BaselineSkills

IREB CPRE ADVANCED LEVEL — REQUIREMENTS MODELING

CPRE-AL

FROM TEXTUAL REQUIREMENTS TO PRECISE, REVIEWABLE MODELS

Model the structure. Model the behavior. Make requirements reviewable.

The IREB CPRE Advanced Level — Requirements Modeling module builds on Foundation Level knowledge to teach model-based specification of requirements in depth: information structures, dynamic behavior, and scenarios. At Baseline Skills, you practise each notation against realistic requirements using IREB in Practice — powered by ReqDrive.

Course at a Glance

Course	IREB CPRE Advanced Level — Requirements Modeling (CPRE-AL)
Duration	2 Days
Delivery	Live Online • Corporate / On-site
Learning approach	Instructor-led learning • Practical modeling exercises • Case studies • ReqDrive labs • Exam preparation

Why This Course?

A well-written requirement can still be hard to review, hard to check for completeness, and hard to keep consistent as a system grows. Modeling requirements as diagrams — information structures, behavior, scenarios — makes complexity manageable and enables a level of formal review that text alone doesn't support.

Three layers of learning

CERTIFICATION	Build the body of knowledge for the IREB CPRE Advanced Level Requirements Modeling Practitioner and Specialist certificates.
CAPABILITY	Practise context, information-structure, dynamic and scenario modeling through realistic requirements.
APPLICATION	Use various methods to explore model-based representations of a requirement alongside your own modeling work.

Module 1 — Basic Principles of Requirements Modeling

Why model requirements at all, and what changes at the Advanced Level

You will learn

- Motivation for requirements modeling and the difference between textual and modeled requirements

- The views and languages of requirements modeling, at a general level
- Adapting modeling languages and integrating textual and modeled requirements
- The benefits of requirements modeling and quality criteria for requirements models

IREB in Practice

Take a textual requirement that has grown difficult to review and identify which parts of it would be clearer, and easier to check for completeness, if modeled instead.

> ***"A requirement modeled well is a requirement that's easier to argue about — in a good way."***

Module 2 — Context Modeling in Requirements Engineering

Defining the system boundary before modeling what's inside it

You will learn

- The purpose of context modeling and conceptual fundamentals
- Basic elements of context modeling
- Notation and rules for context modeling with data flow diagrams
- Other types of context modeling

IREB in Practice

Draw the context boundary for a system whose scope keeps quietly expanding. Decide, with evidence, what belongs inside the boundary and what doesn't.

ReqDrive lab: Use ReqCompass to document the agreed system context alongside the stakeholders and requirements it affects.

> ***"Before you model what's inside the system, agree on what's outside it."***

Module 3 — The Information Structure View in Requirements Modeling

Classes, relationships, and the shape of the data behind the requirements

You will learn

- The purpose of information structure modeling
- Modeling classes, attributes, and data types
- Modeling simple relationships, aggregations, and compositions
- Modeling generalization and specialization
- Further modeling concepts

IREB in Practice

Build an information structure model from a set of requirements that describe the same data inconsistently in three different places. Reconcile the inconsistencies through the model.

> ***"If two requirements can't agree on what a word means, the model will show it before the code does."***

Module 4 — Dynamic Views in Requirements Modeling

Use cases, data flow, control flow, and state — the largest unit in this course

You will learn

- Overview of the dynamic views of requirements modeling
- The purpose and modeling constructs of use case modeling
- Identifying use cases and specifying them in text form
- Structuring use cases and packages
- Data flow modeling, control flow modeling, and diagram types
- Requirements modeling with data flow diagrams
- Requirements modeling with activity diagrams
- Combining and decomposing functions, and ensuring consistency
- The purpose of state-oriented modeling and modeling constructs
- Requirements modeling with state machines

IREB in Practice

Model the same piece of system behavior three ways — as a use case, as an activity diagram, and as a state machine — and identify what each view reveals that the others don't.

> ***"The right diagram is the one that answers the question you're actually asking."***

Module 5 — Scenario Modeling in Requirements Engineering

How things are supposed to happen, step by step

You will learn

- Basic principles of scenario modeling in requirements engineering
- Simple scenario modeling with sequence diagrams
- Advanced scenario modeling with sequence diagrams
- Scenario modeling with communication diagrams

IREB in Practice

Walk a realistic multi-step interaction through a sequence diagram, then find the step where an edge case was quietly assumed away.

> ***"A scenario diagram doesn't just show what happens — it shows what was assumed to happen."***

What You Will Be Able to Do

- Explain the motivation, benefits and quality criteria for requirements modeling.
- Choose an appropriate view and notation for a given requirements modeling problem.
- Model a system context using data flow diagrams and other context-modeling forms.
- Model classes, attributes, data types and relationships in the information structure view.
- Apply generalization, specialization, aggregation and composition correctly.
- Model use cases and structure them into packages.
- Model behavior using data flow diagrams, activity diagrams and state machines.
- Combine and decompose functions while keeping models consistent.
- Model scenarios using sequence diagrams and communication diagrams.
- Use AI-assisted tools to cross-check modeling decisions without depending on them.
- Prepare systematically for the Requirements Modeling Practitioner or Specialist certification.

Who Should Attend?

- Certified CPRE Foundation Level holders
- Business Analysts

- Systems Engineers
- Requirements Engineers
- Process and system analysts
- Organizational designers working with requirements models

The course is also suitable for organizations that want a shared, formal modeling notation for requirements across teams.

Prerequisites

This is an Advanced Level module and assumes IREB CPRE Foundation Level certification or clearly equivalent working knowledge — including the basic requirements-modeling views covered at Foundation Level, basic conceptual/data modeling, and the ability to read simple requirements diagrams.

Course Format

Duration	2 Days
Delivery	Live Online • Corporate / On-site
Learning	Instructor-led sessions • Practical modeling exercises • Case studies • ReqDrive labs • Examination preparation

Certification

IREB CPRE Advanced Level — Requirements Modeling

The course is designed around the official IREB syllabus and prepares participants for either certification track: the Requirements Modeling Practitioner exam (multiple-choice) or the Requirements Modeling Specialist exam (a self-paced written assignment submitted to a licensed IREB certification body).

"TRAINING ≠ CERTIFICATION"

Baseline Skills provides the training and examination preparation for both tracks. IREB certification is awarded following successful completion of the applicable certification exam. Current examination arrangements and applicable fees are communicated with each scheduled session.

Why Learn with Baseline Skills?

- Standards-based learning aligned with the official IREB Requirements Modeling syllabus.
- Practical modeling exercises across every view — context, information structure, dynamic, and scenario.
- AI-assisted Requirements Engineering practice via ReqDrive.
- Preparation for either the Practitioner or the Specialist certification track.
- Real-world modeling scenarios, not just notation reference.
- Learning from practitioners with industry and training experience.

For Organizations — Build a Common Capability

A corporate Baseline Skills Requirements Modeling program can combine the IREB framework with your organization's own systems, existing model libraries, and modeling-tool conventions.

- A shared modeling notation and vocabulary across teams
- Consistent quality criteria for requirements models
- Stronger context and information-structure modeling practices
- Improved consistency between textual and modeled requirements
- Experience with AI-assisted requirements modeling

What Comes Next?

This module combines with CPRE Advanced Requirements Elicitation and CPRE Advanced Requirements Management toward the full CPRE Advanced Level, and connects to Baseline Skills learning paths in Systems Engineering and Business Analysis.

Frequently Asked Questions

Do I need CPRE Foundation Level first?

Yes, or clearly equivalent practical Requirements Engineering and basic modeling experience.

Which certification should I choose — Practitioner or Specialist?

Practitioner is a multiple-choice exam covering all educational objectives; Specialist is a self-paced written assignment with deeper analysis and evaluation requirements. Your trainer can help you choose based on your goals.

Do I need to know UML or BPMN before attending?

No prior modeling-notation experience is required — the course teaches the notations used.

Is ReqDrive required to take the course?

No. ReqDrive is used as a practical comparison tool during selected exercises; the modeling techniques themselves are taught independently of it.

Is the certification exam included?

This depends on the selected course session. Please check the session details for the applicable training and examination arrangement.

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