

OUTLINE

OpenTrack training is available to licence holders for their nominated participants.

DELIVERY

The course is delivered online using a combination of self-paced learning via OpenLearning and webinars using Zoom. The course will be presented in English and all times are in AEST (Australian Eastern Standard Time). While the course does include self-paced sections using OpenLearning it is expected that the participants will dedicate the specified days aside to focus on the training and complete/review the material by the specified due date for the best outcome.

FEE STRUCTURE

Attendance for the full course, per participant: AUD \$2,000 plus GST

Attendance for Segment 2, per participant: AUD \$1,500 plus GST

All fees are due and payable 14 days after the date of invoice.

APPLICATIONS

Applications for participants to attend the course should be made by email to OpenTrack@plateway.com.au.

Applications close 5 working days before the commencement of the course if Plateway is required to provide temporary OpenTrack licences. Where temporary licences are not required then applications for course attendance can be made up to 3 working days before course commencement.

QUERIES

If you have any questions please contact Plateway by email to OpenTrack@plateway.com.au

TRAINING APPROACH

The course proper will concentrate on manual manipulation from primary principles to ensure that the basics are well drilled. There will be opportunities to demonstrate electronic file transfer and the import and export of files into Excel.

SESSION HOUSEKEEPING

WEBINAR ETIQUETTE

Participants are asked to have their microphones muted during the webinar unless asking questions. Rest breaks will be offered as a stretch break at half way during the webinars.

NOTE TAKING

Plateway will provide each participant with soft copies of each of the presentations through the OpenLearning platform. These will be in PDF format suitable for writing notes appropriate to the relevant slides and reviewing. Where licence holders have been issued with their OpenTrack licences we request that each participant has access to their OpenTrack manual. For cases where a permanent licence is installed on a client's laptop prior to the course, Plateway will provide a soft copy of the manual.

TRAINING COURSE STRUCTURE

SEGMENT 1

The first segment, self-paced conducted on OpenLearning, is an introduction to rail transportation. This segment provides a background in the elements of rail operations that are used in the OpenTrack Rail Network Simulation. As an example, the Rolling Stock basics unit gives an understanding of the characteristics of modern rolling stock. Participants can get a feel for typical values that can be experienced when entering data in OpenTrack and understand the criteria being discussed in the later modules which covers the OpenTrack Rolling Stock elements of Trains and Engines.

From past experience, we have found that even those experienced with rail operations would appreciate a refresher in these elements.

For those with a background in rail it is not necessary to partake in segment 1. To make the decision whether to participate or not please review the course outline. If you feel comfortable with your knowledge of the course material, you can join the course for segment 2, focusing directly on OpenTrack.

Wednesday
-Thursday

Self-Paced

Unit 1 Development of Railways in the UK and USA with emphasis on Signalling and Safeworking concepts

- Early history – driven by the market demands of the industrial revolution
- Evolution of rail safety systems
- Tokens and timetables
- Recognising the fallibility of humans
- Modern system developments

Unit 2 Railway Physics – The laws of physics as applied to railway operations and as used by OpenTrack

- Basics of force, mass, acceleration, energy, power, velocity, speed, friction & gravity
- Comparative advantages for rail of steel wheel to steel rail operations

Unit 4 Australian Rail Operations – including sources of information, Curve & Gradient Diagrams

- Access providers, TOC information sources
- Railway topography, differences between steam era and modern era alignment

Friday

Webinar
10:00-14:00

Review Webinar

- Q/A

Unit 3 Rolling Stock Basics

- Characteristics of Diesel Electric and Electric traction
- Tractive effort curves
- Hotel power
- AC V DC Traction motors

Unit 5 Current Safeworking Practice in Australia and New Zealand

- Ordinary Staff (Token)
- Electric Staff (Token)
- Train Order/ Track Warrant
- Rail Vehicle Detection (Track Circuit and Axle Counter)
- CTC
- ARTC ATMS
- ETCS (Levels 1, 2 & 3) CBTC
- Level crossings (includes predictor type)

TRAINING COURSE STRUCTURE

SEGMENT 2

Segment 2, the OpenTrack training to be conducted in combination with self-paced learning on OpenLearning and online using Zoom. The first day covers an introduction to the OpenTrack principles. From Tuesday through to Friday we plan to give the participants hands on experience with OpenTrack. To achieve this, we ask that participants are equipped with a laptop or Desktop and have OpenTrack installed. As part of the OpenTrack training course, Plateway can supply time limited training version which is suitable for the training. These will expire at the end of the training course.

Monday

Webinar
10:00-14:00

Introduction to course (Webinar)

- Overview of course
- Housekeeping

Unit 6 An introduction to OpenTrack (Webinar)

- Operational principles of OpenTrack software
- Purpose and application deployment of the OpenTrack Rail Network Simulator

Unit 7 Structure of OpenTrack software (Webinar)

- Software structure and advantages of combined data base and continuous calculation
- Importance of version control in simulation analysis
- Awareness of what is material in determining the extent of detail covered in the OpenTrack input phase

Refresher on Data collection (Self-paced) – OpenLearning

- Overview of data collection required for OpenTrack

Tuesday

Self-Paced

Unit 8 OpenTrack infrastructure (Self-paced) – OpenLearning

- Elements of OpenTrack infrastructure

Unit 9 Constructing the OpenTrack Infrastructure – Track (Self-paced) – OpenLearning

- OpenTrack preferences
- Line speeds
- Track and line names
- The double vertex
- Vertex inspector
- Edge elements
- Connector elements
- Station vertices
- Power areas

Unit 10 Constructing the OpenTrack Infrastructure – Track Hands On (Self-paced) – Openlearning

- Manual and electronic data transfer
- Use of Excel

Units 8-10 To be completed by Wednesday morning AEST

TRAINING COURSE STRUCTURE

SEGMENT 2 - CONTINUED

Wednesday

Webinar
10:00-14:00

Review Webinar (Webinar)

- Q/A
- Review of OpenTrack models from Tuesday

Unit 11 OpenTrack Signalling – Hands On (Webinar)

- Absolute and permissive signals and OpenTrack equivalents
- Virtual signals
- Performance signals
- Stopping commands etc.

Unit 14 Rolling Stock – Engines and Trains (Webinar)

- Engine data input requirements
- Train composition, as individual wagons or as combined trailing load
- Entering rolling stock data into OpenTrack

Thursday

Self-Paced

Unit 12 Routes, Paths and Itineraries – Hands on (Self-paced) – Openlearning

- Determination of an OpenTrack route
- Entry into occupied block

Unit 13 Overlaps, Release Groups and Shunting – Hands On (Self-paced) – Openlearning

- Low Speed areas, overlaps, shunting limits etc.

Unit 15 Courses and Timetables – Simple Simulation – Hands on (Self-paced) – Openlearning

- Establishing the course and timetable requirements for a single train run
- Making a simple point to point single line multiple train timetable

Friday

Webinar
10:00 – 14:00

Unit 16 Advanced Courses and Timetables – (Part 1) Hands on (Webinar)

- Creating a scenario for combining two trains and splitting a train into two components that continue their journey
- Joining and splitting trains
- Creating regular interval timetables
- More advanced simulation and exercises in performance analysis
- Train diagrams
- Single line performance with 'follow on operations'

Wrap up

- Q/A
- Revision
- Help desk contact details
- Wrap up