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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, especially:

- 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

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| le savoir vivant |

## 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 Master of Science (MSc) in Forensic Science has been entirely reworked and reorganised to offer an even more flexible, specialist and applied course, with a particular focus on practical aspects in each orientation. The “mandatory courses” in year 1 cover cross-disciplinary areas of forensic science, which can be supplemented with the equivalent of 18 ECTS credits from a choice of options, depending on your expectations and interests.

“Specialist subjects” and “additional subjects” are offered in both years of the course and 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 in Bienne provide additional technical IT knowledge for those who request it.

In the second year, as part of the module “Cross-disciplinary practical work”, which supplements the “mandatory courses”, you put your knowledge into practice by working on fictional cases covering several types of traces and requiring the coordinated involvement of several groups of forensic experts. The fourth semester is dedicated to a dissertation based on a piece of ambitious personal research, worth 30 ECTS credits.

#### Mobility

The School has agreements in place with several international universities. You may spend one semester (max. 30 credits) abroad as part of your course, during your second year. Semesters or projects successfully completed abroad are, in principle, recognised on the student’s return from the relevant study periods.

Some dissertation work may be completed in a professional setting with one of our partners.

#### 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

#### Module 1: Mandatory Courses

- Appraisals, Mandates and Reports
- Interpretation of Scientific Evidence and Decision-Making
- Lectures and Seminars
- Cross-disciplinary Practical Work
- Choice of Options (18 ECTS)

#### 38 ECTS credits

#### Module 2: Specialised subjects (choice of options)

- Digital investigation: Mobile Phones and Smartphone Apps
- Criminality Watch and Online Investigation
- Cryptography and Digital Authentication
- Advanced Practice in Digital Investigation and Identification
- Operational Criminal Analysis
- Causes of Fire or Explosion
- Appraisal of Handwriting and Signatures
- Enseignements à choix (8 to 16 ECTS)

#### 40 ECTS credits

#### Module 3: Additional subjects (choice of options)

- Security data and intelligence analysis
- Computer Forensic
- Malware & Cyber Threats
- IT Crime and Cybercrime: Case Studies
- Machine Learning in Forensic Science
- Cybercrime and Online Abuse
- Specialist Courses (Choice of Options)

#### 12 ECTS credits

#### Part 4: Master’s Thesis

#### 30 ECTS credits

### GENERAL 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](mailto: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/master-temps-partiel](http://www.unil.ch/formations/master-temps-partiel). See also the Master’s degree regulations: [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)

#### Accommodation and financial assistance

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

#### International

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

