

SEN2 - Preparation to INCOSE ASEP & CSEP certification

From the Advanced Master SEN
(Systems Engineering)



Highlights

- Become INCOSE ASEP or CSEP certified
- 94% success rate at ISAE-SUPAERO
- About 3800 SEP (ASEP/CSEP/ESEP) worldwide
- Leadership position of ISAE-SUPAERO for ASEP preparation

This course provides you with a global knowledge and understanding of the INCOSE Systems Engineering Handbook (SEH) V4 in order to prepare with best success conditions the INCOSE ASEP/CSEP exam. The exam itself is not included in the training and shall be planned on trainee's initiative within a period of 6 months maximum after the training.

Prerequisites

- Master level
- INCOSE member (to apply for the ASEP exam)
- Have a copy of the SE Handbook V4 (paper copy is preferred)

Key elements

Period: **May**

Estimated duration: **70 hours**

For whom: **recent graduates, jobseekers and experienced employees**

Location:

ISAE-SUPAERO, Toulouse

Language: **English**

Learning objectives

After completing this course, participants will be able to:

- Understand the definition and concepts of a system;
- Know the concepts of System thinking and Life cycle overview;
- Analyze technical processes ranging from requirements, to implementation, integration, verification and validation;
- Understand how systems engineering contributes to business aspects.

Information and registration

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Please note that the training cost includes AFIS/INCOSE membership and exam registration

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Programme overview

Day 1

INCOSE general presentation & Certification process overview

SE Handbook V4 scope (Chap 1)

Systems Engineering Overview (Chap 2)

Day 2

Generic Life Cycle Stages (Chap 3)

Day 3

Technical Processes – Part 1 (Chap 4.1- 4.6)

Business or Mission Analysis, Stakeholder Needs and Requirement Definition, Systems Requirement Definition, Architecture Definition, Design Definition, System Analysis

Day 4

Technical Processes – Part 2 (Chap 4.7- 4.12)

Implementation, Integration, Verification, Transition, Validation, Operations, Maintenance, Disposal

Day 5

Technical Management Processes (Chap 5)

Project Planning, Project Assessment & Control, Decision Analysis, Risk Management, Configuration Management, Information Management, Measurements, Quality Assurance

Day 6

Agreement Process (Chap 6)

Acquisition Process, Supply Process

Organizational Project Enabling Process (Chap 7)

Life Cycle Model Management, Infrastructure Management, Portfolio Management, Human Resource Management, Quality Management, Knowledge Management.

Day 7

Tailoring Process & Application of Systems Engineering (Chap 8)

Tailoring for Specific Product Sector or Domain Application, Application of SE for Services, Enterprises, VSME

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Day 8

Cross-cutting Systems Engineering Methods (Chap 9)

Modeling & Simulation, MBSE, Functions-based SE, Object-oriented SE, Prototyping, Interface Management, Integrated Product and Process Development, Lean SE, Agile SE.

Day 9

Specialty Engineering Activities (Chap 10)

Affordability/Cost Effectiveness/LCC Analysis, Electromagnetic Compatibility, Environmental Impact Analysis, Interoperability Analysis, Logistics Engineering, Manufacturing and Producibility, Mass Property Engineering, Reliability, Availability and Maintainability, Resilience Engineering, Safety, Security, Training Needs, Value Engineering.

Day 10

Synthesis and preparation of the ASE/CSEP Exam

Fictive ASEP/CSEP exam

Teaching methods

Teaching methods	Yes
Lectures / tutorial	X
Collaborative learning	X
Flipped classroom	
Blended learning (online and face to face)	X
Learning by doing	
Project-based	
Simulation	X
Case study	

Assessment

30 min MCQ at the end of each day

2h30 MCQ with 120 questions (fictive exam)