Programme Specification: Undergraduate

For students starting in Academic Year 2024/25

1. Course Summary

Names of programme and award title(s)	BSc (Hons) Forensic Science BSc (Hons) Forensic Science with International Year (see Annex for details) BSc (Hons) Forensic Science with Work Placement Year (see Annex for details)
Award type	Single Honours
Mode of study	Full-time
Framework of Higher Education Qualification (FHEQ) level of final award	Level 6
Normal length of the programme	3 years; 4 years with either the International Year or Placement Year between years 2 and 3
Maximum period of registration	The normal length as specified above plus 3 years
Location of study	Keele Campus
Accreditation (if applicable)	This programme is accredited by the Chartered Society of Forensic Sciences. For further details see the section on Accreditation.
Regulator	Office of Students (OfS)
Tuition Fees	**UK students:** Fee for 2024/25 is £9,250* **International students:** Fee for 2024/25 is £20,700** The fee for the international year abroad is calculated at 15% of the standard year fee The fee for the work placement year is calculated at 20% of the standard year fee

How this information might change: *Please read the important information at http://www.keele.ac.uk/student-agreement/. This explains how and why we may need to make changes to the information provided in this document and to help you understand how we will communicate with you if this happens.*

* *These fees are regulated by Government. We reserve the right to increase fees in subsequent years of study in response to changes in government policy and/or changes to the law. If permitted by such change in policy or law, we may increase your fees by an inflationary amount or such other measure as required by government policy or the law. Please refer to the accompanying Student Terms & Conditions. Further information on fees can be found at http://www.keele.ac.uk/studentfunding/tuitionfees/*

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2. What is a Single Honours programme?

The Single Honours programme described in this document allows you to focus more or less exclusively on this subject. In keeping with Keele's commitment to breadth in the curriculum, the programme also gives you the opportunity to take some modules in other disciplines and in modern foreign languages as part of a 360-credit Honours degree. Thus it enables you to gain, and be able to demonstrate, a distinctive range of graduate attributes.

3. Overview of the Programme

This undergraduate honours degree programme aims to provide an education in the core areas of forensic science together with a theoretical and practical understanding of those analytical techniques that are of particular importance to the analysis of forensic evidence. The core curriculum encompasses key topics in forensic chemistry, forensic biology and criminalistic science. Additional emphasis is given towards professional forensic practice, crime scene investigation and expert witness skills.

4. Aims of the programme

The broad aims of the programme are to enable you to:

- engender and develop an enthusiasm for forensic science and provide an intellectually stimulating and beneficial learning experience
- gain an education to honours degree level in key areas of analytical science, forensic chemistry, forensic biology and criminalistics, underpinned by appropriate aspects of the core physical, biological and mathematical sciences
- develop knowledge and experience of techniques relevant to forensic analysis and their practical application across a range of relevant materials and samples
- develop an understanding of continuity of evidence and how the crime scene, the laboratory and the court contribute to the forensic and legal process
- foster an awareness of and engagement with methods and techniques within forensic science, some of which are informed by current research
- develop practical, analytical, problem-solving and quantitative skills within forensic science, including those related to experimental data analysis and the evaluation of evidence;
- develop written and oral reporting skills and the ability to convey scientific outcomes to both scientists and non-scientists;
- research, devise, plan, execute and report on an original investigation or research project within the discipline;
- acquire a clear understanding of the context within which the professional forensic scientist operates and recognition of the constraints and opportunities which that implies, including legal and ethical issues;
- develop subject-specific knowledge and a range of technical and transferable skills to enable entry to employment across a range of science-based and other graduate occupations;
- develop a range of generic skills appropriate to the scientific professions including the ability to engage in independent learning.

5. What you will learn

The intended learning outcomes of the programme (what students should know, understand and be able to do at the end of the programme), can be described under the following headings:

- Subject knowledge and understanding
- Subject specific skills
- Key or transferable skills (including employability skills)

Subject knowledge and understanding

Successful students will be able to:

- describe and explain the principles of forensic chemistry, criminalistic science, analytical science and selected topics in forensic biology and statistics, and possess competence in applying these principles to appropriate areas of the discipline
- maintain an awareness of and engagement with methods and techniques within forensic science, some of which are informed by current research
- describe and explain the principles and procedures for crime scene investigation
- describe the place of forensic science within the legal framework and the role of the expert witness in court
- describe the legal and ethical issues which constrain the practice of the professional forensic scientist

Subject specific skills

Successful students will be able to:

- identify a range of instrumental and other techniques, use them to analyse materials relevant to forensic science, and appreciate their limitations
- execute practical work and critically analyse the results from experiments or investigations and draw valid conclusions
- solve problems within forensic science by drawing on their scientific understanding and knowledge, and experience of experimental techniques
- interpret and evaluate the significance of the results of a forensic investigation in the context of the circumstances of the crime, using appropriate statistical tools where necessary
- prepare a written statement of expert testimony and defend it under cross-examination in a court setting
- research, devise, plan, execute and report on an original investigation or research project within the discipline
- work safely in the laboratory and manage risk assessments and other practices in a competent fashion select and utilise appropriate software, databases and other digital resources for the analysis and interpretation of instrumental and other laboratory data.

Key or transferable skills (including employability skills)

Successful students will be able to:

- solve familiar and unfamiliar problems by clearly formulating the problem, identifying the issues and generating different approaches to its solution
- analyse, synthesise and summarise data and information critically and appreciate its limitations
- assess the merits of contrasting theories, explanations and strategies
- make critical judgements by acquiring a range of evidence and information then formulating and testing hypotheses
- present concepts and information in a clear and concise manner, both orally, in writing and by other means and to interact and communicate effectively with scientific and non-scientific audiences
- work both independently and as part of a team, to plan,organise and perform work efficiently and conscientiously in a timely way, and meet appropriate deadlines
- take responsibility for their own learning and be able to reflect upon that learning
- utilise a range of ICT skills, including the use of databases, software packages and modern methods of communication
- work within an ethical framework and according to ethical, honest and acceptable practices

The Keele Graduate Attributes

The Keele Graduate Attributes are the qualities (skills, values and mindsets) which you will have the opportunity to develop during your time at Keele through both the formal curriculum and also through co- and extra-curricular activities (e.g., work experience, and engagement with the wider University community such as acting as ambassadors, volunteering, peer mentoring, student representation, membership and leadership of clubs and societies). Our Graduate Attributes consist of four themes: **academic expertise, professional skills, personal effectiveness, and social and ethical awareness.** You will have opportunities to engage actively with the range of attributes throughout your time at Keele: through your academic studies, through self-assessing your own strengths, weaknesses, and development needs, and by setting personal development goals. You will have opportunities to discuss your progress in developing graduate attributes with, for example, Academic Mentors, to prepare for your future career and lives beyond Keele.

6. How is the programme taught?

Learning and teaching methods used on the programme vary according to the subject matter and level of the module and generally involve a blend of in-situ and digital approaches . They include the following:

- Lectures, including those from guest speakers from the profession
- Tutorials
- Practical laboratory classes
- Practical simulated crime scene examination (indoor and outdoor)
- Problems classes
- Oral presentations Poster presentations
- Presentation and cross-examination in a mock court setting or online
- Mini-projects
- Group/ team work Independent project work
- Literature research tasks
- Expert witness statement preparation
- Case studies
- Workshops
- Problem-based learning

- Directed reading Independent study
- Use of e-learning/the Keele Learning Environment (KLE) (Blackboard) and MS Teams

The lectures describe, explain and map out the academic content of modules as well as engendering and developing an enthusiasm for forensic and analytical science. Through examples and case studies discussed in the lectures, students develop critical skills in reviewing ideas, principles and applications. Informal tutorials provide occasional small group support to material discussed in lectures and problem classes have a dual role, firstly in enabling students to apply theoretical ideas to new problems and secondly, to allow the tutor to provide formative feedback on the students' learning during these activities.

Forensic science is a laboratory-based discipline and practical work is closely tied to the lectures thus enabling students to gain competence and confidence in the investigation and analysis of forensic evidence, using laboratory instrumentation as well as developing a critical awareness of the range of techniques available, their capabilities and limitations. Students working in the laboratory quickly gain an understanding of health and safety issues, manage risk assessments, maintaining accurate and informative laboratory notes and working with others in a safe and productive fashion. In a similar way, through small-group, tutor-guided exercises and team-led investigations in indoor and outdoor simulated crime scenes, students apply the principles and procedures of crime scene investigation to novel incidents, develop practical skills and learn how to implement a forensic strategy and ensure a rigorous chain of custody.

In working with laboratory data, students develop skills and confidence in data analysis, the use of software tools and databases and in communicating the outcomes of such work in the form of reports, oral presentations and as conference posters. They will also develop skills in working within small groups of various sizes in laboratory mini- projects, CSI teams, a fieldwork exercise and a large scale team project.

In preparing expert witness statements and through the presentation and cross-examination within the mock court, students develop understanding of the place of the forensic and investigative sciences within the legal framework, the role of the expert witness in court and some of the legal and ethical issues which constrain the practice of the professional forensic scientist.

By engaging in literature research tasks and through directed reading, students will advance their own understanding of the discipline, develop critical abilities, appreciate the limitations of information and assess the merits of contrasting theories, explanations and strategies. Through working on all assignments, students will develop organisational skills, efficient working practices and the ability to meet appropriate deadlines.

Through project work, students will research, devise, plan, execute and report on an original investigation within the discipline either as an individual or as part of a team. They will work safely in the laboratory and engage in ethical, honest and acceptable practices throughout.

Throughout the programme students will undertake independent study that will require them to develop an adaptable and flexible approach to study, work and work-life balance. They will need to work towards identified targets for their own academic development, take responsibility for their own learning and thereby develop confidence in their own understanding and acquire a self-critical attitude to their own work and achievements. Consequently each student will develop practices which will enable them to engage with ongoing professional development throughout their careers.

All staff use the Keele Learning Environment and/or MS Teams to post learning resources for the modules on which they teach; these include lecture notes, recorded lectures and screencasts, module and laboratory handbooks, problem sheets, past exam papers, web-links to external resources, assignment briefs, assignment feedback and in some cases quizzes. Staff also use the KLE for electronic submission of work, marking and feedback and MS Teams to hold online tutorials, lectures and problem classes.

Apart from these formal activities, students are also provided with regular opportunities to talk through particular areas of difficulty, and any special learning needs they may have, with their Academic Mentors or module lecturers on a one-to-one basis.

These learning and teaching methods enable students to achieve the learning outcomes of the programme in a variety of ways.

7. Teaching Staff

There are a number of additional guest lecturers from the profession who contribute either a single or a short series of lectures, workshops or practical classes across the programme in topics such as crime scene examination, fire scene investigation and forensic toxicology. The Forensic Science academic staff have expertise and interests across the forensic sciences as well in chemistry and earth sciences. Most academic staff are active researchers in the forensic, analytical and chemical sciences and many have a distinguished track record in publication, the generation of grant income, industrial collaboration and as research journal reviewers. Several staff have particular interests in the development of teaching and learning methods within forensic and chemical sciences education and some are members of and active in the professional bodies for the forensic and chemical sciences. A number of staff are Fellows of the Higher Education Academy, have held Keele Teaching and

Learning Awards and, within the School, several have been awarded the University Teaching Excellence Award. Additionally, the majority of staff contribute to widening participation and science outreach activities, and have demonstrated innovation and good practice in teaching and learning to take into account the diverse needs of all students.

The University will attempt to minimise changes to our core teaching teams, however, delivery of the programme depends on having a sufficient number of staff with the relevant expertise to ensure that the programme is taught to the appropriate academic standard.

Staff turnover, for example where key members of staff leave, fall ill or go on research leave, may result in changes to the programme's content. The University will endeavour to ensure that any impact on students is limited if such changes occur.

8. What is the structure of the Programme?

The academic year runs from September to June and is divided into two semesters. The number of weeks of teaching will vary from programme to programme, but you can generally expect to attend scheduled teaching sessions between the end of September and mid-December, and from mid-January to the end of April. Our degree courses are organised into modules. Each module is usually a self-contained unit of study and each is usually assessed separately with the award of credits on the basis of 1 credit = 10 hours of student effort. An outline of the structure of the programme is provided in the tables below.

There are two types of module delivered as part of your programme. They are:

- Compulsory modules - a module that you are required to study on this course;
- Optional modules - these allow you some limited choice of what to study from a list of modules.

Optional modules include Global Challenge Pathways - a choice of modules from different subject areas that count towards the overall credit requirement but not the number of subject-related credits.

Global Challenge Pathways can either be taken as one 15-credit module at Levels 4, 5 and 6, or one 15-credit module at Levels 5 and 6 (except for the TESOL pathway). **Information about Global Challenge Pathways can be found after the module lists for Level 6.**

Language modules

Students on this programme will also be able to study language modules offered by the Language Centre, as part of a Global Challenge Pathway. You can enrol on either a Modern Language module [more information available at this link] (Semester 1 only) Teaching English to Speakers of Other Languages (TESOL) (Semesters 1 and 2) module (ENL-10053), or the Intercultural Explorer pathway (ENL-10057). See the Global Challenges Pathway information under the module lists for more details.

If you choose the Language Specialist pathway, you will automatically be enrolled on a Semester 2 Modern Language module as a continuation of your language of choice as a faculty funded 'additional' module. Undertaking a Modern Languages module in Semester 2 is compulsory if you wish to continue to the Language Specialist Global Challenge Pathway the following academic year.

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For further information on the content of modules currently offered, please visit: https://www.keele.ac.uk/recordsandexams/modulecatalogue/

A summary of the credit requirements per year is as follows.

Year	Compulsory	Optional	
		Min	Max
Level 4	105	15	15
Level 5	90	30	30
Level 6	90	30	30

In addition to entry at year 1, it is possible to join this programme at the start of year 2 as long as you are studying a forensic science combined honours programme in year 1. If you join this programme in year 1 you will study all the compulsory modules listed below. If you join in year 2 you will not study the year 1 modules CSC-10024, CSC-10025.

Module Lists

Level 4

At Level 4, students take 105 credits of compulsory modules. The remaining 15 credits may either be used to take a GCP, or the optional modules listed below.

Compulsory modules	Module Code	Credits	Period
Introduction to Crime Scene Investigation	FSC-10009	15	Semester 1
Forensic Chemistry and Analysis	FSC-10003	30	Semester 1-2
Forensic Identification and Investigation	FSC-10005	30	Semester 1-2
Forensic Science Skills and Practice	FSC-10001	30	Semester 2

Optional modules	Module Code	Credits	Period
Cybercrime	CSC-10025	15	Semester 1
Introduction to Programming	CSC-10070	15	Semester 1
Science & Society	NAT-10001	15	Semester 1-2

NB: Global Challenge Pathways (GCPs) - students have the option of taking a Global Challenge Pathway, can either be taken as one 15-credit module at Levels 4, 5 and 6, or one 15-credit module at Levels 5 and 6 (except for the TESOL pathway). Information on GCPs is shown under the Level 6 modules below.

Level 5

Students complete 105 credits of compulsory modules and 15 credits of optional modules or the GCP.

Compulsory modules	Module Code	Credits	Period
Forensic Genetics	FSC-20003	15	Semester 1
Spectroscopy and Advanced Analysis	FSC-20005	15	Semester 1
Forensic Anthropology and Taphonomy	FSC-20007	30	Semester 1-2
Criminalistic Methods	FSC-20001	15	Semester 2
Drugs of Abuse	FSC-20009	15	Semester 2

Optional modules	Module Code	Credits	Period
Counterfeits, Fakes and Forgeries	FSC-20011	15	Semester 1
Digital Forensics	FSC-20013	15	Semester 2

Level 5 Module Rules

Students must select at least one of FSC-20011 or FSC-20013

Level 6

Students complete 90 credits of compulsory modules and 30 credits of optional modules which may include the GCP.

Compulsory modules	Module Code	Credits	Period
Evaluation of evidence, explosives and arson	FSC-30007	15	Semester 1
Interpretation, Evaluation and Presentation of Evidence	FSC-30005	30	Semester 1-2
Forensic Science Research Project (30 credit)	FSC-30021	30	Semester 1-2
Forensic Toxicology	FSC-30017	15	Semester 2

Optional modules	Module Code	Credits	Period
Advanced Forensic Biology	FSC-30031	15	Semester 1
Advanced Forensic Evidence Examination	FSC-30033	15	Semester 1
Environmental and Wildlife Forensics	FSC-30029	15	Semester 2
Advanced Forensic Chemistry	FSC-30037	15	Semester 2

Level 6 Module Rules

Students can take EITHER FSC-30029 OR FSC-30037 in SEM2 not both.

Global Challenge Pathways (GCPs)

Students have the option of taking a Global Challenge Pathway, which includes one 15-credit module at Levels 4, 5 and 6, or one 15-credit module at Levels 5 and 6. Students who started a Global Challenge Pathway at Level 4 will continue with the same pathway at Level 5. Students joining Global Challenge Pathways at Level 5 can join any pathway (except TESOL). Students at Level 6 will continue with the same Global Challenge Pathway they studied at Levels 4 and/or Level 5.

Global Challenge Pathways offer students the chance to fulfil an exciting, engaging route of interdisciplinary study. Choosing a pathway, students will be presented with a global issue or 'challenge' which directly relates to societal issues, needs and debates. They will be invited to take part in academic and external facing projects which address these issues, within an interdisciplinary community of students and staff. Students completing a Global Challenge Pathway will receive recognition on their degree certificate.

Digital Futures	The Digital Futures pathway offers you the opportunity to take an active role in current debates, cutting-edge research, and projects with external partners, addressing both the exciting potential and the challenges of disruptive digital transformation across all spheres of life. Part of a diverse and interdisciplinary pathway community, you will engage in exciting, impactful collaborative project work in innovative formats on areas that matter most to you. Engaged in real-world scenarios as digital citizens, you will expand, deepen, and mobilise knowledge and skills to drive inclusive, empowering, and sustainable change at local and global levels. **Level 4 Module**: **A digital life: challenges and opportunities (GCP-10005)** **Level 5 Module: Digital World - People, Spaces, and Data (GCP-20005)** **Level 6 Module: Digital Citizenship and Sustainable Futures (GCP-30005)**

Climate Change & Sustainability	Through the Climate Change & Sustainability pathway you will develop the skills, understanding and drive to become agents of change to tackle climate change and wider sustainability challenges. You will hear from international partners to learn about climate change and sustainability in different international contexts; lead your own projects to drive real change in your communities; and be part of educating and supporting others to help achieve a more sustainable future. **Level 4 Module: Climate Change and Sustainable Futures: Global Perspectives (GCP-10009)** **Level 5 Module: Climate Change and Sustainability: Action and Activism (GCP-20009)** **Level 6 Module: Skills for Sustainability (GCP-30009)**
Social Justice	The Social Justice pathway is based upon a transformative methodology which centres the student's role as 'agents of change' to reflect upon decolonising and feminist, perspectives on social justice, to forge critical outputs to transform the Sustainable Development Goals. You will develop research and engagement skills with local, national, and international partners from Universities, NGOs, International Human Rights frameworks. You will engage with key societal challenges focused upon the Sustainable Development Goals, to develop an intersectional response from identity-based perspectives on race, gender, sexualities and disabilities. The pathway will allow you to monitor and critically evaluate policies and human rights treaties, and produce and disseminate digitally fluent, international and sustainable project findings. **Level 4 Module**: **Reflections on Social Injustices, Past and Present (GCP-10003)** **Level 5 Module: Strategic Interventions for Social Justice (GCP-20003)** **Level 6 Module: Transforming Social Justice; Global Perspectives (GCP-30003)**
Enterprise & the Future of Work	In order to meet the challenges set out in the UN's Sustainable Development Goals we need to understand the power of enterprise and prepare for the future contexts of work, creativity and disruption. By providing you with the skills, knowledge and understanding of global challenges this pathway will prepare you to be part of future-facing solutions. This module will support you in developing creative, original thinking, allowing you to collaborate on projects that persuade and effect change, setting you up to thrive in future environments of work and innovation. **Level 4 Module: Enterprise and the Future of Work (GCP-10007)** **Level 5 Module: Enterprise and the Future of Work: Collaborate to Innovate (GCP-20007)** **Level 6 Module: Enterprise and the Future of Work: Designing Change (GCP-30007)**

Global Health Challenges	By taking the global health challenge pathway you will develop solutions to improve the health and quality of life for particular people and communities, engaging with these groups to co-design interventions. This pathway will provide you with skills that go beyond a focus on health and will allow you to develop your ability to work in a team and lead change in society. The knowledge, skills and work experience will complement your core degree and enhance your career opportunities and graduate aspirations. **Level 4 Module: Key concepts and challenges in global health (GCP-10001)** **Level 5 Module: Using Evidence to Improve Global Health (GCP-20001)** **Level 6 Module: Working to Improve Global Health (GCP-30001)**
Languages & Intercultural Awareness	Communication within and across cultures is inseparable from language, and development of intercultural awareness can enable you to actively contribute to the shaping of an international future. The Language and Intercultural Awareness pathway allows you to engage in genuine interdisciplinary and international exchange and to understand and explore the link between language, culture and communication. Each of the strands we offer provides you with skills and direct experience for active engagement in working to face global challenges. **The Language Specialist**: Become a specialist in one of our languages and graduate with a degree title that includes '... with competency in (Language)' or '... with advanced competency in (Language)'. **The Language Taster:** Explore a new language every year. **The Certificate in TESOL** (Teaching English to Speakers of Other Languages): ***(NB: only available if starting from Level 4)*** Enhance your undergraduate degree by studying the Trinity College Certificate in Teaching English to Speakers of Other Languages (TESOL). As an internationally recognised qualification, you can teach around the world, enabling you to travel whilst helping people develop their English Language Skills. You will also develop many transferable skills which will enhance your future employability. **The Intercultural Explorer:** Through an interdisciplinary understanding of intercultural communication - as both an academic discipline and as a tool to promote and engage in global activity, you will explore the concept of culture. Module content and assessments allow you to examine in-depth the role of both culture and language in, for example, the UN sustainability goals. **Modules available:** **The Language Specialist:** Any Semester 1 Language Module (the level at which you enter will be determined by your previous language learning experiences). **The Language Taster:** Any Semester 1 Language Module (the level at which you enter will be determined by your previous language learning experiences) **The Certificate in TESOL (NB: only available if starting from Level 4):** ENL-10053 TESOL 1 ENL-20007 TESOL 2 ENL-30009 TESOL 3 **The Intercultural Explorer:** ENL-10057 The stories we live by ENL-20009 Who do you think you are?

Information on Global Challenge Pathways can be found here:
https://www.keele.ac.uk/study/undergraduate/globalchallengepathways/

Learning Outcomes

The table below sets out what students learn in the programme and the modules in which that learning takes place. Details of how learning outcomes are assessed through these modules can be found in module specifications.

Level 4

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
know the underlying concepts in and principles of forensic and analytical science and an ability to evaluate and interpret these	Forensic Science Skills and Practice - FSC-10001 Forensic Identification and Investigation - FSC-10005 Forensic Chemistry and Analysis - FSC-10003 FSC-10001, FSC-10003, FSC-10005
use basic theories and concepts within forensic and analytical science to develop arguments, make judgements, and evaluate different approaches to solving problems	Forensic Chemistry and Analysis - FSC-10003 Forensic Science Skills and Practice - FSC-10001 Forensic Identification and Investigation - FSC-10005 FSC-10001, FSC-10003, FSC-10005
identify the major types of cyber-crime and implement counter-measures to protect against them; will be achieved by assessments	Cybercrime - CSC-10025 CSC-10025
describe and discuss the law relating to the major forms of cyber-crime	Cybercrime - CSC-10025 CSC-10025
identify and describe the technologies and processes that underpin today's information infrastructure	Cybercrime - CSC-10025 CSC-10025, CSC-10029, CSC-10024

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
to present, evaluate and interpret qualitative and quantitative data	Forensic Chemistry and Analysis - FSC-10003 Forensic Science Skills and Practice - FSC-10001 Forensic Identification and Investigation - FSC-10005 FSC-10001, FSC-10003, FSC-10005, CSC-10024
operate a range of analytical equipment required for the analysis of forensic samples	Forensic Science Skills and Practice - FSC-10001 Forensic Identification and Investigation - FSC-10005 Forensic Chemistry and Analysis - FSC-10003 FSC-10001, FSC-10003, FSC-10005
analyse and develop solutions to straightforward scientific problems	Forensic Chemistry and Analysis - FSC-10003 Forensic Science Skills and Practice - FSC-10001 Forensic Identification and Investigation - FSC-10005 FSC-10005, FSC-10003, FSC-10001
effectively carry out basic forensic practical techniques such as microscopy, fingerprinting and spectroscopic analysis	Forensic Identification and Investigation - FSC-10005 Forensic Chemistry and Analysis - FSC-10003 Introduction to Crime Scene Investigation - FSC-10009 FSC-10005, FSC-10003, FSC-10009
carry out forensic science lab work including blood typing, DNA handling chromatography and electrophoresis	Forensic Chemistry and Analysis - FSC-10003 Forensic Identification and Investigation - FSC-10005 FSC-10005, FSC-10003

Key or Transferable Skills (graduate attributes)	
Learning Outcome	**Module in which this is delivered**
communicate the results of work accurately and reliably, with structured and coherent arguments	Forensic Science Skills and Practice - FSC-10001 Forensic Identification and Investigation - FSC-10005 FSC-10001, FSC-10005
operate a range of analytical equipment	Forensic Chemistry and Analysis - FSC-10003 Forensic Identification and Investigation - FSC-10005 FSC-10003, FSC-10005
write scientific reports that describe the operation and outcome of a particular experiment or investigation	Forensic Science Skills and Practice - FSC-10001 Forensic Chemistry and Analysis - FSC-10003 Forensic Identification and Investigation - FSC-10005 FSC-10001, FSC-10003, FSC-10005
orally present scientific concepts/data to a range of different audiences	Forensic Science Skills and Practice - FSC-10001 Forensic Identification and Investigation - FSC-10005 FSC-10001, FSC-10005
solve a range of problems	Forensic Identification and Investigation - FSC-10005 Forensic Chemistry and Analysis - FSC-10003 Forensic Science Skills and Practice - FSC-10001 FSC010001, FSC-10003, FSC-10005
understand the accreditation requirements for crime scene investigation under ISO17025.	Introduction to Crime Scene Investigation - FSC-10009 FSC-10009

Level 5

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
know and critically understand the well-established principles of forensic and analytical science, their development, the limits of that knowledge and how that influences analyses and interpretations based on that knowledge	Forensic Genetics - FSC-20003 Drugs of Abuse - FSC-20009 Criminalistic Methods - FSC-20001 Spectroscopy and Advanced Analysis - FSC-20005 FC-20001, FSC-20003, FSC-20005, FSC-20009
know the main methods of enquiry in forensic and analytical science and be able to critically evaluate different approaches to solving problems	Forensic Genetics - FSC-20003 Drugs of Abuse - FSC-20009 Criminalistic Methods - FSC-20001 Spectroscopy and Advanced Analysis - FSC-20005 FC-20001, FSC-20003, FSC-20005, FSC-20009
exercise personal responsibility and decision-making	Forensic Genetics - FSC-20003 Drugs of Abuse - FSC-20009 Spectroscopy and Advanced Analysis - FSC-20005 Criminalistic Methods - FSC-20001 FC-20001, FSC-20003, FSC-20005, FSC-20009
know and critically understand the well-established principles of forensic and analytical science, their development, the limits of that knowledge and how that influences analyses and interpretations based on that knowledge	Spectroscopy and Advanced Analysis - FSC-20005 Forensic Genetics - FSC-20003 Criminalistic Methods - FSC-20001 Drugs of Abuse - FSC-20009 FC-20001, FSC-20003, FSC-20005, FSC-20009
describe and explain the postmortem process of human decomposition and identify the variables which influence it	Forensic Anthropology and Taphonomy - FSC-20007 FSC-20007
describe human teeth including dental anomalies, traits and pathological conditions	Forensic Anthropology and Taphonomy - FSC-20007 FSC-20007
discuss how digital forensics investigations are carried out and describe how evidence is collected using digital tools and appropriate software	Digital Forensics - FSC-20013 FSC-20013
describe, explain and critically review the principles and practices used for the examination of documents in the forensic science and security contexts	Counterfeits, Fakes and Forgeries - FSC-20011 FSC-20011

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
apply underlying concepts in and principles of forensic and analytical science outside the context in which they were first studied	Forensic Genetics - FSC-20003 Drugs of Abuse - FSC-20009 Spectroscopy and Advanced Analysis - FSC-20005 Criminalistic Methods - FSC-20001 FC-20001, FSC-20003, FSC-20005, FSC-20009
use a range of forensic and analytical techniques to undertake a critical analysis and to propose solutions based on the outcome of that analysis	Criminalistic Methods - FSC-20001 Spectroscopy and Advanced Analysis - FSC-20005 Drugs of Abuse - FSC-20009 Forensic Genetics - FSC-20003 FC-20001, FSC-20003, FSC-20005, FSC-20009
apply underlying concepts in and principles of forensic and analytical science outside the context in which they were first studied	Criminalistic Methods - FSC-20001 Spectroscopy and Advanced Analysis - FSC-20005 Drugs of Abuse - FSC-20009 Forensic Genetics - FSC-20003 FC-20001, FSC-20003, FSC-20005, FSC-20009
use a range of techniques and methods to determine post-mortem interval	Forensic Anthropology and Taphonomy - FSC-20007 FSC-20007
identify the stages of decomposition and the variables that affect this both environmental and related to the body	Forensic Anthropology and Taphonomy - FSC-20007 FSC-20007
identify examples of species of insects most frequently found at crime scenes	Forensic Anthropology and Taphonomy - FSC-20007 FSC-20007
practice and evaluate anthropological methods used to create a biological profile and identify an individual	Forensic Anthropology and Taphonomy - FSC-20007 FSC-20007
discuss, select and apply appropriate analytical techniques for the physicochemical examination of various document related materials, including inks and paper, as well as drug, food and heritage specimens	Counterfeits, Fakes and Forgeries - FSC-20011 FSC-20011
communicate effectively and critically discuss the findings from the examination of documents, heritage specimens, counterfeit medicine and fraudulent food, both in the form of written reports and through oral presentation	Counterfeits, Fakes and Forgeries - FSC-20011 FSC-20011

Key or Transferable Skills (graduate attributes)	
Learning Outcome	**Module in which this is delivered**
effectively communicate information, arguments and analysis in a variety of forms to specialist and non-specialist audiences in an effective manner	All modules
work as part of a team	All modules
write scientific reports that describe and evaluate the operation and outcome of a particular experiment	All modules
maintain accurate records of laboratory work and use these to interpret the findings of an examination	All modules

Level 6

Subject Knowledge and Understanding	
Learning Outcome	**Module in which this is delivered**
systematically understand key aspects of forensic and analytical sciences, including acquisition of coherent and detailed knowledge, at least some of which is at, or informed by, the forefront of defined aspects of a discipline	All modules
devise and sustain arguments, and/or to solve problems in the forensic science, using ideas and techniques, some of which are at the forefront of a discipline	All modules
appreciate the uncertainty, ambiguity and limits of knowledge	All modules
describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline	All modules

Subject Specific Skills	
Learning Outcome	**Module in which this is delivered**
can apply the methods and techniques that they have learned, to review, consolidate, extend and apply their knowledge and understanding, and to initiate and carry out projects	Interpretation, Evaluation and Presentation of Evidence - FSC-30005 FSC-30005
carry out a planned programme of investigative laboratory work, continually analysing the data obtained, enabling informed decisions to be made	Interpretation, Evaluation and Presentation of Evidence - FSC-30005 Forensic Science Research Project (30 credit) - FSC-30021 FSC-30005, FSC-30021
describe the processes of fire scene investigation and the forensic analysis of fire scene evidence	Evaluation of evidence, explosives and arson - FSC-30007 FSC-30007
describe and explain the principles of and be able to critically select and apply appropriate statistical approaches to the logical interpretation of evidence	Advanced Forensic Evidence Examination - FSC-30033 Evaluation of evidence, explosives and arson - FSC-30007 Interpretation, Evaluation and Presentation of Evidence - FSC-30005 Environmental and Wildlife Forensics - FSC-30029 Advanced Forensic Biology - FSC-30031 FSC-30005, FSC-30007, FSC-30029, FSC-30031, FSC-30025, FSC-30033, FSC-30037
discuss, select and apply analytical techniques to the analysis of explosives and explosive residues as well as calculate the physical and thermochemical processes occurring in an explosion, combustion and in fires	Evaluation of evidence, explosives and arson - FSC-30007 FSC-30007
make informed judgements about the issues, limitations and current knowledge in forensic science within the specialist areas, with particular emphasis on crime scene examination/ evidence in court issues	Advanced Forensic Evidence Examination - FSC-30033 FSC-30033
devise and execute appropriate analytical and other methods for the examination of forensic materials, including setting up casework experiments	Interpretation, Evaluation and Presentation of Evidence - FSC-30005 FSC-30005
interpret critically data from forensic analysis in a meaningful and structured manner, including the use of statistical tests and databases where appropriate	All modules
report the results of forensic analysis both as a written report and orally in a form appropriate to a court of law and defend the conclusions under cross examination	Interpretation, Evaluation and Presentation of Evidence - FSC-30005 FSC-30005
be familiar with the processes of handling soft tissue remains and trauma in a forensic setting	Advanced Forensic Biology - FSC-30031 FSC-30031
have an advanced understanding of estimating PMI from biological evidence	Advanced Forensic Biology - FSC-30031 FSC-30031

Key or Transferable Skills (graduate attributes)	
Learning Outcome	**Module in which this is delivered**
initiate a programme of investigation into a clearly defined topic and summarise the project aims and key primary sources; communicate verbally and discuss the project aims, key findings and conclusions with other specialists	Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021
can manage their own learning, and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to forensic science)	All modules
evaluate arguments, assumptions, abstract concepts and data (that may be incomplete) in a critical fashion , to make judgements, and to frame appropriate questions to achieve a solution - or identify a range of solutions - to a problem	All modules
exercise initiative and personal responsibility, exercise decision-making in complex and unpredictable contexts and appreciate need to undertake professional development	Interpretation, Evaluation and Presentation of Evidence - FSC-30005 FSC-30005
communicate information, ideas, problems and solutions to both scientific and non-scientific audiences	Interpretation, Evaluation and Presentation of Evidence - FSC-30005 Advanced Forensic Evidence Examination - FSC-30033 Forensic Toxicology - FSC-30017 FSC-30005, FSC-30017, FSC-30033, FSC-30037
critically evaluate written scientific evidence	Forensic Toxicology - FSC-30017 Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021, FSC-30017
plan and initiate a programme of practical work into a clearly defined area of the proposed forensic project	Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021
critically appraise information of relevance to the project (general) and specific area (individual) obtained from a variety of sources	Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021
communicate verbally the project aims, key literature findings, and plans for practical work	Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021
identify any ethical considerations related to a planned experiment	Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021
work as part of a team	Environmental and Wildlife Forensics - FSC-30029 Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021, FSC-30029
critically appraise information of relevance to the topic obtained from a variety of sources including scientific literature, forensic science databases and other primary sources	Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021
produce a comprehensive dissertation outlining the project background, a critical summary of research, and conclusions drawn; demonstrate a systematic understanding of key aspects of the selected topic	Forensic Science Research Project (30 credit) - FSC-30021 FSC-30021
apply the forensic science theories and laboratory skills learnt to real situations in the workplace to design, plan and critically evaluate workplace tasks.	FSC-30027

Key or Transferable Skills (graduate attributes)	
Learning Outcome	**Module in which this is delivered**
explain how their perspective on forensic science has been influenced by working in a forensic science workplace	FSC-30027
set up examples of standard analytical instrumentation (including calibration), prepare appropriate samples and carry out straightforward laboratory measurements	FSC-30037
demonstrate a critical understanding of advanced digital forensics and how they can be applied to forensic crime solving	FSC-30035
demonstrate digital forensics digital documentation, evidence handling and presenting in court can be achieved	FSC-30035
critically appraise the scale and nature of national and international environmental and wildlife crime and links to other types of serious crime	Environmental and Wildlife Forensics - FSC-30029 FSC-30029
critically evaluate and apply the methods and procedures used in environmental and forensic wildlife crime scene investigation	Environmental and Wildlife Forensics - FSC-30029 FSC-30029

9. Final and intermediate awards

Credits required for each level of academic award are as follows:

Honours Degree	360 credits	You will require at least 120 credits at levels 4, 5 and 6 You must accumulate at least 270 credits in your main subject (out of 360 credits overall), with at least 90 credits in each of the three years of study*, to graduate with a named single honours degree in this subject. *An exemption applies for students transferring from a Combined Honours programme - see point 3.4 here: https://www.keele.ac.uk/regulations/regulationc3/
Diploma in Higher Education	240 credits	You will require at least 120 credits at level 4 or higher and at least 120 credits at level 5 or higher
Certificate in Higher Education	120 credits	You will require at least 120 credits at level 4 or higher

International Year option: in addition to the above students must pass a module covering the international year in order to graduate with a named degree including the 'international year' wording. Students who do not complete, or fail the international year, will be transferred to the three-year version of the programme.

Work Placement Year option: in addition to the above students must pass a non-credit bearing module covering the work placement year in order to graduate with a named degree including the 'with Work Placement Year' wording. Students who do not complete, or fail the work placement year, will be transferred to the three-year version of the programme.

10. How is the Programme Assessed?

The wide variety of assessment methods used on this programme at Keele reflects the broad range of knowledge and skills that are developed as you progress through the degree programme. Teaching staff pay particular attention to specifying clear assessment criteria and providing timely, regular and constructive feedback that helps to clarify things you did not understand and helps you to improve your performance. The

following list is representative of the variety of assessment methods used on your programme:

- **Class tests** assess the understanding of concepts and the application of theories to solve familiar and unfamiliar problems. They also allow students to experience time-constrained assessment as well as acting to provide feedback on their progress
- **End of module examinations, open book assessments and case work portfolios** test the ability of the student to describe, explain, and critically discuss the principles of forensic chemistry, criminalistic science, analytical science and selected topics in forensic biology and to demonstrate competence in applying these principles to applications and to solve problems from appropriate areas of the discipline
- **Problems sheets** and **data analysis exercises** assess the student's skills in solving numerical and other problems within forensic science by drawing on their scientific understanding and knowledge, and experience of experimental techniques

Throughout the extensive laboratory and other practical work in this programme, many types of assessment are utilised to achieve the learning outcomes.

- **Laboratory diaries** (notebooks) are used to communicate the results of work accurately and reliably and to encourage good working practice, including managing risk assessments and following safe working practices. Together with **laboratory proformas**, they allow students to demonstrate their skills in the critical analysis and interpretation of data, test the uncertainty in knowledge and show the ability to draw valid conclusions from their work
- **Laboratory reports** communicate the execution of practical work, the ability to describe the results of work accurately and reliably, with structured and coherent arguments and to enable students to evaluate the outcomes of data analysis in a critical fashion
- **Court expert witness statements** enable students to prepare a written statement of expert testimony and to understand the place of forensic science within the legal framework and the role of the expert witness in court. These reports test the student's ability to interpret and evaluate the significance of the results of a forensic investigation in the context of the circumstances of the crime, using appropriate statistical tools
- **Oral presentations, digital presentations** and **poster presentations** demonstrate the ability of the student to present complex concepts and information in a clear and concise manner, to interact and communicate effectively to a wide range of professional environments, including to both scientific and non-scientific audiences
- **Crime scene investigation reports** enable students to apply the principles and procedures for crime scene investigation to a scenario, to critically review data and outcomes in light of the chain of custody for evidence and the appropriate forensic strategy, to make critical judgments and to present these in a clear and concise manner
- **Essays** and the production of **technical leaflets** enable students to analyse, synthesise and summarise data and information critically, to appreciate its limitations, to assess the merits of contrasting theories, explanations and strategies and to present, in writing, complex concepts and information in a clear and concise manner
- **Dissertation and research paper** / **literature** / **critical reviews** enable the student to demonstrate their effective engagement with the research literature across forensic and analytical science and use it to advance their understanding. In this way, the assessment may test their awareness of, and engagement with, current methods and techniques within the forensic and analytical sciences, some of which are at, or informed by, the forefront of the discipline. These assessments enable the student to present complex concepts and information in a clear and concise manner in writing, and to communicate effectively to a wide range of scientific and professional environments
- **Project plans, team project interviews** and **viva examinations** test the student's skills in working both independently and as part of a team, in planning, organising and carrying out practical and other work efficiently, including making appropriate ethical assessments, and meeting appropriate deadlines
- **Project reports** demonstrate how the student has taken responsibility for their own learning, has critically assessed a wide range of techniques and methodologies relevant to the forensic and analytical sciences and used them competently to analyse relevant materials and has selected and utilised appropriate software, databases and other digital resources for the analysis and interpretation of laboratory data. The report also tests the student's achievement in presenting complex concepts and information in a clear and concise manner in writing and communicating effectively to a scientific audience
- **Presentation and cross-examination** assessments test the student's ability to interpret and evaluate the significance of the results of a forensic investigation in the context of the circumstances of the crime, to demonstrate their understanding of the place of forensic science within the legal framework and the role of the expert witness in court and test their ability to defend a written witness statement under cross-examination in a court setting

Through working on a diverse range of assessments, linked to a curriculum that is in its latter stages closely based around the professional forensic science context, the student will demonstrate confidence in their own understanding and skills as well as a self-critical attitude to their own work and achievements, an adaptable and flexible approach to study, work and work-life balance and the ability to identify and work towards targets for ongoing professional development.

Marks are awarded for summative assessments designed to assess your achievement of learning outcomes. You will also be assessed formatively to enable you to monitor your own progress and to assist staff in identifying and addressing any specific learning needs. Feedback, including guidance on how you can improve the quality of your work, is also provided on all summative assessments within three working weeks of submission, unless there are compelling circumstances that make this impossible, and more informally in the course of tutorial and seminar discussions.

11. Contact Time and Expected Workload

This contact time measure is intended to provide you with an indication of the type of activity you are likely to undertake during this programme. The data is compiled based on module choices and learning patterns of students on similar programmes in previous years. Every effort is made to ensure this data is a realistic representation of what you are likely to experience, but changes to programmes, teaching methods and assessment methods mean this data is representative and not specific.

Undergraduate courses at Keele contain an element of module choice; therefore, individual students will experience a different mix of contact time and assessment types dependent upon their own individual choice of modules. The figures below are an example of activities that a student may expect on your chosen course by year stage of study. Contact time includes scheduled activities such as: lecture, seminar, tutorial, project supervision, demonstration, practical classes and labs, supervised time in labs/workshop, fieldwork and external visits. The figures are based on 1,200 hours of student effort each year for full-time students.

Activity

	Scheduled learning and teaching activities	**Guided independent Study**	**Placements**
Year 1 (Level 4)	24.7%	75.3%	0%
Year 2 (Level 5)	29.5%	70.5%	0%
Year 3 (Level 6)	36.9%	63.1%	0%

12. Accreditation

This programme carries full accreditation status from The Chartered Society of Forensic Sciences. Further details on the accreditation requirements for these programmes can be found on the society web page below.

The Chartered Society of Forensic Sciences accreditation web page: http://www.csofs.org/Accreditation

13. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at: http://www.keele.ac.uk/student-agreement/

Students should note that it is not possible to take both the Work Placement Year and International Year options.

A student who has completed a semester abroad will not normally be eligible to transfer onto the International Year option.

Any student wishing to transfer to a route that is accredited by the Chartered Society of Forensic Sciences, at any point other than year 1, must demonstrate that they have covered similar content in the years spent at their other institution as would be covered at Keele.

14. What are the typical admission requirements for the Programme?

See the relevant course page on the website for the admission requirements relevant to this programme: https://www.keele.ac.uk/study/

Applicants who are not currently undertaking any formal study or who have been out of formal education for more than 3 years and are not qualified to A-level or BTEC standard may be offered entry to the University's Foundation Year Programme.

Applicants for whom English is not a first language must provide evidence of a recognised qualification in English language. The minimum score for entry to the Programme is Academic IELTS 6.0 or equivalent.

English for Academic Purposes

Please note: All new international students entering the university will provide a sample of Academic English during their registration Using this sample, the Language Centre may allocate you to an English language module which will become compulsory. This will replace any GCP modules. *NB:* students can take an EAP module only with the approval of the English Language Programme Director and are not able to take any other Language modules in the same academic year.

English Language Modules at Level 4:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2)
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

English Language Modules at Level 5:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2)
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

English Language Modules at Level 6:

- Business - ENL-90003 Academic English for Business Students (Part 1); ENL-90004 Academic English for Business Students (2); ENL-90005 Advanced Business English Communication
- Science - ENL-90013 Academic English for Science Students
- General - ENL-90006 English for Academic Purposes 2; ENL-90001 English for Academic Purposes 3; ENL-90002 English for Academic Purposes 4

Recognition of Prior Learning (RPL) is considered on a case-by-case basis and those interested should contact the Programme Director. The University's guidelines on this can be found here: https://www.keele.ac.uk/qa/programmesandmodules/recognitionofpriorlearning/

15. How are students supported on the programme?

All the academic staff in Forensic Science operate an open door policy for students; in other words, if they are available at any time in the working day then they are happy to discuss any matter a student raises with them; if they are not free then a future meeting will be arranged for a later time.

All students have many opportunities for close contact with the staff - through laboratory sessions, problems classes, tutorials, workshops and other teaching activities including online sessions. Consequently, students and staff get to know each other fairly quickly and all students should feel free to approach any lecturer, module tutor or other colleagues whom they believe may be able to provide them with help and assistance on any academic issue. Feedback on formative and summative assessment is usually best obtained from the tutor who set and marked the work but after the whole semester's assessment is complete, it may be that the student's Academic Mentor is best placed to discuss their overall progress.

Each year of study has an associated Year Tutor who monitors the students and the modules, to ensure the course is running smoothly and that all students are making progress. The Year Tutor should be regarded as the first point of contact to discuss any topic or issue related to that year (level) of the programme and can provide advice on module content and advise on any matters relating to modules at that level. In addition, the Programme Director for Forensic Science has oversight of all aspects of delivery of the Forensic Science programme.

Help, support and advice are also available from each student's Academic Mentor who is allocated by the School. Academic Mentors will make contact with each student in their first few days at Keele to arrange an introductory meeting and will contact them at various key points throughout their degree to check on their progress and to determine whether any specific discussion is needed. From the student's perspective, the Academic Mentor should be seen as someone they can approach with confidence for advice on any matter whether academic or personal; if the mentors themselves cannot help directly then they know who within the university should be able to provide the help the student needs. As well as reviewing overall academic progress, the Academic Mentor can advise on general matters relating to the whole programme of study.

16. Learning Resources

Forensic Science at Keele is based in the Lennard-Jones and Central Science Laboratories, which houses modern, well-equipped teaching and research facilities. The teaching laboratories for forensic science and chemical analysis are all well equipped with high quality standard laboratory facilities and modern forensic science and analytical instrumentation, with many multiple sets of commonly used techniques. Our students gain hands-on experience with a wide range of equipment and techniques working with professional and research grade instruments.

These include: document examination equipment, such as VSC-4 and ESDA-2 instruments, many low power stereo microscopes, a comparison microscope and several specialist phase-contrast and polarising microscopes - these include variable temperature stages for glass analysis - and high resolution microspectrophotometer. Finger and palm print analysis may be undertaken on our dedicated AFIS system. There are three well-equipped dark-rooms for forensic imaging together with a range of high specification cameras. The analytical laboratories are fully equipped with multiple sets of FTIR spectrometers, UV-VIS spectrometers, fluorescence spectrometers, HPLC and GC-MS instrumentation, NMR spectrometers, an Inductively-Coupled Plasma Optical Emission Spectrometer (ICP- OES), and Raman microscope. Forensic Science students also have access to XRD, XRF and a scanning electron microscope (with EDX analysis). Students undertaking project work at level 6 may have access to further analytical instrumentation within the research laboratories. Investigation scenarios are set up in the dedicated crime scene facility and a range of CSI equipment is available. Forensic biology equipment includes a thermal cycler for PCR, electrophoresis and gel visualisation equipment, autoclaves and micro-centrifuges. Specialist forensic geophysics equipment such as ground-penetrating radar and resistivity equipment, is also available.

Students have access to a wide variety of on-line databases and scientific journals, both in electronic and paper form, through the university library.

17. Other Learning Opportunities

Study abroad (semester)

Students on the programme have the potential opportunity to spend a semester abroad in their second year studying at one of Keele's international partner universities. Please note that students cannot take both a Global Challenge Pathway (GCP) and the semester abroad option.

Exactly which countries are available depends on the student's choice of degree subjects. An indicative list of countries is on the website (http://www.keele.ac.uk/studyabroad/partneruniversities/); however this does not guarantee the availability of study in a specific country as this is subject to the University's application process for studying abroad.

No additional tuition fees are payable for a single semester studying abroad but students do have to bear the costs of travelling to and from their destination university, accommodation, food and personal costs. Depending on the destination they are studying at additional costs may include visas, study permits, residence permits, and compulsory health checks. Students should expect the total costs of studying abroad to be greater than if they study in the UK, information is made available from the Global Education Team throughout the process, as costs will vary depending on destination.

Whilst students are studying abroad any Student Finance eligibility will continue, where applicable students may be eligible for specific travel or disability grants. Students who meet external eligibility criteria may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible for income dependent bursaries at Keele. Students travel on a comprehensive Keele University insurance plan, for which there are currently no additional charges. Some governments and/or universities require additional compulsory health coverage plans; costs for this will be advised during the application process.

Study Abroad (International Year)

A summary of the International Year, which is a potential option for students after completion of year 2 (Level 5), is provided in the Annex for the International Year.

Work Placement Year

A summary of the Work Placement Year, which is a potential option for students after completion of year 2 (Level 5), is provided in the Annex for the Work Placement Year.

18. Additional Costs

Activity	Estimated Cost
Equipment - All PPE equipment (laboratory coats and glasses) are provided by the School at no cost to the student. Students will be required to have two laboratory notebooks, these are provided at no cost to the student in the induction session and can be used for multiple modules/years. Replacement items are available from the School Stores, the 2020/21 price for these are listed below: Laboratory Book - £1.50 Laboratory Glasses - £2.00 Laboratory Coat - £10 Students will be required to supply appropriate writing equipment but this would be a minimal (<£10) cost. All core textbooks are available in the main University Library. To increase the availability of these resources, eBooks are also purchased alongside the printed text where available; these can be accessed through the University Library Catalogue. Additional costs may be incurred if the student wishes to purchase any book for themselves. In general we only recommend they purchase the core textbook which is available for approximately £50.	£60

These costs have been forecast by the University as accurately as possible but may be subject to change as a result of factors outside of our control (for example, increase in costs for external services). Forecast costs are reviewed on an annual basis to ensure they remain representative. Where additional costs are in direct control of the University we will ensure increases do not exceed 5%.

As to be expected there will be additional costs for inter-library loans and potential overdue library fines, print and graduation. We do not anticipate any further costs for this programme.

19. Quality management and enhancement

The quality and standards of learning in this programme are subject to a continuous process of monitoring, review and enhancement.

- The School Education Committee is responsible for reviewing and monitoring quality management and enhancement procedures and activities across the School.
- Individual modules and the programme as a whole are reviewed and enhanced every year in the annual programme review which takes place at the end of the academic year.
- The programmes are run in accordance with the University's Quality Assurance procedures and are subject to periodic reviews under the Revalidation process.

Student evaluation of, and feedback on, the quality of learning on every module takes place every year using a variety of different methods:

- The results of student evaluations of all modules are reported to module leaders and reviewed by the Programme Committee as part of annual programme review.
- Findings related to the programme from the annual National Student Survey (NSS), and from regular surveys of the student experience conducted by the University, are subjected to careful analysis and a planned response at programme and School level.
- Feedback received from representatives of students in all three years of the programme is considered and acted on at regular meetings of the Student Staff Voice Committee.

The University appoints senior members of academic staff from other universities to act as external examiners on all programmes. They are responsible for:

- Approving examination questions
- Confirming all marks which contribute to a student's degree
- Reviewing and giving advice on the structure and content of the programme and assessment procedures

Information about current external examiner(s) can be found here:
http://www.keele.ac.uk/qa/externalexaminers/currentexternalexaminers/

20. The principles of programme design

The programme described in this document has been drawn up with reference to, and in accordance with the guidance set out in, the following documents:

a. UK Quality Code for Higher Education, Quality Assurance Agency for Higher Education: http://www.qaa.ac.uk/quality-code
b. QAA Subject Benchmark Statement: Forensic Science (2012) http://www.qaa.ac.uk/docs/qaa/subject-benchmark-statements/subject-benchmark-statement-forensic-science.pdf?sfvrsn=659ef781_10
c. Keele University Regulations and Guidance for Students and Staff: http://www.keele.ac.uk/regulations
d. Chartered Society of Forensic Science (CSFS) Accreditation Scheme; Criteria and Standards; available at: http://www.csofs.org/Accreditation

21. Annex - International Year

Forensic Science with International Year

International Year Programme

Students registered for this Single Honours programme may either be admitted for or apply to transfer during their period of study at Level 5 to the International Year option. Students accepted onto this option will have an extra year of study (the International Year) at an international partner institution after they have completed Year 2 (Level 5) at Keele.

Students who successfully complete both the second year (Level 5) and the International Year will be permitted to progress to Level 6. Students who fail to satisfy the examiners in respect of the International Year will normally revert to the standard programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.

Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the International Year option.

International Year Programme Aims

In addition to the programme aims specified in the main body of this document, the international year programme of study aims to provide students with:

1. Personal development as a student and a researcher with an appreciation of the international dimension of their subject
2. Experience of a different culture, academically, professionally and socially

Entry Requirements for the International Year

Students may apply to the 4-year programme during Level 5. Admission to the International Year is subject to successful application, interview and references from appropriate staff.

The criteria to be applied are:

- Academic Performance (an average of 55% across all modules in Semester 1 at Level 5 is normally required. Places on the International Year are then conditional on achieving an average mark of 55% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 55% requirement may progress to the International Year. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account)
- General Aptitude (to be demonstrated by application for study abroad, interview during the 2nd semester of year 2 (Level 5), and by recommendation of the student's Academic Mentor, 1st and 2nd year tutors and programme director)

Student Support

Students will be supported whilst on the International Year via the following methods:

- Phone or Skype conversations with Study Abroad tutor, in line with recommended Academic Mentoring meeting points.
- Support from the University's Global Education Team

Learning Outcomes

In addition to the learning outcomes specified in the main text of the Programme Specification, students who complete a Keele undergraduate programme with International Year will be able to:

1. Describe, discuss and reflect upon the cultural and international differences and similarities of different learning environments
2. Discuss the benefits and challenges of global citizenship and internationalisation
3. Explain how their perspective on their academic discipline has been influenced by locating it within an international setting.
4. Reflect upon the international nature of crime and describe and discuss differences between investigative approaches taken in different countries.
5. Evaluate the merits and limitations of the different approaches taken to investigating crime in different countries.
6. Apply their experiences abroad to the specific graduate attributes associated with their Forensic Science degree.

These learning outcomes will all be assessed by the submission of a satisfactory individual learning agreement, the successful completion of assessments at the partner institution and the submission of the reflective portfolio element of the international year module.

Regulations

Students registered for the International Year are subject to the programme-specific regulations (if any) and the University regulations. In addition, during the International Year, the following regulations will apply:

Students undertaking the International Year must complete 120 credits, which must comprise *at least 40%* in the student's discipline area.

This may impact on your choice of modules to study, for example you will have to choose certain modules to ensure you have the discipline specific credits required.

Students are barred from studying any module with significant overlap to the Level 6 modules they will study on their return. Significant overlap with Level 5 modules previously studied should also be avoided.

Additional costs for the International Year

Tuition fees for students on the International Year will be charged at 15% of the annual tuition fees for that year of study, as set out in Section 1. The International Year can be included in your Student Finance allocation, to find out more about your personal eligibility see: www.gov.uk

Students will have to bear the costs of travelling to and from their destination university, accommodation, food and personal costs. Depending on the destination they are studying at additional costs may include visas, study permits, residence permits, and compulsory health checks. Students should expect the total costs of studying abroad be greater than if they study in the UK, information is made available from the Global Education Team throughout the process, as costs will vary depending on destination.

Students who meet external eligibility criteria may be eligible for grants as part of this programme. Students studying outside of this programme may be eligible income dependent bursaries at Keele.

Students travel on a comprehensive Keele University insurance plan, for which there are currently no additional charges. Some Governments and/or universities require additional compulsory health coverage plans; costs for this will be advised during the application process.

22. Annex - Work Placement Year

Forensic Science with Work Placement Year

Work Placement Year summary

Students registered for this programme may either be admitted for or apply to transfer during their studies to the 'with Work Placement Year' option (NB: for Combined Honours students the rules relating to the work placement year in the subject where the placement is organised are to be followed). Students accepted onto this programme will have an extra year of study (the Work Placement Year) with a relevant placement provider after they have completed Year 2 (Level 5) at Keele.

Students who successfully complete both the second year (Level 5) and the Work Placement Year will be permitted to progress to Level 6. Students who fail to satisfactorily complete the Work Placement Year will normally revert to the 3-year programme and progress to Level 6 on that basis. The failure will be recorded on the student's final transcript.

Study at Level 4, Level 5 and Level 6 will be as per the main body of this document. The additional detail contained in this annex will pertain solely to students registered for the Work Placement Year option.

Work Placement Year Programme Aims

In addition to the programme aims specified in the main body of this document, the Work Placement Year aims to provide students with the opportunity to carry out a year long work placement in the broad field of forensic science between Years 2 and 3 (Levels 5 and 6) of their degree programme. The module will be underpinned by reflective assessment, employer and tutor evaluation, and support from academic tutors.

Entry Requirements for the Work Placement Year

Admission to the Work Placement Year is subject to successful application, interview and references from appropriate staff. Students have the opportunity to apply directly for the 4-year 'with work placement year' degree programme, or to transfer onto the 4-year programme at the end of Year-1 and in Year-2 at the end of Semester 1. Students who are initially registered for the 4-year degree programme may transfer onto the 3-year degree programme at any point in time, prior to undertaking the year-long work placement. Students who fail to pass the work placement year, and those who fail to meet the minimum requirements of the work placement year module, (* or equivalent, work placement), will be automatically transferred onto the 3-year degree programme.

* We recommend where possible students undertake a placement of between 9 - 12 months on a full-time basis to maximize academic and personal growth. However, the Faculty of Natural Sciences Work / Professional Placement Year mandates a minimum of 24 weeks in duration, ideally on a full-time basis, but no less than 21 hours per week. This enables those undertaking an unpaid placement to work on a part-time basis alongside their placement.

The criteria to be applied are:

- A good University attendance record and be in 'good academic standing'.
- Academic Performance (an average of 50% across all modules in Semester 1 at Level 5 is normally required. Places on the Work Placement Year are then conditional on achieving an average mark of 50% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 50% requirement may progress to the Work Placement Year. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account)
- Students undertaking work placements will be expected to complete a Health and Safety checklist prior to commencing their work experience and will be required to satisfy the Health and Safety regulations of the company or organisation at which they are based.
- *(International students only)* Due to visa requirements, it is not possible for international students who require a Tier 4 Visa to apply for direct entry onto the 4-year with Work Placement Year degree programme. Students wishing to transfer onto this programme should discuss this with student support, the academic tutor for the work placement year, and the Programme Lead. Students should be aware that there are visa implications for this transfer, and it is the student's responsibility to complete any and all necessary processes to be eligible for this programme. There may be additional costs, including applying for a new Visa from outside of the UK for international students associated with a transfer to the work placement programme.

Students may not register for both an International Year and a Work Placement Year.

Student Support

Students will be supported whilst on the Work Placement Year via the following methods:

- Regular contact between the student and a named member of staff who will be assigned to the student as their University supervisor. The University supervisor will be in regular contact with the student throughout the year, and be on hand to provide advice (pastoral or academic) and liaise with the Placement supervisor on the student's behalf if required.
- Two formal contacts with the student during the placement year: the University supervisor will visit the student in their placement organization at around 5 weeks after the placement has commenced, and then visit again (or conduct a telephone/video call tutorial) at around 15 weeks into the placement.
- Weekly supervision sessions will take place with the placement supervisor (or his/her nominee) throughout the duration of the placement.

Learning Outcomes

In addition to the learning outcomes specified in the main text of the Programme Specification, students who complete the 'with Work Placement Year' option will be able to:

1. apply the forensic science theories and laboratory skills learnt to real situations in the workplace to design, plan and critically evaluate workplace tasks.
2. develop key professional skills in the accurate documentation of information.
3. develop employability skills in the presentation and communication of data/information; the writing of reports; and the ability to work effectively both individually and as part of a team.
4. explain how their perspective on forensic science has been influenced by working in a forensic science workplace.

These learning outcomes will be assessed through the non-credit bearing Work Placement Year module which involves:

1. apply the forensic science theories and laboratory skills learnt to real situations in the workplace to design, plan and critically evaluate workplace tasks.
2. develop key professional skills in the accurate documentation of information.
3. develop employability skills in the presentation and communication of data/information; the writing of reports; and the ability to work effectively both individually and as part of a team.
4. explain how their perspective on forensic science has been influenced by working in a forensic science workplace.

Regulations

Students registered for the 'with Work Placement Year' option are subject to programme-specific regulations (if any) and the University regulations. In addition, during the Work Placement Year, the following regulations will apply:

- Students undertaking the Work Placement Year must successfully complete the zero-credit rated Work Placement Year module
- In order to ensure a high quality placement experience, each placement agency will sign up to a placement contract (analogous to a service level agreement).
- Once a student has been accepted by a placement organisation, the student will make a pre-placement visit and a member of staff identified within the placement contract will be assigned as the placement supervisor. The placement supervisor will be responsible for ensuring that the placement experience meets the agreed contract agreed with the University.
- The placement student will also sign up an agreement outlining his/her responsibilities in relation to the requirements of each organisation.

Students will be expected to behave professionally in terms of:

(i) conforming to the work practices of the organisation; and

(ii) remembering that they are representatives of the University and their actions will reflect on the School and have an impact on that organisation's willingness (or otherwise) to remain engaged with the placement.

Additional costs for the Work Placement Year

Tuition fees for students on the Work Placement Year will be charged at 20% of the annual tuition fees for that year of study, as set out in Section 1. The Work Placement Year can be included in your Student Finance allocation; to find out more about your personal eligibility see: www.gov.uk

Students will have to bear the costs of travelling to and from their placement provider, accommodation, food and personal costs. Depending on the placement provider additional costs may include parking permits, travel and transport, suitable clothing, DBS checks, and compulsory health checks.

A small stipend may be available to students from the placement provider during the placement but this will need to be explored on a placement-by-placement basis as some organisations, such as charities, may not have any extra money available. Students should budget with the assumption that their placement will be unpaid.

Eligibility for student finance will depend on the type of placement and whether it is paid or not. If it is paid, this is likely to affect student finance eligibility, however if it is voluntary and therefore unpaid, should not affect student finance eligibility. Students are required to confirm eligibility with their student finance provider.

International students who require a Tier 4 visa should check with the Immigration Compliance team prior to commencing any type of paid placement to ensure that they are not contravening their visa requirements.

23. Annex - Programme-specific regulations

Programme Regulations: BSc Forensic Science

Final Award and Award Titles	Forensic Science Single Honours Forensic Science Single Honours with International Year Forensic Science Single Honours with Work Placement Year
Intermediate Award(s)	BSc Honours Diploma in Higher Education Certificate in Higher Education
Last modified	n/a
Programme Specification	https://www.keele.ac.uk/qa/programmespecifications

The University's Academic Regulations which can be found on the Keele University website (https://www.keele.ac.uk/regulations/)[1] apply to and regulate the programme, other than in instances where the specific programme regulations listed below over-ride them. These programme regulations list:

- *Exemptions* which are characterised by the omission of the relevant regulation.
- *Variations* which are characterised by the replacement of part of the regulation with alternative wording.
- *Additional Requirements* which set out what additional rules that apply to students in relation to this programme.

The following **exemptions, variations** and **additional requirements** to the University regulations have been checked by Academic Services and have been approved by the Faculty Education Committee.

A) EXEMPTIONS

The clause(s) listed below describe where an exemption from the University's Academic Regulations exists:

For the whole duration of their studies, students on this Programme are exempt from the following regulations:

- **No exemptions apply.**

B) VARIATIONS

The clause(s) listed below describe where a variation from the University's Academic Regulations exists:

Variation 1: *International Year and Work Placement Year Eligibility*

In order to be eligible to pursue an international year or work placement year between level 5 and level 6, students must have relevant academic performance (an average of 50% across all modules in Semester 1 at Level 5 is normally required. Places on the Work Placement Year are then conditional on achieving an average mark of 50% across all Level 5 modules. Students with up to 15 credits of re-assessment who meet the 50% requirement may progress to the Work Placement Year. Where no Semester 1 marks have been awarded performance in 1st year marks and ongoing 2nd year assessments are taken into account), as well as demonstrated competency in relevant practical and professional skills.

C) ADDITIONAL REQUIREMENTS

Additional requirement 1: Transferring from another institution

Any student who is wishing to transfer to this programme from another institution, at Level 5 or above, must demonstrate that they have transferred from a programme that is accredited by The Chartered Society of Forensic Sciences. If the original programme is not accredited the student must demonstrate that they have covered the same material in their Level 4 year as would be covered at Level 4 on this programme.

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[1] References to University Regulations in this document apply to the content of the University's Regulatory Framework as set out on the University website here https://www.keele.ac.uk/regulations/.

Version History

This document

Date Approved: 05 June 2024

Previous documents

Version No	Year	Owner	Date Approved	Summary of and rationale for changes
1	2023/24	JAMIE PRINGLE	19 January 2023	
1	2022/23	RICHARD DARTON	01 February 2022	
1	2021/22	RICHARD DARTON	23 March 2021	
2	2020/21	RICHARD DARTON	07 May 2020	Removal of Level 4 modules (CHE-10038, CHE-10039, CHE-10037 and CHE-10042) and replacement with two 30 credit modules (FSC-10003 and FSC-10005). Removal of two 15 credit optional modules (CRI-10013 and CRI-10014) and introduction of one 30 credit module (FSC-10001). These changes are made to remove repetition between modules and reduce student workload through more efficient teaching and assessment methods.
1	2020/21	RICHARD DARTON	12 December 2019	
1	2019/20	RICHARD DARTON	12 December 2019	