

# **AspenTech University Training Catalog**

Subsurface Science & Engineering, March 2025



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# **Questions about AspenTech University Training**

Please contact your AspenTech Regional Service Center below. Press option 7 to speak with a Training Coordinator or a Customer Care Specialist.

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# To register for a Training

Go to AspenTech University.



# DATA MANAGEMENT AND INTEROPERABILITY

**Aspen Epos Applications and Aspen Epos Services** 

#### **EPO101 - Aspen Epos System Administration and Database Management**

Learn how to install and configure Aspen Epos software, understand Epos architecture, create and administer Epos databases, and how to provide support and perform troubleshooting using AspenTech utilities.

Pre-requisites: Some familiarity with Linux or completion of a System Administration course (Unix and/or Windows).

**Duration**: 3 day(s)

## EPO102 - Loading and Managing Seismic and Interpretation Data using Aspen Epos

Learn how to use AspenTech tools for loading, QCing, and managing seismic and interpretation data.

**Pre-requisites**: Background/familiarity in data loading terminology and concepts, and an understanding of basic geoscience concepts.

**Duration**: 3 day(s)

# **EPO103 - Loading and Managing Well Data using Aspen Epos**

Learn how to use AspenTech tools for loading, QCing, and managing well, seismic, and interpretation data.

Pre-requisites: Background/familiarity in data loading terminology and concepts, and an understanding of basic

geoscience concepts. **Duration**: 2 day(s)

# **EPO110 - Aspen Epos Data Management for Technologists**

Learn how to use AspenTech tools for loading, QCing, and managing seismic and Interpretation data.

**Pre-requisites**: Background/familiarity in data loading terminology and concepts. Understanding of basic geoscience concepts.

**Duration**: 5 day(s)

#### **EPO121 - Aspen Epos OpenGeo SDK**

Gain the skills necessary to work with OpenGeo, one of AspenTech's development toolkits.

Pre-requisites: Developing experience in C++, basic knowledge of geophysics.

**Duration**: 5 day(s)

## **DRILLING**

Aspen Geolog, Aspen Sysdrill

# **GEO208 - Well Directional Steering using Aspen Geolog**

Learn about the basics of using Geosteer in a typical geological steering workflow.

**Pre-requisites**: Familiarity with Aspen Geolog, involved in planning and/or drilling directional and horizontal wells, or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog.

**Duration**: 2 day(s)

### SYS101 - Advanced Well Planning and Drilling Engineering using Aspen Sysdrill

Learn about the advanced features and functionality of Sysdrill.

Pre-requisites: Background in geology and drilling, familiarity with Windows operating system.

**Duration**: 2 day(s)



# **FORMATION EVALUATION**

# **Aspen Geolog**

#### **GEO100 - Site Administration for Aspen Geolog**

Learn how to install, configure, and maintain Aspen Geolog.

**Pre-requisites**: Knowledge of Linux and/or Windows administration.

**Duration**: 2 day(s)

#### **GEO101** - Essentials for Performing Log Analysis using Aspen Geolog

Learn to start Geolog, open applications and document views within the applications, use the menus, tool bars and other functions common throughout Geolog, and manage working projects.

**Pre-requisites**: None. **Duration**: 3 day(s)

#### **GEO102 - Deterministic Petrophysical Log Analysis using Aspen Geolog**

Learn how to use Geolog Determin as a tool for performing advanced deterministic petrophysical well evaluations.

**Pre-requisites**: A working knowledge of Aspen Geolog software, and of basic petrophysics, or completion of GEO101:

Essentials for Performing Log Analysis using Aspen Geolog.

**Duration**: 2 day(s)

### GEO103 - Multi-Mineral Analysis and Interpretation using Aspen Geolog

Learn how to use Geolog Multimin to perform sophisticated formation evaluation.

**Pre-requisites**: A working knowledge of the Geolog software, and a background in petrophysics, including an understanding of mineralogy effects on tool responses, or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog + GEO102: Deterministic Petrophysical Log Analysis and Uncertainty using Aspen Geolog.

**Duration**: 2 day(s)

# **GEO201** - Borehole Image Processing and Analysis using Aspen Geolog

Learn to use the Borehole Image Processing module in Geolog, an advanced analysis tool kit that enables users to process, enhance, and analyze vendor specific image tools and logs.

**Pre-requisites**: A working knowledge of the Geolog software or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog.

**Duration**: 2 day(s)

# GEO202 - Nuclear Magnetic Resonance Analysis (NMR & NMR2D) using Aspen Geolog

Learn about the theory behind NMR and NMR2D measurements and how to perform processing, quality control and interpretation of NMR logs.

Pre-requisites: Familiarity with Aspen Geolog, and a background in geology, petrophysics, or well log analysis.

Completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog.

**Duration**: 2 day(s)

# **GEO203 – Rock Physics using Aspen Geolog**

Learn about the Geophysics application within Aspen Geolog and how to generate a synthetic seismic trace, estimate pore pressure and perform the fluid substitution workflow.

**Pre-requisites**: Previous experience of using Aspen Geolog, including proficiency in using Geolog's Well application, or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog.

**Duration: 2 day(s)** 

# **GEO204 - Full Waveform Sonic Processing using Aspen Geolog**

Learn how to use the array sonic processing tools in Geolog and how to perform a typical workflow.

**Pre-requisites**: Familiarity with basic functionality in Aspen Geolog and module processing or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog.

**Duration**: 1 day(s)



#### GEO207 - Electrofacies Analysis and Data Prediction using Facimage in Aspen Geolog

Learn how to perform electrofacies analysis and data modeling, using the Facimage functionality in Geolog.

**Pre-requisites**: A background in geoscience, and familiarity with Geolog or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog.

**Duration**: 2 day(s)

# **GEO111 - Introductory Loglan Programming in Aspen Geolog**

Learn how to develop log processing modules to perform your own processing algorithms on your Geolog data.

**Pre-requisites**: Familiarity with Geolog or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog. Some experience of programming is beneficial.

**Duration**: 2 day(s)

#### **GEO112 - Tcl Programming in Aspen Geolog**

Learn how to develop scripts for log processing, database access, information management, and report generation using Tcl instructions and the Geolog extensions to Tcl.

**Pre-requisites**: Familiarity with Geolog or completion of GEO101: Essentials for Performing Log Analysis using Aspen Geolog. Some experience of programming is beneficial.

**Duration**: 1 day(s)

# **GEOLOGIC MODELING**

Aspen RMS, Aspen SKUA

#### **RMS101 - Introduction to Aspen RMS**

Learn how to import and analyze data, build a structural model, flow simulation grid and geological modeling grid, model facies and petrophysical data, compute volumetrics and assess the impact of uncertainty on the volumes.

**Pre-requisites**: None. **Duration**: 3 day(s)

#### RMS201 - Grid Design and Upscaling using Aspen RMS

This course covers grid construction requirements, process and tools, the upscaling techniques and the options for exporting grid data and importing a simulation model.

Pre-requisites: RMS101: Introduction to Aspen RMS.

**Duration**: 1.5 day(s)

#### **RMS202 - Advanced Gridding in Aspen RMS**

Learn about more advanced grid construction settings, tools and post-processing options.

Pre-requisites: RMS101: Introduction to Aspen RMS; RMS 201: Grid Design and Upscaling using Aspen RMS.

**Duration**: 0.5 day(s)

#### **RMS211 - Advanced Property Modeling using Aspen RMS**

Learn how to use the tools in RMS to model facies properties in clastic environments and petrophysical properties (porosity, permeability) in shoreface, fluvial and turbidite reservoirs.

Pre-requisites: RMS101: Introduction to Aspen RMS.

**Duration**: 2-3 day(s)

#### **RMS221 - Structural Uncertainty Modeling in Aspen RMS**

Learn how to use the Horizon Uncertainty Modeling job (HUM) and Fault Uncertainty Modeling job (FUM) to assess the impact of uncertainties on the structural model.

**Pre-requisites**: RMS101: Introduction to Aspen RMS.

**Duration**: 2 day(s)

### RMS222 - Advanced Horizon Uncertainty Modeling in Aspen RMS - Well Data

Learn how to include well trajectory, well picks and azimuth information to constrain the horizons and define uncertainty in the Horizon Uncertainty Modeling job. This course follows-up on RMS221

Pre-requisites: RMS101: Introduction to Aspen RMS, RMS221; Structural Uncertainty Modeling in Aspen RMS.

**Duration**: 0.5 day(s)



#### RMS231 - Dynamic Well Modeling using Aspen RMS

Learn how RMS can be used to define dynamic well data as input to a flow simulation. The course covers the RMS event model, import of completion data and production data, preparation of flow model data, and export of keywords to the flow simulator.

Pre-requisites: RMS101: Introduction to Aspen RMS.

**Duration**: 1.5 day(s)

#### SKG101 - Fundamentals of Aspen SKUA

Familiarize yourself with the SKUA interface and processes for loading, reviewing and preparing data.

Pre-requisites: Background in geoscience.

**Duration**: 1.5 day(s)

## SKG111 - Velocity Modeling and Calibration using SKUA

Learn how to use SKUA modeling technology to build geologically constrained velocity models and perform efficient time-to-depth conversion.

**Pre-requisites**: SKG201: Modeling Reservoir Architecture using Aspen SKUA or a background in geoscience and some experience with SKUA.

**Duration**: 2 day(s)

# SKG201 - Modeling Reservoir Architecture using Aspen SKUA

Learn how to use SKUA modeling technology to create geologically accurate structural models, geologic grids and flow simulation grids.

**Pre-requisites**: SKG101: Fundamentals of Aspen SKUA and a background in geoscience.

**Duration**: 3 day(s)

#### SKG202 - Data Analysis and Property Modeling using Aspen SKUA

Learn how to use the Data Trend Analysis workflow and the Reservoir Properties workflow to create robust and realistic 3D models of the lithology, porosity, and permeability, and how to perform reservoir volumes computation and post-processing.

Pre-requisites: SKG101: Fundamentals of Aspen SKUA and SKG201: Modeling Reservoir using Aspen SKUA.

**Duration**: 2 day(s)

#### SKG301 – Automating Processes using Macros in Aspen SKUA

Learn how to use macros (small programs) in Aspen SKUA to automate common tasks and save time.

Pre-requisites: SKG101: Fundamentals of Aspen SKUA or a background in geoscience and some experience with SKUA.

**Duration**: 1.5 day(s)

## INTERPRETATION

Aspen SKUA, Aspen SeisEarth, Aspen Quantitative Seismic Interpretation (QSI), Aspen GeoDepth/SeisEarth Velocity Modeling

### SKG121 - Well Correlation using Aspen SKUA or Aspen StratEarth

Learn how to use the tools in SKUA or StratEarth to pick new markers, correlate existing markers, consolidate existing marker sets and save the results into the database.

Pre-requisites: Background in geology or geophysics.

**Duration**: 3 day(s)

#### SEI101 – Multi-Survey (2D/3D) Interpretation using Aspen SeisEarth

Learn how to examine data in Integrated Canvas, calibrate wells to seismic data, perform structural interpretation of target features, create fault outlines, map boundaries and multi-survey maps, extract attributes and much more.

**Pre-requisites**: None. **Duration**: 4 day(s)



#### SEI111 - Rock Type Classification using Machine Learning in Aspen SeisEarth

Learn how to use a unique machine learning approach to predict rock facies away from the wellbore using well and seismic data with Aspen SeisEarth.

Pre-requisites: SEI101: Multi-Survey (2D/3D) Seismic interpretation using Aspen SeisEarth.

**Duration:** 1 day

#### SEI112 – Attribute Clustering using Machine Learning in Aspen SeisEarth

Learn how to use unsupervised machine learning for subsurface characterization using seismic data.

**Pre-requisites**: SEI101: Multi-Survey (2D/3D) Seismic interpretation using Aspen SeisEarth.

**Duration:** 1 day

#### SEI113 - Waveform Classification using Machine Learning in Aspen SeisEarth

Learn how to use a unique machine learning approach to delineate subtle variations in the seismic response associated with reservoir characteristics with Aspen SeisEarth.

Pre-requisites: SEI101: Multi-Survey (2D/3D) Seismic interpretation using Aspen SeisEarth.

**Duration:** 1 day

# QSI101 – Fluid and Rock Property Estimation using AVO and Inversion Workflows

Learn how to perform a reservoir characterization workflow which integrates petrophysical analysis, rock physics, AVO analysis, seismic inversion, and 3D visualization tools, to identify, visualize and validate hydrocarbon prospects. A thorough introduction to elastic wave theory, rock physics, AVO theory, and seismic inversion is included in this course. **Pre-requisites**: SEI101: Multi-Survey (2D/3D) Interpretation using SeisEarth or a background in geoscience and some experience with Aspen SeisEarth.

**Duration**: 4 day(s)

## QSI106 - Property Prediction using Neural Network Seismic Inversion in Aspen SeisEarth

Learn how to use the Neural Network Inversion workflow to predict rock and elastic properties from seismic attributes and log data using a machine learning approach. The course offers a detailed overview of the theory behind NNI, along with guidance on defining and optimizing parameters to refine results.

**Pre-requisites**: Some experience using Aspen SeisEarth or complete SEI101: Multi-Survey (2D/3D) Interpretation using SeisEarth or QSI101: Fluid and Rock Property Estimation using AVO and Inversion Workflows

**Duration: 0.5 to 1 day** 

### **VEL101 – Velocity Modeling and Time to Depth Conversion**

Learn how to use the Aspen GeoDepth/SeisEarth Velocity Modeling toolkit to perform 2D and 3D visualization, model building from structure-limited and non-structural velocity sources, integration of well and seismic data, calibration to wells, basic geostatistical mapping, Constrained Velocity Inversion, building a velocity volume, estimating velocity gradients, and much more.

Pre-requisites: Background in geology or geophysics.

**Duration**: 3 day(s)

### RESERVOIR ENGINEERING

# **Aspen METTE, Aspen Tempest**

# **MET101 - Introduction to Aspen METTE**

Learn how to set up a METTE model and perform simulations. This course covers the main modes of calculation: Life of Field/Network Simulations, Well and Flow Line Performance Calculations, Virtual Metering Calculations.

**Pre-requisites**: None. **Duration**: 4 day(s)

### **TEM101 – Reservoir Simulation with Aspen Tempest**

Learn how to use the tools available in Tempest MORE and Tempest PVTx for creating simulation models, running simulations and analyzing results.

**Pre-requisites**: None. **Duration**: 2 day(s)



#### **TEM102 – Introduction to Aspen Tempest ENABLE**

Learn how to perform appraisal, history matching, prediction and optimization workflows using Tempest ENABLE.

**Pre-requisites**: None. **Duration**: 2 day(s)

# **PROCESSING AND IMAGING**

Aspen Echos, Aspen GeoDepth

## ECH101 - Seismic Data Processing using Aspen Echos

Learn about the interactive and production approaches in Echos. This course aims to introduce you to the wide range of modules available for both prestack and poststack processing of 2D and 3D land and marine data, so you can design and perform your own seismic data processing workflows.

Pre-requisites: Experience of seismic data processing.

**Duration**: 5 day(s)

#### **ECH102 - 3D Marine Processing using Aspen Echos**

Learn about the interactive and production approaches in Echos for 3D marine datasets.

**Pre-requisites**: Experience of seismic data processing.

**Duration**: 3 day(s)

## **ECH103 – Land Processing using Aspen Echos**

Learn about the interactive and production approaches in Echos for 2D and 3D marine datasets.

**Pre-requisites**: Experience of seismic data processing.

**Duration**: 3 day(s)

### GDE121 - 2D Depth Velocity Model Building and Depth Imaging using Aspen GeoDepth

Learn how to create an initial interval velocity model, perform depth imaging, and update the velocity model using GeoDepth 2D.

Pre-requisites: Background in geophysics, completion of Constrained Velocity Inversion elearning course.

**Duration**: 3 day(s)

# GDE131 – 3D Depth Velocity Model Building and Depth Imaging using Aspen GeoDepth

Learn how to perform basic time-to-depth velocity model building workflows and time-to-depth migration using GeoDepth 3D. This course includes a structure-independent (grid-based) and a layer-based model building workflow. **Pre-requisites**: Background in geophysics.

**Duration**: 5 day(s)

# **SUSTAINABILITY**

Aspen SKUA, Aspen SeisEarth, Aspen Tempest

#### SUS-S111 – Carbon Capture and Storage using Aspen SKUA

Apply the advanced geological modeling capabilities of Aspen SKUA to the specific context of Carbon Capture and Storage. Using a real dataset of a field used for carbon sequestration, you will learn various techniques for creating a detailed 3D geological model to predict the behavior of CO2 storage sites, and assess the reservoir's storage capacity. **Pre-requisites**: Background in geology or geophysics and some familiarity with Aspen SKUA.

**Duration:** 2 day(s)

### SUS-S114 – Simulating CO2 Injection using Aspen Tempest MORE

Build, run and analyze the simulation of injecting carbon dioxide into porous rock. This will be achieved by using Aspen Tempest MORE and Aspen Tempest VIEW employing a gas/water black oil model.

**Pre-requisites**: Background in reservoir engineering and an understanding of Carbon Capture Utilization and Storage (CCUS).

**Duration:** 1 day(s)



#### SUS-S121 - Designing a Closed-Loop Well using Aspen METTE for Geothermal Applications

Familiarize yourself with the Aspen METTE interface and processes by executing a forecasting study for a closed-loop well for geothermal application.

Pre-requisites: Some expertise in the field of geothermal energy.

**Duration:** 1 day(s)

# SUS-S122 - Geothermal Simulation using Aspen Tempest MORE

Learn how to build, run, and analyze a geothermal simulation in porous and non-porous rock. This will be achieved using Aspen Tempest MORE and Aspen Tempest VIEW, employing a black oil model with single phase water injection below the boiling point of water.

Pre-requisites: Background in reservoir engineering and some familiarity with modeling thermal energy flow.

**Duration:** 1 day(s)

## SUS-S231 – Salt Modeling for Hydrogen Storage using Aspen SeisEarth and Aspen SKUA

Generating an accurate interpretation and model of the subsurface is a crucial step in optimizing hydrogen storage in salt formations. Learn how to interpret and model salt surfaces, create 3D structural models and model properties within a salt intrusion.

Pre-requisites: Background in geology or geophysics and some familiarity with Aspen SeisEarth and Aspen SKUA.

**Duration:** 3 day(s)