This Master's degree is the very first program to be offered in the framework of the EUNICE European University alliance.

This program includes courses taught by four of the alliance's European partners, enabling students to benefit from their respective expertise.

Courses are provided by :
- Université Polytechnique Hauts-de-France (France)
- University of Cantabria (Spain)
- Poznan University of Technology (Poland)
- University of Vaasa (Finland)

PRACTICAL INFORMATION

Contact
master-it4ssm@uphf.fr
03 27 51 18 41

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MASTER

Computer science

EUNICE Alliance

INFORMATION TECHNOLOGY FOR SMART AND SUSTAINABLE MOBILITY
IT4SSM

KEY FEATURES

This program offers a unique combination of European courses in the Information Technology domain for the new and promising areas of smart technologies dedicated to smart cities applications with a specific attention to the sustainability of the designed solutions.

PROGRAM GOAL

The Information Technology for Smart and Sustainable Mobility (IT4SSM) program is a Computer Science Master program that aims to provide knowledge and practical training in the new context of intelligent mobility while considering current issues of ethics and sustainable development. Smart mobility requires expertise in new techniques and technologies (Internet of Things, distributed data management, security of exchanges, etc.) and skills for the analysis, design and development of new algorithms and softwares for decision support in smart cities.

ENROLLMENT

Open to* : FI, FC

*Initial Training / Continuing Education

Education level at entrance / exit

Bac + 3 / Undergraduate / Bachelor

Before

After

1 internship abroad

Bac + 5 / Master

Admission requirements

Open to all European students. For the 1st year – Master 1 : open to students with Bachelor degree in Computer Science (after a Licence/ Bachelor), or another engineering or technology specialty that fulfills the following requirements:

- Design and programming skills in C or equivalent, and highly desirable in Java or equivalent object oriented language
- At least B2 level; equivalent skills in English (ability to attend courses delivered in English).

Application procedure

Application is based on a registration file including previous diploma scores, and possible interview.
To apply: monmaster.gouv.fr

When the required diploma is not available, possibility of validating (fully or partially) equivalent diploma (VAP) or professional skills (VAE).

Contact: formation.continue@insa-hdf.fr

MAIN COURSES

- Data engineering: agent-based modeling and simulation for sustainable and mobile application
- Edge and mobile computing for sustainability
- Traffic and transportation modeling
- Environmental, social & economic impact of mobility solutions
- Internet of Things, services and applications
- Machine learning
- Human Computer Interaction for sustainable and mobile application
- Network security
- Smart mobility: ethics and legal issues, transport engineering and spatial development

The 2nd year of the Master includes an internship period carried out abroad, preferably in one of EUNICE alliance partner countries.

AND AFTER?

Graduates will have the skills to apply for positions in the computing domain, more specifically IT for service design and data management, decision-making supports, ethical and sustainable development of transport and logistics solutions.

Potential jobs

- Software and data engineer, data analyst, design implementation and deployment of secure, sustainable and resilient services for smart mobility

- System integrator of AI/ML and optimization techniques applied to the urban context

- Mobility expert of sustainable smart solutions conciliating legal, social, ethical and business components.

The graduates may apply for research programs.