COURSE CATALOGUE - MSC PROGRAMS

FALL 2026

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

- MSc Cybersecurity Management
- MSc Data Management
- MSc Artificial Intelligence
- MSc Sustainable Energy Futures
- Msc Embedded AI & Edge Intelligence
- Msc Information Systems and Digital Sovereignty
- Msc AI for Business Transformation

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.

PROGRAMS	COURSES AND EXAMINATIONS
MSc Cybersecurity Management	October 1st to December 20th 2026
MSc Data Management	
MSc Artificial Intelligence	
MSc Sustainable Energy Futures	
Msc Embedded AI & Edge Intelligence	
Msc Information Systems and Digital Sovereignty	
Msc AI for Business Transformation	

ABOUT

>A HIGH-LEVEL PROFESSIONAL POSTGRADUATE COURSE IN DIGITAL TECHNOLOGIES

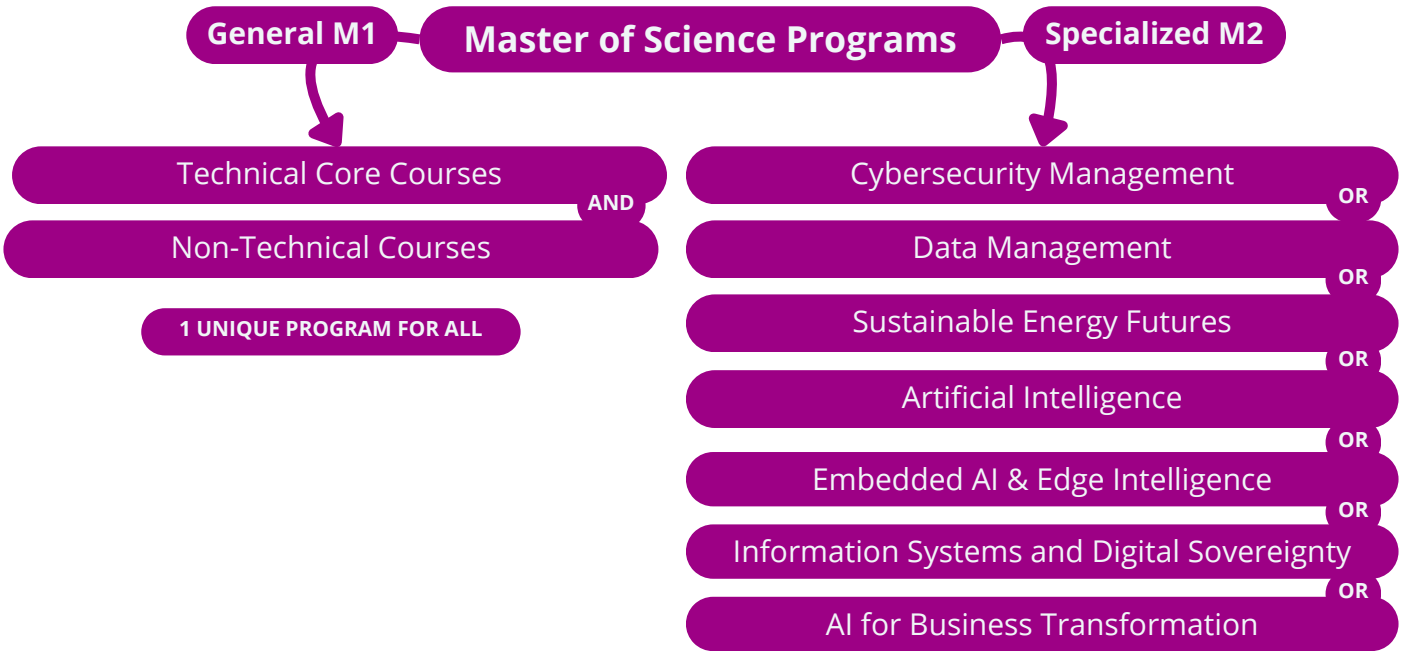
ECE Masters of Science Programs are **specialized training programs** whose ambition is to prepare our graduates to take up the challenges posed by the **digital and environmental transitions.** They implement a pedagogy of excellence that allows the consolidation of **scientific and technical fundamentals**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

THE FREEDOM TO CHOOSE YOUR PATH

At ECE, each student **chooses freely their path according to their tastes, personal aptitudes and professional project.**

All M1 courses in Fall are core courses - specializations courses are scheduled only in Spring.

Starting from M2, you will be able to apply for a specialized program.



COURSE CATALOGUE - MSC PROGRAMS - YEAR 2026-2027

MSC - M1

FIRST SEMESTER - ENGLISH

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1- IT Transformation	Digital Transformation and Business Models	18	3	In-person
	Digital Ecosystem and Regulation	12	3	In-person
	Information Systems Design	12	3	In-person
UPE 2 - Digital Innovation	AI Foundations	18	3	In-person
	DevOps Practices and Continuous Integration	12	3	In-person
	Information Systems Architecture and Performance	12	2	In-person
	Internet of Things and Connected Systems	18	3	In-person
UPE 3 - IT Project Management and Innovation	Project Management Basics	18	3	In-person
	Practice Based Project	30	2	In-person
	Object Oriented Programming : Python	30	3	In-person
UPE 4 - Foreign Language	French courses	30	2	Hybrid (20h In-person, 10h online)

All M1 tracks in Fall follow the same courses - specializations courses are scheduled only in Spring.

COURSE CATALOGUE - MSC PROGRAMS - FALL 26

MSC CYBERSECURITY MANAGEMENT - M2
MANAGEMENT DE LA CYBERSÉCURITÉ

FIRST SEMESTER - ENGLISH OR FRENCH

>PREREQUISITES FOR EXCHANGE ADMISSION:

- **Object-Oriented Programming:** Proficiency in an object-oriented programming language (Java or Python).
- **Essential Specific Knowledge:** Basic Python programming, In-depth knowledge of network systems (TCP/IP, firewalls, access management), Information Systems and Networks Security, Cybersecurity in cloud environment, Database management, Symmetric and asymmetric cryptography, Applied mathematics

>PRÉREQUIS POUR ADMISSION EN ÉCHANGE:

- **Programmation orientée objet :** maîtrise d'un langage orienté objet (Java ou Python).
- **Connaissances essentielles :** bases en Python, compréhension avancée des systèmes réseau (TCP/IP, pare-feu, gestion des accès), sécurité des systèmes d'information et des réseaux, cybersécurité en environnement cloud, gestion de bases de données, cryptographie symétrique et asymétrique, mathématiques appliquées.

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1 - Cybersecurity Policies and Compliance Politiques de Cybersécurité et Conformité	**Cybersecurity Standards and Regulations** en Anglais même dans le parcours français	24	3	In-person
	Identity & Access Management Gestion des Identités et des Accès	30	5	In-person
	Cybersecurity Standards and Regulations Gestion des Risques en Cybersécurité	30	5	In-person
UEP 2 - Advanced Security and Cyber Threat Intelligence Sécurité Avancée et Menaces Cybernétiques	**Applied Cryptography** Cryptographie Appliquée	30	4	In-person
	Assets, Threats, and Vulnerabilities Ressources, Menaces et Vulnérabilités	30	3	In-person
	Ethical Hacking and Penetration Testing Hacking Éthique et Test d'Intrusion	30	4	In-person
UEP 3 - Managerial Innovation Serving Leadership	**Intercultural Leadership and Team Management** en Anglais même dans le parcours français	18	2	Hybrid (12h in-person, 6h online)
	Communication and Innovation Management en Anglais même dans le parcours français	18	2	In-person
	Job Interview Simulation en Anglais même dans le parcours français	18	2	In-person
UEP 4-Foreign Language	**French courses FLE**	30	2	In-person

ECE
ÉCOLE D'INGÉNIEURS
ENGINEERING SCHOOL

COURSE CATALOGUE - MSC PROGRAMS - FALL 26

MSC DATA MANAGEMENT - M2

FIRST SEMESTER - ENGLISH OR FRENCH

>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.

>PRÉREQUIS
Un diplôme de premier cycle avec mention en mathématiques (incluant calcul, algèbre linéaire et statistiques) et en informatique (incluant programmation, structures de données et algorithmes), avec une connaissance des bases de données ou des systèmes d'information appréciée.

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1 - Data Science Fundamentals	Mathematics for Data Science	24	3	In-person
	Machine Learning and Deep Learning	30	5	In-person
	Data Visualization and Data Mining	30	5	In-person
UEP 2 - Data Engineering	Advanced Databases	24	3	In-person
	Big Data Infrastructures	24	3	In-person
	Cloud Computing Platforms	24	3	In-person
	Real-Time Data Processing	18	2	In-person
UEP 3 - Managerial Innovation Serving Leadership	Intercultural Leadership and Team Management	18	2	Hybrid (12h in-person, 6h online)
	Communication and Innovation Management	18	2	In-person
UEP 4-Foreign Language	French courses FLE	30	2	Hybrid

COURSE CATALOGUE - MSC PROGRAMS - FALL 26

MSC ARTIFICIAL INTELLIGENCE - M2

FIRST SEMESTER - ENGLISH OR FRENCH

>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.

>PRÉREQUIS
Un diplôme de premier cycle avec mention en mathématiques (incluant calcul, algèbre linéaire et statistiques) et en informatique (incluant programmation, structures de données et algorithmes), avec une connaissance des bases de données ou des systèmes d'information appréciée.

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1 - Advanced Architectures and Technologies	**Generative AI and Diffusion Models**	30	5	In-person
	Distributed Systems and Cloud Computing in AI	30	5	In-person
	Multi-LLM Architectures and Eco-Responsible AI	24	3	In-person
UEP 2 - AI Innovation Strategies	**Symbolic AI**	18	2	In-person
	Embodied AI	24	3	In-person
	Reinforcement Learning	24	3	In-person
	Knowledge Representation and Reasoning	24	3	In-person
UEP 3 - Managerial Innovation Serving Leadership	**Intercultural Leadership and Team Management**	18	2	Hybrid (12h in-person, 6h online)
	Communication and Innovation Management	18	2	In-person
UEP 4 - Foreign Language	**French courses FLE**	30	2	Hybrid

COURSE CATALOGUE - MSC PROGRAMS - FALL 26

MSC SUSTAINABLE ENERGY FUTURES - M2

FIRST SEMESTER - ENGLISH OR FRENCH

>PREREQUISITES

A foundational academic background is expected in the following areas:

- **Mathematics**: core concepts including calculus, linear algebra, and basic statistics.
- **Programming**: fundamental knowledge of programming principles, including algorithmic logic and basic data structures.

Not expected but would be an asset: **Energy Systems:** introductory knowledge of energy systems (e.g., energy production, distribution, and energy transition challenges).

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1 - Strategy for Sustainable Energy Transition	Energy Systems Performance Analysis	18	3	Hybrid (12h in-person, 6h online)
	Energy Resource Management and Optimization	18	3	Hybrid (12h in-person, 6h online)
	Sustainable Energy Transition Strategies	18	3	Hybrid (12h in-person, 6h online)
	Decision support for energy integration	18	3	In-person
	Circular Economy and Energy System	12	1	In-person
UEP 2 - Smart Energy Systems & Data	Intelligent energy systems (Smart Grids)	24	3	In-person
	IoT and captors for energy	24	3	In-person
	Big Data and energy data analysis	24	3	In-person
	Energy Traceability Technologies	18	2	In-person
UEP 3 - Today's Challenges and Future World Transformations	Intercultural Leadership and Team Management	18	2	Hybrid (8 h in-person, 4h online)
	Communication and Innovation Management	18	2	In-person
UEP 4 - Foreign Language	French courses FLE	30	2	Hybrid

COURSE CATALOGUE - MSC PROGRAMS - FALL 26

MSC EMBEDDED AI & EDGE INTELLIGENCE - M2

FIRST SEMESTER - ENGLISH

>PREREQUISITES
Applicants must hold at least a 1st year of Master degree (or equivalent) in **Computer Science, Engineering, Data Science, Applied Mathematics, Digital Sciences, Cybersecurity,** or a closely related field.

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1 - Embedded AI Fundamentals	**Edge Computing, Communication & Storage**	30	5	In-person
	Tiny Machine Learning	30	5	In-person
	Embedded Intelligence and AI Hardware	24	3	In-person
UEP 2 - Lightweight & Efficient AI Models	**Neural Network Architectures for Edge**	30	5	In-person
	Model Compression & Optimization for AI	30	3	In-person
	Frugal Generative AI	30	3	In-person
UEP 3 - Managerial Innovation Serving Leadership	**Intercultural Leadership and Team Management**	18	2	Hybrid (12h in-person, 6h online)
	Communication and Innovation Management	18	2	In-person
UEP 4-Foreign Language	**French courses FLE**	30	2	Hybrid

COURSE CATALOGUE - MSC PROGRAMS - FALL 26

MSC INFORMATION SYSTEMS & DIGITAL SOVEREIGNTY - M2

FIRST SEMESTER - ENGLISH

>PREREQUISITES
Applicants must hold at least a 1st year of Master degree (or equivalent) in **Computer Science, Engineering, Data Science, Applied Mathematics, Digital Sciences, Cybersecurity**, or a closely related field.

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1 - Distributed Systems and Cloud Infrastructure	**Information Systems Architecture**	24	3	In-person
	Infrastructure as Code in DevOps	30	5	In-person
	Cloud-Native Infrastructure	30	5	In-person
UEP 2 - Security and Privacy in Federated Systems	**Privacy Engineering and Self-Sovereign Identity**	30	4	In-person
	Secure Data Exchange and Policies	30	4	In-person
	Federated Security Architecture	30	3	In-person
UEP 3 - Managerial Innovation Serving Leadership	**Intercultural Leadership and Team Management**	18	2	Hybrid (12h in-person, 6h online)
	Communication and Innovation Management	18	2	In-person
UEP 4-Foreign Language	**French courses FLE**	30	2	Hybrid

COURSE CATALOGUE - MSC PROGRAMS - FALL 26

MSC AI FOR BUSINESS TRANSFORMATION - M2

FIRST SEMESTER - ENGLISH

>PREREQUISITES
Applicants must hold at least a bachelor's degree in **Computer Science, Engineering, Data Science, Applied Mathematics, Digital Sciences, Cybersecurity**, or a closely related field.

MODULES	COURSES	HOURS	ECTS	ATTENDANCE
UEP 1 - Foundations of AI and Business Analytics	**Fundamentals of AI for Business**	24	5	In-person
	Business Data Science and Analytics	30	5	In-person
	Business Intelligence and Data Visualization	30	3	In-person
UEP 2 - Advanced AI and Business Applications	**Applied Machine Learning**	18	2	In-person
	NLP for Business	24	3	In-person
	AI in Marketing and CX	24	3	In-person
	Generative AI for Business	24	3	In-person
UEP 3 - Managerial Innovation Serving Leadership	**Intercultural Leadership and Team Management**	18	2	Hybrid (12h in-person, 6h online)
	Communication and Innovation Management	18	2	In-person
UEP 4-Foreign Language	**French courses FLE**	30	2	Hybrid