



# MSc in Digital Investigation & Forensic Computing

## UCD School of Computer Science and Informatics

### UCD Centre for Cybersecurity & Cybercrime Investigation



## Why is this course for me?

The MSc in Digital Investigation & Forensic Computing is designed for information technology specialists who need to acquire skills for the prevention and investigation of computer-related incidents. It introduces concepts, principles and professional practice in digital investigation, yet is highly practical and gives you information, knowledge and skills that you can apply straight away. It is delivered simultaneously in the classroom in Dublin and online allowing you to attend and participate from your home or office, coming to UCD only for

workshops and examinations each year. You can take the MSc part time over two years or full time over one year. The programme is delivered in cooperation with the leading Irish experts in the field with an engaging mix of learning sessions, hands-on labs, case studies, tool demonstrations and in-depth discussions. A unique aspect to the course is the international student and alumni network that gives you an international perspective and global contacts that will be valuable in your future career.

## What will I study?

The programme is highly practical and uses tutors from industry and law enforcement as well UCD academics. This course is open to both law enforcement and civilian experts.

### Modules

- Computer Forensic Foundations
- Law for IT Investigators
- Application Forensics
- Investigative Techniques
- Corporate Investigations
- Information Security
- Digital Investigation Project

*This is an individual research project on a real-world topic in digital investigation.*

### Programme outcomes

On successful completion of the programme students will be able to:

- Perform forensic analysis of a personal computer running Windows operating system
- Understand legal issues in keeping information secure and in the conduct of investigations
- Understand the role and the use of digital evidence in litigation
- Prepare investigation reports and court testimony
- Analyse user activity in Windows OS
- Use crime scene search techniques, handle evidence and interview witnesses
- Prepare investigative reports and court testimony
- Perform investigations into misuse of IT in a corporate environment
- Investigate crime against computer systems including malware
- Deploy information security mechanisms
- Conduct independent research and convey the knowledge discovered to colleagues



## What are the career opportunities?

Cybercrime and identity theft are among the fastest growing crimes, yet employers cannot find people who have the right mix of skills to work in this area. Graduates of the MSc are employed as project managers, developers and information security specialists, computer forensics and security analysts, test, audit and engineering specialists.

They work at IT companies such as Dell, Detica Group, Jinny Software, Symantec, Oracle, IBM Global Services, as well as in law enforcement agencies, in banks and financial institutions such as J.P. Morgan, Bank of Ireland, Central Bank of Ireland, Pioneer Investments and consultancies such as Ernst & Young.

## Why study at University College Dublin?

Some reasons to study at UCD:

- In the top 1% of the world's universities, winner of The Sunday Times University of the Year award for 2012
- Ireland's largest provider of graduate education
- A diverse university, both in academic disciplines and culture
- Emphasis on research and innovation
- Purpose-built, modern parkland campus, close to Dublin city centre
- Extensive range of campus accommodation

### UCD College of Science

The College is dedicated to the creation, delivery and communication of new knowledge and innovation across the spectrum of science. With a staff of 750 and a student population of 5500 including 1800 postgraduate students, the College is a vibrant community dedicated to excellence in all our pursuits.

### UCD School of Computer Science & Informatics

The School is one of seven Schools within the College of Science. It has an excellent reputation among students, staff and employers for the range and quality of its programmes. The School is currently enjoying its most successful period to date with a rapidly expanding curriculum and research agenda matched with growth in student and staff numbers.



### Centre for Cybersecurity & Cybercrime Investigation (CCI)

Since 1998, CCI has been working closely with law enforcement agencies and industry practitioners in seeking solutions to technology related crimes. CCI are special advisors to the European Cybercrime Training & Education Group at Europol and are members of the INTERPOL steering committee for the regional working parties on Hi Tech Crime Training. UCD CCI scientists continue to work on applied research and have developed a number of forensic tools.

## How do I apply?

### Entry Qualifications

Applicants to the MSc Digital Investigation and Forensic Computing normally have a bachelor's degree in computer science or equivalent work experience. However, all applicants are assessed on a case by case basis.

### Flexible delivery options

Most participants take the MSc part time over 2 years but it is also possible to do it full time over 1 year. Lectures are held at UCD two evenings every week during term time. A part time student doing the course over two years will attend 4 hours of lectures on Tuesday evenings in Year 1, switching to Wednesday evenings in year 2. Full time students attend lectures on Tuesday and Wednesday evenings. As some students choose to follow the course online, lectures are simultaneously broadcast live via the classroom website. While personal attendance at weekly lectures is not mandatory, students are required to come to Dublin for approximately 5-10 days each year to complete examinations & workshops. These sessions are normally held in May or June. In addition to lectures, students perform self-study assignments during the year, using their personal computers and UCD's online computer lab. Hands-on practical assignments, which require laboratory equipment, take place at the end of the year in the form of intensive full-day workshops during the examination period. In addition, students may book time in UCD's digital forensic lab and use the equipment for self-study during the year.

### Applying Online

To apply online, please go to: <http://www.ucd.ie/apply>

### Fee Information

[www.ucd.ie/registry/adminservices/fees](http://www.ucd.ie/registry/adminservices/fees)

### Contact



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### Useful Links

[www.ucd.ie/cci](http://www.ucd.ie/cci)  
<http://www.csi.ucd.ie/>  
<http://www.ucd.ie/science/>  
<http://www.ucd.ie/>  
<https://twitter.com/UCDCCI>