

Core Workshop

Overview

This two-day core workshop provides a thorough overview of SEER for Systems Engineering (SEER-SYS). The SEER-SYS model brings a unique combination of parametrics, built-in expert knowledge, and detailed cost-driver analysis to systems engineering estimation, making it possible to capture key elements of systems engineering effort which other estimation models may miss. The focus of the course will be on the SEER-SYS methodology for estimating systems engineering costs, schedule, and risk. Students will also gain insight into the risks, uncertainty and cost drivers associated with systems engineering, learn strategies for making cost proposals more efficient, and find out how to maximize return on investment using benchmarking and cross-checking. At the end of this course, students will be able to estimate a project of any size and complexity, from individual components to a major system, using SEER-SYS.

For convenience, this workshop can be taught at a requested on-site location or at our headquarters in El Segundo, CA. At our offices, we will provide a comfortable and highly effective learning environment, utilizing only the most up-to-date technologies. Along with the training, our instructors bring with them years of extensive industry experience. Our instructors don't just teach—they are actual practitioners and consultants with intimate knowledge of the application domains. Their extensive involvement with the application of SEER-SYS includes Space, Military, Telecommunications, and much more. Instructors will augment the training with “lessons learned” from use of the model in real situations and demonstrate ways to use the model for simple and efficient analysis—things that cannot be learned from just reading the manual! Upon completion of the two-day SEER-SYS core workshop, students will have gathered valuable perspective on how the model has been used by many other organizations under a variety of environments and circumstances.

Audience

This course is designed for:

- Cost estimators
- Project Managers
- Project/Team leads

Upon completion of the class, users will be able to:

- Understand various systems engineering concepts, including activity definition
- Define system configurations
- Understand the model in context to their environment
- Quantify uncertainty
- Understand how to conduct tradeoff analyses and evaluate project risk
- Understand estimate sensitivities and interrelationships, and how they are modeled in SEER-SYS

- Translate what they know into SEER-SYS: knowledge base choices, parameter entries
- Understand how SEER-SYS fits into an overall project estimation process
- Be familiar with the features and functions of SEER-SYS and how it compares with other methodologies
- Explain all input parameters in detail
- Use charts, reports and export capabilities to create briefing packages

SEER for Systems Engineering Core Course Outline

Day One

- I. Intro & Background
 - a. Schedule, course objective, introductions
 - a. Tool history, importance of systems engineering cost estimation
- II. SEER-SYS Overview
 - a. Interface
 - b. Reports and Charts
 - c. Qualitative factors
 - d. Sizing variables
 - e. Cost catalog
 - f. Calibration factors
 - g. Custom knowledge bases
- III. Systems Engineering Estimation Methods
 - a. High-level approaches
 - b. Parametric SE estimation
 - i. COSYSMO
 - ii. Galorath research
- IV. Defining Systems Engineering Activities
 - a. Notable standards and activities
 - b. ANSI-632 and defining process effort categories
 - c. ISO 15288 and defining activities

Day Two

- I. Review/ Catch-up on any material not covered in Day 1
- II. SEER-SYS Sizing Variable Considerations
 - a. Requirements counting level
 - b. "Double counting"
 - c. Sizing variable counting recommendations
- III. Capstone Exercise
 - a. Hands on application
- IV. Summary and Conclusion
 - a. Summary
 - b. Best practices
 - c. Wrap up questions