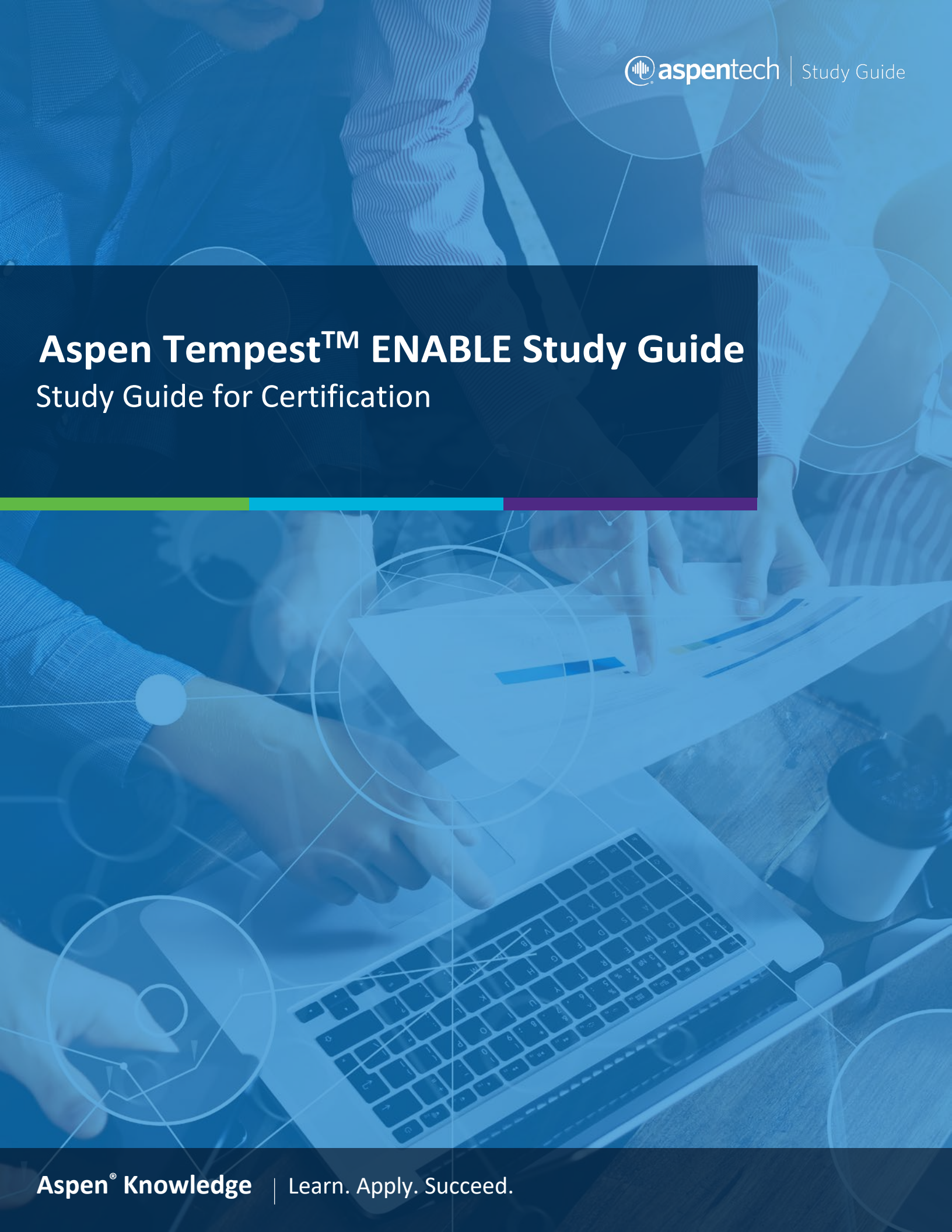

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Aspen Tempest™ ENABLE Study Guide

Study Guide for Certification

Aspen® Knowledge | Learn. Apply. Succeed.

Prove your Credibility

An Aspen Tempest ENABLE Certified User has the essential knowledge and practical skills needed to set up ENABLE projects, define uncertainty user modifiers, perform appraisal study, perform assisted history matching using proxy-based and ensemble-based workflows, perform prediction uncertainty, field development optimization and perform uncertainty diagnostics.

Exam Scope for Aspen Tempest ENABLE User Certification (ACU-TEM02)

- ☐ Appraisal workflow
- ☐ History Matching workflow (proxy-based)
- ☐ Uncertainty diagnostics
- ☐ Prediction uncertainty workflow
- ☐ Optimization workflow
- ☐ History Matching workflow (Ensemble smoother-based)

Step 1: Take the Class: Introduction to Aspen Tempest ENABLE (TEM102)
– 2 days

AspenTech offers a variety of delivery methods in which you can take training.

- Register for public training (face to face or virtual)
- Register for private training (face to face or virtual)
- Subscribe to eLearning (on-demand)

Step 2: Review Scope and Objectives

This study guide covers all the objectives for the Aspen Tempest ENABLE User Certification exam and serves as both a study tool and an on-the-job reference.

Step 3: Take the Exam: Aspen Tempest ENABLE User Certification (ACU-TEM02)

The total time for the certification exam is 2 hours.
The passing score is 70 %.

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SCOPE	TECHNICAL CONTENT	COMPETENCY OBJECTIVE
Appraisal Workflow	Project Setup	**Understand** the role of Aspen Tempest ENABLE
		Explain the appraisal workflow objectives and methodology
		Manage the various ENABLE project settings and configurations
		Understand Tempest ENABLE RAC settings and file system
	Add user modifiers	**Understand** the concept of dynamic model uncertainty and possible uncertain parameters in any dynamic simulation model
		Differentiate between control and geology user modifiers and when to use each type
		Explain the different types of modifier distributions and sampling transforms
		Understand the concept of uncertainty solution space
	Ensemble runs	**State** the objective of prior ensemble runs
		Explain the sampling technique used in the prior ensemble runs
		Recognize the different tools to display and analyse simulation results
		Understand how to calculate additional summary vectors such as NPV
		Manage to perform sensitivity analysis
History Match Workflow (Proxy-based)	Scoping runs and model validation	**Understand** proxy-based history matching workflow in Aspen Tempest ENABLE
		State the objective of scoping runs
		Explain the sampling algorithms used in scoping runs
		Perform project validation, what are possible actions in case of invalid settings
	Add history match points	**Understand** the definition of history match objective functions
		Explain the impact of varying the tolerance of history match points
		Recognize the best practices of selecting history match points
		Manage to perform quality check for the selected history match points
		Explain the different types of quality terms and how it is calculated
	Submit refinement and posterior batches	**Understand** the proxy model functions
		Identify the meaning and purpose of refinement batches
		Understand the concept and methodology for posterior ensemble batches

Uncertainty Diagnostic Techniques	Quality plot	**Explain** the quality concept, how it is calculated and different types of quality measures
	Modifiers and qualities plot	**Learn** how to diagnose the plot, use filters and identify modifiers influences on history match qualities
	Modifier distributions	**Display** modifier distributions at different project stages and using different run sets
	Modifier pair plots	**View and diagnose** modifiers pair plots
	MCMC chains	**Investigate** different display options using modifiers, log likelihood, step size and others
	Estimator vs simulator tool	**Display and analyse** estimator vs simulator plot for different HM points
	ALL	**Use and differentiate** between multiple diagnostic tools and the use of each one
		Learn how to use proper diagnostic tools to perform what-if analysis using proxy model predictions at each estimator point.
Prediction workflow	Prediction ensembles	**Submit** prediction ensemble runs
		Learn how to create, display and analyse different delta ensembles
Optimization workflow	Create project, define parameters and optimize the FDP	**Understand** the optimization workflow in Aspen Tempest ENABLE
		Learn how to define optimization objective function
		Create Multiple optimization objectives
		Assign different weights for different objectives
		Use the proxy model to submit cases to maximize/minimize the objective function
HM workflow (Ensemble smoother-based)	Create project, improve HM using Ensemble smoother	**Explain** the ensemble smoother HM concept
		Understand the ensemble smoother assimilation technique
		Submit ensemble smoother runs