Curriculum for

Certified Professional for Software Architecture (CPSA)®
Advanced Level

Module
SOFT

FULL NAME OF MODULE

2024.1-RC1-EN-20240921

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List of Learning Goals

Introduction: General information about the iSAQB Advanced Level

What is taught in an Advanced Level module?

- The iSAQB Advanced Level offers modular training in three areas of competence with flexibly designable training paths. It takes individual inclinations and priorities into account.
- The certification is done as an assignment. The assessment and oral exam is conducted by experts appointed by the iSAQB.

What can Advanced Level (CPSA-A) graduates do?

CPSA-A graduates can:

- Independently and methodically design medium to large IT systems
- In IT systems of medium to high criticality, assume technical and content-related responsibility
- Conceptualize, design, and document actions to achieve quality requirements and support development teams in the implementation of these actions
- Control and execute architecture-relevant communication in medium to large development teams

Requirements for CPSA-A certification

- Successful training and certification as a Certified Professional for Software Architecture, Foundation Level® (CPSA-F)
- At least three years of full-time professional experience in the IT sector; collaboration on the design and development of at least two different IT systems
  - Exceptions are allowed on application (e.g., collaboration on open source projects)
- Training and further education within the scope of iSAQB Advanced Level training courses with a minimum of 70 credit points from at least three different areas of competence
- Successful completion of the CPSA-A certification exam

Essentials

Curriculum Structure and Recommended Durations

Content	Recommended minimum duration (minutes)
1. Fundamentals of communication	330
2. One-on-one and group discussions	180
3. Visualisation techniques	60
4. Moderation techniques	240
5. Fundamentals of conflict management	360
Total	1170 (19.5h)

Duration, Teaching Method and Further Details

The times stated below are recommendations. The duration of a training course on the SOFT module should be at least 3 days, but may be longer. Providers may differ in terms of duration, teaching method, type and structure of the exercises, and the detailed course structure. In particular, the curriculum provides no specifications on the nature of the examples and exercises.

Licensed training courses for the SOFT module contribute the following credit points towards admission to the final Advanced Level certification exam:

Methodical Competence:	0 Points
Technical Competence:	0 Points
Communicative Competence:	30 Points

Prerequisites

Participants **should** have the following prerequisite knowledge:

- Software development is communication.
- Architects represent the IT side and support Requirements Engineers/Software Analysts in their role as intermediaries between the operations side and the IT side.
- Respecting people and communicating successfully with them are important skills for architects.

Knowledge in the following areas may be **helpful** for understanding some concepts:

- Knowledge of typical challenges when interacting with other people:
  - The other person “doesn’t understand me”.
  - There is a conflict.
  - People sometimes don’t understand everything that architects are trying to explain to them.
  - Complicated issues are easier to understand with the aid of diagrams.
  - It’s not easy to find solutions together.

Structure of the Curriculum

The individual sections of the curriculum are described according to the following structure:

- **Terms/principles**: Essential core terms of this topic.
- **Teaching/practice time**: Defines the minimum amount of teaching and practice time that must be spent on this topic or its practice in an accredited training course.
- **Learning goals**: Describes the content to be conveyed including its core terms and principles.

This section therefore also outlines the skills to be acquired in corresponding training courses.

Supplementary Information, Terms, Translations

Architects need soft skills in their day-to-day work. They are continuously in contact with stakeholders, requirements engineers and development and quality assurance staff. They make design decisions based on information obtained from many different discussions, held with people with a wide range of interests. In this area of potential conflict, they must be able to identify the relevant important content for the decision to be made, and to present it in detail. Communication of their actual decisions in a clearly understandable manner is another challenge.

Human traits are often an obstacle to objective communication, with the result that misunderstandings and sensitivities can hinder the decision-making process and smooth cooperation, and that conflicts can easily develop.

This course specifically addresses the typical work situations of architects in this context as the "hub of the wheel", and provides pragmatic tools for enriching one's own set of soft skills and appropriately constructively coping with the challenges of an architect.

The material learnt in the "Soft Skills for Architects" module is not covered by the iSAQB CPSA-A examination. It is, however, expected that the examinees use their soft skills to present and discuss their solution to the examination task in an understandable manner.

To the extent necessary for understanding the curriculum, we have added definitions of technical terms to the iSAQB glossary and complemented them by references to (translated) literature.

1. Introduction to communication models and types

Duration: 180 min	Practice time: 150 min

1.1. Terms and Principles

Definitions, Freud's iceberg model, Schulz von Thun's 4 aspects of a message, Mayrshofer/Kröger's percep- tion, assumption and judgement.

1.2. Learning Goals

What should the participants be able to do?

- The participants are familiar with different communication models and types.
- Participants can assess in which typologies they and their dialogue partner find themselves. During this process, they consider that typologies can also lead to stereotyped thinking and should therefore be used with care.
- Participants can adapt their communication to the respective needs of others.

What should the participants understand?

- Other people are not the same as me.
- Knowing the other person's communication type can be useful when communicating with them.
- Content is the least important aspect when speaking.
- People don't (only) act rationally, and that's OK!
- Models are too simple, but are nonetheless useful.
- My inner disposition affects the communication.
- It's wrong to believe that only one person can be right.
- Resource-oriented versus deficient communication.

What should the participants know?

- Their own assumptions of how communication works
- Situations in which communication was successful and situations in which it was unsuccessful
- Their own strengths and weaknesses in specific communication situations
- Knowledge of how they wish to improve their own skills

TODO: explizite Lernziele aus DE übernehmen

1.3. References

[Krips+ 2017], [Vigenschow+ 2019], [Schulz von Thun 1981], [Schulz von Thun 1983], [Schulz von Thun 1998]

2. One-on-one and group discussions

Duration: 90 min	Practice time: 90 min

2.1. Terms and Principles

Active listening, providing feedback, one-on-one discussions, group discussions, preparation of discussions, follow-up activities, the course of a discussion, discussion settings.

2.2. Learning Goals

What should the participants be able to do?

- The participants can evaluate one-on-one and group discussions and presentations based on different communication models.
- Participants can independently prepare one-on-one and group discussions in a structured manner.
- Participants can conduct one-on-one and group discussions.
- Participants can carry out the necessary follow-up activities for one-on-one and group discussions.
- The participants have learnt methods for conducting discussions (actively listening, asking questions / follow-up questions, summarising) and how to apply them.

What should the participants understand?

- The participants understand the importance and effectiveness of well-planned preparation of discussions.
- The participants understand the structure of the course of a discussion and prepare themselves for it.
- The participants understand the importance of following up discussions.
- The participants can recognise a divergence between the subject level and the process level.
- The participants understand that intensive preparation of a discussion enables them to adapt to current developments and unforeseen changes, and that they can trust their inner freedom and skills.

What should the participants know?

- Situations in which the participants conduct one-on-one or group discussions
- Different presentation methods, depending on the respective situation.

TODO: explizite Lernziele aus DE übernehmen

2.3. References

[Ion+ 2011], [Graeßner 2013], [Hellmoldt+ 2017], [Maslow], [Mayrshofer 2006], [Pink+2018]

3. Visualisation techniques

Duration: 45 min	Practice time: 15 min

3.1. Terms and Principles

Visualisation techniques, importance of visualisation, advantages and disadvantages of different visualisation media (metaplan board, whiteboard, flipchart, slides, PowerPoint, tools).

3.2. Learning Goals

What should the participants be able to do?

- The participants have gained an impression of how they can use visualisation techniques for reaching a consensus and for joint development of results.
- The participants should feel motivated to stand up, go to the front and visualise or draw what they're thinking.

What should the participants understand?

- Visualisation can also be used to reach a consensus.
- Visualisation increases transparency and a common understanding.
- Visualisation supports clarification processes.
- Visualisation is a linking topic.
- There's a difference between visualisation for moderation purposes and someone else visualising their own ideas.

What should the participants know?

- How to use whiteboards, flipcharts and metaplan boards and cards
- What is used where in practice
- When visualisation makes sense

TODO: explizite Lernziele aus DE übernehmen

3.3. References

[Rachow 2016], [Graeßner 2013], [Mayrshofer 2006]

4. Moderation techniques

Duration: 120 min	Practice time: 120 min

4.1. Terms and Principles

Definitions, the role of the moderator, different moderation techniques, stages in decision-making.

4.2. Learning Goals

What should the participants be able to do?

- The participants can define their role in accordance with the requirements of the specific group situation, between the extremes of “Moderator” (process level) and “Decision maker” (functional level), and can make it transparent in the group.
- To support decision making they can use methods and techniques for the preparation and conduct of group situations and for discussions in groups.
- They can bring about architecture decisions in the group.
- They can provide inputs appropriate to the group’s needs, to support the solution process.

What should the participants understand?

- The demands that the role of a moderator places on the architect.
- The difference between the role of the moderator (supporting a solution process with no specific interest in the nature of the resulting solution) and the role of the decision maker/architect (with a specific interest in the resulting solution).
- Which aspects of the moderator role help the architect to in future achieve viable and constructive solutions.
- That in addition to technical aspects, architecture involves a significant level of moderation dexterity to enable smooth interaction with one another.

What should the participants know?

- Experience with moderation situations
- Further literature.

TODO: explizite Lernziele aus DE übernehmen

4.3. References

[Rachow 2016], [Graeßner 2013], [Mayrshofer 2006], [unFIX], [Zörner 2021]

5. Introduction to conflict management

Duration: 180 min	Practice time: 180 min

5.1. Terms and Principles

Definitions, types of conflicts, conflict analysis, Glasl's conflict stages.

5.2. Learning Goals

What should the participants be able to do?

- The participants can carry out a conflict analysis appropriate to the situation, to ensure a continued ability to act and work.
- In a conflict situation, the participants can recognise whether they can resolve the conflict on their own authority.
- The participants find both their own de-escalation channels and delegation options and escalation channels.

What should the participants understand?

- Different types of conflict require different approaches for their resolution.
- Conflict analyses assist in differentiating between practical and impractical solution approaches.
- Constructive conflict solutions contribute to growth and learning.
- Only under certain conditions can conflicts can be resolved on one's own authority.
- The participants are not responsible for providing the solution for a conflict.

What should the participants know?

- The most important conflict situations in the context of software architecture work, and the involved parties (e. g., Specialist Department / Development, Development/Operations, Development/Support, etc.)
- Glasl's stages of conflicts
- Conflict resolution options on one's own authority
- Delegation options and escalation channels

TODO: explizite Lernziele aus DE übernehmen

5.3. References

[Glasl 2020], [Vigenschow+ 2019]

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This section contains references that are cited in the curriculum.

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