

Track Infrastructure Fundamentals for Railway Professionals

21 - 25 February 2022

Monash Institute of Railway Technology
Monash University

*Presenters are specialist from
Monash Institute of Railway Technology and the Australian Rail Industry*

This is a wonderful opportunity to gain an illuminating insight into the concepts, technology, processes and standards that are essential for railway professionals

Day One	Overview of the track infrastructure and operational principles
Day Two	Fundamentals of track loading, stability and rail materials
Day Three	Principles of track infrastructure design and material selection
Day Four	Processes of infrastructure management, monitoring and maintenance
Day Five	Importance of special track components, track alignment and clearances

The aim of this five-day course is to:

- Provide background information and important concepts relating to track infrastructure to professionals in the railway industry or planning to join the railway industry
- Provide a consistent understanding of infrastructure as well as safety and design within industry context
- Explore the impacts of infrastructure quality and maintenance strategy together with associated risks, needs and benefits

The format of the course will be face to face training supported by activities, and consolidation tasks and flexible to allow participants to raise questions regarding the above topics or other track infrastructure issues.

Venue: Monash University – Clayton Campus, Victoria 3800, Australia

Date: Monday 21 February to Friday 25 February 2022

Time: 9.30am – 5.00pm (Registration from 9.00am)

Cost: AUD\$ 3,500 + GST

Morning/afternoon tea, lunch and refreshments will be provided

This is an exclusive event with limited seats.

Early registration is essential to avoid disappointment.

Please feel free to notify others who may be interested in this course.

Registration by Friday 11 February 2022

For any additional information and registration call

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Please advise if you have any dietary or access requirements.

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Course Structure

Day 1: Overview of the track infrastructure and operational principles

- Establish an overview of railway track infrastructure
- Identify key elements of track components and understand their functions
- The application of Codes of Practice and Standards for track components and management
- Apply knowledge of track features and components to different scenarios/environments/contexts

Day 2: Fundamentals of track loading, stability and rail materials

- Understand the importance of wheel-rail interaction and vehicle loading on track
- Transmission of vehicle loading through the track structure and major component stresses
- Understand what is involved in managing track stability
- Introduction of rail materials

Day 3: Understanding track infrastructure behaviour and material selection

- Understanding of track components behaviour during railway operation and material selection
- Understanding the context of the interfaces between different track components
- Understanding of the methods to join rails

Day 4: Processes of infrastructure management, monitoring and maintenance

- Understanding track infrastructure management
- Understand the different types of rail/track defects and their characteristics
- Appreciate the impact and severity of different defect types
- Understand the importance of track inspection and condition monitoring
- Techniques for track maintenance and track construction

Day 5: Importance of special track components, track alignment and clearances

- Overview of use and importance of special track components
- Track alignment design
- Determination of track clearances
- Track interactions with signaling and electric traction systems

Course Attendance Certificate will be issued

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