# Curriculum for

# Certified Professional for Software Architecture (CPSA)® Advanced Level

Module {curriculum-short}

{curriculum-name}

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# Introduction: General information about the iSAQB Advanced Level

# What is taught in an Advanced Level module?

The module can be attended independently of a CPSA-F certification.

- 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**

## **Duration, Teaching Method and Further Details**

The times stated above are recommendations. The duration of a training course on the {curriculum-short} 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 {curriculum-short} module contribute the following credit points towards admission to the final Advanced Level certification exam:

Methodical Competence:	Specified by the module Points
Technical Competence:	Specified by the module Points
Communicative Competence:	Specified by the module Points

#### 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**

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

# 1.1. Terms and Principles

Quality Attribute, Security, Secure Development Lifecycle, Security Property

#### 1.2. Learning Goals

#### LG 1-1: Definition of Security

Participants know a definition of security and understand it as a quality of the system. Participants understand the relationship and trade-offs to other quality attributes.

#### **LG 1-2: Security Properties**

Participants know the security properties of the universal triad: confidentiality, integrity and availability. In addition they know additional common properties such as authentication, authorization and non-repudiation.

#### LG 1-3: Security Lifecycles

Participants understand, that security must be considered in the whole product lifecycle and not just for the development phase. Participants understand that maintaining security requires participation and consideration of all stakeholders. Participants know the typical lifecycle phases (conception, development, production, operation and maintenance, and decommission). Participants know at least one example of a security product lifecycle.

#### LG 1-4: Security Regulations and standards

Participants understand the difference between regulations, standards and guidelines. Participants know examples of regulations, standards and guidelines regarding security.

#### 1.3. References



# 2. Analysis