Signalling

What is railway signalling?

Signalling encompasses technical systems, standards, and design principles that enable operators to regulate the movement of trains on the line. Signalling professionals work with both 'heritage' and leading edge technology on a daily basis.

Basic equipment includes coloured light signals and signaller setting of routes that incorporate interlocking methods to ensure trains can operate safely and at speed. More advanced equipment includes computer based signalling, and automated control and communications systems.

What is the purpose of railway signalling?

Signalling systems serve two main purposes:

- **Safety** – to maintain the safe separation between trains on the same line, and at converging junctions.
- **Efficiency** – to manage the flow of traffic on a line or through junctions, with maximum throughput and minimum conflict or delay.

What are the career paths in signalling for electrical engineers?

Working in railway signalling offers a huge variety of tasks including:

- Designing, installing, testing and commissioning new signalling systems
- Evaluating the latest equipment for use on the network
- Developing new equipment to fill the demands not met in the marketplace
- Managing the maintenance and upgrading of signalling systems
- Supervising signalling contract works

These tasks lead to career opportunities in:

- Signal Design
- Signalling Maintenance
- Signalling Construction Management
- Technical Standards
- Project Management

There is a worldwide shortage of electrical engineers with expertise in all facets of railway signalling. This means there will always be career opportunities for people who pursue a career in any aspect of railway signalling.

What kind of electrical engineer is suited to working in a railway signalling environment?

Signalling attracts engineers, mainly electrical, who are dedicated and committed to their profession and are always ready to face new challenges and to learn new technology.

You need to:

- be ready to take responsibility for your designs and installations
- like solving technical problems through the application of logical reasoning
- enjoy developing creative solutions within the bounds of fundamental signalling principles, technical standards, and safety limits to come up with the best way of doing things.

Signalling offers career opportunities that can be field or office based or a combination of both.

What subjects should an electrical engineer study at university to have a career in signalling?

There are no specific railway signalling subjects or courses available at tertiary institutions in Australia. The only way to learn about railway signalling in this country is through on the job training and attending in-house courses. The people currently working in the signalling areas tend to have a sound knowledge of electrical theory and to have studied a range of subjects, which gives them a broad general knowledge rather than a specialisation in a particular area.

Graduates of Mechatronics Engineering are also finding their degree can be applied to a satisfying career in Signalling.

For further information about RailCorp please visit **www.railcorp.nsw.gov.au**

To apply for further information about the Internship Program, please contact: graduate@railcorp.nsw.gov.au

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