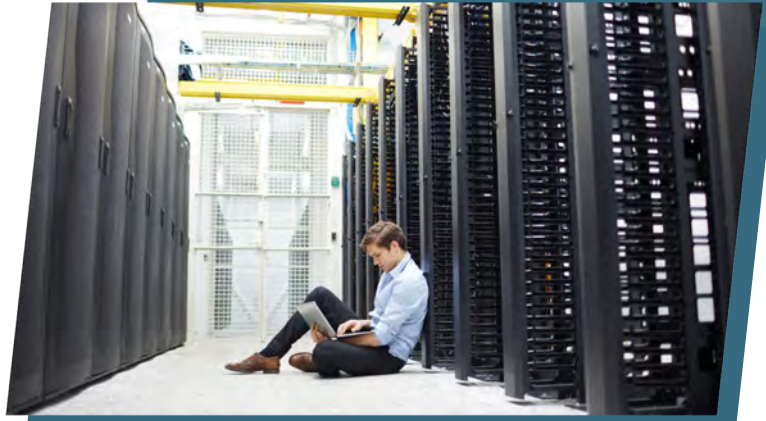


# Fundamentals of Systems Engineering

- 3 DAYS -



Systems Engineering is a transdisciplinary and integrative approach to enable the successful realization, use, and retirement of systems by defining, verifying and validating the requirements, architecture and design.

With the Fundamentals of Systems Engineering training, it is aimed for engineers and engineering managers to understand the fundamentals of the system engineering discipline and its applications and apply them in their projects. The training covers the fundamentals of systems engineering throughout the product lifecycle, from the first need of the system to the disposal of the product.

The training is compatible with the following documents:

- ISO/IEC/IEEE 15288:2015 Systems and software engineering - System life cycle processes
- INCOSE (International Council of Systems Engineering) (2015) Systems Engineering Handbook: A Guide for System Life Cycle Process and Activities (4th ed.)

## Course Outline

### Fundamental Concepts of Systems Engineering

- Definition of System
- Definition of Systems Engineering
- Value of Systems Engineering

### System Lifecycle

- Life Cycle and the Life Cycle Model
- Generic Life Cycle Stages
- Life Cycle Approaches

### Technical Processes

- Business and Mission Analysis
- Stakeholder Needs and Requirements Definition
- System Requirements Definition
- Architecture Definition
- Design Definition
- Implementation
- Integration
- Verification
- Transition

- Validation
- Operation
- Maintenance
- Disposal

### Technical Management Processes

- Project Planning
- Project Evaluation and Control
- Decision Management
- Risk Management
- Configuration Management
- Information Management
- Measurement
- Quality Assurance