

RAIL SIGNALLING SYSTEMS DESIGN FUNDAMENTALS

**2-Day Training Course: Understanding Signal
Design Requirements for an Integrated Rail
Project**

FACE TO FACE TRAINING

23 – 24 June 2022 • Brisbane



Our Expert Course Instructor



Stewart Rendell

Stewart has been involved in just about every facet of railway signalling works. Having started as a maintenance technician and through training and experience progressed to engineer and now manager. He has a broad range of knowledge and experience that is useful to others in the industry.

KEY LEARNING OBJECTIVES

- ▶ Understand the purpose of a signalling plan and the relationships between principles and signal positioning on a signalling plan
- ▶ Describe the purpose of a Signalling Functional Specification (SFS) and factors that influence equipment selection
- ▶ Discuss issues arising from changes to a 'brownfield' site and how changes are identified
- ▶ Understand the signalling design process and identify critical points in the process
- ▶ Detail the process for signal sighting and describe interfaces that can influence it
- ▶ Sketch a simple aspect sequence chart for signalling control
- ▶ Interpret key elements from control tables
- ▶ Explain data preparation processes and interlocking interfaces
- ▶ State operational readiness needs before commissioning
- ▶ Explain incident investigation, regulatory system requirements and options for degraded operations

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ABOUT THE COURSE

This is an intermediate course covering Australian; design, principles, and practices for rail signalling and control systems.

The purpose of this course is to make evident the key principles and thinking behind the design of signalling and control systems in a multi discipline (integrated) project context.

The course makes extensive use of a case study, which involves the addition of an electrified stabling yard to a non-electrified railway, and the reasoning behind the changes associated with the new signalling and control system.

The sequence of the course mimics a real life project, completed in 2 days! It follows the systems engineering vs project lifecycle i.e: Requirements • Concept Design • Detailed Design • Installation • Testing and Commissioning • Operations and Maintenance Phases.

WHO WILL BENEFIT

- Operations management and traffic management (network controllers, train controllers, timetable planners)
- Project managers, project engineers
- Track and civil infrastructure managers and engineers
- Railway maintenance managers
- Safety assurance practitioners
- Signal technicians or trainee signal engineers wanting to broaden their knowledge of a signalling project lifecycle
- Regulators
- Control systems and communications engineers



2-Day Course Outline

DAY 1:

- Signalling Systems Overview
- Signalling Principles
- Legislation, Regulations and Standards
- Phases of a Signalling Project
- Concept Design and Requirements Definition

DAY 2:

- Signalling Arrangement
- Signalling Plan
- Aspect Sequence Charts
- Control Tables
- Detailed Design
- Construction
- Testing and Commissioning
- Operation and Maintenance

OUR EXPERT COURSE INSTRUCTOR



Stewart Rendell

Stewart has been involved in just about every facet of railway signalling works. Having started as a maintenance technician and through training and experience progressed to engineer and now manager. He has a broad range of knowledge and experience that is useful to others in the industry.

Stewart's strengths are within signalling engineering, systems engineering and management within a cross-section of projects and railway undertakings. He enjoys helping guide others in achieving their career goals via his involvement in the Graduate Diploma in Railway Signalling as a course tutor with Competency Australia.

Stewart's mission is to offer value adding input into project scoping and planning efforts, and be able to offer new and different approaches and technologies to challenge the 'norm' without compromising safety or the integrity of the signalling and control systems.

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Easy Ways to Register

1 **Web**
www.informa.com.au/railsignallingsystems

2 **Telephone**
+61 (02) 9080 4395

3 **Email**
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Course Codes	Location	Course Dates	Early Bird price valid until 3 June 22		Standard price valid after 3 June 22		4+ Dels Discount	
P22GR20BR	Brisbane	23 – 24 June 2022	\$2,995 + \$299.50 GST	\$3,294.50	\$3,095 + \$309.50 GST	\$3,404.50	\$2,476 + \$247.60 GST	\$2,723.60

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