

# MASTER'S IN TRANSPORTATION, MOBILITY AND NETWORKS

U N I V E R S I T É P S L

*The Master's in Transportation, Mobility, and Networks run by MINES ParisTech – PSL and jointly accredited with the École d'Urbanisme de Paris (Universités Paris Est Créteil and Gustave Eiffel), École des Ponts ParisTech and Institut Polytechnique de Paris, is designed for students wishing to better equip their analysis skills and develop solutions to transportation-related challenges through an in-depth mastery of formalized tools. The aim of this course of study is to train professionals and researchers capable of providing answers to the issues surrounding sustainability in the transportation and mobility sectors, making connections between technical, technological, economic, social, and urbanistic dimensions and the regional context in which they are placed.*

## MAIN ASSETS

- **An academic program built on a first of its kind collaboration between renowned schools:** MINES ParisTech – PSL, École d'Urbanisme de Paris (Universités Paris Est Créteil and Gustave Eiffel), École des Ponts ParisTech and Institut Polytechnique de Paris.
- **A Master's degree that offers a critical multidisciplinary understanding** of the fields of transportation and mobility for people and goods, covering the full range of modes (automobile, urban mass transit, walking, bicycle, rail, air), at different regional scales.
- **A Master's degree working to promote the widespread adoption of sustainable modes of governance** by training tomorrow's global leaders in urban planning and design on issues related to transportation systems. The aim is for students to acquire a practical knowledge of skills they can apply to reconcile transportation needs with sustainable development goals.
- **Education informed by ongoing research**, part of PSL's graduate program in Engineering (ISAI).
- **Enrolled students from many different countries**,

helping foster an open-minded approach. Selected from the best universities, the students come to this Master's program with very diverse cultures, issues, and approaches to reasoning; their interaction represents a very valuable asset.

## LEARNING OUTCOMES

- Identify, analyze, and predict the factors that determine transportation demand.
- Analyze a transportation problem in its full complexity, so as to be able to define and conduct a transportation policy and/or project within the framework of regional land use planning, urban policies, safety and congestion issues, and local or global pollution.
- Work with all involved stakeholders to produce a regional diagnostic, addressing economic, social, and environmental aspects.
- Master the professional tools and instruments needed in the field of transportation and development.

# CURRICULUM

## Master's Year 1 (M1; 60 ECTS)

### 2 courses of study offered, with a core curriculum

#### Transportation and sustainable development (TraDD)

- Transportation and sustainable development: the issues
- Analysis of demand & sustainability in modes of transportation
- Digital tools and engineering for sustainable transportation
- Sustainable transportation economy
- Management of sustainable transportation projects

#### Transportation and mobility (TM)

- Transportation and mobility: issues and prospects
- Methods in transportation, urban planning, development transportation, urban planning, development

**Languages and Humanities and Social Sciences:  
Internships or M1 topic**

## Master's Year 2 (M2; 60 ECTS)

### 3 TraDD concentrations

- Mobility service design
- Freight transportation and logistics
- Eco-design of vehicles and transportation infrastructure

### 3 TM optional courses

- Transportation, development and urban planning: Urban transportation plans, hubs, active mobility options, travel safety, etc.
- Design and operation of transportation systems
- Freight transportation

**Languages and Humanities and Social Sciences:  
Internships and final dissertation (5-6 months)  
Research track**

## INSTRUCTIONAL CONTENT

The Transportation and Mobility course of study focuses on the interactions between development, urban planning, and mobility. The Transportation and Sustainable Development course considers issues related to mobility through the lens of sustainable development, emphasizing innovative mobility service design tools based on digital technologies.

## OPPORTUNITIES

Students move quickly into engineering roles or positions with high levels of managerial responsibility, with jobs such as:

- Mobility project manager for a local government or mobility organizing authority.
- Sustainable mobility service and vehicle designer with one of the traditional players (manufacturer, network manager) or an information technology-based company.
- Transportation and mobility project manager for a civil engineering company or an engineering consulting firm.
- Operator of transportation service or infrastructure, involved in operational production of transportation.
- Auditor and manager of sustainable development policy for a transportation service company (Transportation and Sustainable Development track only).

## More information

[psl.eu/en/education/masters-degree-transportation-mobility-networks](https://psl.eu/en/education/masters-degree-transportation-mobility-networks)

## Contact

Head of the master's program: Emeric FORTIN, École des Ponts ParisTech

## ADMISSIONS

### Desired background for M1

- Holds a 3-year undergraduate degree (BAC+3, 180 ECTS credits) or equivalent in engineering science, economics, or geography.
- Has completed mathematics equivalent to the level of a BS (Bachelor of Science).
- Applicants who are not native speakers of French must be able to read, speak, and understand French, as demonstrated by a minimum B2 level of language mastery.

### Selection process

Based on an application and interview.

## DIPLOMA DELIVERED

National master's degree delivered by Université PSL, co-accredited with École d'Urbanisme de Paris (Universités Paris Est Créteil and Gustave Eiffel), École des Ponts ParisTech and Institut Polytechnique de Paris.

## TEACHING LOCATIONS

Classes are taught on the campuses of the various schools participating in the course:

- Mines ParisTech-PSL
- École d'Urbanisme de Paris (Universités Paris Est Créteil and Gustave Eiffel)
- École des Ponts ParisTech
- Institut Polytechnique de Paris



Partners



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