

## Form 2 – Instructions for Completing Form 1 (Application for INCOSE 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 shaded areas in the form are for you to type or paste inputs. The shaded rectangular areas will expand to accommodate your text. The shaded square boxes can be activated with a click of your left mouse button to insert (or remove) an “X” in the square boxes. **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 Microsoft Word format will be returned to the applicant.**
3. (For CSEP Only) **The applicant is responsible for providing the information requested on the application, and for providing Form 4A “Instruction Letter to CSEP References” and Form 4B “CSEP Reference’s Comments and Recommendations” to his or her qualified references for their use in submitting their endorsements.** 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. The application may be submitted electronically at [secert@incose.org](mailto:secert@incose.org).
5. 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**
6. 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 listed above or by submitting a check or money order made payable to INCOSE. The application will not be processed if the fee is not received.
7. A standard acknowledgement of receipt of application will be sent electronically. Any questions can be directed to the INCOSE Certification Program Office at the Email and address listed above.

8. **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 and your fees will not be refunded.

**Note: Applicants have one year from the date of your application and payment to complete the entire certification process.** The applicant is responsible for any delays in application or reference submittals, delays due to incomplete or insufficient information, time for INCOSE to review the submittal, and successfully passing the examination. Failure to do so will result in your application for certification being denied and your fees will not be refunded.

### Section 1: General Information

Name: Family (Last) Name, Given (First) Name(s), Middle Initial.

Year and Place of Birth (City, State, and Country): This is needed to help verify education and experience and to distinguish between people with the same names

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

Current e-mail address and phone numbers

Present organization and address (indicate “None” if applicable)

### Section 2: INCOSE Membership & Certification Interest

Please indicate if you are an INCOSE individual, senior, or student member and provide your membership number and years of membership. (Note that applicants for ASEP must be members of INCOSE.)

Please indicate if you currently possess any level of INCOSE systems engineering certification. If you do, please provide your certification number, the date attained, and the expiration date. Also, indicate the type of certification being requested.

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 at most 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 Systems Engineering Professional (SEP) until they have been notified by INCOSE that they have successfully completed the entire certification process (e.g., not 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.

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

The INCOSE CAB organizations are listed at the following web site URL:  
<http://www.incose.org/about/organization/cab.cfm>

#### **Section 4: Education (CSEP Only)**

If you are applying for certification as an Associate Systems Engineering Professional (ASEP) or for the Acquisition (Acq) extension, skip Sections 4, 5, and 6 of the application and these instructions and go directly to the concluding Section 7.

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 (CSEP Only)**

If you are applying for certification as an Associate Systems Engineering Professional (ASEP) or for the Acquisition (Acq) extension, skip Sections 4, 5, and 6 of the application and these instructions and go directly to the concluding Section 7.

For applicants possessing a technical Bachelor's degree, or equivalent, the minimum required amount of systems engineering experience to be considered for CSEP certification is five (5) years.

Technical Bachelor's degrees include BS or BSE (or international equivalents through such mechanisms as the Washington Accord or the Bologna Agreement) in engineering or other technical fields. Acceptable engineering fields of study include: aeronautics, biomedical, chemical, civil, computer, electrical, environmental, mechanical, nuclear, software, systems. Acceptable other fields of study include: chemistry, computer science, mathematics, physics. If the Bachelor's degree does not come from the above fields, then a Masters or Doctorate degree (or international equivalent) in those fields is acceptable. The acceptability of other degrees outside this guideline is subject to the decision of the Certification Program Office.

Applicants who lack a technical Bachelor's degree, or equivalent, must submit an additional five (5) years of engineering experience with a non-technical Bachelor's degree, or an additional ten (10) years of engineering experience in lieu of no Bachelor's degree. The additional years of engineering experience required to compensate for lack of a technical degree may be in any engineering field, including systems engineering.

In the response to the question about certification and degree status, please check your technical degree status with the corresponding minimum number of years of systems engineering experience that is required. **Note: INCOSE is the final authority on degree applicability.**

List your experience. Please start with your current position for P1 and continue in reverse chronological order. Add extra pages/space if needed.

Provide the dates of experience (from/to month & year), organization 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. Describe at least five years of relevant systems engineering experience performing tasks defined in Attachment A to these Instructions. If you choose to use the “Other” area, please ensure the claimed experience relates to SE and include a definition of why it should be allowed.

Under “Your Duties and Responsibilities” include the full depth of detail typically provided on a job resume about the SE tasks/functions you performed and the products you produced. Describe in detail your role in leading/performing systems engineering tasks, the products produced, and the duration of your efforts in producing those products. The Certification Application Review Team makes its assessments based on the information provided in the application and is looking for your direct contributions to a work effort. For example:

- Identify and describe the products or services for which SE was applied.
- Describe the sub-level activities performed in SE functional areas, such as what parts of requirements engineering were done – requirements elicitation, definition, decomposition, allocation, control, management, etc. It is too vague to just state “I worked on requirements for the system.”

Describe your qualifications in more detail than just saying that you were involved with an effort, led an effort, or contributed to an effort. Simply stating a job title or position is not a description of experience. Non-technical roles/tasks in program management, resource management and business development are not SE functions and do not count as the experience desired. Also, describe additional years of engineering experience required due to your educational situation. Applications with insufficient detail may result in denial.

Please identify employment periods at different organizations, or **significant** changes of responsibilities within the same organization. Do not differentiate between different projects or various placements within the same organization unless there was a significant change in responsibility. Also, time in school as a student does not count as experience.

For each position, include the names of your reference (or references) that will cover this position and substantiate your experience claims. Use the same name(s) that you provide in Section 7 below. If you do not have any references for a given position, state “None.” The reference may or may not be the same as the immediate supervisor for the position.

A Certified Systems Engineering Professional must have a demonstrated breadth and depth of systems engineering experience. In order to ensure a sound systems engineering technical foundation, the systems engineering experience is to be in one-year or greater increments in at least three of the following systems engineering functions defined further in Attachment A:

- Requirements Engineering;
- Risk and Opportunity Management;

- Baseline Control;
- Technical Planning;
- Technical Effort Assessment;
- Architecture/Design Development;
- Qualification, Verification, and Validation;
- Process Definition;
- Tool Support;
- Training;
- Systems Integration;
- Quality Assurance;
- Specialty Engineering; and
- Other.

A summary table has been provided for the applicant to identify that he or she has the required breadth and depth of systems engineering experience. This required summary table is broken down by the 14 SE experience areas listed in Attachment A to this form. Please indicate the number of full-time equivalent calendar months (rounded to the nearest whole month and no credit for overtime work/penalty for vacation time) worked in each of the system engineering areas at each position. You may list the months of experience gained for each SE work area for up to seven job positions (P1 to P7).

The time for each period of performance in the summary table must not exceed the respective period of performance calendar time claimed on your application. As an example, assume you worked in 4 different SE functional work 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. As another check, the total amount of SE experience in the summary table cannot exceed the calendar time of your claimed periods of performance on the application.

All of the cells in the table that allow input by the applicant have been pre-populated with a zero (0) to support embedded formulas used to determine the values in the right-hand column and the bottom row. To update the automatically calculated values after completing your entries, place your computer cursor on the desired cell (in the right-hand column or the bottom row), right click your cursor, and then select the menu option "Update Field."

Note: 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 application. 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, have a minimum of 20 years of engineering experience, and have at least 10 years of systems



engineering experience. CARs participation is by invitation only based on the above requirements and other factors. Further information on CARs is available from the INCOSE Certification Program Office at [secert@incose.org](mailto:secert@incose.org)

### **Section 6: References (CSEP Only)**

Identify at least three qualified references who can verify your experience to meet the certification requirements and recommend you for certification. A qualified reference is a supervisor or associate fellow worker who is equal or at a higher level in abilities and qualifications "systems engineering wise," and, because of that can attest to the applicant's systems engineering knowledge and past experience in successfully performing systems engineering tasks. References endorsing additional general engineering experience due to the applicant's educational situation need to be qualified to attest to the applicant's general engineering knowledge and past experience in successfully performing general engineering tasks. Include current addresses and telephone numbers (preferably day time numbers) so that your references may be contacted if necessary. 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 systems engineering experience (and additional general engineering experience, if applicable) 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 required experience, including both depth and breadth of experience requirements.

For each reference, indicate the position (or positions) for which they will substantiate your experience claims. List all of the applicable positions separated by commas (e.g., P1, P3, P4).

### **Section 7: Affidavit**

Read, check, sign, and date your decision on accepting the affidavit. Your typed name is accepted as a signature on an electronically submitted application.

If you decline to accept the affidavit, your application will not be processed.

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.

## Attachment A - 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 technical Bachelor's degree, or equivalent.

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.

Applicants who lack a technical Bachelor's degree, or equivalent, must submit an additional five (5) years of engineering experience with a non-technical Bachelor's degree, or an additional ten (10) years of engineering experience in lieu of no Bachelor's degree. The additional years of engineering experience required to compensate for lack of a technical degree may be in any engineering field, including systems engineering.

## **Attachment B - Colleagues/Peers Used for References**

A "Colleague/Peer" used as a reference is a supervisor, 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 Certified Systems Engineering Professional is to obtain data from qualified references that the applicant performed the tasks as described in the application. A qualified 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 the applicant's systems engineering knowledge and past experience in successfully performing systems engineering tasks.

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
- INCOSE CSEPs and ESEPs who are acquainted with your work (experience), knowledge, leadership, and contributions to systems engineering
- 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
- Customers for whom you have provided systems engineering services or products who are familiar with the quality of your work.

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