



## Form 2 – Instructions for Completing Form 1 (Systems Engineering Certification Application for ASEP, CSEP, and Extensions)

### General Instructions

1. An electronic submission via email is preferred. If you are submitting a paper application, type or print neatly and legibly on this application. You will be requested to resubmit information that is illegible and incomplete on your original application.
2. The electronic application form is set up for your inputs into shaded rectangular or square box regions. The shaded rectangular areas in the form will expand to accommodate your typed or pasted inputs. The shaded square boxes can be activated with a click of your left mouse button to insert (or remove) an “X”. The form is protected to prevent modifications to the form. **Please submit this form when completed in its current Microsoft Word format; do not convert it to any other format, such as PDF, for submittal. Forms not submitted in the original format will be returned to the applicant.**
3. The applicant is responsible for providing the information requested on the application, and for providing the Instruction Letter (Form 4A) and the Reference’s Comments and Recommendations Form (Form 4B) to his/her references for their use in submitting their endorsements. At least one reference should be a current or former supervisor. The applicant's experience reported and confirmed by the references must cover the entire period of experience needed by the applicant to qualify for certification. Each individual reference does not have to confirm the entire period of the applicant's experience, but the collective set of references must support the entire period of the applicant's experience. The applicant is also responsible for following up with his/her references to ensure that they have submitted their recommendations in a timely manner, preferably within two weeks, to the INCOSE Certification Office.
4. Applicants interested in being considered to be invited to become a Certification Application Reviewer (CAR) should describe at least 20 years of experience in their certification applications. No additional reference confirmations (beyond that required for the entire period of experience needed by the applicant to qualify for certification) are required for CAR consideration. The minimum qualifications for Certification Application Reviewers (CARs) are to be a current Certified Systems Engineering Professional (CSEP), be an INCOSE member, and have a minimum of 20 years of engineering experience, with at least 10 years of that experience being in systems engineering. CARs are chosen by invitation only. Further information on CARs is available from the INCOSE Certification Program Manager at [secert@incose.org](mailto:secert@incose.org)
5. The application may be submitted electronically at [secert@incose.org](mailto:secert@incose.org) and a credit card payment may be made through the secure INCOSE web site at: [https://www.incose.org/cc\\_orders/incosecertpayment.asp](https://www.incose.org/cc_orders/incosecertpayment.asp)
6. If submitting a paper application, send it with the application fee to:  
**Certification Program Office**



**INCOSE**  
**7670 Opportunity Road, Suite 220**  
**San Diego, CA 92111**

7. The non-refundable fees in United States dollars that must accompany certification applications are listed on the INCOSE Certification web site at :  
[https://www.incose.org/cc\\_orders/incosecertpayment.asp](https://www.incose.org/cc_orders/incosecertpayment.asp)

The fee may be paid with a credit card through the secure INCOSE web site at the Online Certification Payment or by submitting a check or money order. Checks should be made payable to INCOSE. The application will not be processed if the fee is not received.

8. A standard acknowledgement of receipt of application will be sent electronically.
9. **All supporting documentation and information must be received before an application is considered complete.** If the application is incomplete or one of your items is missing, you will be notified of the corrective actions that you must take. If you are requested to submit additional information, you will have three months from the time of notification to provide this additional information. Failure to do so will result in your application for certification being denied.

### **Section 1: General Information**

Name: Last (family) name, first (given) name, middle initial.

Address: Preferred **permanent** complete mailing address.

Current e-mail address

Date and Place of Birth: This is needed to distinguish between people with the same names

The INCOSE CAB organizations are listed at the following web site URL:

<http://www.incose.org/about/organization/cab.cfm>

**Note: Employees of CAB organizations are eligible for INCOSE-member discounted application fees.**

### **Section 2: INCOSE Membership & Certification Interest**

Please indicate if you are an INCOSE member, provide your membership number, and, if applicable, list your current certification level and date attained. Also, indicate the type of certification being requested. (Note that applicants for ASEP must be members of INCOSE.)

Applicants applying for the CSEP certification should indicate if they want the option of taking the certification exam before having their experience reviewed. Under this **Exam First Option**, applicants:

- Must complete all sections of this form and submit it along with the non-refundable application fee
- Will be authorized to take the certification exam before INCOSE receives the recommendations from their references or reviews their experience
- Will be authorized to take the exam only three times within one year of the submittal of this application
- Will pay the exam fee separately to the testing organization each time the exam is scheduled



- Will not be allowed to claim or use the notation of INCOSE Certified Systems Engineering Professional (CSEP) by only passing the certification exam.

### Section 3: Fee Payment

Please indicate the applicable fee and method of payment. Your application will not be processed until the non-refundable fee is received.

### Section 4: Education

You must submit a **copy** of your college transcript(s) or diploma(s) to receive credit for having a degree(s). If submitting your application electronically, you may submit a scanned copy of your transcript(s) or diploma(s). Please do not submit your actual diploma; we will not return it to you.

### Section 5: Experience

If you are applying for certification as an Associate Systems Engineering Professional (ASEP) or for the Acquisition (Acq) extension, skip sections 5 and 6 of the application and these instructions and go directly to the concluding section 7.

Provide the dates of experience, company name, the name of your immediate supervisor/peer and how he/she may be contacted, your title/position, and a description of your job duties and responsibilities. Add extra pages/space if needed. Describe at least five years of relevant systems engineering experience performing tasks defined in Attachment A to these Instructions. Start with your most recent position. Under “Your Duties and Responsibilities” include the depth of detail typically provided on a job resume about the SE tasks/functions you performed. If you do not have a four-year technical college degree, or equivalent, describe your additional years of general engineering experience required to qualify for certification. A total of ten years of experience (including five years in systems engineering) is required if you have a four year non-technical college degree. A total of fifteen years of experience (including five years in systems engineering) is required if you do not have a four year college degree.

The Certification Application Review Team is looking for your direct contributions to a work effort. For example, describe that as a team member you authored, defined, or planned a section of a Systems Engineering Management Plan, Concept of Operations, Verification and Validation Plans, or portions of such documents. Describe your qualifications in more detail than just saying that you were involved with an effort, led an effort, or contributed to an effort.

Please identify employment periods at different companies or firms, or **significant** changes of responsibilities within the same company or firm. Do not differentiate between different projects or various placements within the same company or firm unless there was a significant change in responsibility.

This section on experience has proven to be difficult for some applicants to complete accurately and concisely. For your convenience, we have provided a summary table to supplement the narrative, and to help you quantify the types, breadth and depth (see Attachment A for additional detail), and amounts of your experience throughout your career. The summary table is required if you have less than seven (7) years of experience and is optional if you have seven (7) or more



years experience. The summary table is broken down by the 14 SE experience areas listed in Attachment A to this form. If you use this summary table, please input the amount of your equivalent full-time experience in calendar months (no decimals please and no credit for working overtime in a month) into the applicable areas on the summary table. You may list the months of experience gained for each SE work area for up to seven job positions (P1 to P7). Update with your value the pertinent cells in this table that are pre-populated with a zero to support the embedded formulas. To update the “Total Months in Each SE Area” in the right-hand column and/or the “Total per Position” in the bottom row after making your entries, place your computer cursor over the desired cell, right click the cursor, and then click the “Update Field” option on the menu. As a check, the total amount of SE experience in the summary table cannot exceed the calendar time of your career. Also, time in school as a student does not count as experience.

As an example, assume you worked in 4 different SE experience areas in a 7 year period and the total of all your SE experience amounted to 5 years. The summary table breakout should reflect your equivalent full-time experience such as Requirements Engineering for 18 months, Systems Integration for 15 months, Baseline Control for 15 months, and Technical Planning for 12 months, thus equaling 60 months of SE experience for the 7 year period.

If you are interested in being considered to become a reviewer of certification applications after you achieve certification as a Certified Systems Engineering Professional (CSEP), be sure to include a minimum of 20 years of engineering experience in this section of the application.

## **Section 6: References**

Identify at least three references who can verify your experience to meet the certification requirements and recommend you for certification. Be sure to include current addresses and telephone numbers (preferably day time numbers) so that your references may be contacted. See Attachment B to these Instructions for guidance on colleagues/peers who may serve as references to confirm your experience. Also note the work relationship between your reference and you, such as manager, supervisor, co-worker, etc.

References should:

- Not be related to the applicant by blood or marriage
- Have personal knowledge of applicant’s professional reputation and accomplishments
- Be knowledgeable of the discipline of systems engineering

At least one reference should be a current or former supervisor. The applicant's experience reported and confirmed by the references must cover the entire period of experience needed by the applicant to qualify for certification. Each individual reference does not have to confirm the entire period of the applicant's experience, but the collective set of references must support the entire period of the applicant's experience.

## **Section 7: Affidavit**

Check and date your decision on accepting the affidavit. If recognized as an INCOSE Systems Engineering Professional, your name along with your organization/division, city, state, and country will be posted on the INCOSE public web site and may be otherwise communicated by



INCOSE. If you decline to accept the affidavit, your application will not be processed. Your typed name is accepted as a signature on an electronically submitted application.



## Attachment A - Experience Applicable for Certification

Applicants for certification as a Systems Engineering Professional are required to submit evidence of a minimum of five years of systems engineering experience in addition to having a technical Bachelor's degree, or equivalent. Applicants who have the minimum five years of SE experience but who lack a technical degree may submit an additional five years of engineering experience with a non-technical degree, or an additional ten years of engineering experience in lieu of no degree. (The additional years of engineering experience may, but are not required to, be in systems engineering.) Systems engineering experience to satisfy the minimum requirements for initial certification includes performing systems engineering functions, but does not include time spent in receiving a technical education, or teaching full time. (Teaching experience may be included to satisfy re-certification requirements.)

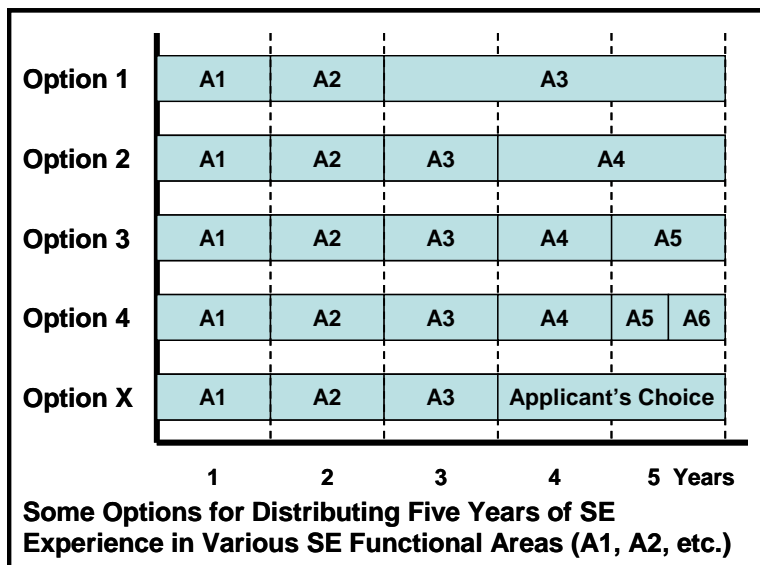
Systems engineering functions include but are not limited to the following:

1. **Requirements Engineering:** analyze customer and stakeholder needs, generate/develop requirements, perform functional analyses, derive requirements, ensure requirements quality, allocate requirements, control requirements, maintain requirements database, develop and implement Requirements Management Plans, develop measures of effectiveness and performance
2. **Risk and Opportunity Management:** develop and implement Risk and Opportunity Management Plans, identify risk issues and opportunities, assess risk issues and opportunities, prioritize risks and opportunities, develop and implement risk mitigation and opportunity achievement plans, track risk reduction and opportunity achievement activities
3. **Baseline Control:** develop and implement Configuration Management Plans, establish and update baselines for requirements and evolving configurations/products, establish and implement change control processes, maintain traceability of configurations, participate in Configuration Control Boards, participate in configuration item identification and status accounting, participate in functional and physical configuration audits
4. **Technical Planning:** identify program objectives and technical development strategy; prepare Systems Engineering Management Plans, program Work Breakdown Structures, product Breakdown Structures, Integrated Master Plans, and Integrated Master Schedules; identify program metrics including product technical performance measures and key performance parameters, identify program resource needs in terms of equipment, facilities, and personnel capabilities
5. **Technical Effort Assessment:** collect, analyze, track, and report program metrics including product technical performance measures and key performance parameters; conduct audits and reviews; assess process and tool usage compliance; conduct capability assessments; recommend and implement process and product improvements
6. **Architecture/Design Development:** identify baseline and alternate candidate concepts and architectures, prepare Trade Study Plans, conduct and document trade studies, evaluate and optimize candidate concepts and architectures, prepare system/solution description documents
7. **Qualification, Verification, and Validation:** develop and implement Qualification, Verification, and Validation Plans; develop verification requirements and pass/fail criteria;



- conduct and record results of qualification, verification, and validation efforts, and corrective actions; prepare requirements verification matrix and qualification certificates
8. **Process Definition:** define enterprise processes and best practices, tailor enterprise processes for program/project applications
  9. **Tool Support:** specify requirements for, evaluate, select, acquire, and install SE computer programs/tools
  10. **Training:** develop and implement Training Plans, develop and give training courses on processes and tools
  11. **Systems Integration:** define technical integration strategy, develop Integration Plans, develop integration test scripts, develop and implement integration test scenarios, conduct and document integration tests, track integration test results and retest status
  12. **Quality Assurance:** develop and implement a Quality Assurance Plan, perform quality audits, report quality audits, define and track quality corrective actions
  13. **Specialty Engineering:** develop and implement Specialty Plans as part of, or an addendum to, the Systems Engineering Management Plan to cover such specialties as reliability, maintainability, supportability, survivability, logistics support, security, safety, human factors, electromagnetic environmental effects, environmental engineering, packaging and handling, etc.
  14. **Other:** describe other functions that you have performed and can justify as system engineering activities.

Certification at the foundation level will indicate that the individual has a balance between the depth and breadth of SE experience in performing some, but not all, SE functions. To achieve the desired depth and breadth in the minimum 5 years of SE experience, the CSEP candidate must have at least one year of SE experience in each of three or more of the 14 systems engineering functional areas listed above. The acceptability of experience distributions outside these guidelines is subject to the decision of the Certification Program Office. The following figure graphically depicts some possible options for distributing the required five years of SE experience across various SE functional areas (designated A1, A2, A3, etc. in the figure).





## Attachment B - Colleagues/Peers Used for References

A "Colleague/Peer" used as a reference, is an associate or fellow worker who is equal or at a higher level in abilities and qualifications "systems engineering wise," and, because of that can attest to your "systems engineering knowledge" and past experience in successfully performing "systems engineering tasks."

Part of the process in certifying an applicant as a Systems Engineering Professional is to obtain data from references that the applicant performed the tasks as described in the application. All of the following categories of people should qualify as credible references:

- Supervisors for whom you work and/or who provide your systems engineering performance rating
- Program Managers/Task Leaders for whom you work and/or who provide input for your systems engineering performance rating
- College Professors of Systems Engineering who grade your knowledge and systems engineering performance through classroom assignments and projects at the graduate level
- INCOSE Fellows who are acquainted with your work (experience), knowledge, leadership, and contributions to systems engineering
- INCOSE Leadership who are acquainted with your work (experience), knowledge, leadership, and contributions to systems engineering
- INCOSE Certified Systems Engineering Professionals who are acquainted with your work (experience), knowledge, leadership, and contributions to systems engineering

An applicant should provide references from a mixture of these categories. Thus, an applicant should limit references to two from any one category. References, who provide information to support an applicant and their reasons for the recommendation, will be requested to submit information on their own work (experience), knowledge, leadership, and contributions to systems engineering.