



DRIVE TOMORROW'S MOBILITY

SMART MOBILITY : THE DIGITAL REVOLUTION OF URBAN MOBILITY

POST-MASTER'S DEGREE (6 YEARS AFTER HIGH SCHOOL DIPLOMA)

 **PART
TIME**

**ANTICIPATE AND LEAD THE
TRANSFORMATION OF TRANSPORTATION
THROUGH DIGITAL TECHNOLOGY**

**DRIVE THE DIGITAL TRANSFORMATION OF
MOBILITY SYSTEMS**

**DESIGN AND DEVELOP MOBILITY SERVICES
AND SOLUTIONS**

« The Post-Master's Degree Smart
Mobility enabled me to better
understand and streamline
mobility decision-making »

**François, Graduate, Post-
Master's Degree Smart Mobility**



SMART MOBILITY :

A DYNAMIC, USER-ORIENTED INDUSTRY

Digital technologies are spread across all forms of mobility. Travellers have access to easy yet powerful solutions and an ever-increasing number of innovative services to organize their trips. Service platforms (e.g. MaaS), customer relationship, operations, maintenance and investment planning are all undergoing profound change.

The new uses enabled by autonomous vehicles, car-sharing and car-pooling are deeply challenging mobility practices and transforming the sector's value chains and business models.

A WIDE RANGE OF PROFESSIONAL OPPORTUNITIES

The Post-Master's Degree in Smart Mobility delivers a dual skill set, in mobility and digital, to train «mobility solution architects». It stands at the convergence of two professional worlds: the field of transportation, which is strongly challenged by digital transformation, and information technologies.

FLAGSHIP CAREERS IN SMART MOBILITY

- ▶ “Digital transition” project manager for the transportation industry
- ▶ Digital Officer in transportation manufacturing industry, authorities responsible for mobility
- ▶ Digital Officer infrastructure and operations for ground, air or sea transportation operators
- ▶ Designer and developer of “transportation services”
- ▶ Architect of urban mobility
- ▶ Transport architect or planner.

WHICH EMPLOYERS?

- ▶ Transportation services or infrastructures operators
- ▶ Manufacturers of vehicles and transport subsystems
- ▶ Engineering consulting firms, digital services companies (ex SSII)
- ▶ Mobility and territorial planning organizations
- ▶ High-tech startups specializing in mobility



SMART MOBILITY :

WHAT IF YOU INVENTED TOMORROW'S MOBILITY?

THE POST-MASTER'S SMART MOBILITY : A BROAD SKILLS BASE AT THE SERVICE OF INNOVATION

The Post-Master's Smart Mobility guarantees you a high-level technical and managerial training based on the mastery of:

- ▶ technologies related to the various phases of the information processing chain ;
- ▶ the implementation of technologies to ensure and renew functions due to the increased use of richer data;
- ▶ the articulation between various industrial, commercial, hard and soft components to improve the systems ;
- ▶ the relationships between the players who jointly participate in mobility: cooperation, complementarities, competition, regulation, system effects...

Our **pedagogy is unique** and based on numerous contacts with companies, through Real-world data (RWD) projects or events and trade shows. **It fosters group reflection and analysis.**

THE APPRENTICESHIP THAT SUITS YOU

ARE YOU ALREADY WORKING?

The Post-Master's Degree Smart Mobility allows you to pursue the training program while keeping your professional activity (6 course days per month)

ARE YOU STILL STUDYING?

The Post-Master's Degree Smart Mobility allows you to gain one year of professional experience and a diploma from a top engineering school.

ARE YOU UNDERGOING PROFESSIONAL RETRAINING?

The Post-Master's Degree Smart Mobility allows you to train while embarking on a new career path.

EACH PROFILE HAS ITS OWN TRAINING RHYTHM

9 MONTHS
OF PART-TIME COURSES

4 TO 6 MONTHS
OF PROFESSIONAL THESIS



TESTIMONY

Naman Negi, Graduate, Post-Master's Degree Smart Mobility

Why did you choose to pursue the Post-Master's Degree Smart Mobility at Télécom Paris?

NN : Before embarking on this course, I worked for 4 years at Suzuki Motor in India and Japan, and then at Ford in the UK. These experiences in the automotive industry made me aware of the need to rethink mobility systems and to move towards a more innovative activity.

What are the characteristics of the program that attracted you the most?

NN : I wanted a part-time course because I wanted to keep a professional activity in parallel. The Post-Master's Smart Mobility was an excellent compromise for me.

What do you remember about the training you received?

NN : This Post-Master's Degree is based on many modules: quality approach, transportation policies, industry, railways, modeling, aviation, data management and analysis. For me, the program was the perfect mix of all sectors and subjects of mobility, including the legal, political and societal aspects.

TRAINING ON SMARTMOBILITY PROFESSIONS

This unique training program in France is provided by two leading engineering schools in the digital and transportation fields. The courses engage a network of more than 90 leading speakers, professionals, experts or teacher-researchers.

TÉLÉCOM PARIS: IT AND TELECOMMUNICATIONS EXPERTS

Télécom Paris provides the IT and telecommunications component of courses in information technology, data science, IoT and geolocation, CRM and cybersecurity. As a major digital engineering school, its teaching and research cover all the disciplines of information and communication sciences and technologies.

ÉCOLE DES PONTS PARISTECH : AT THE HEART OF TRANSPORT AND MOBILITY SYSTEMS

École des Ponts ParisTech provides the training in transport-related courses on the organization of mobility systems, transport networks, infrastructure and transport systems engineering as well as territorial management, mobility economy, traffic management and logistics management.



École des Ponts
ParisTech

PEDAGOGICAL MANAGER

▼
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Main advantages of the Post-Master's Degree Smart Mobility for former graduates :

- The first-rate quality of lecturers, professors, teacher-researchers and professionals
- The multidisciplinary space
- The interconnection between the different aspects of mobility
- The variety and diversity of presentations and speakers
- The impressive amount of knowledge provided
- The facilitation of exchanges
- Objectives achieved: Gaining a global view and being able to discuss with experts

A MULTI-COMPONENT TRAINING

TRAINING PROGRAM

The courses are spread over 11 months on a part-time basis from September to July. The professional thesis takes place between July and December (4 to 6 months). The complete program totals 75 ECTS credits.

The courses, alternating at a rate of one week per month, take place in both institutions: École des Ponts ParisTech (Marne-la-Vallée) and Télécom Paris.

MOBILITY

- ▶ Mobility system organization
- ▶ Smart Mobility – Smart City
- ▶ Actors and political issues in Mobility 3.0
- ▶ Contractual and legal aspects
- ▶ Safety and Cyber Security

DATA PROCESSING

- ▶ Mobility information systems engineering
- ▶ Communication for smart mobility
- ▶ Introduction to big data and data mining
- ▶ Introduction to machine learning

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)

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
- ▶ Tarification & business models
- ▶ Transportation and traffic modeling
- ▶ Logistics engineering and management

100% OPERATIONAL SKILLS

- ▶ Design, organize and plan an intelligent mobility system
- ▶ Design and develop mobility services and solutions
- ▶ Lead a «Digital Transition» project in the transportation field
- ▶ Lead an «Intelligent Transportation System» project in a company or community

RED THREAD PROJECTS

During the 11 months of classes, students work in teams on a core project with tutors who are in direct contact with industrial partners and their needs. These projects can rely on the schools' research laboratories and their scientific equipment.

INTERNSHIP AND PROFESSIONAL THESIS

The professional thesis is an opportunity to apply the methods, techniques, tools and approaches studied. It offers the opportunity to confront conceptual thinking and operational experience. Often related to a specific aspect of a company, the subject of the thesis must have an innovative or R&D dimension.

TEACHING LANGUAGES

Courses are conducted in French and English (only in English for the technical part).

A CLOSE COLLABORATION WITH COMPANIES

The close ties that the two schools maintain with industry enable them to be at the heart of intelligent transport and to anticipate its technological, societal and economic impacts.

Numerous companies and startups take part in the teaching, practical work, case studies and real-life professional situations.

TWO CHAIRS DEDICATED TO THE THEME

Chair Connected Cars & Cyber Security (Télécom Paris)

Houda Labiod and Guillaume Duc

The Chair focuses on the challenges related to the emergence of the connected and autonomous car, which crystallize technical, social, ethical, economic and legal challenges.

Partners : Fondation Mines-Télécom, Nokia, Renault, Thales, Valeo, Wavestone

Chaire Ile de France Mobilités (Ecole des Ponts)

Fabien Leurent

This Chair focuses on the technical and economic functioning of an urban public transportation system, with a major theme: the interaction between transport supply (consisting of commercial services) and mobility demand (the travel needs of passengers).

Partner : Ile de France Mobilités (anciennement STIF)

OUR PARTNERS : ESSENTIAL TRAINING SUPPORT



The program receives support from the City Mobility Transport Laboratory (LVMT) of École des Ponts ParisTech.



HOW TO APPLY?

PROFILES SOUGHT

Candidates for the Post-Master's Degree must be :

- holders of an engineering degree (5 years after high-school diploma), or
- holders of a degree from a management or business school accredited to deliver the grade of Master (5 years after high-school diploma), or
- holders of a university Master 2 (5 years after high-school diploma), or
- holders of a university Master 1 or Maîtrise (4 years after high-school diploma), with three years of professional experience, or
- holders of foreign diplomas of equivalent level.

ADMISSION PROCESS

1

APPLICATION PROCESS

the application process must be completed online only.

2

INDIVIDUAL INTERVIEWS

if your application is accepted, you will be asked to attend a phone interview. If the interview is successful, you will be eligible and your application will be studied by a jury.

3

THE JURY

several juries are organized from January to August. The application deadlines are indicated on the website or directly from the training counsellor (see below). You will be informed of the jury's decision directly on your candidate space. If you are selected, you will have a 15-day priority registration period which guarantees you a place.



We advise you to apply as soon as possible, especially for foreign students and for those wishing to apply for financing.

A MOOC TO PREPARE

The MOOC «Challenge and stakes of mobility 3.0» is used to raise awareness among the numerous actors of mobility and progressively bring them up to date on the huge possibilities of the digital economy with the development of ICT.

 www.telecom-evolution.fr/MOOCs

HAVE QUESTIONS?

For registration details, dates, fees and to apply, visit the website or contact **Sabine Seynou** : 01 75 31 96 16 or sabine.seynou@telecom-paris.fr

 www.telecom-paris.fr/smart-mobility

WHAT IS A

POST-MASTER'S DEGREE?



The Post-Master's Degree is a certified diploma issued by a member of the Conférence des Grandes Écoles as part of an accredited program. This label guarantees the asserted professional vocation, the rigor and the technicality of the teaching. It enables graduates (engineers and Masters), who are pursuing their studies or changing careers, to develop their best assets and constitutes a springboard for their professional careers.

Full-time Post-Master's Degrees

- ▶ Big Data: management and analysis of massive data
- ▶ Design, Network Architecture and Cybersecurity
- ▶ Digital Project Designer with UX Design skills (in partnership with Ina)
- ▶ Cybersecurity and Cyberdefense
- ▶ Artificial Intelligence (in partnership with ENSTA Paris)
- ▶ Innovation and Entrepreneurship (in partnership with École Polytechnique, ENSTA Paris, and Zhejiang University)
- ▶ Mobile Networks, IoT and 5G
- ▶ Embedded Systems: cyber-physical engineering of connected objects

Part-time Executive Post-Master's Degrees

- ▶ Enterprise Digital Architect
- ▶ Network and Cybersecurity Architect
- ▶ Information Systems Manager (in partnership with ESSEC Business School)
- ▶ Regulation of Digital Economy (in partnership with ARCEP of Burkina Faso)
- ▶ Smart Mobility: digital transformation of mobility systems (in partnership with École des Ponts ParisTech)

INFORMATION & REGISTRATION

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Innovating and undertaking in a digital world

Télécom Paris is the leading French school for generalist digital engineers. Its graduates work in all industry sectors. With its excellent teaching and research, Télécom Paris is at the heart of a unique innovation ecosystem based on the transversality of its training, its research center and its two business incubators.

As a founding member of the Institut Polytechnique de Paris and a school of the IMT (Institut Mines-Télécom), Télécom Paris positions itself as the college for innovation through digital technology on the Saclay plateau.

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