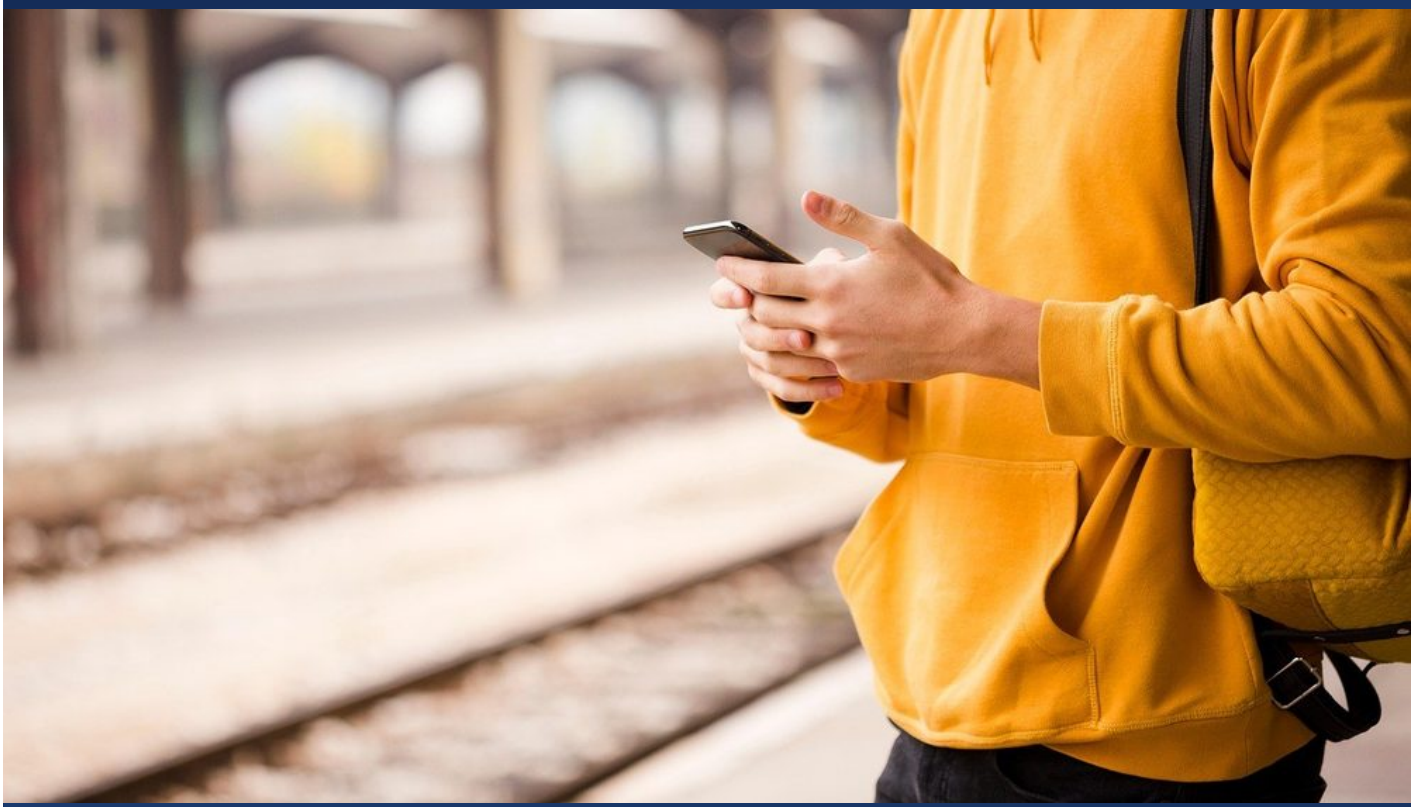
LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

ISO 62280 — Railway Communication Signalling and Processing Security

ISO Certification Programme



LAPT — London Academy of Professional Training

Address 85 Great Portland Street, W1W 7LT, London, United Kingdom

Email info@lapt.org

Telephone +44 7513 283044

Web lapt.org

Reference TR-RAL-62280 • ISO Transport

UKPRN 10067351 • Registered in England and Wales, company 4984798

6	10	48	430	60%	Lifetime
SUBJECTS	CHAPTERS	CLASSES	TOTAL MARKS	PASS MARK	VALIDITY

AT A GLANCE

REFERENCE	**TR-RAL-62280**
AWARD	**Certificate**
ASSESSMENT	**430 marks — 258 to pass (60%)**
PREREQUISITES	**None**
VALIDITY	**Lifetime**
AWARDING BODY	**LAPT — London Academy of Professional Training**

CURRICULUM

1 Incident Management and Response

0 chapters · 65 marks

2 ISO Standards and Compliance

0 chapters · 65 marks

3 Leadership in Security Management

0 chapters · 65 marks

4 Railway Communication Systems

5 chapters · 30 classes · 105 marks

- **1 Fundamentals of Railway Communication Systems** — 6 classes
  - 1.1 Identify Key Components of Railway Communication Systems
  - 1.2 Explain the Principles of Signal Transmission in Railways
  - 1.3 Analyze Communication Protocols Used in Railway Systems
  - 1.4 Evaluate the Importance of Security in Railway Communications
  - 1.5 Demonstrate Effective Communication Strategies for Railway Operations
  - 1.6 Apply Best Practices for Ensuring Signal Integrity in Railway Systems
- **2 Signalling Technologies and Standards** — 6 classes
  - 2.1 Identify Key Signalling Technologies in Railway Communication
  - 2.2 Analyze the Role of Standards in Signalling Systems
  - 2.3 Explore ISO 62280 Requirements for Security in Signalling
  - 2.4 Assess Risk Management Strategies in Railway Signalling
  - 2.5 Implement Best Practices for Signalling System Security
  - 2.6 Evaluate Future Trends in Railway Signalling Technologies
- **3 Security Challenges in Railway Communication** — 6 classes
  - 3.1 Identify Key Security Challenges in Railway Communication
  - 3.2 Analyze Vulnerabilities in Current Railway Communication Systems
  - 3.3 Explore Emerging Threats to Railway Communication Security
  - 3.4 Evaluate Security Protocols and Standards in Railway Systems
  - 3.5 Develop Mitigation Strategies for Identified Security Risks
  - 3.6 Implement Best Practices for Enhancing Railway Communication Security
- **4 ISO 62280 Framework and Compliance** — 6 classes
  - 4.1 Explore the ISO 62280 Framework Overview
  - 4.2 Identify Key Components of Railway Communication Systems
  - 4.3 Analyze Compliance Requirements for ISO 62280
  - 4.4 Examine the Role of Security in Railway Communication
  - 4.5 Develop Strategies for Implementing ISO 62280 Compliance
  - 4.6 Assess the Impact of ISO 62280 on Railway Operations
- **5 Future Trends in Railway Communication Security** — 6 classes
  - 5.1 Analyze Emerging Technologies Impacting Railway Communication Security
  - 5.2 Examine Current Vulnerabilities in Railway Communication Systems
  - 5.3 Assess Regulatory Changes Shaping Future Railway Security Standards
  - 5.4 Develop Strategies for Integrating Cybersecurity in Railway Operations
  - 5.5 Create a Risk Assessment Framework for Future Railway Technologies
  - 5.6 Propose Innovative Solutions to Enhance Railway Communication Security

5 Security Risk Assessment

5 chapters · 18 classes **85 marks**

- **1 Fundamentals of Security Risk Assessment in Railway Systems** — 6 classes
  - › 1.1 Identify Key Principles of Security Risk Assessment in Railway Systems
  - › 1.2 Analyze Potential Threats to Railway Communication and Signalling
  - › 1.3 Evaluate Vulnerabilities in Railway Infrastructure and Processes
  - › 1.4 Assess Impacts of Identified Risks on Railway Operations
  - › 1.5 Develop Risk Mitigation Strategies for Rail Security Enhancements
  - › 1.6 Implement a Continuous Improvement Process for Security Risk Management
- **2 Identifying Vulnerabilities in Railway Communication Systems** — 6 classes
  - › 2.1 Analyze Communication System Components for Vulnerabilities
  - › 2.2 Identify Potential Threat Actors Targeting Railway Systems
  - › 2.3 Evaluate Historical Incidents in Railway Communication Security
  - › 2.4 Assess Current Security Measures in Place
  - › 2.5 Develop a Risk Profile for Railway Communication Systems
  - › 2.6 Create an Action Plan to Mitigate Vulnerabilities
- **3 Threat Modeling and Risk Analysis Techniques** — 6 classes
  - › 3.1 Identify Key Threats in Railway Communication Systems
  - › 3.2 Analyze Vulnerabilities in Existing Signalling Protocols
  - › 3.3 Assess Impact and Likelihood of Threats on Security Infrastructure
  - › 3.4 Develop a Risk Matrix for Railway Security Scenarios
  - › 3.5 Prioritize Risk Mitigation Strategies for Threats Identified
  - › 3.6 Create a Threat Model for a Hypothetical Railway Communication Network
- **4 Evaluating and Prioritizing Risks in Railway Operations**
- **5 Developing and Implementing Security Mitigation Strategies**

6 Strategic Security Planning

0 chapters **45 marks**