INCOSE Systems Engineering Professional (SEP) Exam Preparation

Course Syllabus Overview

Duration – 4 days, each containing around 6 hours of training

Day 1
- INCOSE certification overview, including benefits and limitations of certification
- Introduction to the Handbook
- Definition and concepts of a system
- Systems Engineering Principles
- Lifecycle Concepts, Models and Processes
- Decision Gates
- Generic Lifecycle States and Approaches
- Case Studies
- Agreement processes
- Organisational Project-Enabling Processes
  - Lifecycle Model Management
  - Infrastructure Management Maintenance
  - Project Portfolio Management
  - Human Resource Management
  - Quality Management Process
  - Knowledge Management

Day 2
- Day 1 consolidation
- Organisational Project-Enabling Processes
- Technical Management Processes
  - Project Planning
  - Project Assessment & Control
  - Decision Management
  - Configuration Management
  - Risk Management
  - Information Management
  - Measurement
  - Quality Assurance

Day 3
- Day 2 consolidation
- Technical processed continued
  - Business or Mission Analysis
  - Stakeholder Need and Requirements Definition
  - System Requirements Definition
  - System Architecture Definition
  - Design Definition
  - System Analysis
  - Implementation
  - Integration
  - Verification
  - Transition
  - Validation
  - Operation
  - Maintenance
  - Disposal
- Quality Characteristics Approaches
  - Affordability
  - Agility
  - Human Systems Engineering
  - Interoperability
  - Logistics
  - Manufacturing and Producibility
  - Reliability, Availability & Maintainability
  - Resilience
  - Sustainability
  - Systems Safety
  - System Security

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COURSE SYLLABUS

Day 4
- Day 3 Consolidation
- Systems Engineering Analysis and Methods
  - o Modelling and Simulation
  - o Prototyping
  - o Interface Management
  - o Architecture
  - o Patterns
- Tailoring
- MBSE
- Product Line Engineering
- Systems of Systems
- SE Competencies
- Handbook Review
- Examination Structure, Preparation and Application
- Course Summary and Conclusion

COURSE SYLLABUS

About Optimise Engineering

Optimise Engineering is a provider of systems engineering solutions, specialising in the design, integration, and management of complex systems. With a focus on innovation and excellence, Optimise Systems Engineering is dedicated to delivering solutions that drive success.

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