

# Enabling Systems Engineering Success

## A Systems Engineering Overview for Non-Systems Engineers

### Summary

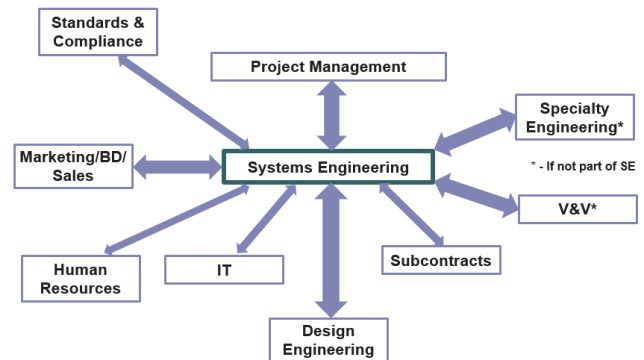
- One-day course (customizable)
- Targeted for people who interact with systems engineers.
- Provides an overview of the fundamental principles of Systems Engineering, with its focus on holistic perspectives, balanced trade-offs, and life cycle considerations
- Shows how Systems Engineering is used as an effective way to manage increased system complexity, market pressures, and distributed development efforts
- Follows the basic outline and conventions of the INCOSE Systems Engineering Handbook, ISO/IEC/IEEE 15288, and the Guide to the Systems Engineering Body of Knowledge (SEBoK)
- Practical information and tools are provided
- Includes in-class exercises to solidify the concepts being presented
- Each student will receive a complete set of lecture notes and an annotated bibliography

### What You Will Learn

- The key inputs and products of systems engineering
- How to effectively work with your systems engineers on development efforts
- How Systems Engineering is used to develop and evolve a balanced system solution that takes into account risk and downstream life cycle activities
- The questions others should be asking of their systems engineering team
- The latest Systems Engineering best practices

### Instructor – David D. Walden, ESEP

- An internationally recognized expert in the field of Systems Engineering
- Over 30 years of industry experience
- Taught over 100 courses to over 1600 students since 2006
- INCOSE Expert Systems Engineering Professional (ESEP)
- Senior Member of the IEEE
- Lead Editor of the INCOSE SE Handbook Fourth Edition
- Education
  - MS in MOT, University of Minnesota
  - MS in EE & CS, Washington University in St. Louis
  - BS in EE, Valparaiso University



### Course Outline & Topics

**1. Systems Engineering and its Importance.** Course Overview. Welcome & Introductions. Introduction to Systems Engineering. Key Definitions. Systems Engineering Best Practices and Lessons Learned. Introduction to the Systems Engineering Maxims. Introduction to the Systems Engineering Tool Belt.

#### **2. Key Systems Engineering Competencies, Concepts, and Tools.**

In the context of the 7 SE maxims:

Introduce the 20 SE competencies

Introduce some of the key SE tools

Application of Systems Engineering:

COTS-Based SE

Brownfield SE

System of Systems Engineering (SoSE)

Course Wrap-up & Summary

**Typical Course Duration - 1 Day**  
**Typical Schedule 8:30am-4:00pm**

**Earn up to 6 INCOSE PDUs!**

Please contact Sysnovation for availability, customization, and pricing.