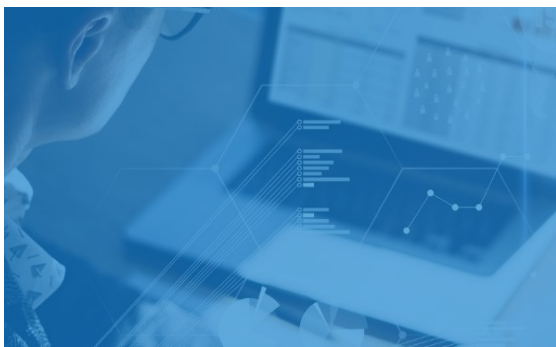# Aspen ProMV

Study Guide for Certification

Prove Your Credibility

An Aspen ProMV Certified User has a practical understanding and the hands-on skills required to find the right operating point and eliminates the information overload on operators from univariate process monitoring. Passing the exam demonstrates your skills in quickly identify what's really driving the variability among the hundreds or thousands of variables in your processes. You become a valued trusted expert who can perform quality deviation analysis, unit yield analysis, production capacity degradation analysis and multivariate analysis.

Practice

AspenTech training is highly recommended though not required.

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

(read pages 2-3).

Get Certified

You will have up to 4 hours to complete the exam.

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 on LinkedIn profile.

Exam Scope for ProMV

☐ Multivariable Analysis Concepts

☐ Configuration and Settings

☐ Models from Historical Data

☐ Lab

Grading

Grade	Weight
Multiple choice questions	40%
Lab task	60%
Total	100%

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SCOPE	TECHNICAL CONTENT	COMPETENCY OBJECTIVE
Multivariable Analysis Concepts	Principal Component Analysis	**Describe** the nature of multivariate process data
		Explain the Principal Component Analysis
		Describe of the plots for interpreting the data in PCA
		Summarize the Cross-validation process in PCA
	Partial Least Squares	**Explain** the Partial Least Squares
		Describe of the plots for interpreting the data in PLS
		Summarize the Cross-validation process in PLS
	Abnormal Operations	**Explain** how to detect outliers
		Explain how to treat outliers and missing data
Configuration and Settings	Aspen ProMV Workflow	**Explain** which variables to monitor
		Summarize the Aspen ProMV Workflow
	Graphical User Interface	**Illustrate** how to create a PCA and a PLS model
		Explain the Autofit configuration
		Explain how to generate different plots
		Illustrate Observations versus Predictions
Models from Historical Data	Empirical Models	**Summarize** the classes of empirical models
		Describe the model Summary
		Describe the model Explorer
		Describe the model Optimizer
	Inferential Models	**Illustrate** how to handle lagged variables
		Explain classification

SCOPE	TECHNICAL CONTENT	COMPETENCY OBJECTIVE
Lab	Building Principal Component Analysis Model	**Task 1** – Create a PCA model
		Task 2 – PCA Abnormal Operations
		Task 3 – Use the model of the previous task and create a PLS model
		Task 4 – PLS Abnormal Operations
		Task 5 – Reviewing the full process
		Task 6- Improving the process

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.