+MASTER
COMPUTER SCIENCE
INFORMATION TECHNOLOGY FOR SMART AND SUSTAINABLE MOBILITY

INSA HAUTS-DE-FRANCE

PROGRAM GOAL

The Information Technology for Smart and Sustainable Mobility (IT4SSM) program is a **European** 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. It is based on new technologies (Internet of Things, distributed data management, security of exchanges,etc.) and provides skills for the analysis, design and development of new algorithms and software for decision support in smart cities.

KEY FEATURES

+ This program offers a unique combination of European information technology courses focused on smart city applications, with a particular emphasis on the sustainability of the solutions designed.
+ The courses for this master's degree, created as part of the EUNICE alliance, are taught in English by four of the alliance's European partners, each in their area of expertise.

Open to

IT, CE*

+ Education level at entrance

Bachelor's degree in computer science or equivalent qualification

Courses are provided by

+ UPHF (France)
+ University of Cantabria (Spain)
+ Poznan University of Technology (Poland)
+ University of Vaasa (Finland)

Contact

master-it4ssm@uphf.fr

*Initial Training (IT) / Continuing Education (CE)

DIPLÔME NATIONAL DE MASTER CONTRÔLÉ PAR L'ÉTAT

Université Polytechnique HAUTS-DE-FRANCE

Eunice EUROPEAN UNIVERSITY

INSA INSTITUT NATIONAL DES SCIENCES APPLIQUÉES HAUTS-DE-FRANCE

LABELLISÉ DD&RS

MAIN COURSES

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

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

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, ustainable 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.

ADMISSION REQUIREMENTS

For the first 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 or equivalent skills in English : ability to attend courses delivered in English; A good level in mathematics.

Application procedure

The application file must include diplomas obtained as well as all transcripts since high school graduation.

+ To apply : European students : Master 1 > monmaster.gouv.fr
Non European students : pastel.diplomatie.gouv.fr/etudesenfrance

Tuition fees are approximately four thousand euros per year for most non european students (carrefully check your own situation!) :
uphf.fr/formation/candidatures-inscriptions/droits-dinscription

Mon Master

Etudesenfrance