



SNCF GROUP

Training for railway professionals



FOREWORD



Until now, we've designed most SNCF Group training programmes for our own employees.

Backed by a network of corporate universities and training centres, they cover the structure and operation of railway systems, safety, driving, maintenance, and more—including highly technical subjects such as infrastructure design.

Today we are delighted to offer our most essential courses to railway professionals from around the world.

This brochure describes a selection of training objectives, listing main themes addressed in each programme, along with sample course titles.

We're proud to offer our training expertise to you and your team.

*Guillaume Pepy
Chairman, SNCF Management Board,*





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THE FRENCH RAILWAYS: SYSTEM AND OPERATIONS

Railways are complex systems. Understanding all of their technical, economic, social and environmental dimensions demands a multidisciplinary approach.

At SNCF, delivering on-time performance and optimizing line capacity are just two of the challenges we've mastered. We've drawn on our store of expertise to design hands-on training courses that deliver essential operations know-how.

Objective

Develop advanced skills in railway system design and operation.

What you'll learn

- French railways: how we work & key developments
- Railway universals: essential features
- Estimating railway capacity and scope for improvement, based on operating assets and conditions
- Track design: a functional approach
- How transport planning helps meet performance targets
- Efficient resource management: optimizing network use



Courses include:

- An introduction to railway operations
- An introduction to traffic flow, capacity and performance

MASS TRANSIT EXPERTISE IN THE PARIS REGION AND AROUND THE WORLD

For years, SNCF Group has delivered mass transit solutions at home and abroad—through Transilien in the Paris Region, and through Keolis on international markets. Along the way, we've mastered the complex skillsets that transport operators require.

Now a world leader in mass transit, SNCF offers a wide range of focused, practical courses that give railway professionals the skills they need.



Objective

Develop a system-wide view of mass transit operations.

What you'll learn

- Operating trains in densely populated areas
- Driving in densely populated areas
- High-performance rolling stock and networks
- Using transport planning to improve performance
- Day-to-day management: safety, robust systems, on-time performance
- Infrastructure maintenance in densely populated areas
- Passenger information during disruptions
- Understanding and managing passenger flows
- Stations and trains: getting capacity right



Courses include:

Understanding railway operation in densely populated areas



CRISIS MANAGEMENT: WHAT YOU NEED TO KNOW

Like most railway operators, we regularly face crises—minor or major—that can impact operations, traffic flows and on-time performance.

At SNCF, our response has included the creation of a nationwide centre of excellence for crisis management.

Objective

Learn to manage crises more effectively.

What you'll learn

- Crisis coordination
- Human factors in crisis management
- Key challenges in crisis communication
- Managing emergencies
- Passenger information in crisis situations



Courses include:

Crisis management for professionals
Passenger information

RAILWAY SAFETY

In the rail industry, safety comes first. Amid constant change and rising passenger numbers, rail networks must adapt their operations to deliver safe mobility every time.

We and our partners have created SNCF training courses especially for the men and women who keep the network safe.



Objective

Understand and share safety management.

What you'll learn

- Safety: fundamentals and challenges
- Understanding safety challenges
- Managing safety
- Organizational and human factors in safety
- Operations safety



Courses include:

Safety basics
Safety in engineering projects



RAILWAY SECURITY

For railway operators, the demand for security has never been higher. Both passengers and staff naturally seek smooth, uneventful journeys, but effective security also improves service quality and on-time performance.

When railway operators take security seriously, making users aware of their care and effort, they create critical trust with customers and with employees.

Objective

Offer training in and awareness of security issues for all rail professionals—to keep goods and people secure in transit, and to protect their own security when interacting with customers.

What you'll learn

- Professional communication and attitudes
- Preventing and managing conflict
- Positioning and exiting conflict situations
- Dealing with security situations in a railway environment
- Managing aggression and conflict: staying alert to risk in the railway environment



Courses include:

Training sales staff in all railway functions/
businesses

Training security personnel

INFRASTRUCTURE MAINTENANCE

SNCF Réseau and its teams have been designing, maintaining and upgrading the French railway network for decades, for both classic and high-speed service. In the process, we've developed unique expertise in every infrastructure speciality.

Courses on offer focus primarily on maintenance of active track.

They include maintenance strategy, but also maintenance of trackbeds/embankments and catenary systems.



Objective

Organize and optimize maintenance of active track. Improve understanding of maintenance policy.

What you'll learn

- Infrastructure environments
- Preventive maintenance
- Corrective maintenance
- Maintenance policies
- Preparing for and scheduling maintenance
- Maintenance of tracks in operation



Courses include:

Maintaining structural works
Track maintenance



ROLLING STOCK MAINTENANCE

To service our large, diverse fleet of rolling stock, we've developed a comprehensive training programme that combines time-tested and cutting-edge techniques for diesel and electric-powered trains.

Our aim is seamless operation—trains we can count on, with minimal downtime and optimized maintenance costs.

Objective

Learn to identify rolling stock components and their functions. Identify, analyse and resolve operating failures.

What you'll learn

- Rolling stock: engineering
- Rolling stock: components
- Key failures: analysis
- Use of monitoring and measuring devices
- How to use maintenance documents
- The role of maintenance in safety management



Courses include:

Rolling components
Safety systems

RAILWAY ENGINEERING: STRUCTURAL WORKS

SNCF's network has over 30,000 structural works, including some 2,500 on high-speed lines. Good design is the key to durability, safety and ease of maintenance—and also to the comfort of our passengers.

The courses we offer cover a wide range of subjects: The effect of wind on structures. Building braking impacts into structural specifications. Earthquakes. Features specific to dedicated high-speed infrastructure, and more.



Objective

Learn to design and quantify a railway structure.

What you'll learn

- Braking and acceleration
- Calculating rail-structure interaction
- Structural dynamics
- Impact of crosswinds
- Impact of earthquakes
- Designing and dimensioning concrete, metal and mixed structures
- Sizing cable-stayed bridges: principles



Courses include:

Dynamic calculation under rolling loads
Combined concrete and metal bridges



RAILWAY ENGINEERING: SIGNALLING

SNCF Réseau designs, maintains and upgrades a comprehensive signalling system, gradually replacing elements year after year.

Rail signalling components must meet the very highest safety standards for both design and maintenance.

Objective

Understand how signalling systems work and how to maintain them.

What you'll learn

- Signalling: principles
- New developments in signal boxes
- Subsystem maintenance (track circuits, automatic blocks, switch mechanisms and more)
- The principles behind ETCS (European Train Control System) and ERTMS (European Rail Traffic Management System)



Courses include:

Computerized switching
(PAI: Poste d'Aiguillage Informatisé)

Automatic block operation

ERTMS, level 2: general principles

OUR MAIN TRAINING PARTNERS

Université
de l'Ingénierie

Université de l'Ingénierie - UDI
47 rue Christino Garcia
93 210 LA PLAINE SAINT DENIS
FRANCE
accueiludi@udi-sncf.com

A corporate university for the rail industry

MASTERIS
PARIS STRASBOURG LILLE LONDON

MASTERIS
4 rue André Campra
93 210 LA PLAINE SAINT DENIS
FRANCE

Railway maintenance and state-of-the-art engineering

ief

IEF
Immeuble Le Stadium
1 avenue François Mitterrand
93 210 LA PLAINE SAINT DENIS
FRANCE

SNCF Group's in-house training centre, offering courses for railway companies and infrastructure managers

SNCF
R É S E A U

SNCF Réseau
15 /17 rue Jean-Philippe Rameau
93 210 LA PLAINE SAINT DENIS
FRANCE

Managing and maintaining France's railway network

SYSTRA

SYSTRA
72 rue Henry Farman
75 015 PARIS
FRANCE

World-class consulting and engineering for transport solutions

IFF
INSTITUT DE FORMATION FERROVIAIRE

Institut de Formation Ferroviaire
Avenue Ibn Sina – Agdal
10 090 RABAT - MOROCCO

Created by the ONCF-SNCF partnership, offering over 70 courses for rail professionals

**MASS
TRANSIT
ACADEMY**

MASS TRANSIT ACADEMY
10 rue Camille Moke
93 210 LA PLAINE SAINT DENIS
FRANCE

An academy dedicated to mass transit, founded by SNCF subsidiaries Keolis and Transilien

PRACTICAL INFORMATION

→ Language

Our courses are taught in French, but we can offer them in other languages, too. Simultaneous interpreting is available on request.

→ Training requests

SNCF offers standard courses and courses customized to meet client specifications. We can also develop entirely new courses.

Content is adapted to participants' level and skillset(s), and ranges from basic for beginners to advanced technical training.

→ For more information

Contact us at sncf.dig@sncf.fr



OPTIM SERVICES ENVIRONNEMENT DE TRAVAIL
MACQUETTE ET IMPRESSION CENTRE EDITION SNCF