

Criteria for

Certified Professional for  
Software Architecture (CPSA)<sup>®</sup>  
*Expert Level*

2023.1-rev0 - EN-20231221



© (Copyright), International Software Architecture Qualification Board e. V. (iSAQB® e. V.) 2023

The curriculum may only be used subject to the following conditions:

1. You wish to obtain the CPSA Certified Professional for Software Architecture Foundation Level® certificate or the CPSA Certified Professional for Software Architecture Advanced Level® certificate. For the purpose of obtaining the certificate, it shall be permitted to use these text documents and/or curricula by creating working copies for your own computer. If any other use of documents and/or curricula is intended, for instance for their dissemination to third parties, for advertising etc., please write to [info@isaqb.org](mailto:info@isaqb.org) to enquire whether this is permitted. A separate license agreement would then have to be entered into.
2. If you are a trainer or training provider, it shall be possible for you to use the documents and/or curricula once you have obtained a usage license. Please address any enquiries to [info@isaqb.org](mailto:info@isaqb.org). License agreements with comprehensive provisions for all aspects exist.
3. If you fall neither into category 1 nor category 2, but would like to use these documents and/or curricula nonetheless, please also contact the iSAQB e. V. by writing to [info@isaqb.org](mailto:info@isaqb.org). You will then be informed about the possibility of acquiring relevant licenses through existing license agreements, allowing you to obtain your desired usage authorizations.

#### Important Notice

**We stress that, as a matter of principle, this curriculum is protected by copyright. The International Software Architecture Qualification Board e. V. (iSAQB® e. V.) has exclusive entitlement to these copyrights.**

The abbreviation "e. V." is part of the iSAQB's official name and stands for "eingetragener Verein" (registered association), which describes its status as a legal entity according to German law. For the purpose of simplicity, iSAQB e. V. shall hereafter be referred to as iSAQB without the use of said abbreviation.

## Training Provider

A training provider must fulfill the following criteria to get the accreditation from iSAQB:

Criterion	Details	Evidence
iSAQB FL or AL	The organization must be accredited for the Foundation Level and/or the Advanced Level of the iSAQB®.	iSAQB® has a list of all the organizations that are accredited.
Topic moderator	The training provider must have at least one accredited topic moderator.	The topic moderator has been accredited successfully.

## Topic Moderator

The training provider provides a topic moderator for the topic working group.

A topic moderator must fulfill the following criteria to get the accreditation by iSAQB®.

Criterion	Details	Evidence
Process knowledge	A topic moderator must have knowledge of the process of expert level certification.	A member of the iSAQB® working group "Expert Level" conducts an interview with the applicant and checks the requested knowledge.
Social skills	A topic moderator must have social skills to be able to manage a group.	<p>The applicant must prove one or more of the following competences:</p> <ul style="list-style-type: none"> <li>• The applicant has taken training courses or seminars, such as iSAQB® trainings or lectures at a university.</li> <li>• The applicant must substantiate that he has held the position of group leader for a minimum of one year, such as in an association, club, or development team.</li> </ul>
Knowledge	A topic moderator must know enough about software architecture.	<p>The applicant must meet the following requirements:</p> <ul style="list-style-type: none"> <li>• The applicant has at least the CPSA® Foundation Level certification.</li> <li>• The applicant has been working as software developer or software architect for five years.</li> </ul>

## Criteria for a new Topic

A new topic must meet the following criteria:

Criterion	Requirement	Description
Originality	Must	Will the topic group provide new knowledge or insights to the community?  Is the topic not yet completely and publicly worked on (e. B. Wikipedia)?
Relevance	Must	Is the topic interesting for a larger group of people?
Innovation	Must	Does the topic generate new ideas and new knowledge that are of general interest?
Creativity	Shall	Does the topic show creativity, e.g. through synergies, analogies, ideas?
Effectiveness	Shall	Is it to be expected that the work in software architecture can be simplified or accelerated in the future by working on the topic?
Problem solving	Must	Can recurring and previously insurmountable problems in the software architecture be solved by topic processing?  Examples: <ul style="list-style-type: none"><li>• Improve communication between management and software architects</li><li>• Introduction of new methods, like e.g. architecture management, Domain-Driven Design, Green-IT, ...</li></ul>

## Criteria for New Applicants

To be eligible to participate in a topic group, applicants must satisfy the following criteria:

Criterion	Description
Advanced Level Certifications	Applicants must confirm that they have the expert level certification, or they will get it until the topic group submits their results.
Knowledge and practical experience	Applicants must prove that they have knowledge and practical experience of the chosen topic.
iSAQB® can publish results	Applicants must agree that iSAQB® is allowed to publish and exploit the results of the topic group.
Willingness to travel	Applicants must confirm that they are willing to travel at their own expense to work together in the topic group.
Disclosure of contact data	The applicants grant permission to iSAQB® to forward the following contact details to the other members of the topic groups: first name, second name, e-mail address, and telephone number.

*The following criteria may come into operation in the future*

iSAQB® may accept individuals as candidates for the expert level if they meet one of the following requirement:

- People who are distinguished experts on the topic.
- Members of iSAQB® who are not permitted to participate in the iSAQB® Advanced Level Certification since they know the examination question.



The iSAQB® strategy council and the members of the iSAQB® working group "Expert Level" make a majority decision on whether or not a person meets one of the stated requirements.

iSAQB® is able to actively invite luminaries to participate in a topic group and refund the cost.

The experts must work in the chosen topic group as well. Nobody gets a certification without active and successful work in a topic group.

## Criteria for a Roadmap

Criterion	Requirement	Description
Objective, mission	Essential	<ul style="list-style-type: none"> <li>• Are the objective and mission of the topic working group described comprehensibly?</li> </ul>
Topic working group	Essential	<ul style="list-style-type: none"> <li>• Are the contact details of all members of the topic working group stated?</li> </ul>
Procedure	Essential	<ul style="list-style-type: none"> <li>• Are the roles and tasks of the members of the topic working group described?</li> <li>• Is a timetable with milestones provided?</li> <li>• Are the times and locations for the optional in-person meetings stated?</li> <li>• Are the times and resources for the virtual meetings stated?</li> <li>• Are the tools for electronic communication listed?</li> <li>• Are work packages and responsibilities defined?</li> <li>• Is the review process determined?</li> </ul>
Literature	Essential	<ul style="list-style-type: none"> <li>• Is there a bibliography?</li> <li>• Does the bibliography comprise at least 7 sources?</li> <li>• Are the sources of academic value?</li> </ul>
Results	Essential	<ul style="list-style-type: none"> <li>• Is the mandatory article discussed?</li> <li>• Is at least one additional result stated (e.g., instructions, example, ...)?</li> <li>• Are the form and structure discussed for each result?</li> <li>• Does the topic working group attempt to present the results at at least one conference?</li> <li>• Does the topic working group attempt to publish the results in at least one trade publication?</li> </ul>

## Formal Criteria

Criterion	Requirement	Description
Article	Essential	<p>Does the article have the following structure and content?</p> <ol style="list-style-type: none"> <li>1. Title <ol style="list-style-type: none"> <li>a. Does the title suit the topic discussed?</li> </ol> </li> <li>2. Authors <ol style="list-style-type: none"> <li>a. Are the authors named?</li> <li>b. Are the authors' e-mail addresses listed?</li> </ol> </li> <li>3. Abstract <ol style="list-style-type: none"> <li>a. Is the problem described briefly?</li> <li>b. Does the abstract describe the main theses or results?</li> <li>c. Is the description short and understandable?</li> </ol> </li> <li>4. Introduction <ol style="list-style-type: none"> <li>a. Does the introduction describe the current state of knowledge?</li> <li>b. Is the motivation discussed?</li> <li>c. Is there a description of the existing knowledge gaps that are to be filled by this academic article?</li> <li>d. Is there a description of the research questions that are to be answered in the article?</li> </ol> </li> </ol>



Criterion	Requirement	Description
		<p>5. Main section (chapter name(s) can be chosen freely)</p> <p>a. Materials and methods</p> <p>i. Is there a description of the information sources?</p> <p>ii. Is there a description of the methods used to answer the research question?</p> <p>b. Results</p> <p>i. Is there a description of the findings?</p> <p>ii. Are the findings substantiated with sufficient plausible data?</p> <p>c. Discussion</p> <p>a. Is there a description of how the findings are interpreted?</p> <p>b. Is there a discussion of questions that arise from the results?</p> <p>c. Is there a discussion of the impacts that the findings have in practice?</p> <p>6. Summary</p> <p>a. Is there a brief summary of all of the research questions and their answers?</p> <p>b. Is there a brief discussion of the effects of the findings?</p> <p>7. Acknowledgments</p> <p>a. Are supporters mentioned?</p> <p>8. Conflicts of interest</p> <p>a. Are conflicts of interest mentioned?</p> <p>9. Bibliography</p> <p>a. Is there a list of all of the literature used?</p> <p>b. Is the literature cited correctly?</p>
Additional result	Essential	<ul style="list-style-type: none"> <li>• Do the form and content fulfill the purpose of the result (e.g., a new pattern according to the pattern language context, problem, solution)?</li> <li>• Is there a comprehensible description of the result?</li> <li>• Is it evident that at least two person weeks were necessary for the creation of the additional result?</li> </ul>
Submissions	Desired	<ul style="list-style-type: none"> <li>• Has the topic working group submitted a talk or a workshop to at least one conference?</li> <li>• Has the topic working group attempted to publish the results in at least one trade publication?</li> </ul>

Criterion	Requirement	Description
Experience report	Essential	<ul style="list-style-type: none"><li>• Has each member of the topic working group submitted an experience report?</li><li>• Are all the points in the experience report completed?</li></ul>
Collaboration	Essential	<ul style="list-style-type: none"><li>• The topic moderator confirms that, according to their perception, all members of the topic working group have contributed to approximately the same degree.</li><li>• All members of the topic working group each present a work log, in which they have logged their activities.</li></ul>

If the formal criteria are fulfilled, the topic moderator passes the results on to the certifying body selected by the topic working group.

## Content Criteria

Criterion	Assessment Scheme
Importance for theory and practice	10 - Outstanding importance 08 - Important 06 - Not unimportant 04 - Rather weak importance 02 - Of low importance 00 - Absolutely no relevance
Originality and degree of innovation	10 - An important and meaningful contribution to the topic area 08 - A clear contribution to the topic area. 06 - A small contribution to the topic area. Added value may result from it in the future. 04 - There is better work on this topic. 02 - Already said many times. 00 - Contributes little or nothing at all to the topic area.
Quality of the presentation	10 - Excellently written 08 - Well written 06 - Readable 04 - Should be edited 02 - Still significant work required 00 - Unacceptable