COURSE CATALOGUE - BACHELOR SPRING 2026

International students enrolled in the ECE Exchange Programs can select English taught courses from the following Bachelor programs.

Starting and ending dates will vary according to the program.

🚫 **COURSES FROM DIFFERENT PROGRAMS AND STUDY LEVELS CANNOT BE MIXED.**

PROGRAMS	COURSES AND EXAMINATIONS
B1 - Bachelor of Artificial Intelligence	January 5th 2027 – May 28th 2027
B2 - Bachelor of Artificial Intelligence	January 5th 2027 – May 31st 2027
B3 - Bachelor of Artificial Intelligence	January 5th 2027 – April 7th 2027

ABOUT

>TECH FOUNDATIONS, FUTURE INNOVATIONS

Our Computer Science Bachelor at ECE introduces tech fundamentals through NoCode, data, cybersecurity, and DevOps. Students explore contemporary challenges with the SHIFT program and develop teamwork and communication skills. Hands-on projects in C programming, Linux, and web development lay the groundwork for their tech journey.

RHYTHM

>FOUR DAYS PER WEEK (1 DAY FREE)



COURSE CATALOGUE - BACHELOR PROGRAMS - SPRING 26

B1 - BACHELOR OF ARTIFICIAL INTELLIGENCE

SECOND SEMESTER - ENGLISH

>PREREQUISITES
Applicants must be in their final year of secondary school (high school) to first year of higher education, preferably in a technological or science-oriented track.

COURSE TITLE	HOURS	CREDITS (ECTS)	ATTENDANCE MODE	COURSE DESCRIPTION
Capstone Project: Hackathon	32	2	Synchronous	An intensive team project mobilising acquired skills to design, prototype and present a solution addressing a real-world challenge.
SHIFT(s) 1: Break It All Down and Get a Move On	6	2	Synchronous & Asynchronous	A cross-disciplinary workshop dedicated to analysing contemporary transformations, fostering cooperation and moving from idea to action.
Soft Skills for IT Professionals	12	2	Synchronous	Development of the interpersonal skills essential to IT careers: communication, collaboration, organisation, public speaking and problem-solving.
C Structured Programming	30	3	Synchronous & Asynchronous	Introduction to structured programming in C: variables, conditions, loops, functions, arrays, pointers and development best practices.
Database Systems: SQL Fundamentals and Administration	31.5	4	Synchronous	Introduction to relational databases, the SQL language and key operations in administration, security and data management.
Introduction to Applied AI	18	2	Synchronous	An overview of artificial intelligence principles with hands-on application of simple methods to solve concrete use cases.
Mathematics for Computer Science	33	3	Synchronous	Study of mathematical tools useful in computing: logic, sets, algebra, probability and reasoning applied to algorithms.
TECHAWAY-PROGRAMING-L1	30	2	Synchronous & Asynchronous	The fundamental principles of Python programming.
Back-End Web Development	30	3	Synchronous & Asynchronous	Design of the server side of a web application: APIs, business logic, data access, security and communication with the front-end.
Data Exploration	30	4	Synchronous & Asynchronous	Methods for preparing, analysing and visualising data in order to identify its structure, quality and main trends.
Introduction to Machine Learning	24	3	Synchronous & Asynchronous	Introduction to the main machine learning methods, from data preparation to training and evaluating simple models.
French as a Foreign Language	18	2	Synchronous	French as a Foreign Language course designed for international students to develop comprehension, expression and integration in an academic context.

COURSE CATALOGUE - BACHELOR PROGRAMS - SPRING 26

B2 - BACHELOR OF ARTIFICIAL INTELLIGENCE

SECOND SEMESTER - ENGLISH

>PREREQUISITES

Applicants must hold a high school diploma (or equivalent) and have some prior knowledge of computing and/or digital technologies.

COURSE TITLE	HOURS	CREDITS (ECTS)	ATTENDANCE MODE	COURSE DESCRIPTION
AI Hackathon	46	4	Synchronous	An intensive collaborative project consisting of imagining, developing, and presenting an AI solution to address a specific problem.
Maths for Computer Science	27	4	Synchronous, Evaluation	Deepening of mathematical concepts useful for computing and AI, including algebra, analysis, probability, and optimization.
AI Design Workshop	30	3	Synchronous	Design of an AI-integrated application, from selecting the architecture and model to prototyping and deployment.
TECHAWAY-PROGRAMING-L2	30	2	Synchronous & Asynchronous	Strengthen database management skills and ensure high data quality standards by mastering SQL queries and data cleaning techniques.
Advanced Linux & AI Deployment	24	3	Synchronous	Advanced Linux administration and preparation of reliable environments to install, run, and supervise AI applications and models.
Cloud & Infrastructure Hybridization	24	3	Synchronous	Study of hybrid architectures combining local and cloud infrastructures, with a focus on integration, security, and service continuity.
Cloud & Virtualization for AI	28	3	Synchronous, Independent Study	Use of the cloud, virtual machines, and containers to provide flexible resources for artificial intelligence projects.
Deep Learning	30	3	Synchronous & Asynchronous	Introduction to deep neural networks, their training, and their applications in computer vision, natural language processing, and prediction.
Networking & Cloud for AI	22	3	Synchronous	Fundamentals of networking and cloud services required for deploying, communicating, and securing AI solutions.
French as a Foreign Language	18	2	Synchronous	French as a Foreign Language course designed for international students to develop comprehension, expression and integration in an academic context.

COURSE CATALOGUE - BACHELOR PROGRAMS - SPRING 26

B3 - BACHELOR OF ARTIFICIAL INTELLIGENCE

SECOND SEMESTER - ENGLISH

>PREREQUISITES
Applicants must have completed two years of higher education in a scientific or technological field (e.g., an associate degree, diploma, or equivalent qualification).

COURSE TITLE	HOURS	CREDITS (ECTS)	ATTENDANCE MODE	COURSE DESCRIPTION
AI Hackathon: Deliverable & Deployment	20	2	Synchronous, Independent Study	An intensive team project focused on the finalisation, documentation, deployment, and presentation of an artificial intelligence solution.
IT Team Management & Strategic Decision Making	12	2	Synchronous	Principles of IT team management, project leadership, and strategic decision-making in a technological environment.
Advanced Databases and Data Exploration	18	2	Synchronous	Deepening knowledge of data systems, complex queries, and exploration methods to effectively analyse diverse data volumes.
AI Deployment and MLOps	20	3	Synchronous, Evaluation	This course introduces MLOps principles to bridge the gap between model development and real-world application. Students will learn to transition AI models from local environments to reliable, scalable production systems.
Governance and Security Systems	12	2	Synchronous	Study of information systems governance, risk management, security controls, and organisational responsibilities.
Advanced AI Libraries & Workflows	18	2	Synchronous	Hands-on experience with advanced tools and libraries to build, automate, test, and industrialise AI processing pipelines.
Advanced Deep Learning	18	2	Synchronous	Advanced study of neural network architectures, optimization techniques, and evaluation methods for complex models.
Cloud Architecture & distributed AI system	20	2	Synchronous	Design of distributed AI solutions in the cloud, including service orchestration, data management, performance, and scalability.
Cloud Computing & AI	20	2	Synchronous	Implementation of cloud services to train, deploy, and operate artificial intelligence solutions flexibly and securely.
TECHAWAY-AI-L3	30	2	Synchronous & Asynchronous	A deep dive into advanced machine learning techniques, focusing on the understanding and application of complex algorithms.
AI in the Field of Finance	18	1	Synchronous	Exploration of AI uses in finance: predictive analysis, fraud detection, automation, risk management, and decision support.
AI in the Healthcare Sector	18	1	Synchronous	Overview of AI applications in healthcare, from diagnostic support to medical analysis, with a focus on ethical limitations.
Global Challenges in AI & Data Security	34	4	Synchronous	Analysis of international issues related to AI and data security: cyber threats, sovereignty, governance, and systems protection.
Responsible AI & Data Protection (GDPR Compliance)	28	1	Asynchronous	Study of responsible AI principles and GDPR requirements: transparency, fairness, data protection, and project compliance.
French as a Foreign Language	18	2	Synchronous	French as a Foreign Language course designed for international students to develop comprehension, expression and integration in an academic context.