

# Fundamentals of EMC for Military

Learn & Discover

5

DAYS

34

CPD HOURS

£1995

+ VAT

**Understand the fundamentals and essentials of EMC in the military environment from underlying theory, standards and testing through to design requirements and how to achieve EMC assurance.**

## Overview of the course

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An understanding of EMC is key for the reliable operation of electrical/electronic equipment and systems in the military environment, in particular when using commercial equipment that may require adaptation for military use.

It is also essential to understand what exactly is happening during product acceptance and testing so that any possible risks or gaps can be closed out.

This course gives you the essential information you need to be able to manage EMC and reduce business risk.

## Key benefits of the workshop

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- Gain an overall understanding of both the theoretical and practical aspects of EMC in a military environment
- Understand the key management techniques to achieve EMC compliance
- Understand EMC mitigation design techniques across a range of military applications and environments

## Who should attend?

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- Engineers using or specifying commercial equipment in the military environment
- Designers & Engineers concerned with EMC approvals and assurance within a military environment
- Manufacturers who make apparatus to be used for military applications
- Anyone who need to understand Military EMC standards, the Military EMC Environment and Military EMC testing

## The course structure

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- Four days with a mixture of lectures, presentations, interactive workshops and demonstrations
- Specific sessions on Military EMC standards (including DEFSTAN 59-411 and MIL 461), the Military EMC Environment and Military EMC testing
- One day of practical demonstrations to illustrate the EMC tests described in the multi-disciplinary EN 61000-4-x series of standards

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### The course content

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

- Fundamentals of EM Waves and radiation mechanisms
- Decibels and the units of 'EMC'
- The EMC Directive 2014/30/EU, it's history, updates and implementing regulations
- Commercial EMC standards
- EMC measurement and testing
- Overview of EMC design principles
- Conducted interference (passive devices, filters, etc)
- EMC on a PCB (PCB layout, decoupling, 'chip' characteristics, etc)
- Screening and enclosures
- Shielding modelling case studies (illustrating shielding examples using computational software)
- Conformance workshop – case studies
- Technical documentation
- EMC management strategies

In addition the course features specific sessions covering

- Military EMC standards
- The Military EMC environment
- Specific requirements for Military EMC testing
- Using CE marked equipment in a military environment

The course also includes one day of demonstrations held at our Laboratory in Castleford during which our 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 for Military 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/FUNDMIL19**
- Book & pay online at **bit.ly/FUNDMIL19**



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