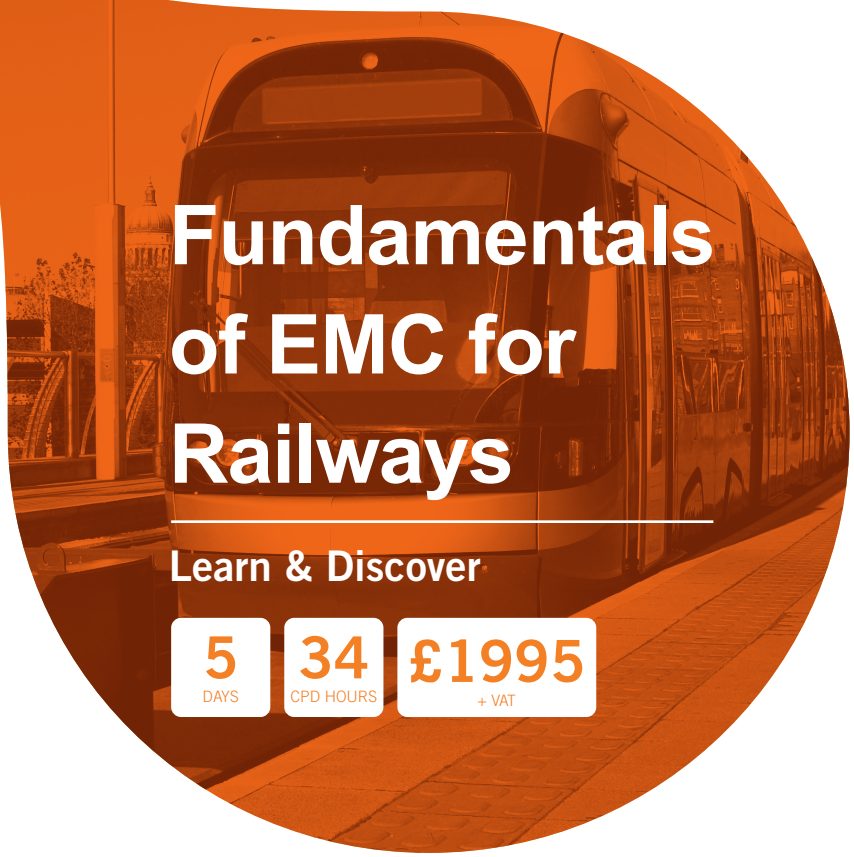
eurofins | York



Fundamentals of EMC for Railways

Learn & Discover

5 DAYS | 34 CPD HOURS | £1995 + VAT

Understand the fundamentals and essentials of EMC and its importance in the rail environment, from underlying theory, standards and testing through to EMC management and mitigation.

Overview of the course

This 5-day course delivers an in-depth study of EMC in the complex railway environment. It provides an understanding of its importance and the need to manage EMC from project concept to completion.

Applying the knowledge and understanding from this course will improve the management of EMC and minimise the risk of unforeseen problems and therefore their associated time and cost over-runs.

Topics covered in this course help you to understand and manage the railway electromagnetic environment.

Who should attend?

- Engineers concerned with EMC approvals and assurance on the railway network
- Engineers and manufacturers who make apparatus to be used on the rail network
- Engineers and managers wishing to learn how EMC is controlled throughout a project
- Rolling Stock and equipment manufactures wishing to achieve compliance for equipment destined for the rail environment

Key benefits of the workshop

- Gain an overall understanding of both the theoretical & practical aspects of EMC in the railway environment
- Knowledge of regulatory EMC requirements and the relationship to standards
- Provides an understanding of EMC mitigation and design techniques

The course structure

- Four days with a mixture of lectures, presentations, interactive workshops and demonstrations
- One day of practical demonstrations at our UKAS accredited Test Laboratory to illustrate the commonly required EMC tests described in the EN multi-disciplinary 61000-4-x series of standards such as; conducted emissions, radiated emissions, conducted immunity and radiated immunity

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Understand the fundamentals and essentials of EMC and its importance in the rail environment, from underlying theory, standards and testing through to EMC management and mitigation.

Fundamentals of EMC in Railways

5 DAYS | 34 CPD HOURS | £1995 + VAT

The course content

This course covers essential concepts of EMC in the rail environment from the underlying theory, standards and testing, design requirements and how to achieve EMC assurance.

- Introduction to EMC, EM waves and radiation mechanisms
- Commercial and Railway EMC standards including
- Technical Documentation
  - Updates to the EN 50121-X series
  - Network Rail specific EMC standards
  - LU specific EMC standards
- Railway specific EMC considerations including
  - Railway EMC measurements both at the trackside (on-site testing) and within the laboratory
  - Signalling systems
  - The power feeding arrangements in AC and DC railways
  - The EMI threats posed by traction drives
  - Fixed installation requirements
  - How unwanted signals couple into lineside cables
  - How to shield/screen equipment and how to measure and reduce touch potentials
- Interoperability, management and regulatory considerations
- EMC management
- Practical immunisation case studies
- Fundamental EMC knowledge of antennas, testing, standards and interference effects

This course includes one day of demonstrations held at one of our UKAS accredited test Laboratories. During this time, our experienced Test Engineers are available to answer specific testing questions you may have.

The practical demonstrations illustrate the commonly required EMC tests including:

- Conducted emissions
- Radiated emissions
- Conducted immunity (RF, EFTB, etc)
- Radiated immunity

Book your place now to expand your knowledge

The current dates for Fundamentals of EMC in Railways are available from our website or by calling our training team on **0330 430 3456**

You can also email our training team on **trainingyork@eurofins.com** and they will be pleased to help.

To book your place

- Call our training team on **0330 430 3456**
- Email **trainingyork@eurofins.com**
- Download the booking form online at **bit.ly/FUNDRAIL19**
- Book & pay online at **bit.ly/FUNDRAIL19**

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call: 0330 430 3456

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