

INCOSE Systems Engineering Professional (SEP) Certification Program



International Council on Systems Engineering

A better world through a systems approach

Program Summary

INCOSE SEP Architecture

For wherever you are in your career

Multi-Level Base Credentials

The base ASEP, CSEP, and ESEP credentials cover the breadth of systems engineering at increasing levels of leadership, accomplishments, and experience.



If you have just started (or plan to start) practicing systems engineering or have recently graduated and are interested in system engineering



If you are a practicing Systems Engineer with more than five years of systems engineering professional work experience



If you are a systems engineering leader with recognized systems accomplishments and have many years of systems engineering professional work experience

INCOSE SEP Program Purpose and Benefits

The INCOSE SEP program offers independent assessment of system engineering professionals benefiting:

SYSTEMS ENGINEERING COMMUNITY:

- Creates the standard to identify and develop systems engineering professionals.
- Establishes a formal, recognized body of knowledge for the systems engineering community.

SYSTEM ENGINEERING PROFESSIONALS:

- Provides a portable standard of recognition for attainment of knowledge, education, and experience.
- Serves as a mechanism for continued professional development through recertification requirements.

ORGANIZATIONS/INSTITUTIONS:

- Offers a universal, industry-approved measure of a professional's knowledge – achieved through the independent evaluation of relevant tasks, projects, and programs.

What is INCOSE?

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded in 1990 to develop and disseminate the interdisciplinary principles and practices that enable the realization of successful systems. *A better world through a systems approach.*

MISSION

Share, promote and advance the best of systems engineering from across the globe for the benefit of humanity and the planet.

VISION

The world's authority on Systems Engineering.

**Certification is just one of many
INCOSE products and offerings.**



Employer Job Postings ask for SEP

- Employers who recognize and value SEP certifications



Booz | Allen | Hamilton®



Universities have Certification Agreements

- INCOSE and the following Universities have signed agreements to recognize college courses

ACADEMIC EQUIVALENCY



Other Certification Agreements

- INCOSE and the following organizations have signed agreements for existing certifications to meet some of the SEP requirements or offering a discount on application fees



What Certification is Right for You?

No matter where you are in your professional career, we offer SEP's for every level.

Plan the next step in your career!



If you have just started (or plan to start) practicing systems engineering or have recently graduated and are interested in systems engineering



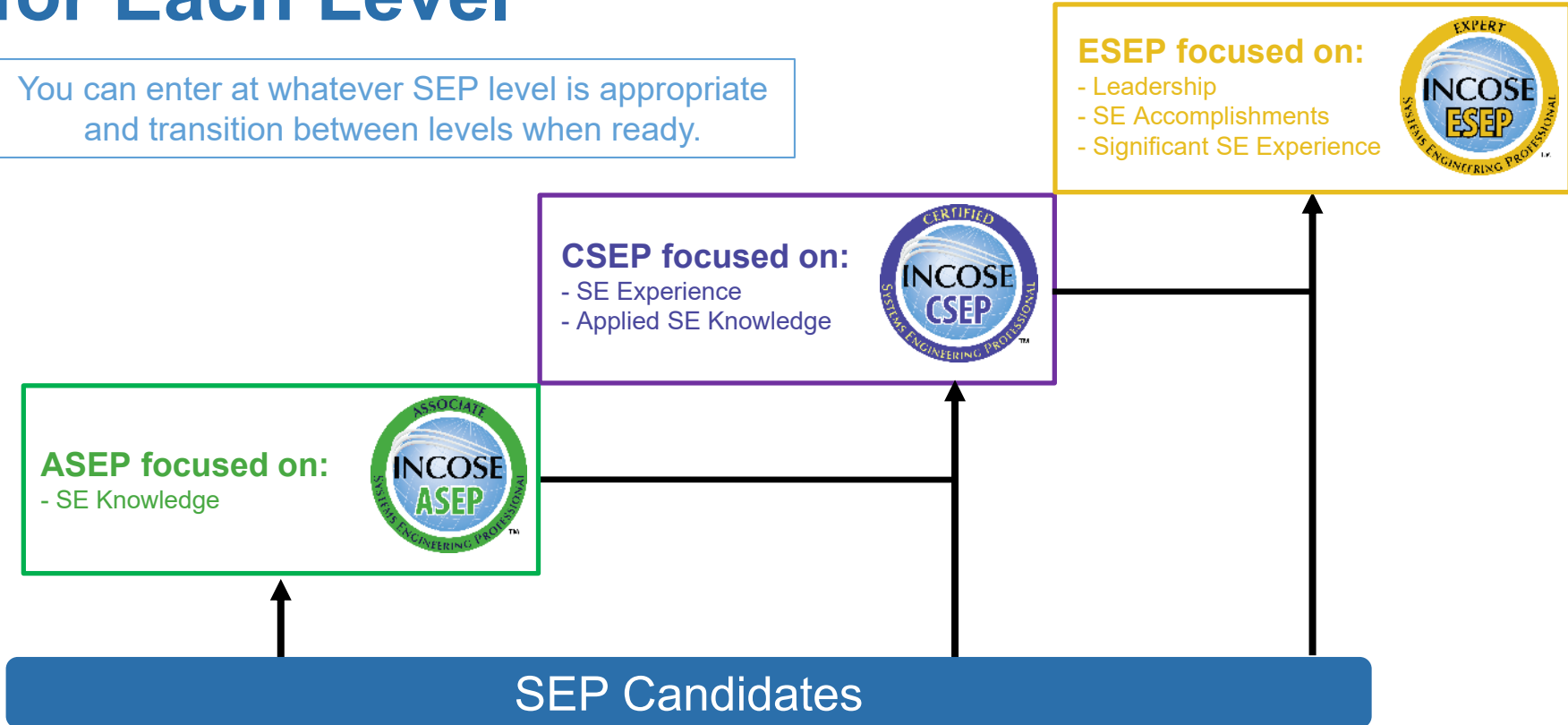
If you are a practicing Systems Engineer with more than five years of systems engineering professional work experience



If you are a systems engineering leader with recognized systems accomplishments and have many years of systems engineering professional work experience

Different Requirements for Each Level

You can enter at whatever SEP level is appropriate and transition between levels when ready.



Associate Systems Engineering Professional



If you have just started practicing – or want to start practicing – systems engineering, then ASEP is for you. This certification is for people at the beginning of their career as a systems engineer. The ASEP has “book knowledge” but not yet significant experience as a systems engineer.

- Knowledge verification required
- Suitable for students, early career professional, project and program managers, and all those who “speak systems engineering”

Certified Systems Engineering Professional



If you are a practicing Systems Engineer with more than five years of systems engineering professional work experience, then CSEP is for you.

- Knowledge verification required
- At least five years of experience required
- At least five years of experience verification required
- Suitable for independent practitioners, which includes most systems

Expert Systems Engineering Professional



If you are a systems engineering leader with recognized systems accomplishments and have many years of systems engineering professional work experience, then ESEP is for you.

- At least 20 years of experience required
- At least 10 years of experience verification required
- Suitable for technical leaders who have “moved the needle” in applying systems engineering within a community, which may include their employer, client, or a professional society. Few individuals meet the ESEP requirements, even if they have been practicing systems engineering for a long time

Knowledge Verified by Exam or Coursework



Knowledge Requirements

- Based on INCOSE Systems Engineering Handbook v5
- Required for ASEP and CSEP certification
- Can be verified through knowledge exam
- Can be verified through university coursework

Exam is

- 100 multiple-choice questions
- 100 minutes for exam
- Proctored by video through computer or in-person at INCOSE events
- Administered online with video proctoring
- Offered as a pencil-and-paper test at many INCOSE events
- Allowed to be attempted up to 3 times per 12 months

Academic Equivalency allows course assessments to meet knowledge requirement

- Must score highly in pre-approved university course
- Course may be taught in any language and may use a wide variety of assessment methods
- Course must use INCOSE SE Handbook

Experience Documented By Area

CANDIDATE MUST PROVIDE A MAP OF THEIR EXPERIENCE

CSEP: 1 Year Experience in 3 of the Areas

ESEP: 2 Years Experience in 6 Areas

- Requirements Engineering
- System and Decision Analysis
- Architecture / Design Development
- System Integration
- Verification and Validation
- System Operation and Maintenance
- Technical Planning
- Technical Monitoring and Control
- Acquisition and Supply
- Information Management and Configuration Control
- Risk and Opportunity Management
- Lifecycle Process Definition and Management
- Specialty Engineering
- Organizational Project Enabling Activities
- Other



Certification & Reference Experience Requirements



SYSTEMS ENGINEERING EXPERIENCE

- CSEP has ≥ 5 years of professional-level SE experience
- ESEP has ≥ 20 years of professional-level SE experience



EXPERIENCE CONFIRMATION

- Recommendations from at least 3 colleagues / peers / managers
- References must confirm SE experience claims
- References must be knowledgeable of systems engineering but need not be SE's

MUST USE INCOSE FORMS



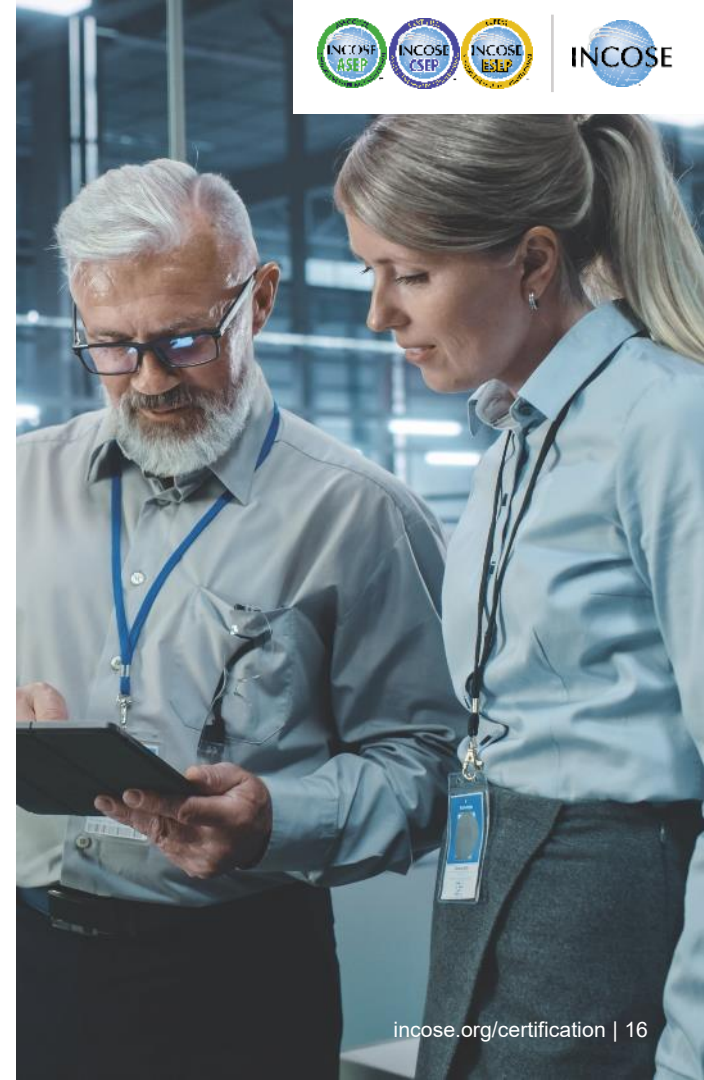
ESEP Technical Leadership Requirements



Minimum of 5 years of professional development

- Product Development Leadership, Technical Society Leadership, and Advanced Academics

ESEP candidates participate in audio interview to confirm SE leadership



ASEP and CSEP Renewal

CERTIFICATION IS VALID FOR DEFINED TIME PERIOD

5 Years for ASEP



3 Years for CSEP



Indefinite for ESEP



All levels must maintain INCOSE individual membership

CERTIFICATION RENEWAL REQUIRES CONTINUING EDUCATION

- Minimum of 120 Professional Development Units (PDUs)
 - Technical Society participation
 - SE course work and publications
 - SE job functions beyond daily work

What People Are Saying



Diego Rangel

"I understood that it is essential to certify your knowledge, especially at the beginning of your career. The SEP certification is an excellent way to demonstrate your qualification standard since it is internationally recognized. This motivated me to get SEP Certification."



David R. Schneider

"For the university, Academic Equivalency helps to ensure that the curriculum is well-aligned to the INCOSE methodologies and hence has significant professional value for our students. It also distinguishes the course(s)/program offering academic equivalency from peer institutions."

For students, they too earn additional distinction as it is not just the institution stating their SE skill capability, but the student has demonstrated that they met the larger standard established by INCOSE."



Raksha Mani

"The SEP certification by the INCOSE is a universally recognized certification, helping me prove my competence and knowledge in the different aspects of systems engineering."



Kahdeem Cohens

"I promote SEP certification. I would suggest that everyone considering it do some introspection on their "why."

In an ideal world, all systems engineering professionals are INCOSE SEPs for personal motivations like recognition, objective communication of your knowledge, and the ability to apply systems engineering learnings in the workplace."

Bring INCOSE to your community

Email info@incose.net to request an INCOSE Central representative to come to your next meeting, conference, or event.



Personal INCOSE presence



**Custom presentation for
your needs and interests**



**Best practices for getting
your employees or members
certified**

Additional INCOSE Resources

- [INCOSE Youtube Channel](#)
- [INCOSE Publications](#)
- [Calling All Systems](#)
- [INCOSE Guides, Processes, Models, and Other Technical Products](#)
- *Members Only:* [iNET MarCom Member Resources](#)



Any Questions?

Certification Office
certification@incose.net

For more information visit
www.incose.org/certification

INCOSE Copyright Notice

- Copyright © 2006-2024 by INCOSE, subject to the following restrictions:
 - Author Use. Authors have full rights to use their contributions in a totally unfettered way. Abstraction is permitted with credit to the source.
 - INCOSE Use. Permission to reproduce and use this document or parts thereof by members of INCOSE and to prepare derivative works from this document for INCOSE use is granted, with attribution to INCOSE and the original author(s) where practical, provided this copyright notice is included with all reproductions and derivative works.
 - External Use. This document may be shared or distributed to non-INCOSE third parties. Requests for permission to reproduce this document in whole are granted, provided it is not altered in any way. Requests for permission to prepare derivative works of this document for external and/or commercial use will be denied unless covered by other formal agreements with INCOSE. Copying, scanning, retyping, or any other form of reproduction of the content of whole pages or source documents is prohibited except as approved by the INCOSE Central Office, 7670 Opportunity Rd #220, San Diego, CA 92111.
 - Electronic Version Use. Any electronic version of this document is to be used for personal use only and is not to be placed on a non-INCOSE sponsored server for general use. Any additional use of these materials must have written approval from INCOSE Central.
 - Permissions. INCOSE has granted permission to member companies of the INCOSE Corporate Advisory Board to post and use this document internally, subject to the external use restriction.
 - Technical Data. This data was prepared by INCOSE for information only. It has been released by INCOSE as Technical Data. It is subject to change without notice and may not be referred to as an INCOSE Technical Product.

This briefing was created from information from various INCOSE sources as indicated in the Notes section of this slide. Send comments to certification@incose.org.

INCOSE

International Council on Systems Engineering

A better world through a systems approach



Learn more at [INCOSE.org/certification](https://www.incose.org/certification)

©2023 INCOSE. All rights reserved.