓	✓			✓	✓	✓				✓
FZ4305	Developmental Anatomy	O	✓	✓	✓				✓	✓		✓	✓	✓			✓	✓	✓				✓	

FZ4307	Forensic Trauma Analysis	O		✓	✓				✓		✓	✓	✓	✓		✓	✓	✓				✓	
FZ4301	Biometrics and Identification	O		✓	✓				✓		✓	✓	✓	✓			✓	✓	✓				✓
FZ4308	Forensic Archaeology and Body Recovery	O		✓					✓	✓		✓	✓	✓		✓	✓	✓	✓				✓

19. LEARNING OUTCOMES FOR EXIT AWARDS:

Learning outcomes for the award of: Postgraduate Certificate in Forensic Science

- A1. Analyse a complex problem involving the specific aspects of Forensic Science and be able to design and implement a suitable solution.
- A2. Present forensic information and be aware of the role of the expert witness.
- A3. Apply data handling skills, effectively plan a project and use documentation skills in an appropriate manner.
- A7. Synthesise solutions to problems involving several aspects of Forensic Science either independently and/or as a team member.

- B1. Implement scientific solutions to complex problems.
- B2. Effectively communicate forensic science solutions with both experts and non-experts.
- B3. Research information from literature/manuals/internet.

- C3. Communicate results and ideas to both experts and non-experts.
- C4. Assimilate ideas quickly.

- D1. Work to deadlines.
- D2. Work in a team.

Learning outcomes for the award of: Postgraduate Diploma in Forensic Science

- A1. Analyse a complex problem involving the specific aspects of Forensic Science and be able to design and implement a suitable solution.
- A2. Present forensic information and be aware of the role of the expert witness.
- A3. Apply data handling skills, effectively plan a project and use documentation skills in an appropriate manner.
- A4. Design, plan and implement solutions to complex problems in Forensic Science and be capable of analysing the effectiveness of such solutions.
- A7. Synthesise solutions to problems involving several aspects of Forensic Science either independently and/or as a team member.

- B1. Implement scientific solutions to complex problems.
- B2. Effectively communicate forensic science solutions with both experts and non-experts.
- B3. Research information from literature/manuals/internet.
- B4. Critically evaluate different potential solutions to a problem.

- C1. Critically evaluate technical and non-technical information
- C3. Communicate results and ideas to both experts and non-experts.
- C4. Assimilate ideas quickly.

- D1. Work to deadlines.
- D2. Work in a team.
- D5. Synthesise knowledge.