AI Designer Tutor

Built-in learning companion for FrameworX Designer, with hands-on lessons and tier certificates.

New in 10.1.5. The Tutor adds tier Recognitions (Associate, Professional, Expert) that issue a local HTML certificate when you finish all fifteen lessons in a tier.

The AI Designer Tutor runs structured lessons inside your live Designer session. You build real objects alongside the Tutor in your own Designer instance and the Tutor verifies each checkpoint via MCP. Between lessons, or whenever no lesson is active, the Tutor works as a general FrameworX expert for your own projects.

Three Ways to Learn FrameworX

The Tutor is one of three learning channels. Each one serves a different need.

Channel	Best for	How it works
AI Designer Tutor	Hands-on building in your own Designer	Interactive lessons via MCP. The Tutor creates objects, verifies your work, and adapts to your pace.
Documentation	Reference depth and conceptual grounding	Full platform documentation at docs.tatsoft.com. Concepts, tutorials, how-to guides, and reference pages organized by module.
Video Training	Visual walkthroughs at your own pace	Structured video courses at training.tatsoft.com.

The Tutor knows about all three channels. When you ask a question better answered by documentation or video, the Tutor points you there.

How a Lesson Works

Each lesson has a defined scope, a demo throughline (for example, a mixing station with tanks and a mixer), and observable checkpoints the Tutor verifies with MCP tools. Lessons run 5 to 12 minutes each.

Inside a lesson section, the Tutor follows a **frame build check** loop:

1. **Frame.** One sentence on what this section does and why.
2. **Build.** The Tutor calls MCP tools to create objects in your Designer. You watch the changes appear in real time.
3. **Check.** The Tutor verifies the checkpoint via MCP. If it passes, you move on.

You interrupt at any time. Ask a mid-lesson question, switch to your own project, or leave entirely. Progress is saved at the last completed checkpoint.

The Curriculum

Lessons are organized into three tiers of fifteen lessons each.

Essentials — First-Run Competence

Approximately 90 minutes total. By the end, you model a plant, connect a device, configure alarms and historian, run the runtime, write a script, build a display, add a user, and deploy to production. Lessons follow a fixed order and traverse the four platform pillars (Foundation, Industrial, Business, Interaction).

Intermediate — Scaling a Real Solution

From first-run competence to production-quality solutions. Covers UserType composition, full Historian and Alarms modules, Datasets, Reports, Scripts in depth, symbol authoring, advanced dynamics, themes, security policies, and version control. Ends with the Brewery Simulation integration lab.

Advanced — Platform Mastery

Deep platform internals: execution domains, online configuration edge cases, runtime object model, TagProviders, deployment profiles, multi-node architectures, performance tuning, CI/CD, Python and .NET integration, MCP Client, and ML.NET.

How to Start a Lesson

Inside any Claude session connected to FrameworX Designer, you start a lesson in several ways.

- **By lesson ID.** "Start E4" or "Run the UNS Triad lesson."
- **Resume.** "Continue where I left off." The Tutor picks up from your last checkpoint.
- **By topic.** "Teach me the UNS from the ground up." The Tutor maps your request to the best-fit lesson and confirms before starting.
- **Browse.** "What should I learn?" The Tutor summarizes the available tiers and suggests a starting point.

If you already know the material in a lesson, the Tutor checks whether the objects from the lesson exist in your solution and offers to skip ahead. Advanced users move through familiar material quickly.

Progress Tracking

Progress is tracked automatically on your local machine. Completed lessons and your current position are saved so you resume across sessions.

- Progress is per-user on the machine. Switching computer or user account starts fresh.
- No cloud sync, no account required. Everything stays local.
- Progress file location: `My Documents\FrameworX\AITutor\tutor_progress.json`.

Recognitions

Finishing all fifteen lessons in a tier unlocks a Recognition. The Tutor issues a local HTML certificate and records the event in your progress file.

Tier	Recognition	Unlock rule
Essentials	**Associate**	All fifteen Essentials lessons completed.
Intermediate	**Professional**	Associate issued, and all fifteen Intermediate lessons completed.
Advanced	**Expert**	Professional issued, and all fifteen Advanced lessons completed.

When the fifteenth lesson of a tier completes, the Tutor offers to issue the recognition and asks for the name to print on the certificate. The certificate is written to `My Documents\FrameworX\AITutor\Certificates\` as a standalone HTML file with the learner name and issue date filled in. If you re-request an already-issued recognition, the existing file is reused. If the file was deleted, the Tutor regenerates it while preserving the original issue date.

The certificate is local. Nothing is sent to Tatsoft or any cloud service.

Off-Curriculum Help

The Tutor is not limited to curriculum lessons. When your question or request does not match a lesson, the Tutor uses its general FrameworX expertise to answer, build objects, and point you to documentation or video when appropriate. This works whether or not a lesson is active.

Requirements

- FrameworX **10.1.5 or later** (build number 2000 or higher).
- AI Designer connected (Claude Desktop, Claude Code, or any MCP client with the DesignerMCP connector).
- See MCP and Claude Setup for setup instructions.

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