

# Leading Systems Engineering Success

## A Systems Engineering Executive Overview

### Summary

- Full or half-day course (customizable)
- Provides an executive 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
- Elaborates on Systems Engineering effectiveness and return on investment (ROI). Describes how Systems Engineering can reduce your Technical Debt.
- 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 business value and return on investment of systems engineering
- How to effectively lead your systems engineering deployment and 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 systems engineering leaders should be asking of their technical 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. Welcome and Introductions.

**2. Introduction to Systems Engineering.** Key Definitions. Importance of Systems Engineering. Systems Engineering Maxims. Introduction to the Systems Engineering Tool Belt. Best Practice ISO/INCOSE Systems Engineering Processes. Best Practice Systems Engineering Roles & Responsibilities.

**3. Organizational Implications.** What Systems Engineering Means to You and Your Organization.

**4. Systems Engineering Questions to Ask.** The Questions that Leaders Must Ask, and Systems Engineers Must Answer!

#### 5. Course Wrap-Up and Conclusions.

**Typical Course Duration – 4 to 8 Hours**  
**Typical Schedule**  
**8:30am-4:00pm (Full Day)**  
**8:00am-Noon or 1:00-5:00pm (Half Day)**

Please contact Sysnovation for availability, customization, and pricing.