TELECOM ParisTech

Une école de l'IMT

École des Ponts ParisTech

Mastère Spécialisé® (post-Master's degree)

SMART MOBILITY

DIGITAL TRANSFORMATION OF MOBILITY SYSTEMS

#DigitalTransform #BigData #IoT #ServiceInnovation #ITS

Digital technologies are transforming all forms of mobility. Travelers have simple yet powerful solutions and ever more innovative services to organize their journeys. On the supply side, customer relations, operations, maintenance and planning are fundamentally changed. New uses made possible by car-sharing, car-pooling and autonomous vehicles are raising questions about current mobility practices, and are changing value chains and business models in the sector.

The **Smart Mobility Mastère Spécialisé®** is a high-level technical and managerial program which specifically covers mobility systems organization, transportation systems, opportunities created by digital technology and the design and management of mobility services.

WHO IS THE COURSE AIMED AT ?

TARGET AUDIENCE: WORKING PROFESSIONALS AND YOUNG GRADUATES

The **Smart Mobility Mastère Spécialisé®** is an executive, post-Master's or post-graduate engineering program, aimed at supplementing initial engineering education (Master's level) and developing further specialization.

Applicants should have a Master's degree in Transportation Systems Engineering, Industrial or Mechanical Engineering, Systems Architecture or Computer Science.

Applicants with a Master's 1 degree with at least three years' experience of working in the relevant field are also suitable.

This program is also open to Accredited Prior Learning (*Valorisation des Acquis Professionnels [VAP]*) for applicants without a Master's degree, but who have demonstrated several years' experience at engineer or managerial level in the transportation or engineering sectors.

WIDE-RANGING CAREER OPPORTUNITIES AT THE HEART OF THE DIGITAL TRANSFORMATION OCCURRING IN TRANSPORTATION

The program is at the meeting-point of two professional worlds: on the one hand the mobility professions, with a view to engaging in the great digital transformation that is currently under way; on the other hand the digital technology sector, with a view to gaining a broad overview of transportation systems, and the related processes and professions.

PROSPECTIVE CAREERS

> Project Manager for new mobility services

> "Digital Transition" Project Manager in the transportation sector

> Technical Services Manager

> "Transportation Services" Designer and Developer, Solutions Architect

> Transportation System Designer or Planner

> Mobility Information Systems Manager

WHO ARE THE POTENTIAL EMPLOYERS?

- Local authorities and transportation authorities
- Mobility services providers
- Operators of passenger and freight services and infrastructure
- Energy operators and distributors (Smart Grids)
- Engineering and consulting firms
- Digital industry: IT service companies, software publishers, computer manufacturers, telecoms operators and parts manufacturers ...
- Innovative digital start-ups involved in modernizing transportation

THE PROGRAM PARTNERS CLUB

PLANNED SYLLABUS

> MOBILITY:

- Mobility system organization
- Smart mobility - Smart city
- Actors and political issues in Mobility 3.0
- Contractual and legal aspects
- Safety and cyber-security

ALL COURSES ARE TAUGHT IN ENGLISH

> TRANSPORTATION SYSTEMS:

- Transportation networks, places and modes of transport
- Transportation infrastructure, systemic approach
- Systemic of vehicles (mechanical, energy, IT)
- Autonomous vehicles,
- Intelligent Transport systems (rail and guided systems)

> DATA PROCESSING:

- Mobility information systems engineering
- Communication for smart mobility
- Big Data and data mining algorithms
- Introduction to machine learning

> SERVICE DESIGN AND MANAGEMENT:

- From space to services
- Service and economics of mobility
- Planning - Booking - Ticketing: at the interface between the user and the service
- Customer relationship (including yield management)
- Logistics engineering and management
- Transportation and traffic modeling

More information on: http://telecom-paristech.fr/eng/smart-mobility ou sur http://smart-mobility-en.enpc.fr

11 MONTHS OF PART-TIME COURSES COMPATIBLE WITH EMPLOYMENT

Two semesters of classes will total approximately 400 teaching hours (45 European Credit Transfer System [ECTS]), followed by a semester dedicated to a work-based thesis (30 ECTS).

The classes, alternating one week per month, will be held in both graduate schools: École des Ponts ParisTech and Telecom ParisTech, depending on the premises on the day.

"Common Core Project"

During the course's two semesters, students will be involved in teams to carry out a "Common Core Project" focused on innovation and led by teacher-researchers in direct contact with industrial partners and their needs.

These projects will be supported by the graduate schools' research laboratories and their scientific equipment.

TWO SCHOOLS COMBINED TO COVER TWO AREAS OF EXPERTISE

ÉCOLE DES PONTS PARISTECH will provide the teaching for mobility, particularly with regard to transport system organization, infrastructure and transportation system engineering and territorial management, the economics and services of mobility, traffic management, and logistics management.

TÉLÉCOM PARISTECH will provide the IT and telecommunications parts of the courses in Information Technology, Data Science, CRM and Cyber Security, among others. A leading graduate school in digital technology, its teaching and research cover all disciplines of information and communication science and technology.

Each course will involve researchers from both graduate schools and expert professionals.

TARGET SKILLS

- > Designing, organizing and planning a smart mobility system
- > Designing and developing mobility services and solutions
- > Leading a "Digital Transition" project in a profession in the transportation sector
- > Leading a "smart transportation system" project in a business or a local authority

ALL COURSES ARE TAUGHT IN ENGLISH

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or on:
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INFORMATION:

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