#### SECURITY AND CRIME SCIENCE

# **LOCL**

# UCL SECReT

## **UCL Security Science Centre for Doctoral Training**

Training the next generation of researchers in security and crime science

Join UCL SECReT and become part of one of Europe's leading doctoral training centres for security and crime science research.

Make contact with organisations in your field, carry out real world research and build valuable relationships with other students and academics. As a truly multidisciplinary research centre, UCL SECReT will give you the breadth of knowledge, experience and skills that you need to pursue your career.

Cover photograph shows SECReT students during a behind-thescenes trip to the International Criminal Court in The Hague.

# Programme structure

## Route A: MRes (1-year) + PhD (3-year) = 4-year programme

During the foundation year, students take three compulsory taught modules, and three optional taught modules, worth 15 credits each. To complete the MRes, students also undertake a 15,000-word research project, worth 90 credits.

#### **Compulsory modules**

- Doing research in security science
- Foundations of security and crime science
- · Research project
- Risk and contingency planning

## Optional modules may include

- · Horizon scanning and the changing nature of crime
- Perspectives on Organised Crime
- Perspectives on Terrorism
- Introduction to cybersecurity
- Applied Data Science
- · International Law and Human Rights\*
- · Anthropology of Politics, Violence and Crime\*
- Introduction to Machine Learning\*
- Global Monitoring and Security\*
- Disaster Risk Reduction in Cities\*
- Emergency and Crisis Planning\*
- Making, Designing & Building Connected Sensor Systems\*
- Science Journalism\*
- ...and hundreds of other possibilities from around UCL, subject to the below\*

\*These modules are taught by other departments at UCL and their availability is solely subject to the discretion of the module convenor. We cannot guarantee availability in advance.

## Route B: 3-year PhD programme

On this route, students begin their PhD straightaway (without the foundation year) but have the opportunity to audit a number of taught modules, including *Foundations of security and crime science* and *Doing research in security science*, without being assessed.

## For route B, applicants are required to submit a detailed PhD proposal as part of their application.

Students on both routes are encouraged to undertake a 3-6 month internship during their PhD, and to seek opportunities to find real world applications for their research.

## **Research areas**

SECReT students come from a range of scientific backgrounds. They work on real world problems including radicalisation, terrorism, organised crime, cyber security, explosives, baggage screening, forensic analysis, transport security, wildlife crime, and sex trafficking. SECReT research falls under four broad areas:

## Crime and security analysis

- · Big data analysis
- Ecological modelling
- · Geographical analysis
- · Human error analysis
- Scripting and process analysis
- · Social network analysis

## Forensic science

- · Cognitive forensics
- DNA
- Fingerprints
- Forensic archaeology and forensic anthropology
- Forensic geoscience
- · Inference and interpretation
- · Trace evidence dynamics

<sup>44</sup> The topics covered in the teaching aspects were interesting with core skills embedded. [Studying on this programme] has had a lasting impact on how I communicate with different audiences, how I approach problems and always asking 'why' and 'so what' before starting a new project. <sup>99</sup>

(2013 graduate)

## Design and technology

- UAVs
- Radar
- Chemical sensors
- X-ray scanners
- Cyber
- · Ethics and technology

## Future crime

Applications

e.g. Drones, autonomous vehicles, non-GPS navigation, Blockchain, performance-enhancing prosthetics

#### Background changes

e.g. Climate change, mass migration, antimicrobial resistance, new finance/banking models, commodity scarcities

#### • Generic technologies

e.g. Al, robotics/nanobots, quantum computing, 3D printing, hyper-connectivity, smart materials, Internet of Things (IoT), wearable ICT

# SECReT industry partners

SECReT partners comprise a broad spectrum of stakeholders in the crime and security world.

They include the Home Office, SELEX, Rapiscan, L3 Communications, Atomic Weapons Establishment, DSTL, Wynyard Group, Metropolitan Police, National Crime Agency, British Transport Police, NHS, HP Labs, Thales, BAE and BT.

We welcome partners from across the globe.

## Partner benefits

- Opportunity to guide the research of, and ultimately recruit, the brightest researchers in the field.
- Opportunity to support a studentship (cost: £74,000–£98,000 over 3–4 years) and gain a dedicated piece of research.
- Opportunity to put your data to use to generate research relevant to your organisation

If you are interested in becoming a SECReT industry partner, please contact us via **scs@ucl.ac.uk** 

<sup>44</sup> Over the years our industry partners have enabled our students with data, lab facilities, project guidance, expert advice, sponsorship, and career paths. For instance, RAPISCAN funded three PhDs on the programme to develop next-gen airport scanners; the UK's National Crime Agency, and the UK Ministry of Defence's DSTL (Defence Science and Technology Lab) have, between them, employed a significant number of our graduates. This sort of support makes carrying out your doctorate at UCL SECReT a strong career proposition. <sup>9</sup>

# Funding and scholarships

Students on this programme can be funded in a variety of ways:

They may apply for scholarships\* through UCL SECReT Please visit **www.ucl.ac.uk/secret-phd** for details.

They may apply for scholarships elsewhere, e.g. other UCL scholarships Please visit **www.ucl.ac.uk/prospective-students/scholarships** for details

They may be sponsored, e.g. by a commercial or public sector organisation.

They may be self-funded.

Fees are subject to change annually and you can check **www.ucl.ac.uk/students/fees/pay-your-fees/schedules** for up-to-date information.

As well as fees, you will need to ensure that you are able to fund your living costs for the duration of the programme.

\*Scholarships may cover fees only, or stipend and fees.

## The SECReT Society

All UCL SECReT MRes and PhD students are members of the SECReT Society – set up by our students, for our students. The society aims to foster a real sense of community and support for all, and encourages regular social events and the sharing of research and ideas.

0 @uclsecretsociety



# What do our alumni say about the programme?

## Name

**Dr Helen Brayley** 

## Graduated 2013

#### **Current situation**

I work in Counter Terrorism at the UK Home Office.

#### The best bits of the programme!

Getting to work with a wide range of students and academics from different backgrounds – it really helped me develop my problem solving skills and ability to view things from different perspectives.

#### How did the programme help me to further my career

The skills I learnt during my PhD helped me progress to the point of getting [my current] job.

#### Name

Dr Selina Kolokytha

## Graduated 2015

#### **Current situation**

Physicist engineer working in Radiation Imaging for Security (for an international company, based in France).

#### The best bits of the programme!

The multidisciplinary and interdisciplinary knowledge and colleagues, it was very interesting working with students from all backgrounds to better understand and improve global security.

## How did the programme help me to further my career

My PhD focus led to my current role.

## UCL's Department of Security and Crime Science and the Jill Dando Institute

On 26th April 1999, British journalist, newsreader and BBC Crimewatch presenter Jill Dando was murdered. Co-presenter of Crimewatch, Nick Ross (and friends) raised money to establish an institute in her memory. The UCL Jill Dando Institute for Security and Crime Science – the JDI – was established at UCL in 2001. The forget-me-not flower was adopted as the JDI logo as a reminder of Jill.

The Department was created a few years later – under the umbrella of the JDI – to offer taught degrees. We are the world's first security and crime science department, dedicated to equipping current and future professionals working in the crime and security field with the knowledge and skills they will need to meet the challenges of the 21st century.

**UCL SECReT** was founded in 2009 with £17m of funding and support from the EPSRC and an array of public and private sector organisations working in crime reduction security and law enforcement. It has become one of the premier centres for doctoral research training in these fields. Numerous students from around the world have passed through the programme, going on to work in prestigious careers in crime reduction, security and academia with organisations such as the UK Home Office, the MoD Defence Science and Technology Lab, Rapiscan, Darktrace, the UK National Crime Agency and a range of top universities. The programme embodies world-class doctoral research, supervised by leading academics, and focuses on developing important transferable skills such as networking and presenting.

## **Further information**

## **Entry requirements**

A minimum of a 2:1 (upper second-class) first degree in a broadly sciencebased subject e.g. computer science, chemistry, engineering, information and communications technologies, materials, mathematical sciences, physics and some life and social sciences.

## Visit our website

For up-to-date information on the programme, current fees and scholarships, open events, and FAQs for applicants please visit: **www.ucl.ac.uk/secret-phd** 

## Contact

Send any questions to scs-admissions@ucl.ac.uk



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