

COURSE CATALOGUE - MSC PROGRAMS

SPRING 2025

International students enrolled in the ECE Exchange Programs can select English taught courses from the following Masters of Science programs:

- MSc Data Management & Artificial Intelligence
- MSc Cybersecurity Management
- MSc Sustainable Energy Future

Please note that all the English taught courses are taught at the Master's level. Please take into account that courses from different programs cannot be mixed. Allocation to program and courses will be done based on student completion of prerequisites and availabilities.

Starting and ending dates will vary according to the program.

PROGRAM	COURSE PERIOD	EXAM PERIOD
M1 MSC DATA MANAGEMENT & ARTIFICIAL INTELLIGENCE	January 6th to April 11th 2025	April
M2 MSC DATA MANAGEMENT & ARTIFICIAL INTELLIGENCE	January 27th to May 30th 2025	May
M1 MSC CYBERSECURITY MANAGEMENT	January 6th to April 11th 2025	April
M1 MSC SUSTAINABLE ENERGY FUTURE	January 6th to April 11th 2025	April



>A HIGH-LEVEL PROFESSIONAL POSTGRADUATE COURSE IN DIGITAL TECHNOLOGIES

ECE Masters of Science Programs are **specialized training programs** whose ambition is to prepare our graduates to take up the challenges posed by the **digital and environmental transitions.** They implement a pedagogy of excellence that allows the consolidation of **scientific and technical fundamentals** while developing the **managerial skills** required by any future decision-maker.



MSC DATA MANAGEMENT & ARTIFICIAL INTELLIGENCE - MI

SECOND SEMESTER - ENGLISH

>ABOUT THE PROGRAM

This program will provide the managerial and technical skills required to master **Big Data analysis** in order to collect the information needed to make strategic decisions and create innovative services. You will learn how to create information systems using data from its collection to its analysis and artificial intelligence techniques.

>PREREQUISITES

A first-class undergraduate degree with honors in mathematics (covering calculus, linear algebra and statistics) and computer science (covering programming, data structures and algorithms), with some exposure to databases or information systems preferred.



MORE INFO HERE

MODULES	COURSES	31 ECTS	HOURS
Specialisation	Mathematics for Data Science	2	16
	Information Systems Management	2	16
	NoSQSL Database	2	16
	Advanced Machine Learning	3	28
	Cloud Computing	2	16
	Functional Programming	3	28
	Data integration	3	24
Languages & Contemporary Issues	Information Systems Management	2	10
	Corporate Management	2	24
	Management & Ethics	2	4
	Marketing in a digital world (Online class)	3	30
	French Language	5	30



MSC DATA MANAGEMENT & ARTIFICIAL INTELLIGENCE - M2

SECOND SEMESTER - ENGLISH

>ABOUT THE PROGRAM

This program will provide the managerial and technical skills required to master **Big Data analysis** in order to collect the information needed to make strategic decisions and create innovative services. You will learn how to create information systems using data from its collection to its analysis and artificial intelligence techniques.

>PREREQUISITES

A first-class undergraduate degree with honors in mathematics (covering calculus, linear algebra and statistics) and computer science (covering programming, data structures and algorithms), with some exposure to databases or information systems preferred.



MORE INFO HERE

MODULES	COURSES	25 ECTS	HOURS
Specialisation	Big Data Ecosystem	3	28
	Data Analysis with Spark	1	12
	Business Intelligence	2	20
	Data Analytics	3	28
	Real Time Big Data Search and Analytics	1	8
	Mastering Machine Learning	2	16
	Deep Learning	3	28
	Ethics of Artificial Intelligence (Online Class)	2	16
Languages & Contemporary Issues	Workplace, Health, Safety & Security (<i>Online Class</i>)	1	10
	Change Management	1	10
	Job Interview Simulation	1	10
	French Language	5	30



MSC CYBERSECURITY MANAGEMENT - M1

SECOND SEMESTER - ENGLISH OR FRENCH ≱₩



>ABOUT THE PROGRAM

The aim of the Cybersecurity Manager training program is to acquire a solid understanding of the technical and managerial aspects of information specific features.

>PREREQUISITES

A first-class undergraduate degree with honors in mathematics (covering calculus, linear algebra and statistics), computer science (covering programming, systems cybersecurity, its implementation and its data structures and algorithms), as well as networks and operating systems.



MORE INFO HERE

MODULES	COURSES	31 ECTS	HOURS
Specialisation	Machine Learning I	1.5	15
	Machine Learning II	1.5	15
	Information System Management	2	20
	Computer Network Security	2.5	27
	Pentest	2.5	27
	Container Security	2.5	27
	Software Security	2	18
	Information System Security	2.5	24
Languages & Contemporary Issues	Individual Relationship Management	2	10
	Corporate Management	2	24
	Management & Ethics	2	4
	French Language	5	30
	Marketing in Digital World (Online class)	3	30



MSC SUSTAINABLE ENERGY FUTURE - M1

>ABOUT THE PROGRAM

This program offers a global vision of the energy A first-class undergraduate degree with honors in and environment sectors, drawing on both science and technology, but also on the humanities and social sciences (political science, economics, etc.).

>PREREQUISITES

engineering, physics, chemistry, materials science, mathematics, economics, geography or related numerate disciplines.



MORE INFO HERE

MODULES	COURSES	30 ECTS	HOURS
	Electrotechnics & Power Electronics	2.5	18
	Digitalisation O&M (Operation and Maintenance)	2	14
	Nuclear Energy	2	12
	Physics for Energy II	2	12
Specialisation	Renewable Energy II	4	38
	Development of Renewable Energy Projects	1	10
	Sustainable Development	2.5	18
	Technologies for Smart	1	14
Languages & Contemporary Issues	Individual Relationship Management	2	10
	Corporate Management	2	24
	Management & Ethics	2	4
	French Language	5	30
	Marketing in Digital World (Online class)	3	30

