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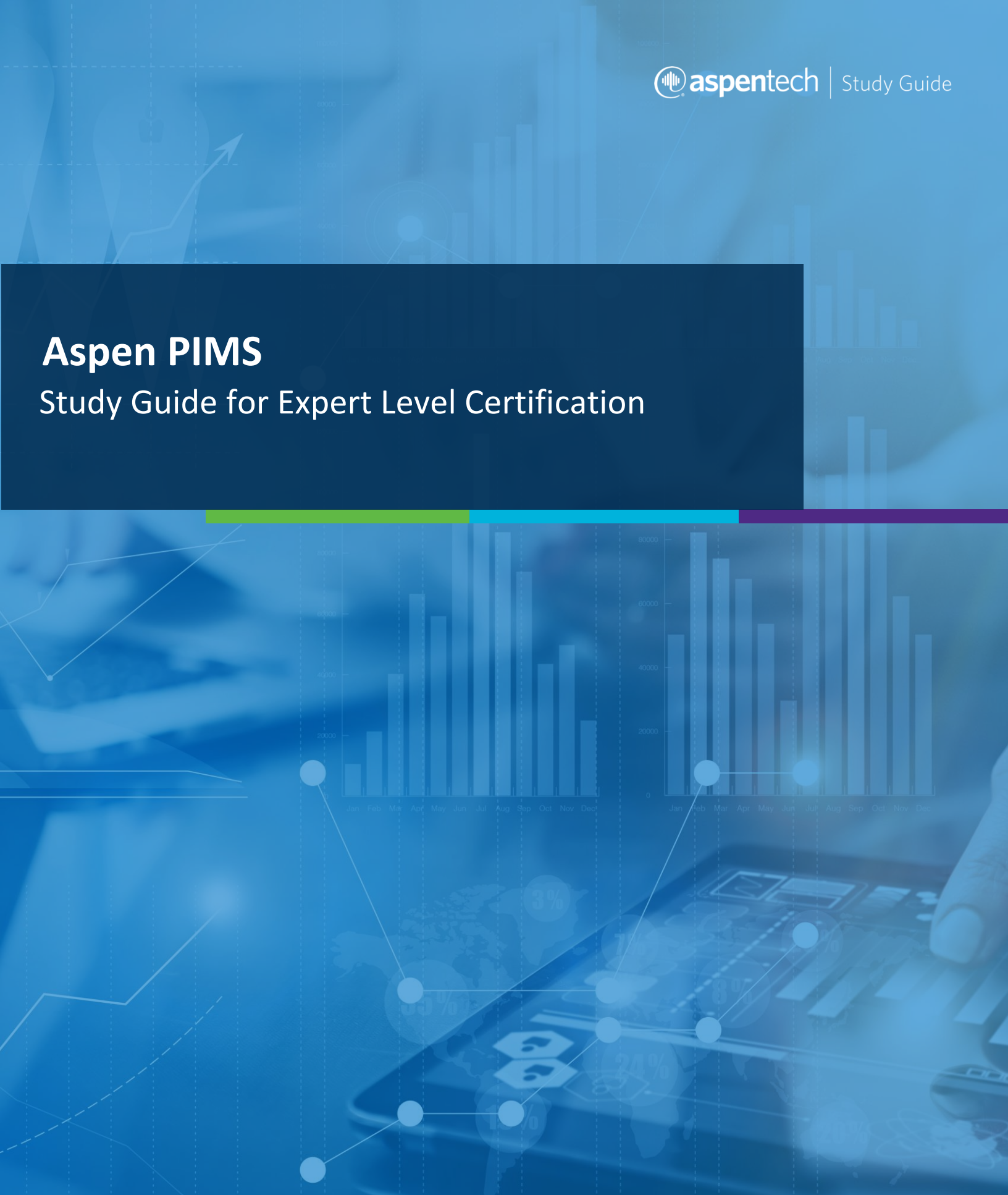
Aspen PIMS

Study Guide for Expert Level Certification



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Exam Scope for Expert Level Certification

- ☐ Introduction
- ☐ Crude Unit
- ☐ Blending
- ☐ Constraints
- ☐ Economic Analysis
- ☐ Troubleshooting
- ☐ Model Structure
- ☐ Case Stacking
- ☐ PIMS-AO

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Who can take this certification?

The certification is a must-have for any users at the PIMS/PIMS-AO intermediate level who want to prove proficient in model building and trouble shooting. This is a certification that measures both product skills and capital cost estimator concepts. The exam contains both multiple choice questions and a lab. We will provide the latest version of AspenTech software. All our exams are conducted with a proctor, either in-person or through remote testing.

Step 1. Prepare with training

AspenTech offers a variety of delivery methods in which you can take training. Here are the recommendations to be most successful on this exam.

- Complete RPA201: Solve Refinery Planning Problems using Aspen PIMS
- Complete RPA221: Advanced Optimization Features using Aspen PIMS or attain sufficient experience with PIMS-AO and its features
- At least 1-year of experience with PIMS including model building

You may register through public or private training. If you already have proficiency in PIMS, you may be interested in refreshing your knowledge with eLearning. **While attending a training class prior to completing the exam is highly recommended, it is not required.**

- 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. Practice before exam

This guide contains 100% coverage of all objectives for the Aspen PIMS / PIMS-AO expert level certification exam. You can use as both a study tool and an on-the job reference.

Step 3. Get Certified

You will have up to 4 hours to complete the exam. **You can expect to receive your exam results in 2 weeks.**

You may take the exam after completing training or view schedule to register on a different day or time. In-person and remote testing are available. Please make sure that you select the correct Location/Time Zone.

After passing the exam you will receive an email to post your certificate and digital badge on social media, which is a cross-industry recognition of technical skills you may share on LinkedIn, as well as in your email signature. View the instructions on how to post your credentials.

SCOPE	TECHNICAL CONTENT	COMPETENCY OBJECTIVE
Introduction	Reports	**Summarize** configuration and content
		Access available report types
	Data	**Configure** data properly (format and content) in Excel tables
	Initialization	**Summarize** tables involved in DR model initialization
	Matrix Generation	**Identify** when the matrix is generated
Crude Unit	Configuration	**Explain** construction of crude unit capacities
		Demonstrate how to configure for various types of crude unites
		Demonstrate how to control stream segregation and naming
Blending	Configuration	**Explain** tables required for definition of a blend
		Recognize the default product blending basis
		Apply Table WSPECS
Constraints	Process Limits	**Explain** the types of equations that PROCLIM is intended for
		Configure correctly the 2 different types of Proclim rows in Table PROCLIM
		Summarize impact of FREE columns and 0 coefficient on calculations
	Capacities	**Explain** the types of equations that capacities are intended for
	Miscellaneous Tables	**Configure** and **apply** Table GROUPS
		Explain possible configurations in Table MIP and possible applications
		Summarize Table ROWS and demonstrate how to build or access matrix structure
Economic Analysis	Breakeven	**Describe** the impact price and volume has on analysis
		Calculate a breakeven from run results
	Marginal Values	**Explain** limitations of marginal values
		Summarize sign conventions in PIMS reports for marginal values
	Tiered Pricing	**Configure** and **apply** tiered pricing correctly
Troubleshooting	Tools	**Investigate** a solution using XLR Viewer and troubleshoot
		Summarize matrix structure and information provided in Matrix Analyzer

SCOPE	TECHNICAL CONTENT	COMPETENCY OBJECTIVE
Troubleshooting	Tools	**Recognize** Data Assistants
	Errors and Warnings	**Investigate** and **prioritize** messages
		Apply methods of suppressing messages and evaluate if appropriate
		Interpret and **evaluate** messages at end of run
	Penalties	**Apply** penalties in various tables
	Solution Problems	**Evaluate** potential causes of non-convergence, local optima, and materials out of balance
Model Structure	Submodels	**Explain** Base Delta configuration
		Locate Base Delta "base" conditions
		Configure Discrete Yield submodel structure
		Evaluate when to apply various submodel structures (discrete, base-delta, pooling, etc.)
		Configure a recursed pool
		Set up compositional pooling and depooling
		Configure custom constraints using control rows (E, L, and G rows)
Case Stacking	Configuration	**Create** a case
		Identify the use of case stacking keywords – EMPTY, MODIFIES
		Explain how to modify table content in T. CASE
PIMS-AO	Settings	**Recognize** impact of settings such as Epsilon, Improve Local Solution, Fix Qualities of Zero Flow Streams, Hyrbrid Quality Initialization, PGUESS Confidence Value, etc.
	Matrix Structure	**Explain** how qualities are modeled (vs DR)
	Initialization	**Create** an input solution file via various methods
	Features	**Configure** and **run** Global Optimization
		Configure and **run** Parametric Analysis
		Configure and **run** Ranging Analysis
		Configure and **run** Goal Programming
		Configure and **run** Feedbasket Reduction

About Aspen Technology

Aspen Technology (AspenTech) is a leading software supplier for optimizing asset performance. Our products thrive in complex, industrial environments where it is critical to optimize the asset design, operation and maintenance lifecycle. AspenTech uniquely combines decades of process modeling expertise with machine learning. Our purpose-built software platform automates knowledge work and builds sustainable competitive advantage by delivering high returns over the entire asset lifecycle. As a result, companies in capital-intensive industries can maximize uptime and push the limits of performance, running their assets safer, greener, longer and faster. Visit AspenTech.com to find out more.