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# Master of science (MSc) in crime data analysis and traceology

## GENERAL OUTLINE

### Objectives

The Master of Science in Crime Data Analysis and Traceology provides cross-disciplinary training in the criminological sciences and data analysis. You will develop a unique skillset, combining complementary approaches and areas of expertise to analyse crime and security issues at a time when society is increasingly driven by digital technology.

The Master of Science is organised in partnership with the School of Criminology of the University of Montreal which is the leading department of criminology in the French-speaking world. Programmes offered by the School cover all three university cycles and are recognised at an international level. Some are unique to Canada and all stand out by their exceptional quality of teaching which gives equal weight to European and American influences.

### Career prospects

You will develop theoretical and applied knowledge that will allow you to identify security issues and problems in an international and multicultural context through a degree course divided between Switzerland and Canada.

In addition to these specific skills, university studies develop a great many transverse skills: oral and written communication, critical, analytical and summarising faculties, abilities in research, and so on.

These panoply of skills prepares to careers in different fields of public and private security related to intervention, analysis and prevention, in particular with:

- police, law enforcement and penalty enforcement organisations;
- public administrative bodies, authorities and private data collection and analysis organisations;
- companies, particularly in security, anti-counterfeiting and anti-fraud departments;
- international (non-) governmental organisations.

Alumni move into a wide variety of roles, for example as an analyst in an insurance company.

[unil.ch/perspectives/unil-et-apres](http://unil.ch/perspectives/unil-et-apres)

The trace to  
understand,  
prevent and  
manage security  
problems

## GENERAL INFORMATION

### Organisers

School of Criminal Justice, Faculty of Law,  
Criminal Justice and Public Administration:  
[www.unil.ch/esc](http://www.unil.ch/esc)  
University of Montreal, School of Criminology:  
[crim.umontreal.ca/accueil](http://crim.umontreal.ca/accueil)

### Degree awarded

Master of Science (MSc) in Crime Data Analysis  
and Traceology

### ECTS credits

120

### Duration

4 semesters, one of them at the University of  
Montreal (UdeM)

### Teaching language

French. Recommended level: C1. A very  
good understanding of English is necessary,  
since most criminology literature is pub-  
lished in English and a few block courses  
are given in English.

### Contact

Secretariat  
School of Criminal Sciences  
Quartier UNIL - Sorge  
Batochime  
CH - 1015 Lausanne  
Tél. +41 (0)21 692 46 00  
[info.esc@unil.ch](mailto:info.esc@unil.ch)

### More information

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



## EDUCATIONAL CONTENT

### Description

In the first semester, you will travel, in principle, to the University of Montreal, where you choose four courses in criminology from among a wide range on offer.

In the ensuing semesters you complete your training in forensic science and criminal analysis. You will develop expertise in gathering, processing and analysing mass data in physical and digital environments.

Finally you complete a project consisting of personal interdisciplinary research work. The degree course includes two integration seminars which prepare you for the dissertation with guided reading, conferences, and preparation and presentation of your research project.

This course will thus lead you to:

- Detect, describe and interpret criminal phenomena by means of traces and in the light of criminological theories.
- Exploit the informational value of traces in processes of prevention, intervention and problem reduction.
- Understand data processing, organisation and visualisation principles and methods.
- Implement tools and methodological approaches used in criminal justice and information sciences.

### Examinations

To obtain the Master of Science degree, you must pass the examinations and validations laid down for each component of the programme, in accordance with provisions outlined in the study plan and regulations.

### Mobility

Study grants may be awarded to students to cover travel and accommodation costs arising from the semester spent at the University of Montreal.

Some Master's theses may sometimes be done in a professional environment thanks to partnerships.

### Skills development

The Master of Science in Traceology and Crime Analysis Lastly, the international dimension of the course allows you to identify security problems and challenges from a multicultural and international perspective.

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

### 1<sup>st</sup> semester

Courses followed at the University of Montreal subject to availability under the exchange agreement.

#### Module Criminology

4 optional courses, including:

- 1 course in Methodology
- 3 courses in Analysis of Criminal Phenomena

28 ECTS credits

### 2<sup>nd</sup> and 3<sup>rd</sup> semesters

Courses followed at the University of Lausanne

#### Module Data and Security

- Criminal Policy
- Policing
- Security Data and Intelligence Analysis
- Operational Criminal Analysis
- Advanced Practice in Criminal Analysis
- Choice of Options (6 ECTS)

32 ECTS credits

#### Module Forensic Science

- Internet Investigations
- Machine Learning in Forensic Science
- Optional Courses in Forensic Science (17 ECTS)

30 ECTS credits

### 4<sup>th</sup> semester

#### Module Master's Thesis

- Integration Seminar I (in Montreal during the first semester)
- Integration Seminar II (in Lausanne during the third semester)
- Conferences and seminars (during all four course semesters)
- Personal Interdisciplinary Work

30 ECTS credits

## GENERAL INFORMATION

### Admission requirements

Applicants must be the holders of a Bachelor of Science in Forensic Science or a Master of Law in Criminology and Security. A different degree or university qualification may be deemed equivalent and allow access to the Master of Science with or without conditions. Equivalence is determined by the School ([info.esc@unil.ch](mailto:info.esc@unil.ch)), subject to the candidate's formal admissibility for the Master of Science.

### 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

Autumn semester: mid-September or according to the calendar of the Université de Montréal.  
UNIL 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)



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