Honourcode, Inc.

CSEP Preparation
A 3-Day Course

Guaranteed Training to Pass the Systems Engineering Certification Exam

The INCOSE Certified Systems Engineering Professional (CSEP) rating is a useful and coveted milestone in the career of a systems engineer, demonstrating knowledge, education and experience that is of high value to systems organizations. The certification requires passing an extensive examination based on the INCOSE Systems Engineering Handbook v4.0. This three-day course provides you with the detailed knowledge and practice that you need to pass the CSEP examination.

This course walks through the CSEP requirements and the INCOSE Handbook to cover all topics that might be on the CSEP exam. Interactive study exercises, study plans, and **three sets of sample examination questions** help you to prepare effectively for the exam. Participants leave the course with solid knowledge, a hard copy of the INCOSE Handbook, study plans, and sample examinations.

What You Will Learn:
- How to pass the CSEP examination!
- The key processes and definitions in the INCOSE language of the exam
- Your strengths/weaknesses, to target study
- Five rules for test-taking

The course is aimed at
- Qualified systems engineers who wish to attain the CSEP certification
- Design engineers and systems engineers in training, who wish to attain the ASEP certification

Attend the course to learn what you need. Follow the study plan to seal in the knowledge. Use the sample exam to test yourself and check your readiness. Contact our instructor for questions if needed. Then take the exam with confidence.

A course with a guarantee. If you do not pass, we will accept you into a repeat of the course at no cost.

Introduction – What is the CSEP and what are the requirements to obtain it? Terms and definitions. Your application and how best to present your experience to INCOSE. Basis of the examination. Study plans and sample examination questions and how to use them. Plan for the course. Introduction to the INCOSE Handbook. Self-assessment quiz. Filling out the CSEP application.

Systems Engineering and Life Cycles – Definitions and origins of systems engineering, including the latest concepts of "systems of systems." Hierarchy within a system. Value of systems engineering. Life cycle characteristics and stages, and the relationship of systems engineering to life cycles. Life-cycle approaches, including plan-driven and incremental. The INCOSE Handbook system development examples.

Technical Processes – The processes that take a system from concept in the eye to operation, maintenance and disposal. Business/mission analysis, stakeholder requirements and technical requirements, including concept of operations, requirements analysis, requirements definition,

requirements management. Architectural design, including functional analysis and allocation, system architecture synthesis, design definition and system analysis. Implementation, integration, verification, transition, validation, operation, maintenance and disposal of a system.

Technical Management Processes – Technical management and the role of systems engineering in guiding a project. Project planning, including the Systems Engineering Plan (SEP) and tailoring methods. Project assessment, including Technical Performance Measurement (TPM). Project control. Decision-making and trade-offs. Risk and opportunity management, configuration management, information management.

Agreement Processes – How to define the need for a system, from the viewpoint of stakeholders and the enterprise. Acquisition and supply processes.

Organizational Project-Enabling Processes – Managing the environment, investment, and resources. Life-cycle model management including standard processes and process improvement. Infrastructure and project portfolio management including business case analysis. Resource management and quality management.

Cross-Cutting Technical Methods – System analysis technical methods including modeling & simulation, model-based systems engineering and the system modeling language (SysML), function-based analysis, and object-oriented analysis. Integrated Product and Process Development (IPPD), Integrated Product Teams (IPT), Lean and Agile methods.

Specialty Engineering Activities – Unique technical disciplines used in the systems engineering processes: affordability, logistics engineering, cost-effectiveness, electromagnetic and environmental analysis, interoperability, life-cycle cost, manufacturing producibility, mass properties, reliability/maintainability/availability, resilience, safety & hazards analysis, sustainment, security, training needs, human systems integration, and value engineering.

Study Exercises – Every section includes quizzes and dynamic exercises to help you bring the material alive. The course includes a case study used for examples throughout the course, aimed at giving you memory aids for your trip to the examination facility.

After-Class Plan – Study plans and methods. Using the self-assessment to personalize your study plan. Five rules for test-taking. How to use the three sample examinations. How to reach us after class, and what to do when you succeed.

Instructors. (Your course may be taught by any one of the following)

Dr. Eric Honour, **CSEP**, INCOSE Fellow, and former INCOSE President (1997), has been in international leadership of the engineering of systems for 20 years, part of a 45+ year career of complex systems development and operation.   His energetic and informative presentation style actively involves class participants. He was the founding Chair of the INCOSE Technical Board in 1994, and served as Director of the Systems Engineering Center of Excellence (SECOE). He was selected in 2000 for Who's Who in Science and Technology and in 2004 as an INCOSE Founder. He is on the editorial board for *Systems Engineering*. He has been a successful entrepreneur, systems engineer, engineering manager, and program manager at Harris Information Systems, E-Systems Melpar, and Singer Link, preceded by nine years as a US Naval Officer flying P-3 aircraft. He has led or contributed to the development of 17 major systems, including the Air Combat Maneuvering Instrumentation systems, the Battle Group Passive Horizon Extension System, the National Crime Information Center, and the DDC1200 Digital Zone Control system for heating and air conditioning. Dr. Honour now heads Honourcode, Inc., a training and consulting firm offering effective methods in the development of system products. Dr. Honour has a BSSE (Systems Engineering) from the US Naval Academy, MSEE from the Naval Postgraduate School, and PhD from the University of South Australia based on his ground-breaking work to quantify the value of systems engineering.

Mr. William "Bill" Fournier, CSEP is a Senior Software Systems Engineer with 30 years experience, the last 11 for a major defense contractor. Mr. Fournier taught DoD Systems Engineering full time for over three years at DSMC/DAU as a Professor of Engineering Management. He has taught Systems Engineering at least part time for more than the last 20 years. Mr. Fournier holds a MBA and BS Industrial Engineering / Operations Research and is DOORS trained. He is a certified CSEP, CSEP-ACQ, and PMP. He is a contributor to DAU/DSMC, defense contractor internal Systems Engineering courses and process, and INCOSE publications.

Mr. Glen Francisco, CSEP, PMP, has over 17 years of experience developing new technologies for both private and government uses. He has a personable, engaging teaching style that keeps a class alive with information. He has been a Lead Systems Engineer, Project Engineer and Program Manager for military & commercial companies Boeing, Lockheed Martin, Texas Instruments, Raytheon, DRS Technologies, and more. His products have supported security surveillance, paramilitary (fire, police & EMS), automotive and industrial markets using passive thermal imaging technologies and other electro-optical imaging laser radar technologies. He hold multiple patents in missile guidance and plastic thermal management. He developed & introduced Thermal Imaging Cameras into the firefighting market in 2001, technology saving hundreds of lives and millions of dollars in property. Glen holds a BS and MS in Aeronautical Engineering from MIT.