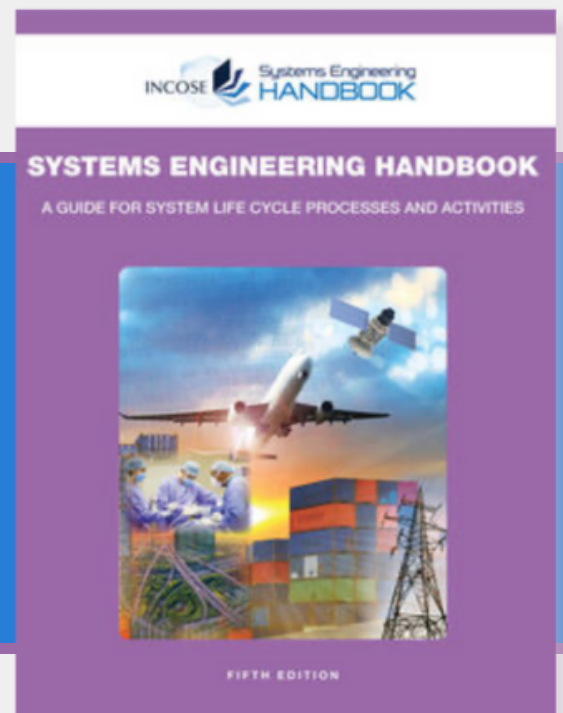




INCOSE SYSTEMS ENGINEERING HANDBOOK, LEARNING OBJECTIVES

Effective 1 August 2023

The INCOSE Systems Engineering Handbook Learning Objectives (LOs) take effect on **1 August 2023** for the knowledge exam. The final LO will not be included on the hybrid exam. Academic Equivalency providers (universities) who apply or renew starting **1 August 2024** will be evaluated based on this list of LOs.



INCOSE Learning Objectives

INCOSE Systems Engineering Handbook

5th Edition

4th Edition

Systems Engineering and Life Cycle Overview

- Identify systems engineering definitions, principles, and concepts
- Define awareness level concepts of systems thinking

Part 1

Chapter 2

Lifecycle Models and Concepts

- Define awareness level concepts for lifecycles
- Define awareness level concepts of acquisition and supply
- Define awareness level concepts of business and enterprise integration

(Includes Infrastructure, Portfolio, Human Resources, Knowledge, Quality Management, and Quality Assurance)

Part 2

Chapters 3, 5, 6, 7

Technical Management Processes

- Define awareness level concepts of planning
- Define awareness level concepts of monitoring and control
- Define awareness level concepts of decision management
- Define awareness level concepts of risk and opportunity management
- Define awareness level concepts of configuration management
- Define awareness level concepts of information management

Part 2

Chapter 5

Technical Processes

- Define awareness level concepts of requirements definition
- Define awareness level concepts of architecture definition
- Define awareness level concepts of design for systems realization
- Define awareness level concepts of modeling and analysis
- Define awareness level concepts of integration
- Define awareness level concepts for verification
- Define awareness level concepts for transition
- Define awareness level concepts for validation
- Define awareness level concepts for operation and support

Part 2

Chapter 4

Methods and Analysis

- Define awareness level concepts of design for quality characteristics
- Define awareness level concepts for interfaces

Part 3

Chapters 9, 10

Application Considerations

- Define how systems engineering is applied

(Includes MBSE, Agile, Lean, PLE, System Types, Domains)

Part 4

Chapters 8, 9

Systems of Systems

- Define the complexities of a System of Systems

Part 4

Chapter 2

Systems Engineering in Practice

- Identify aspects of systems engineering in practice

Part 5

N/A - not on hybrid exam