The International Council on Systems Engineering (INCOSE) offers a credential program to recognize individuals who are knowledgeable and experienced in the practice of systems engineering. Applicants for Certified Systems Engineering Professional (CSEP) and Expert Systems Engineering Professional (ESEP) must describe their work experience and provide references that confirm the experience. CSEPs are individual practitioners, capable of performing systems engineering work on their own. ESEPs are leaders in the field of systems engineering, with a proven history of leading challenging projects.

The certification application review team relies heavily on the information provided by references in their determination to recommend an applicant for certification. Please provide ample information using Form 4B – Reference for CSEP / ESEP. The two things needed from you as a reference are:

- Description of your systems engineering experience to qualify you as a reference and
- Information about the applicant's experience and capabilities to qualify him or her as a CSEP or ESEP.

Please carefully provide all of the information requested in the four major sections of the form as follows:

Applicant's Information

- Provide the applicant's name, email address, and the country in which they live.

Reference's Information

- Provide your contact information so that INCOSE can contact you if additional information is needed.
- Provide information about INCOSE recognition you have as either a Systems Engineering Professional (SEP) or an INCOSE Fellow. You are not required to be either an SEP or a Fellow.
- Identify the time period during which you had personal knowledge of the applicant's SE experience. This is very important, as the applicant must provide references to cover a minimum time period, typically five or ten years.
- Identify your business connection with the applicant during that time period (e.g., co-worker, immediate supervisor, higher-level manager, etc.).

Reference's Qualifications

- If you have indicated above that you are (or previously were) an INCOSE CSEP, ESEP, or Fellow, please note that in the large text field in this section. No other information is required in this section.
- All others, provide information about your own awareness, background and experience in systems engineering. This will help the review team confirm that you are a qualified reference. Please describe the type and number of years of systems engineering work that you have done in addition to the positions that you have held.
- You may use the attachment on pages 3-4 as a guide to assist you.
- You must have and describe at least ten years of your own relevant experience. Listing your prior position titles without describing your work experience is not adequate evidence for the review team to substantiate your systems engineering experience and credibility as a reference.
- If you are commenting on my additional general engineering experience (not systems engineering), then please describe the qualifications you have for the type of experience claimed.

Reference's Knowledge of Applicant

Provide the following information about the applicant:

- Provide detailed, non-perfunctory, textual account of the applicant's systems engineering activities, functions, outcomes, work products, tasks, and experience based on your personal knowledge. Your description of experience must be in your own words. Please do not copy and paste from the individual application nor from another reference.
- You may wish to consult the attachment on pages 3-4 of this document that contains some standardized definitions of systems engineering functions. The CSEP designation is for systems engineers who have demonstrated fundamental systems engineering knowledge and skills. Please describe the full period of the applicant's experience of which you have knowledge.

Reference's Signature

- Your typed name serves as a signature.

Your evaluation is vital to the INCOSE evaluation. INCOSE will not provide any information in your response back to the applicant, to protect your privacy. You may provide a copy of your response to the applicant, if you wish. Please tell the applicant when you have submitted your comments and reference statement to the INCOSE Certification Office.

To expedite processing, it is preferred that you submit your response to INCOSE online through the link that was sent to you in email. If you need the email re-sent, please contact **certification@incose.org**.

Please tell your applicant if you will not be able to respond within two weeks of receiving their request to be a reference or if you do not want to submit a reference statement.

Attachment: Experience Applicable for Certification

Applicants for certification as a Certified Systems Engineering Professional are required to submit evidence of a minimum of five years of systems engineering experience in addition to having a qualifying degree. Applicants for Expert Systems Engineering Professional are required to have at least twenty-five years of systems engineering experience.

Systems engineering experience to satisfy the minimum requirements for initial certification includes performing systems engineering functions. It does not include time spent in receiving a technical education.

Systems engineering technical activities include but are not limited to those identified in the table below. For further information and for detail on typical tasks associated with each activity, refer to the INCOSE Systems Engineering Handbook (V4.0).

Systems Engineering Experience Area:	Principle SE Activities associated with the SE experience area
RequirementsEngineering	Preparing for or managing a Business or Mission analysis; Defining a Problem or opportunity space; Characterizing a solution space; Evaluating alternative solution classes; Preparing for Stakeholder Needs & Requirements Definition; Defining stakeholder needs; Developing Operational Concept and other Life Cycle concepts; Transforming needs into stakeholder requirements; Analyzing Stakeholder Requirements; Managing Stakeholder needs and requirements definition; Preparing for System Requirements Definition; Defining System Requirements; Analyzing System Requirements; Managing System Requirements.
System and Decision Analysis	Preparing, performing and managing a system analysis; Decision Management, including Preparing for System Engineering Decisions; Analyzing decision information; Making and managing SE decisions.
Architecture/ Design Development	Preparing for architecture definition; Developing architecture viewpoints; Developing models and views of candidate architectures; Relating architecture to design; Assessing candidate architectures; Managing the selected architecture; Preparing for design definition; Assessing alternatives for obtaining system elements; Establishing design characteristics and design enablers; Managing a system design;
Systems Integration	Preparing, performing and managing system element implementation; Identifying, agreeing and managing system-level interfaces; Preparing and performing Integration; Managing integration results.
Verification and Validation	Preparing and performing Verification; Managing verification results; Preparing and performing Validation; Managing Validation results; Preparing for, and performing System Transition; Managing results of System Transition; Obtaining Qualification, Certification and Acceptance.
System Operation and Maintenance	Preparing for Operation; Managing results of Operation; Performing and supporting System/ Product Operation; Preparing for and performing Maintenance; Performing Logistics Support; Managing results of maintenance and logistics; Preparing for, performing and finalizing system disposal.
Technical Planning	Defining an SE project; Planning an SE project and its technical management; Activating an SE project; Identifying and recording tailoring influences and mandated structures; Obtaining input from parties affected by the tailoring strategy; Making Tailoring decisions and selecting life cycle processes.
Technical Monitoring and Control	Planning for SE project assessment and control; Assessing SE projects; Controlling projects from an SE perspective; Preparing for and performing System Measurement; Preparing for system Quality Assurance; Performing system product or service evaluations;

Acquisition and Supply	Acquisition, including: Preparing for system/element acquisition; Advertising the acquisition and selecting the supplier; Establishing, maintaining and monitoring an acquisition agreement; Accepting a product or service from a supplier; Supply, including: Preparing for supply; Responding to a tender; Establishing, maintaining and executing a supply agreement; Delivering and supporting a product or service.
Information and Configuration Management	Planning Configuration Management; Performing Configuration Identification; Performing Configuration Change Management; Performing Configuration Status Accounting; Performing Configuration Evaluation; Performing Release Control; Information Management, including Preparing for and performing information management.
Risk and Opportunity Management	Planning technical risk and opportunity management; Managing the technical risk profile; Analyzing, Treating and Monitoring technical risks and opportunities
Lifecycle Process Definition and Management	Establishing Lifecycle Processes including defining and implementing Lifecycle Models; Assessing Lifecycle Processes and Models; Improving Lifecycle Processes and Models.
Specialty Engineering	Performing professional-level systems engineering activities associated with one or more Specialty Engineering area(s). Typical Specialty Engineering areas include but are not limited to those identified in the INCOSE SE Handbook V4.0, namely: Affordability/Cost-Effectiveness/Life Cycle Cost analysis; Electromagnetic Compatibility Analysis; Environmental Engineering/Impact Analysis; Interoperability Analysis; Logistics Engineering; Manufacturing and Produceability Analysis; Mass Properties Engineering; Reliability, Availability and Maintainability analysis; Resilience Engineering; System Safety Engineering; System Security Engineering; Training Needs Analysis; Usability Analysis/Human Systems Integration; Value Engineering.
Organizational Project Enabling Activities	Infrastructure Management, including establishing and maintaining the Infrastructure; HR Management, including identifying and developing SE Skills, acquiring and providing SE skills for projects; Quality Management including planning and assessing Quality Management, Performing Quality Management corrective and preventative actions; Knowledge Management, including Planning Knowledge Management, Sharing Knowledge and skills throughout the organization, Managing Knowledge, skills and knowledge assets; Project Portfolio Management at Organizational level, including defining and authorizing SE projects, evaluating a portfolio of SE projects and terminating SE projects.
Other	Other functions and activities performed that you can justify as Systems Engineering activities.

Certification will indicate that the individual has a balance between the *depth* and *breadth* of SE experience in performing some, but not all, of the SE activities identified above. The acceptability of experience distributions outside these guidelines is subject to the decision of the Certification Program Office.