

EXECUTIVE LEVEL COURSES - SIGNAL ENGINEERING & TELECOMMUNICATIONS

Some of the courses are given below. However detailed position with regard to all the courses proposed during the year, their contents and schedules can be viewed at <http://www.iriset.ac.in> directly or through <http://www.rites.co.in>

1. Initial Course - (Phase – I) - 14 Week (March 2011)

For Whom: Fresh Entrants (Graduate Engineers)

Course Contents

<ul style="list-style-type: none"> ✚ Basic concepts of Signaling and principles of Interlocking ✚ Block Signaling - Part I ✚ Electrical Signaling including relays ✚ Line plant practice ✚ Locking Table and dog charts 	<ul style="list-style-type: none"> ✚ Orthodox and double wire Signaling ✚ Signaling general and safety ✚ Telephone exchanges ✚ Telephone exchanges (Strowger). ✚ Track circuits and power supply arrangements ✚ Train traffic control
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2. Initial Course - (Phase – II) - 14 Week (June 2011)

For Whom: Fresh Entrants (Graduate Engineers) who have undergone Phase I programme.

Course Contents

<ul style="list-style-type: none"> ✚ Axle counters ✚ Block Signaling - Part II ✚ Computer Applications ✚ Data communication ✚ Electrical Signaling circuit practices ✚ Electronic exchanges ✚ Locking Table practices ✚ Microwave communication including digital microwave 	<ul style="list-style-type: none"> ✚ Modern Signaling ✚ Multiplexing & PCM, VHF and mobile communication ✚ Relay interlocking - British system ✚ Relay Interlocking - Siemens's system ✚ Signaling in 25 KB AC electrified area ✚ Stores, Accounts ✚ Tenders estimates
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3. Integration Course (Telecom to Signaling) Phase I & II - 15 Week (January 2012)

For Whom: Engineers/Managers of Telecommunications promoted from Supervisory Cadres of Telecommunications with 2-3 years experience/fresh Graduate Engineers with 1-2 years experience.

Course Contents

<ul style="list-style-type: none"> ✚ Automatic Signaling and Axle Counters ✚ Basic concepts in Signaling and principles of interlocking ✚ Block Signaling and Axle counter ✚ Block Signaling including Intermediate ✚ Block working Signaling general and Safety rules. ✚ Electrical Signaling – Relays 	<ul style="list-style-type: none"> ✚ Equipment and their controls ✚ Mechanical Signaling - Orthodox and double wire Signaling ✚ Modern Signaling ✚ Relay interlocking systems - British & Siemens type ✚ Selection Circuits ✚ Track Circuits
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4. Integration Course (Signaling to Telecom.) Phase I & II - 11 Week (June 2011)

For Whom: Engineers/Managers of signaling discipline promoted from Supervisory Cadres of Signaling discipline with 2-3 years experience/fresh Graduate Engineers with 1-2 years experience.

Course Contents

<ul style="list-style-type: none"> ✚ Carrier communication ✚ Control communication: Under ground cable, over head cables ✚ Digital electronics ✚ Electronic Exchanges ✚ Fundamentals in electronics and applied electronic circuits 	<ul style="list-style-type: none"> ✚ Introduction to modern telecom techniques. ✚ Multiplexing and microwave ✚ Optic fiber. ✚ Propagation and antennas ✚ Public communication system ✚ Train traffic control
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5. Sr. Professional Course for Sr. Engineers – 3 Week (July 2011)

For Whom: Working S&T Engineers with 5-15 years experience for upgrading technical skills and expose them to technological developments in modern Signaling and telecommunications systems.

Course Contents

<ul style="list-style-type: none"> ✚ Computer aided CTC, joint less track circuit etc., ✚ Computer applications in railways. ✚ Construction management ✚ Developments in Signaling – Solid State interlocking, auxiliary warning system 	<ul style="list-style-type: none"> ✚ Developments in telecommunication – optical fiber, mobile communications, digital microwave, electronic exchanges ✚ Information technology ✚ Man power planning ✚ Reliability and quality control
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