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COURSE BROCHURE

Business Systems Design for AI-Embedded Solutions Training Course

21 – 25 November 2027
Cairo

Business Systems Design for AI-Embedded Solutions Training Course

Ref: 1248_46931 **Date:** 21 – 25 November 2027 **Location:** Cairo **Fees:** 4000 GBP

Business Systems Design for AI-Embedded Solutions is a 1-week training course for systems analysts, solution designers and IT project leads who turn agreed requirements into a buildable design, and it produces a solution design blueprint. As vendors ship model-based features inside enterprise software and teams build their own, design choices now decide cost, resilience and how easily a model can be replaced. Jupiter Prime Training runs Business Systems Design for AI-Embedded Solutions as a design-centred course.

Why Business Systems Design for AI-Embedded Solutions Matters Now

Two pressures meet at the design stage. Software suppliers bundle prediction and generation into their products, so designers must decide whether to configure, extend or build. At the same time, architecture and security owners ask how a model component will be isolated, monitored and swapped without breaking upstream and downstream systems. A sound design keeps integration costs visible and limits lock-in; a weak one hard-wires a model into processes no one can later change. The course uses ISO/IEC 42001, the AI management system standard, and the NIST AI Risk Management Framework AI RMF to frame design controls.

Who Gains Most from Business Systems Design for AI-Embedded Solutions

- Analysts who convert approved requirements into logical and physical designs
- Solution designers who select components, patterns and integration styles
- Project leads who weigh sourcing options and schedule build increments
- Integration specialists who define interfaces between legacy and model services
- Data modellers who shape the stores and feeds a model depends on

An IT project group whose analyst, designer and project lead attend together gains most, since the blueprint then carries one agreed set of trade-offs.

Business Systems Design for AI-Embedded Solutions Capabilities

Participants practise converting a requirements baseline into design decisions that engineers can build and sponsors can approve.

- Compare architecture options for hosting a model component — design authority
- Design service interfaces and API contracts around model calls — integration teams
- Specify data stores, feeds and feature pipelines — data engineering
- Weigh build, buy and configure choices with a scoring matrix — sourcing committees
- Design fallback behaviour for model failure or low confidence — service owners
- Test the design against requirements through walkthroughs and prototypes — project sponsors

Key Business Systems Design for AI-Embedded Solutions Terms

- Solution architecture — The arrangement of components, interfaces and data flows that together meet a defined set of business requirements.
- Model service — A deployable component that receives inputs through an interface and returns predictions or generated content.
- API contract — An agreed specification of requests, responses and error codes between two systems.
- Build-or-buy matrix — A weighted comparison of developing, purchasing or configuring a capability against cost, fit and risk criteria.
- Graceful degradation — A design where the system keeps a reduced but safe service when a component, such as a model, fails.
- Design traceability — Links showing which design element satisfies each approved requirement.

Business Systems Design for AI-Embedded Solutions Day by Day

Day 1: From Requirements Baseline to Design Scope

- Requirements Baseline Review — Confirming What the Design Must Satisfy
- Logical Versus Physical Design — Separating Behaviour From Technology Choice
- Model Component Placement — Deciding Where Prediction Sits in the Flow
- ISO/IEC 42001 and NIST AI RMF — Shaping Design Controls
- Design Constraints Register — Recording Security, Cost and Platform Limits

Day 2: Architecture Options

- Layered and Service-Oriented Patterns — Choosing a Structure for Change
- Event-Driven Integration — Decoupling Model Services From Core Systems
- Cloud, On-Premises and Hybrid Hosting — Balancing Latency and Control
- Vendor-Embedded Model Features — Judging Configurability and Lock-In
- Architecture Decision Records — Documenting Options and Rationale

Day 3: Interface and Data Design

- API Contracts and Error Handling — Defining Model Call Behaviour
- Screen and Interaction Design — Showing Confidence and Explanations to Users
- Physical Data Models — Structuring Stores for Transactions and Features
- Feature Pipelines — Scheduling Refresh and Ownership of Model Inputs
- Fallback and Graceful Degradation — Keeping Service When Models Fail

Day 4: Sourcing and Design Validation

- Build-or-Buy Scoring Matrix — Comparing Develop, Purchase and Configure Routes
- Total Cost of Ownership Model — Estimating Run, Licence and Retraining Costs
- Design Walkthroughs — Checking Coverage Against Requirements
- Thin-Slice Prototypes — Proving Integration Before Full Build
- Non-Functional Testing Plans — Verifying Performance and Resilience Targets

Day 5: Practising the Solution Design Blueprint

- Case Architecture Selection — Applying Patterns and Decision Records
- Case Interface and Data Specification — Applying Contracts and Data Models
- Case Sourcing Recommendation — Applying the Scoring Matrix
- Design Review Board Simulation — Defending Trade-Offs to Sponsors
- Solution Design Blueprint — Completing the Approved Design Package

Applying Business Systems Design for AI-Embedded Solutions After the Course

- Write architecture decision records for one live AI feature and present them at the next design authority meeting.
- Run a build-or-buy scoring session on a pending vendor proposal with the sourcing lead.

Business Systems Design for AI-Embedded Solutions Questions FAQ

What is Business Systems Design for AI-Embedded Solutions and why does it matter now?

It is the practice of turning approved requirements into an architecture, interfaces and data design for systems with model components. It matters now because model features arrive both inside vendor products and from in-house teams, and design choices fix cost and flexibility for years.

Which roles gain most from Business Systems Design for AI-Embedded Solutions?

Systems analysts, solution designers and IT project leads gain most. Integration and data specialists also benefit when you need one design that every builder follows.

How does Business Systems Design for AI-Embedded Solutions differ from a requirements analysis course?

It starts where requirements analysis ends. A requirements course elicits and specifies needs; this course decides how a system meets them, covering architecture options, interfaces, data stores, sourcing and design validation.

What do you bring back from Business Systems Design for AI-Embedded Solutions?

You bring back a design package built on a case, with decision records, interface contracts, a data model and a sourcing recommendation.

Business Systems Design for AI-Embedded Solutions: The Way Forward

The solution design blueprint first informs the design authority's approval of the architecture and sourcing route. Engineers, testers and suppliers then build against it. After the first release, revisit the fallback design and hosting choice, because usage in sectors such as logistics or insurance often shows where latency, cost or model replacement needs a different answer.