



**INFORMATION SYSTEMS EXAMINATIONS BOARD**

**Certificate in Enterprise & Solution Architecture**

**Syllabus Introduction**



**ISEB CERTIFICATES in ENTERPRISE & SOLUTION ARCHITECTURE**  
**Syllabus Introduction: Version 11.1**

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## GENERAL NOTES

### ***Objectives***

The primary aims of these ISEB examinations and associated training are to give enterprise and solution architects a broad framework that covers the range of architecture work that *precedes and steers* system development, and to focus attention on areas where the architect is responsible for effective design and risk management.

A secondary aim is to provide architects with *generally applicable* knowledge and training. General here means independent of any specific architecture framework (Gartner, TOGAF, etc.). This enables training providers to teach general knowledge and skills, rather than framework-specific terms, concepts, structures and processes.

Holders of the Intermediate Certificate will have demonstrated their knowledge and understanding of:

- different kinds of architecture and the roles architects play in the IT/IS industry
- the business context, and the importance of business-IT alignment
- architecture precursors: goals, directives and constraints
- architecture development process and description frameworks
- business architecture concepts and techniques
- data architecture concepts and techniques
- applications architecture concepts and techniques
- solution design to meet non-functional requirements
- infrastructure architecture as a process to support applications architecture.

Holders of the Practitioner Certificate will have demonstrated their knowledge and understanding of:

- intermediate level concepts, including architecture processes and descriptions
- shown that they can apply this knowledge to a case study that involves producing deliverables in the following areas:
- architecture precursors: goals, directives and scope
- architecture descriptions: business, data, applications and infrastructure architecture.

They will also have demonstrated their knowledge and understanding of architecture management techniques in the areas of migration planning, implementation, change management and governance.

### ***One syllabus covering all levels***

Examination questions and associated training are based on the terms that are listed in one syllabus and defined in the companion reference model.

Each term is classified as Foundation, Intermediate or Practitioner level.

Each level of certification embraces the level below. So, while there is no foundation level examination, there are many foundation level concepts, and these may appear in intermediate and practitioner level examinations. It is expected that students will understand most if not all the foundation-level concepts before attending a training course. And that training providers may cover foundation-level concepts - relatively briefly.

## ***Training provider guidance***

Training materials should be consistent with the terms and definitions contained in the syllabus and reference model.

Training providers may use sources that use the same terms with different meanings, but should in this case explain any terminology clashes to students

Training providers are free to decide:

- the sequence in which topics are presented in training materials,
- the "process" that students are taught at the Intermediate level and apply to the case study in the practitioner level, and
- the notations used in architecture models and descriptions.

## ***On the breadth of an architect's role***

Architect roles are broad, and the enterprise or solution architect must be a generalist. No syllabus, training course or examination can be enough to make an architect. The role requires extensive experience on a variety of projects.

In this document, the terms "architect" and "architecture" apply principally to Enterprise and Solution Architects working in relation to Information Systems and Technologies. The role played by architects in these roles is broad – spanning the spectrum from business concerns to information technologies.

## INTERMEDIATE LEVEL

Intermediate level training and examinations cover the most of the syllabus at a knowledge and comprehension level.

### *Prerequisites for the Intermediate level*

Intermediate: It is recommended that students have more than 3 years experience of IS/IT work including some contact with architects and architecture descriptions.

### *Intermediate exam questions and training course timings*

An Intermediate-level exam will be 40 questions in 1 hour. The syllabus below includes against the headings, the number of exam questions expected, and the number of hours suitable for a training course.

**A training course should contain at least 18 training hours. All timings below are to the nearest half hour.**

	Intermediate		
	Bloom	Qstns	Hours
1 Architecture and architects	2	4	2.5
2 Architecture precursors	2	6	3
3 Architecture frameworks	2	5	2.5
4 Business architecture	2	5	2.5
5 Data architecture	2	3	1
6 Component architecture	2	5	2
7 Applications architecture	2	4	2
8 Design for NFRs	2	3	1.5
9 Infrastructure architecture	2	5	1.5
10 Migration planning	1		0.25
11 Architecture management	1		0.25
Totals		40	

### *Mapping the Intermediate level to Bloom's taxonomy*

The relevant levels in Bloom's taxonomy are 1 Knowledge and 2 Comprehension. An intermediate enterprise or solution architect should be at Bloom level 2 for all sections 1 to 9. This means they know and comprehend all the terms defined in the syllabus at Foundation and Intermediate Levels.

An Intermediate training course should lightly introduce the topics in sections 10 and 11, but no exam questions will be set.

## PRACTITIONER LEVEL

Practitioner level training and examinations elaborates on the more practical parts of the syllabus, and focuses on the practical application of the knowledge to a case study.

### *Prerequisites for the practitioner level*

Practitioner: It is recommended that students have more than 6 years experience of IS/IT work, including some architecture definition. Must have attended the Intermediate level course, or else have a TOGAF certificate and have studied the ISEB Intermediate level syllabus before attending.

### *Practitioner exam questions and training course timings*

A Practitioner-level exam will be 40 questions in 1 hour, based on application of the syllabus and acquired knowledge to a case study.

Practitioner level training must remind people of Intermediate-level knowledge and exemplify best practice (up to 50%) and lead the students through a practical case study (at least 50%).

The table below includes the number of exam questions expected, and the number of hours suitable for a training course.

**A training course should contain at least 18 training hours. All timings below are to the nearest half hour.**

	Practitioner		
	Bloom	Qstns	Hours
1 Architecture and architects			0.5
2 Architecture precursors	3	5	2.5
3 Architecture frameworks	2	1	2
4 Business architecture	3	5	2
5 Data architecture	3	4	2
6 Component architecture	3	3	1
7 Applications architecture	3	6	2
8 Design for NFRs	3	6	1
9 Infrastructure architecture	3	4	2
10 Migration planning	3	2	1
11 Architecture management	3	4	2
Totals		40	

### *Mapping the practitioner level to Bloom's taxonomy*

The relevant levels in Bloom's taxonomy are 1 Knowledge 2 Comprehension and 3 Application. A practitioner enterprise or solution architect should be at Bloom level 2 for all sections of the syllabus. This means they know and comprehend all the terms defined in the syllabus, at all levels. In addition:

**3 ARCHITECTURE PRECURSORS:** The practitioner should be able to define SMART goals and business cases, and identify risks relating to non-functional requirements.

**4 ARCHITECTURE FRAMEWORKS:** The practitioner should be aware of alternative frameworks and comprehend one framework in more depth.

**5 BUSINESS ARCHITECTURE:** The practitioner should be able to describe business

architecture building blocks, models and views.

6 DATA ARCHITECTURE: The practitioner should be able to describe data architecture building blocks, models and views.

7 APPLICATIONS ARCHITECTURE: The practitioner should be able to describe an applications architecture.

8 SOLUTION DESIGN FOR NFRS: The practitioner should be able to design or redesign a solution to meet non-functional requirements.

9 INFRASTRUCTURE ARCHITECTURE: The practitioner should be able to outline an infrastructure in sufficient detail for technical/infrastructure architects to complete.

10 MIGRATION PLANNING: The practitioner should be able to plan an architecture migration, alongside managers using standard management planning processes

11 ARCHITECTURE MANAGEMENT: The practitioner should be able to govern the implementation of an architecture.

## **SYLLABUS SCOPE**

The syllabus defines the scope of ISEB examinations in enterprise and solution architecture. It is designed to help:

- Examiners to scope examination questions.
- Training providers to scope training courses that lead to the examinations.

See separate document defining the structure and terms of the syllabus.

## **REFERENCE MODEL**

The reference model associated with the syllabus defines terms in just sufficient detail to help:

- Examiners to phrase examination questions and answers.
- Examinees to understand terms and concepts in examination questions.
- Training providers to be consistent with the syllabus and each other.