Masters Programme
Railway Engineering and Urban Transport Systems

Join the leaders of the urban and mainline railway transport

The important development of the railway industry has encouraged manufacturers and operators to ask High-level Schools to create a high-level training programme aimed at engineers, project managers and Executive managers working or aiming to work in the railway and urban transport industry.

Our Goals

You are an Engineer or an Executive manager from the railway industry? The Masters Programme will enable you to acquire a global vision of railway and urban transport systems industry, including technical, economical, institutional and regulatory (French and European) dimensions. The curriculum covers the complete, urban and interurban passenger transportation industry as well as freight transport.

Programme syllabus

The programme is 15-month long (Executive block release training).

- CORE PROGRAMME - 300 H
- MODULES - 150 H at least
- INTERNSHIP * / PROFESSIONAL ASSIGNMENT
- THESIS and VIVA

* 16-week long at least for unemployed students

Studied Topics

- Actors and institutions in railway and urban transport
- Project management and systems engineering
- Security, exploitation, crisis management
- Transport economics and requirements-based analysis
- Civil engineering, infrastructure and maintenance
- Order control
- Rolling stock design
- Urban and commuter transport
- Freight and logistics
Skills acquired

The aim of this Masters Programme is to make you able to:

• Conceive, operate or manage railway and urban transport systems,
• Build and manage a transport bid including socio-economic, organizational and regulatory factors,
• Grasp institutional and financial stakes,
• Apply technical skills to projects.

Your career prospects

The Masters programme offers the opportunity to hold management positions in:

• the railway industry,
• the public works and infrastructures industries,
• railway and urban operators,
• local authorities,
• transport engineering and design companies.

IN HIS OWN WORDS

Cédric BERHAULT
Railway Masters - 2012-2013
Systems Integrator, RATP

“The programme offers to approach every component of the transport systems, from institutional aspect to rolling stock, to signalling management and transport economics. I particularly appreciated the projects achieved during the training. They are a good way to put into practice the concepts we studied during the course. Several visits are organized, they provide a good balance between theoretical explanations, personal thoughts and practical achievements. I have the habit of saying the programme made me earn 20 years of experience in comparison with what I could have acquired during my career.”

Careers

The holders of the Masters Programme can hold the following professions:

• Design Engineer
• Systems Engineer
• Infrastructure project manager
• Head of Operations
• Business Engineer
• Offers Manager
• Upstream research Engineer
• Consulting Engineer
• Operation Engineer
• Operational manager
Profiles and qualifications
The admission conditions are the ones of the Conférence des Grandes Écoles: candidates must hold a 4/5-year higher education diploma (Bac+5 or Bac+4 with a 3-year professional experience). Other professional records are keen to be accepted as part of a dispensation.

Admission
A jury will make a selection of candidates based on the study of a written application and an audition.

Timetable
Applications: January to end of May.
Admission jury: mid-June.
Course begins: early September.
Course duration: from September to July (about 1 to 2 weeks a month - block release organization).

Validation of the degree
Depending on the modules.
Mini thesis.
Professional thesis.

Credits (ECTS)

Cost
€13,500 for students who pay for the course themselves.
€16,000 for courses sponsored by companies.

Academic Partners
- School in Partnership :
  École des Ponts ParisTech - ENSIAME - UTC - ENTPE.
- Associated schools :
  ESTACA - EPFL - University of Birmingham

Alumni
Some events are organized every year by the Masters Programme Alumni. The president of the Alumni is Gautier Bouskila (gautier.bouskila@rff.fr).

Professional Partners
Alstom, Ansaldo-STS, Bombardier, EPSF, RATP, RFF, Siemens, SNCF, Systra.

Teaching venue
The programme will be mainly taught in the Ile-de-France area, at:
the École des Ponts ParisTech
Cité Descartes – Champs-sur-Marne
6 et 8 avenue Blaise-Pascal
77 455 Marne-la-Vallée
but also at the ENSIAME, in the Institut de Recherche Technologique Railenium in Valenciennes and in the UTC in Compiègne.

Languages
The programme is mainly taught in French.

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A labeled programme