



Postgraduate
master's courses in

Forensic science

Academic year 2022/23 entry

Cranfield Forensic MSc Programme
Digital Forensics MSc
Investigative Sciences MSc
Archaeomaterials MSc



Cranfield University

We are the UK's only specialist postgraduate university in technology and management, with long-standing relationships with some of the most prestigious global companies. Our close collaboration with industry, and passion for the areas we operate in, will help your career.

Specialist postgraduate

A research-focused professional community

81%

of our research is world-leading or internationally excellent

Research Excellence Framework (REF) 2014



Six-time winner of the Queen's Anniversary Prize for Higher and Further Education

THE QUEEN'S ANNIVERSARY PRIZES FOR HIGHER AND FURTHER EDUCATION 2019

Over £100 million of investment in new facilities over the past four years

A professional network of **67,000+** alumni, from 169 countries

UK no.2 graduate employment

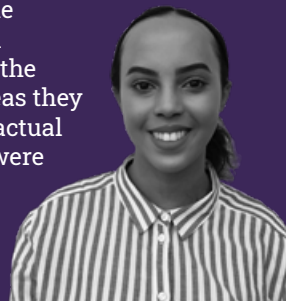
(DLHE longitudinal, 2017)

5,000 postgraduate students from 100+ countries

As we are postgraduate only, we are not listed in league tables that help compare undergraduate universities, such as *The Times World Rankings* and *The Complete University Guide*.

"This course is unique and it is in a great location. I like the variety of the course and the elective modules available. A great attraction was the fact that the faculty who teach at the University are professionals and currently work in the areas they teach. The work that we do is not just coursework, we do actual pieces of work which you would be expected to do if you were in a workplace."

Amna Mahmoud, Analyst, Ministry of Defence, (Forensic Explosive and Explosion Investigation MSc 2019)



Reasons to study forensic science with us

1 Cranfield Forensic Institute (CFI)

CFI is a world-class teaching department for the many forensic-related disciplines at Cranfield University, such as archaeology, ballistics, explosives, heritage crime investigation and materials science. Our superb facilities and excellent industry links will provide you with highly-desired standards of education and research, making CFI unique within the postgraduate education sector.

2 Facilities and teaching

A recent £7.2 million investment has created a new teaching and research facility, run by industry-experienced academic staff at our Cranfield campus, which will be unparalleled in the UK. Using the latest forensic science technology, it includes teaching and research spaces such as a virtual autopsy table, simulated crime scenes and a simulated mass grave site.

3 Programme accreditation

The majority of our MSc courses have been formally accredited by the internationally-renowned Chartered Society of Forensic Sciences, under the Component Standards:

- Interpretation,
- Evaluation and Presentation of Evidence,
- Laboratory Analysis and Crime Scene Investigations.

Further details can be found at www.csofs.org

4 Research project

You will carry out an original research project in academia or the wider forensic sector, allowing you to apply skills and knowledge you have acquired. Project ideas can come from you, academic staff, or from partners such as the police, military, forensic providers and museums across the world.

5 Flexible study

The forensic MSc programme is available on a part-time or full-time basis. As a part-time student you may be in full-time employment and can take up to three years to complete your course. There is plenty of flexibility and we recognise that you will need to balance your studies with your career. The courses are modular and you can select modules throughout the academic year to fit in with other commitments. The full-time course can also be completed in one year.

6 Broad portfolio

CFI offers a wide range of study options – research degrees, taught degrees and short courses. Read more at www.cranfield.ac.uk/cfi



Courses

Cranfield Forensic Programme

Modules form 60% of the course content, with the individual project making up the remaining 40%.

This brochure shows the compulsory and (where applicable) some elective modules offered in the 2021-2022 academic year, to give you an idea of course content. To keep our courses relevant and up-to-date, modules are subject to change so please check the latest information on our website.

Forensic Archaeology and Anthropology

www.cranfield.ac.uk/faa • Accredited - see page 13

MSc, PgDip

Full-Time or Part-time

Learn how the excavation of buried remains, the analysis of human remains and trauma identification can be used in civil, criminal and human rights investigations. You will gain an understanding of how traditional and advanced techniques from archaeological science and physical anthropology can be applied in the forensic context.

Forensic Ballistics

www.cranfield.ac.uk/fb • Accredited - see page 13

MSc, PgDip

Full-Time or Part-time

This course teaches you how firearms and ammunition function, the science of ballistics, the role of the forensic firearms examiners and how the forensic evidence produced in gun crime can be used to help resolve issues in relation to criminal and civil law.

Forensic Explosive and Explosion Investigation

www.cranfield.ac.uk/feei • Accredited - see page 13

MSc, PgDip

Full-Time or Part-time

This course introduces you to the investigation of explosive, chemical, biological, radiological and nuclear crime scenes. You will learn cutting-edge investigative and analytical techniques such as forensic intelligence, exploitation and open-source intelligence.

Forensic Investigation

www.cranfield.ac.uk/forensicinvestigation • Accredited - see pg 13

MSc, PgDip, PgCert

Full-Time or Part-time

Gain an overview of the application of science to forensic problems in this highly-practical and engaging course. You will learn about the latest forensic methodologies and cutting-edge research, which will enable you to resolve issues in relation to civil and criminal law.

Forensic Investigation of Heritage Crime

www.cranfield.ac.uk/heritagecrime

MSc, PgDip, PgCert

Full-Time or Part-time

Due to the rise in heritage crime there is currently an increasing demand for highly-qualified subject matter experts. Developed from discussions with cultural heritage bodies, NGOs, military and police, this course is developed to meet these demands and improve your employment prospects.

✓ = Compulsory modules

	Forensic Archaeology and Anthropology	Forensic Ballistics	Forensic Explosive and Explosion Investigation	Forensic Investigation	Forensic Investigation of Heritage Crime
	Choose three electives	Choose three electives	Choose three electives	Choose seven electives	Choose two electives
Analytical Techniques	✓			✓	Elective
Ballistic Impact and Protection		✓	✓		
Counter-Improvised Explosive Device Capability		Elective	✓	Elective	Elective
Courtroom Skills	✓	✓	✓	✓	✓
Digital Crime and Investigation	Elective	Elective	Elective	Elective	Elective
Environmental Forensic Science	Elective	Elective	Elective	Elective	Elective
Explosive Effects on Structures		Elective	✓		
Extended Essay					✓
Fakes and Forgeries	Elective	Elective	Elective	Elective	✓
Firearms Investigations		✓	Elective	Elective	
Fires, Explosions and their Investigation	Elective	Elective	✓	Elective	Elective
Forensic Archaeology: Mass Grave Excavation	✓			Elective	
Forensic Archaeology: Recovering Buried Remains	✓	Elective	Elective	Elective	Elective
Forensic Ballistics Investigations		✓		Elective	
Forensic Exploitation and Intelligence	Elective	Elective	Elective	Elective	Elective
Forensic Investigation of Explosives and Explosive Devices		Elective	✓	Elective	
Fundamentals of Forensic Anthropology: Osteology	✓	Elective	Elective	Elective	Elective
Further Forensic Anthropology: Identification	✓			Elective	
Hazardous Forensics	Elective	Elective	Elective	Elective	Elective
International Heritage Crime	Elective	Elective	Elective	Elective	✓
International Heritage Crime Exercise	Elective	Elective	Elective	Elective	✓
Introduction to Firearms Investigation and Forensic Ballistics	Elective	✓	Elective	Elective	Elective
Introduction to Shock and Impact		✓	✓		
Investigation and Evidence Collection	✓	✓	✓	✓	✓
Mass Fatality Incidents	Elective	Elective	Elective	Elective	
Materials Engineering and Processes		✓	Elective	Elective	
Practical Archaeological Excavation	Elective			Elective	Elective
Radiographic Investigations in Forensic Science	Elective	Elective	Elective	Elective	Elective
Reasoning for Forensic Science	✓	✓	✓	✓	✓
Trace Evidence	Elective	Elective	Elective	Elective	Elective
UK Heritage Crime	Elective	Elective	Elective	Elective	✓
UK Heritage Crime Exercise	Elective	Elective	Elective	Elective	✓

Courses

CFI has a developing relationship with key national level stakeholders in police training and development, including the Forensics Capability Network, Transforming Forensics, The College of Policing, The National Police Search College and the Office of the Forensic Regulator. As our courses develop and take shape, these relationships will continue to grow and ensure that the Cranfield course offerings are central to the needs of UK policing.

Investigative Sciences

MSc, PgDip, PgCert
Part-time

The Investigative Sciences MSc is tailored for police professionals who want to develop an in-depth skillset to lead and research an area within their specialism that that will transform policing practice. It is accompanied by a suite of post graduate certificates to which you can choose to match your chosen study path.

Crime Scene Leadership

PgCert
Part-time

Enhance your skills when leading an investigation at a crime scene. This PgCert will introduce you to the fundamental skills needed to offer succinct, precise and strategic management alongside how effective leadership can be maintained throughout.

Disaster Response Science

PgCert
Part-time

Providing you with the skillset and expertise to use evidence, theory and practical knowledge along with an understanding of the delicate nature of responding to a disaster or mass fatality event.

Search Science

PgCert
Part-time

Examining the processes and methods of safe, effective and careful search when investigating a crime scene. The course will look at land and water-based search and further modules that introduce you to the technical and situational aspects of the investigation.

	Investigative Sciences	Crime Scene Leadership	Disaster Response Science	Search Science
✓ = Compulsory modules				
CPD Reflective Portfolio	✓	✓	✓	✓
Digital Scene Forensics				
Development of Disaster Response	Elective	Elective	✓	Elective
Ecological Trace Evidence	Elective			
Evidence-Based Policing	✓	✓	✓	✓
Forensic Fibres, Fabrics and Garments	Elective			
Forensic Taphonomy	Elective			
Fundamentals of Forensic Science	Elective	✓		
Fundamentals of Search Science				✓
Induction Module	✓	✓	✓	✓
Judicial and Ethical Frameworks	Elective		✓	
Major Scene Management	Elective	✓		
Major Crime Operations	Elective	✓		
Marine and Water-Based Search	Elective			Elective
Mass Fatality Scene Management	Elective		✓	
Mortuary Identification and Repatriation	Elective		✓	
Situational Awareness	Elective			✓
Technical Aspects of Search	Elective			✓
The Development of Disaster Response	Elective			✓



Courses

Archaeomaterials

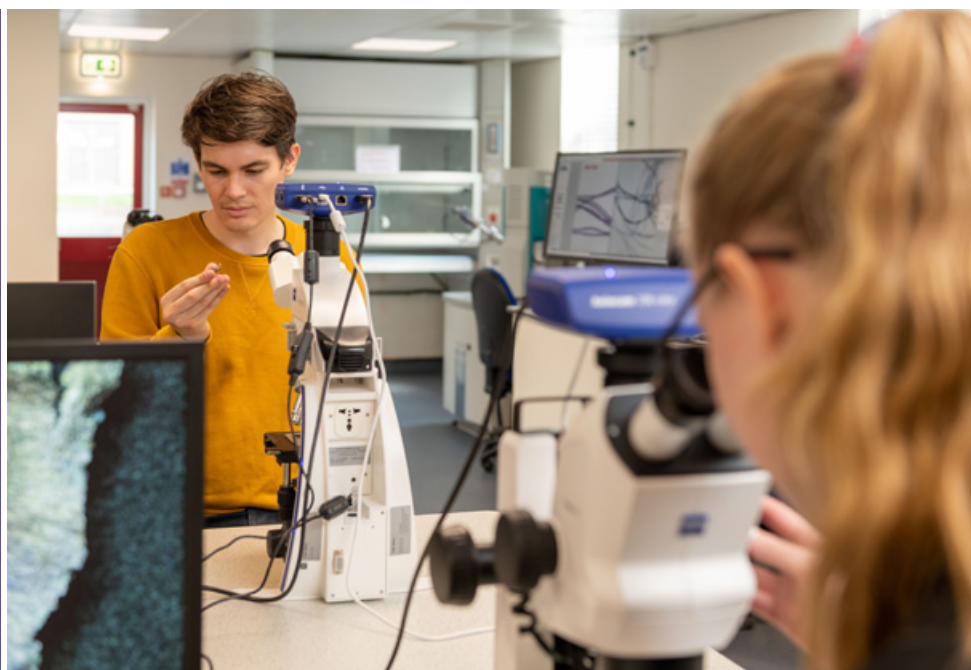
MSc, PgDip, PgCert
Full-time or Part-time

The application of natural science techniques to archaeological research questions is a rapidly growing field of research. The course will provide an overview of both the analytical methodologies used to analyse archaeological materials, and to provide you with a robust framework for applying these techniques to questions of fundamental importance within archaeology and anthropology.

Digital Forensics

MSc, PgDip, PgCert
Full-Time or Part-time

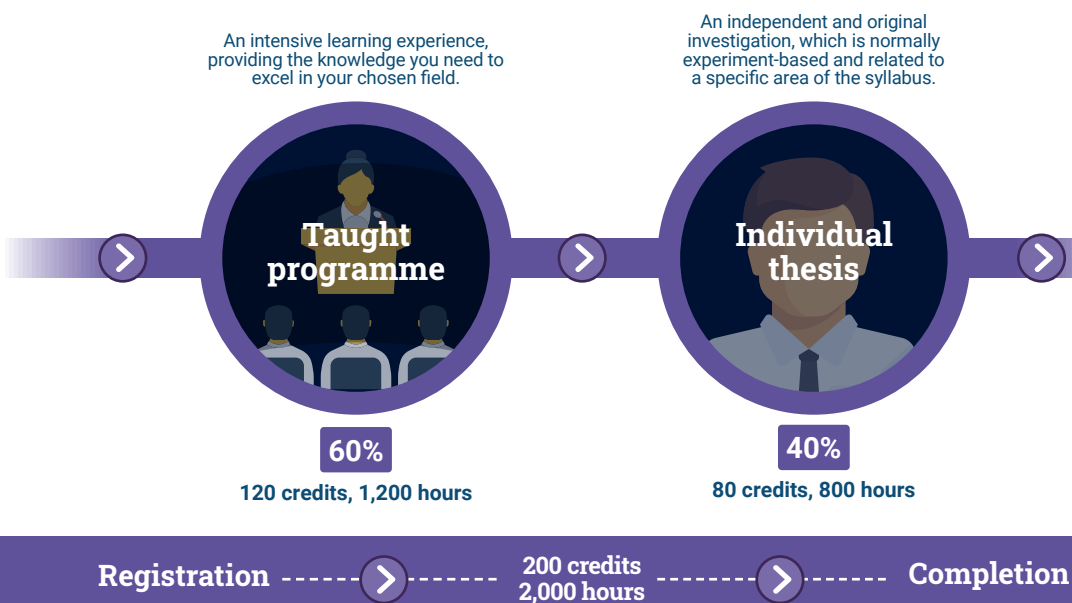
This new MSc addresses the serious skills shortage of trained individuals in the field of digital forensics. The course focuses on the operational needs of UK policing and will equip you to support the UK's criminal justice system. In partnership with [CCL Solutions Group](#).



Course structure

Our specialist, sector-facing master's courses are set up and developed in close collaboration with industry partners, ensuring the content of our courses remain industry-relevant and employers remain impressed with your business-readiness.

This diagram illustrates the course structure of many of our full-time master's courses, it is not indicative of all courses. Please check your course structure online for more detailed information, including the weight of each phase and part-time course structure variations.





Industry supported projects

Cranfield has unrivalled links with industry and academia. You will benefit from our extensive contacts and track record of close collaboration with the forensics and security sectors.

Recent partnerships have seen both staff and students working closely with Dstl to investigate radiography technologies for explosive devices and the aerospace sector. Additional research has focused on the application of rapid genomic sequencing, combining Dstl's skills in DNA sequencing and Cranfield's explosive and forensic expertise and facilities.

Our links include worldwide collaborations with other universities such as Oxford, Harvard and Berlin, recently working with Vilnius University (Lithuania) examining mummified remains from the Capuchin Catacombs in Palermo, Italy. In late 2019 we partnered with the United States Department of Defense (US DoD) as part of a new collaboration to recover and identify service personnel unaccounted for from World War Two. The collaboration will hope to identify some of the 39,000 deemed recoverable from 72,000 missing US personnel.

Careers

Our forensic courses open doors to several different career opportunities. These include employment routes into government and non-governmental bodies, police forces, law enforcement agencies, independent forensic service providers, and consultants working in a range of sectors, such as insurance companies.

Roles:

- Crime Scene Investigator,
- Government Analyst,
- Social Science Professional,
- Protective Service Professional.

Organisations:

- Wiltshire Police,
- Directorate of Government Analytical Laboratory,
- Medway School of Pharmacy,
- HM Forces.

Many students choose to go on to an academic career or to further their research interests at PhD level, which provides a significant boost to their market value and employability.

Academic staff

You will be taught by a wide range of subject specialists and industry professionals, who draw upon their research and industrial expertise to provide stimulating and informed teaching. Here are some staff teaching at the Cranfield Forensic Institute (CFI):



Dr Anicee Van Engeland, Associate Professor of International Security and Law

Anicée graduated in law from Paris II Assas and furthered her studies with three masters a master's in law from Harvard Law School, a master's in International Relations from Paris II Assas and a master's in Iranian studies from Paris III Sorbonne. She also studied a PhD in Islamic Studies, Politics and Law, and prior to joining academia she worked for International Committee of the Red Cross (ICRC). Anicée has held visiting lectureships at Cardiff University, Nagoya University and Azad University; she has also held visiting research positions at Harvard Law School and the Oxford Centre for Socio-Legal Studies before joining Cranfield University.



Dr David Errickson, Lecturer in Archaeology and Anthropology

After obtaining his BSc in Archaeology and a Diploma in Professional Archaeological Studies, David did an MSc in Forensic Archaeology and Crime Scene Investigation at Bradford University. David later undertook a PhD in Forensic Anthropology at Teesside University, while lecturing part-time in forensic science. He joined Cranfield's Forensic Institute in 2018.



Stephanie Giles, Lecturer in Crime Scene Investigation, Course Director Forensic Investigation MSc

Stephanie is a Crime Scene Investigator with seven years' experience in the field. She has undertaken national consultancy work in the field of disaster victim recovery and the specialist area of forensic taphonomy where she has advised on police cases concerning the estimation of the post-mortem interval of decomposing remains. Stephanie has delivered forensic scene analysis training overseas in collaboration with the International Committee of the Red Cross. She joined Cranfield University in 2018 and has used her industry skills to become the module leader in 'Investigation and Evidence Collection' on the Forensic MSc programme and a Course Director of the Forensic Investigation MSc. In 2019 she was nominated for the 'Women in Defence UK Awards'.

"I was drawn to Cranfield for various reasons. I liked that the University was exclusively postgraduate. I could see how this would give teaching staff more time for students. The structure of the course was especially appealing with modules concentrated over short periods instead of spread over whole terms. The course seemed to be very practical in nature, focusing on the application of methods in real-life scenarios. The style of assessments appeared varied and geared to developing practical and professional skills. The fact that the course is formally accredited by The Chartered Society of Forensic Science is also a huge draw."

Lianne Bettis, current student, (Forensic Archaeology and Anthropology MSc)

Key facts and statistics

Course information



Full-time
One year



Part-time
Up to three years
See the course page for more information about part-time study.



Start date
October



Location
Our courses are delivered at Cranfield campus, however some modules may be taught at the Defence Academy of the United Kingdom, Shrivenham. Please see individual course web pages.



Fees
Please see the individual course pages on our website for full fee information and full-time or part-time options. Terms and conditions apply.

See www.cranfield.ac.uk/fee-information

Cohort profile*



Geographic spread
67% UK
19% EU
14% Rest of world



Typical age range
19-29 years



Average cohort size
9



Student / academic staff ratio
5:1

*Figures as at June 2021.

Accreditation

The Chartered Society of Forensic Sciences is the professional body representing forensic sciences. It is internationally-recognised and has around 3,000 members in 60 countries. The following MSc courses are accredited:

- Forensic Archaeology and Anthropology,
- Forensic Ballistics,
- Forensic Explosive and Explosion Investigation,
- Forensic Investigation.



The
Chartered
Society of
Forensic
Sciences

Financing your studies

If you need advice on funding your course, we can provide information and a range of online tools to help you put together the funding package you need for your course and living costs.

There are many other sources of financial support available. Please see our website for more details: www.cranfield.ac.uk/funding

How to apply

Read more about our entry requirements and how to apply.

www.cranfield.ac.uk/apply



Life at Cranfield

Cranfield Campus

Our courses are all delivered at Cranfield campus, located just over an hour from London in the English countryside. It's environment supports close working relationships between our multinational postgraduate students, academics and industry experts.

Cranfield University at Shrivenham

For select modules, students will also have access to the facilities at the Defence Academy of the United Kingdom, Shrivenham which is a Ministry of Defence (MOD) site. This is located in beautiful countryside near Swindon, with quick and convenient links to London and major UK airports.

Cranfield Ordnance Test and Evaluation Centre (COTEC)

COTEC is situated on the edge of Salisbury Plain in Wiltshire. Students on some courses and modules will have the opportunity to use the facilities at COTEC to undertake exercises, evaluations and independent tests at this safe and expert site.

www.cranfield.ac.uk/visit



Important information about security clearance for courses that are held in full or part at Shrivenham

Some Cranfield University courses are delivered at the Defence Academy of the United Kingdom, Shrivenham which is a Ministry of Defence (MOD) site. All applicants to courses that are wholly or partially delivered at Shrivenham must complete the BPSS (HMG Baseline Personnel Security Standard V4 April 2014) prior to registration on the course or must already hold a security clearance to this level or higher. It will take additional time to process your BPSS clearance application and you will not be able to do this course if you fail to obtain this. Please refer to the course page on the website for full details.

Take a virtual tour to see inside some of our facilities:

virtualtour.cranfield.ac.uk

Cranfield University works with over

1,500 businesses and governments
based in over 40 countries

These organisations include:



www.cranfield.ac.uk/cfi

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Every effort is made to ensure that the information in this brochure is correct at the time it is printed. Please check our website for the latest information. Photographs in this publication were taken prior to and during the coronavirus pandemic. We continue to monitor the pandemic and take all the necessary steps to ensure the health, safety and wellbeing of our Cranfield community.

See www.cranfield.ac.uk/coronavirus CDS-FS-September-2021.



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