



JobOppO The Dedicated Ex-Military Job Board

Railway Risk and Safety Management

September - December
2013

Postgraduate Taught Programmes in Railway Risk and Safety Management (RRSM)

JobOppO is proud to be able to offer a number of free places for a Railway Risk and Safety Management. We would like to thank the University of Birmingham for this opportunity and support, the team at JobOppO look forward to working closely with the university.

We have 5 individual places on the technically focused modules of this programme to be held in Birmingham.

All applications for the course will be screened for suitability. The course modules are comprised of the following:

Continuous Professional Development Modules - normally priced at £1,100 per module. JobOppO has agreed to pay a small fee for the successful 5 candidates to attend this course.

Railway Operations and Control Systems Design - 30th September 2013 - 4th October 2013

Technology Strategy and Supply Chain Management - 14th October 2013 - 18th October

Railway Traction Systems Design and Traction Supplies - 4th November 2013 - 8th November 2013

Rolling Stock and Infrastructure Systems Interactions - 2nd December 2013 - 6th December 2013



The programme team aims to create a deep and robust understanding of approaches to manage safety and risk in transport systems and projects. The partners recognise that each transport sector and mode has its own specific features but seek to ensure that a common approach is taken to the generic issues involved in ensuring dependable operations.

Course Details

1. Railway Operations and Control Systems Design (October)

The module covers the interdependent technical areas of the railway of operations and control systems. Areas addressed include the management of complexity, safe operation of freight and passenger train services, human resource management and environmental issues, as well as operations management and economics for the rail industry. The design of railway control and signalling systems requires a detailed understanding of the principles relating to braking performance, block operation, route setting, failsafe principles and the mathematical theories of safe software design. Interlocking design, automatic train control (ATP and ATO) and moving block are covered, together with the new European Train Control System (ERTMS).



The special requirements of metro and light rail operations are considered alongside signalling maintenance and EMC issues. Modelling of signalling systems and the simulation of simple railway networks are introduced through lectures and practical activities

2. Technology Strategy and Supply Chain Management (October)

This module addresses the choice of railway technology elements; matching technology to route, operational requirements and legislation. It discusses the option of future proofing, back-up systems and emerging technologies. It covers issues such as obsolescence management, managing tolerances in documentation and manufacturing. Topics of quality control are covered. The module also addresses management of design processes, supply chain specification, risks and change. The teaching will be complemented with case studies of system application and relevant projects.

3. Railway Traction Systems and Traction Supplies (November)

This module covers all aspects of motive power, from diesel-electric propulsion through to pulse width converter systems. Individual lectures deal with the basic physics of traction, friction braking and electric braking systems, DC and AC motor design and traction supplies, power converters, and train detection. Industry-based speakers address the topics of station design, station systems and infrastructure power supply components.

4. Rolling Stock and Infrastructure Systems Interactions (December)

The infrastructure portion of this module is designed to give students



an in-depth technical knowledge of the rolling stock and infrastructure systems and an understanding of how to design and maintain them in order to minimise risk and maximise safety. Railway alignment design, gauging, and maintenance issues are discussed in detail, as are issues relating to the rolling contact behaviour of the wheel-rail interface and to rail vehicle dynamics, including the steering of wheelsets. Aerodynamics, body-shell design and crashworthiness issues, choice of materials, vehicle maintenance, and the design and behaviour suspensions are covered in some detail. Also addressed are the topics of station design, station systems and infrastructure power supply components. The module is run by the BCRRE at the University of Birmingham, with many speakers from the railway industry.



All applications can be made through the following link:

<http://www.joboppo.co.uk/job/railway-risk-and-safety-management-314012.htm>

Please register your details and upload your CV for consideration on attending this course. All successful candidates will be notified in the coming month and may be required to have a telephone interview with the course instructors.