INCOSE SEP Exam
Online Preparation Course

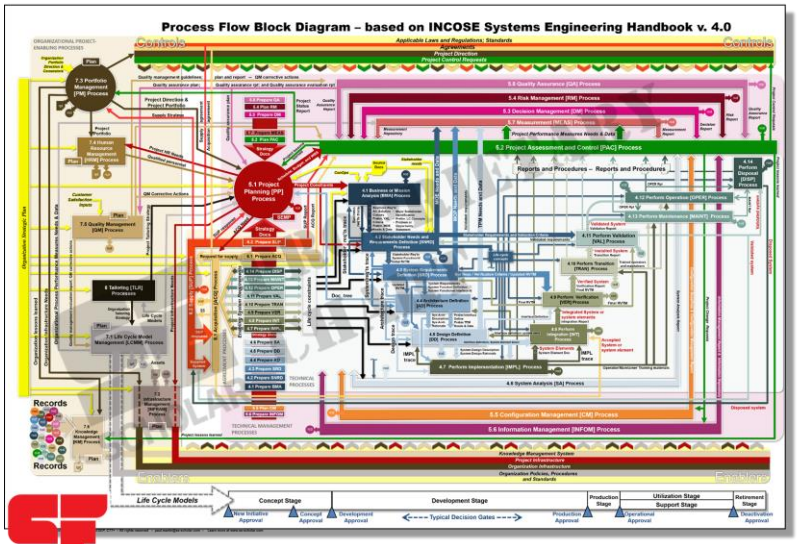
Systems Engineering *Understood!*

Learn the material in a comprehensive & contextual manner.

SE Scholar has developed a unique approach to teaching the INCOSE SE Handbook which contextualizes the various Organizational, Project and Technical processes that are necessary to realized a "System-of-Interest." **With the aid of a comprehensive Process Flow diagram, Paul will walk the students from the Project Portfolio Process to Disposal Process in a logical and sequential manner**, while covering the contents of the entire INCOSE SE Handbook. This course also has a **significant on-line portion which provides study material and numerous quizzes** as well as a sample exam. These tests are based on the structure of the INCOSE CSEP Exam, thus **providing the student with a familiarity and comfort level they'll need to pass the Exam**. These tests are a valuable resource for the student and can be repeated as many times as the student desires.

The INCOSE SEP Exam is used for both CSEP and ASEP applications. This course is one of the best in the industry because of its comprehensive and logical approach. In the end the student will:

- Learn the framework of the 31 Processes within the INCOSE SE Handbook vs. 4.
- Have access to dozens of practice Quizzes.
- Over 23 hours of instructional videos, covering the entire INCOSE SE Handbook vs 4.0



Sure it's complicated! But so is Systems Engineering!

Your instructor is Paul Martin, *ESEP*, *CTT+*, who started **SE Scholar, LLC** several years ago to help other Systems Engineers go through the INCOSE SEP Certification process because he didn't have any help back in 2007 when he got his CSEP. He presently has an ESEP and is a practicing Systems Engineer with over 40 years of experience. He has been everything from a Product Engineer for General Electric Products Division to a Software Systems Engineer for a multi-million-dollar Navy program.

Paul has a unique and passionate style that keeps students' interest at a high level. He's been teaching SEP Exam Preparation Courses since 2009 and has taught several hundred students.

Cost is only
$750
per student

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INCOSE SEP Exam Preparation Course: Scope and Sequence

Systems Engineering by the Book (i.e. ISO/IEC/IEEE 15288:2015)

Module		Lecture	Objective
	Welcome		Introductions - expectations - objectives - logistics
1	**The Context of Systems Engineering**		*Understand Systems and how Systems Engineering is used to create them. Discover the various developmental approaches that can be used to construct a System of Interest.*
	1.1	**Introduction to Systems Engineering**	**Identify what a system is and how systems engineering is used to create them.** Sections 1: SEHBK Scope; C: Terms and Definitions; 2: Systems Engineering Overview; 3: Life Cycle Stages, Characteristics
	1.2	**Systems Engineering Approaches**	**Explore the different developmental approaches to generate a system.** Sections 3: Life Cycle Approaches; 9.2: MBSE; 9.1: M&S; 9.5: Prototyping; 9.4: OOSE; 9.8: Lean SE and 9.9: Agile SE; 3.5: What Is Best …
2	**From Organization to Project**		*The processes that help ensure an organization's capability to realize a system through the initiation, support and control of projects by providing resources and infrastructure.*
	2.1	**Managing Life Cycle Models**	**A Life Cycle Model is the framework where all processes are placed.** Processes covered: 7.1 Life Cycle Model Management, 8.0 Tailoring; 7.3 Portfolio Management; 7.5 Quality Management
	2.2	**Organizational support of Project Planning**	**The organizational processes that help in planning a project.** Processes covered: 7.6 Knowledge Management; 7.2 Infrastructure Management; 7.4 Human Resource Management; 6.1 Acquisition; 6.2 Supply; 5.1 Project Planning; 9.7 IDPTs
3	**Project Management - From SE point of view**		*It's important to understand the contribution of Systems Engineering to the management of the project.*
	3.1	**Project Controlling Processes**	**Identify the processes a project uses to control technical processes.** Processes covered: 5.2 Project Assessment and Control; 5.3 Decision Management; 5.4 Risk Management; 5.7 Measurement
	3.2	**Technical Management - Enabling Processes**	**Identify the processes a project uses to enable technical processes**. Processes covered: 5.8 QA; 5.5 CM; 5.6 Information Management; 4.6 System Analysis; 4.1 Business or Mission Analysis
4	**Requirements: From Stakeholder to System Design**		*Transform stakeholder, user-oriented capabilities into a technical view of a solution that meets the operational needs of the user.*
	4.1	**Requirements: Functional to System Design**	**Develop a system and architecture design based on requirements.** Processes covered: 4.2 Stakeholder Needs and Rqmts Definition; 9.3 FBSE; 10.14 Value Engr 4.3 System Rqmts Definition; 9.6 Interface Management; 4.4 Architecture Definition
	4.2	**Design Considerations**	**Utilize Specialty Engineering to aid in the design of the solution.** Sections covered: 10.1 Cost; 10.2 EMC; 10.3 Environmental; 10.4 Interoperability; 10.5 Logistics; 10.6 Manufacturing; 10.7 Mass Properties; 10.8 RAM; 10.9 Resilience; 10.10 Safety; 10.11 Security; 10.12 Training; 10.13 HSI
5	**Technical Processes - From Implementation to Disposal**		*Create system elements that make up the solution, integrate them together, and ensuring the completed system fulfills its specified requirements, characteristics and mission. Deploy and sustain the system within its operational environment. When use is no longer required, dispose the system properly.*
	5.1	**Design, Implement, Integrate, Verify**	**Create and integrate system elements, verify system built right.** Processes covered: 4.5 Design Definition Process; 4.7 Implementation; 4.8 Integration; 4.9 Verification
	5.2	**Deploy, Validate, Operate, Support and Dispose**	**Deploy system. Validate it is the right system for the mission. Use and support system. Dispose of it when no longer needed.** Processes covered: 4.1 Transition; 4.11 Validation; 4.12 Operation; 4.13 Maintenance; 4.14 Disposal
6	**Practice Exam**		Go to Class Portal and attempt the 120 Question Example Exam – 2 hour running time.

Course References:

- Walden, David D., et. al.. *Systems Engineering Handbook: a Guide for System Life Cycle Processes and Activities* . Vol. 4.0. Hoboken, NJ: Wiley, 2015.

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