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# Master of science (MSc) in forensic science orientation digital investigation and identification

## GENERAL OUTLINE

### Objectives

The Master of Science in Forensic Science, orientation Digital Investigation and Identification, offers theoretical, technical and practical training in digital investigation and identification in the information society. You will acquire a transdisciplinary grasp and in-depth knowledge of the different fields of forensic science, rounded off with advanced technical skills in digital technologies. The technical IT component is offered in collaboration with the IT Division of the Bern University of Applied Sciences.

The transdisciplinary approach encourages synergies with criminology in the context of new Internet paradigms: social networks, discussion forums, structures and importance of criminal networks active on the Internet, virtualization of certain criminal activities.

### Career prospects

This unique and innovative academic training satisfies a clearly identified need in police work, but also in the realm of public and private enterprises. Many firms need to envisage a holistic approach to security and criminality linked to new technologies, whether in relation to acts of fraud committed internally by employees (data theft) or cyberattacks, as well as economic espionage and counterfeiting.

- Forensic science laboratories in Switzerland and abroad
- Technical and scientific police services in Switzerland and abroad
- Police services at a cantonal or federal level
- Academic and research careers in the field of forensics
- Service providers and consulting firms in the fields of digital technology and information security
- Internal IT departments of major public and private enterprises

[www.unil.ch/perspectives/esc](http://www.unil.ch/perspectives/esc)

## Is the digital fingerprint omnipresent?

### GENERAL INFORMATION

#### Organiser

School of Criminal Justice, Faculty of Law, Criminal Justice and Public Administration: [www.unil.ch/esc](http://www.unil.ch/esc)

#### Degree awarded

Master of Science (MSc) in Forensic Science, orientation Digital Investigation and Identification

#### ECTS credits

120

#### Duration

4 semesters

#### Teaching language

French. Recommended level: C1.

A good understanding of English is necessary since most of the literature is published in English and a few courses may be taught in English.

#### Contact

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#### More information

[www.unil.ch/esc](http://www.unil.ch/esc)



## EDUCATIONAL CONTENT

### Description

The Induction and in particular, the Mandatory courses cover the interdisciplinary fields of forensic science, while the Specialised subjects offer a detailed understanding of both theory and practice. Classes in the Digital Investigation and Identification orientation (40 ECTS) provide in-depth knowledge in theoretical, technical, practical and legal areas of digital technology: investigation and information searches on the Internet or the Dark Web, digital investigation of a hard disc or mobile phone, real case studies from a legal perspective. Courses offered by the IT Division of the Bern University of Applied Sciences cover technical knowledge of computers, operating systems and networks.

The programme is rounded off with optional courses (18 ECTS credits) spread over the two-year period. Finally, you will complete a degree project consisting of personal research (30 ECTS).

### Examinations

A variety of assessment methods are used during the course. Practical assignments, continuous assessments and seminars take place during class time. Written and oral examinations take place during the Faculty's examination sessions. The dissertation is assessed on the basis of a dissertation seminar, written version and viva.

### Mobility

The school has concluded agreements for forensic science, in particular with the University of Technology of Sydney and the King's College in London. Semesters or projects successfully completed abroad are, in principle, recognised on the student's return from the relevant study periods.

The studies do not include any compulsory internships, but most students do in fact benefit of internships organised by the School.

### Skills development

University studies develop, in addition to specific academic skills, a great many transverse skills: communication, critical, analytical and summarising faculties, abilities in research, and so on.

This panoply of skills, combined with specialist knowledge acquired in the course of studies, is excellent preparation for a wide range of employment opportunities such as those mentioned in the « Career prospects » section.

## SYLLABUS

### Part 1: Induction (50 ECTS)

#### Module 1.1. Mandatory Courses

- Appraisals, Mandates and Reports
- Interpretation of Scientific Evidence
- Statistical Data Processing
- Investigation Methods (seminars)

14 ECTS credits

#### Module 1.2. Specialised Subjects (Optional)

- Narcotics Profiling
- Organic Microtraces
- Causes of Fire or Explosion
- Appraisal of Handwriting and Signatures
- Identification of Firearms based on Munitions Information
- Operational Criminal Analysis
- Criminal Analysis on the Internet
- IT Crime and Cybercriminality: case studies

18 ECTS credits

Module 1.3 Choice of subjects (18 ECTS credits over two years)

### Part 2: Orientation Digital Investigation and Identification (40 ECTS)

#### Module 2. IN. 1 Orientation Courses

- Criminality Watch and Online Investigation
- Digital investigation: Mobile Phones and Smartphone Apps
- Optional Specialist Courses (9 credits)

20 ECTS credits

#### Module 2. CC. 2. Complementary Courses (taught in Bienne)

- Basics of Computer Science, C and Assembler Programming
- Telematics
- Operating Systems
- Network Design and Services
- Personal Practical Work

20 ECTS credits

### Part 3: Master's Thesis 30 ECTS credits



## PRACTICAL INFORMATION

### Admission requirements

Candidates must be holders of a Bachelor of Science in Forensic Science awarded by a Swiss university, affiliated to the "Forensic Science" study branch (swissuniversities). Another degree or university title may be judged to be equivalent and give access to this Master's degree course, with or without further conditions. The School of Criminal Justice is competent for the final decision on equivalence (info.esc@unil.ch), subject to the candidate's formal admissibility to the master's degree course.

### Enrolment and final date

Applications must be submitted to the Admissions Department ([www.unil.ch/immat](http://www.unil.ch/immat)) before 30 April.

Candidates needing a visa to study in Switzerland: 28 February

### Start of courses

Mid-September

Academic calendar: [www.unil.ch/central/calendar](http://www.unil.ch/central/calendar)

### Part-time Master's degree

Under certain conditions, a Master programme can be followed part-time.

[www.unil.ch/formations/tempspartiel](http://www.unil.ch/formations/tempspartiel). See also the complement to the study plan: [www.unil.ch/esc](http://www.unil.ch/esc)

### Timetables

[www.unil.ch/esc](http://www.unil.ch/esc)

### General information on studies, guidance

[www.unil.ch/soc](http://www.unil.ch/soc)

### Career prospects

[www.unil.ch/perspectives](http://www.unil.ch/perspectives)

### Accommodation and financial assistance

[www.unil.ch/sasme](http://www.unil.ch/sasme)

### International

[www.unil.ch/international](http://www.unil.ch/international)

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