POWERING Performance

OPTIMIZE™ | 26

Catalog | ENG, APM, APC, GDOT, PSC, INMATION

Training Courses

Thursday, May 14, 2026 | 8:30 AM - 4:30 PM

EMERSON | aspentech

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Introduction

Aspen Technology, awards Continuing Education Units (CEUs) for training classes conducted by our organization. One CEU is granted for every 10 hours of class participation. Each training session offered at OPTIMIZE 2026 is eligible for 0.7 CEUs. All of the courses offered at OPTIMIZE 2026 are at the introductory level. All courses take the following approach:

- Clear guidance on fundamental topics
- Industry workflows hands-on workshops
- Experienced instructor-guided demonstrations
- Q&A on student-specific problems

Please Note: All OPTIMIZE training classes are located off site. Transportation will be provided to and from the training facility, leaving from the Marriott Marquis Houston.

For further details or questions, please reach out to the OPTIMIZE26 Training team at Optimize26Training@emerson.com.

Visit our PI Website
https://www.optimize2026.com/process-industries/home

OPTIMIZE™ | 26

Table of Contents

Engineering (ENG) Courses

Asset Performance Management (APM) Courses

Advanced Process Control (APC) and GDOT Courses

Table of Contents

Petroleum Supply Chain (PSC) Courses

Inmation

Accelerating Plant Design Workflow: From Simulation to AI-Driven Layout and Cost Estimating | **EOP026**

Harness the power of Industrial AI in Aspen OptiPlant 3D Layout™ to intelligently generate and evaluate multi-discipline plant layouts that align with your business goals, safety standards, engineering constraints and construction requirements. Learn how end-to-end approach—from simulation to layout to estimating—enables faster, smarter decision-making and optimal project outcomes.

COURSE BENEFITS

- Gain practical knowledge of rapid auto layout design and cost optimization for projects

Who Should Attend?

Project Engineers/Process Engineers/Cost

Estimators/Layout Designer/Piping Designer

Prerequisites

Basic knowledge of cost estimation and conceptual design recommended

Suggested Subsequent Courses

EOP101, EEE101

AGENDA

Introduction to Aspen OptiPlant 3D Layout and Aspen Capital Cost Estimator™ (ACCE)

- Piping Layout and 3D Conceptual Modeling using Auto Routing
- Cost Estimation Techniques in Conceptual Engineering
- **Workshop 1:** Create Basic Project Using Aspen OptiPlant 3D Layout and ACCE

Developing and Analyzing Designs using Aspen OptiPlant 3D Layout and ACCE

- Developing and Analyzing Designs with Aspen OptiPlant 3D Layout
- Volumetric Modeling and Plant Piping in ACCE
- **Workshop 2:** Equipment Lists and Volumetric Models

Accelerating Sustainability Projects Integrating Solutions

- Accelerating Sustainability Projects Integrating Aspen OptiPlant 3D Layout and ACCE
- **Workshop 3:** Integration between Aspen OptiPlant 3D Layout and ACCE
- **Workshop 4**: Importing from Aspen OptiPlant 3D Layout to ACCE
- **Workshop 5:** Importing from ACCE to Aspen OptiPlant 3D Layout
- **Workshop 6:** Using Auto Layout tool in Aspen OptiPlant 3D Layout to generate layouts

Learn Best Practices and Troubleshooting Techniques

Enhancing Plant Distillation Performance with Advanced Features, Rate-Based Modeling and Utility/Energy Analysis in Aspen Plus® | **EAP026**

Boost your plant's distillation performance by learning advanced RadFrac capabilities, rate-based modeling and practical hydraulic analysis for both trayed and packed columns. Explore utility setup, cost evaluation and carbon-tracking workflows, along with techniques for identifying energy-saving opportunities using Aspen Plus built-in Energy Analysis.

ENG Courses

COURSE BENEFITS

- Gain the skills and knowledge to model complex distillation processes
- Reduce process design time by using advanced features of RadFrac
- Improve distillation model stability and accuracy
- Get an overview of how to track and reduce CO^2 emissions

Who Should Attend?

Process Engineers

Prerequisites

Basic Aspen Plus knowledge

Suggested Subsequent Courses

SUS-P101, EAP150, EAP250, EAP2510, EAP201

AGENDA

Distillation Using RadFrac

- Preview of multistage separation models available in Aspen Plus
- Review of the RadFrac model for single columns and functionality regarding Rating and Design
- eview and explain the different types of efficiencies available in RadFrac
- **Workshop:** HCL column illustration

Rate-Based Distillation

- Review differences between equilibrium and rate-based distillation models
- Recognize the capabilities of Aspen Plus Rate-Based Distillation
- **Workshop:** Model a methanol-water distillation column using rate-based techniques

Sizing or Rating of Trays and Packing

- Review and explain Column Internals Analysis for Sizing (Design) and Rating of trays and packing
- **Workshop:** Perform tray rating on an HCl column

Process Improvement with Activated Analysis (utilities, emission and energy)

- Review Activated Energy Analysis and Activated Economic Analysis tools for process improvement
- Investigating opportunities to improve energy efficiency and carbon footprint of the Ethylene Oxide flowsheet
- **Workshop:** Perform a cost analysis on the Ethylene Oxide flowsheet using Activated Economic Analysis

Modeling Custom Electrolyzer using Aspen Custom Modeler® in Aspen Plus® | **ECM026**

Learn how to model industrial-scale alkaline electrolyzers in Aspen Custom Modeler. Hands-on exercises will guide you through building a steady-state custom electrolyzer model, exporting it into Aspen Plus and analyzing key performance metrics.

COURSE BENEFITS

- Get hands-on experience building an alkaline electrolysis cell stack model and learn to deploy custom models into Aspen Plus and Aspen HYSYS

Who Should Attend?

Process Engineers

Prerequisites

Basic knowledge of Aspen Plus and Custom Modeling recommended

Suggested Subsequent Courses

EAP2311

AGENDA

Introduction to Alkaline Electrolyzer for Hydrogen Production

- Overview of Alkaline Electrolyzer unit in Aspen Plus

Learn to setup an Alkaline Electrolyzer in different modes

- **Workshop 1:** Aspen Plus Alkaline Electrolyzer — Simple Mode
- **Workshop 2:** Aspen Plus Alkaline Electrolyzer — Rigorous Mode

Learn custom modeling of Alkaline Electrolyzer in Aspen Custom Modeler® and exporting to Aspen Plus/Aspen HYSYS®

Optimize Energy Usage and Minimize Emissions in Carbon Capture Processes using Aspen HYSYS® | **EHY026**

Create rigorous simulation of carbon capture processes with amine solvents. Set up component properties and reactions essential for modeling carbon capture processes in Aspen HYSYS to meet sustainability goals. Identify the key steps and unit operations involved in accurately modeling carbon capture process.

COURSE BENEFITS

- Learn how to optimize energy consumption for process units
- Learn how to model amine treatment process for carbon capture

Who Should Attend?

Process Engineers

Prerequisites

Basic knowledge of Aspen HYSYS required

Suggested Subsequent Courses

EHY202, EHY223, EHY121, EHY2102, EHY2351

AGENDA

Cabon Capture Overview
Model Amine Treatment Unit for Carbon Capture

Workshop 1: Model Amine Treatment Unit for Carbon Capture

Advanced Modeling and Column Analysis

Workshop 2: Generating Column Hydraulics and effect of Advanced Modeling (proposed workshop)

Emissions Calculations and Optimization

Workshop 3: Emission Calculations and Optimization

Optimize Heat Exchanger Design and Rating for LNG Using Aspen EDR and Aspen HYSYS® | **EHX026**

Table of Contents →

Strengthen the performance and reliability of your liquified natural gas operations with heat-exchanger modeling using Aspen Exchanger Design & Rating™ (EDR) and Aspen HYSYS. Through simulation, quickly diagnose performance issues, manage critical operating constraints and optime exchanger designs that support safer, more efficient and more resilient plant operations. Deep dive into rigorous thermal and hydraulic modeling and learn how to apply these tools effectively to plate-fin and shell-and-tube equipment in demanding cryogenic environments.

COURSE BENEFITS

- Learn the fundamentals of simulating an LNG plant.
- Understand the requirements for design, checking and simulation of rigorous heat exchangers
- Improve your skill in identifying root causes of temperature cross, maldistribution, fouling, and unexpected pressure drop behavior in your heat exchangers.
- Learn the fundamentals of simulating a LNG and a plate fin heat exchanger in Aspen EDR.

Who Should Attend?

- Thermal and process design professionals wishing to enhance their understanding of LNG and plate fin exchanger design and simulation
- New engineers wishing to gain experience in heat transfer and plate fin exchanger modelling for LNGR

Prerequisites

Basic understanding of LNG operations and heat exchangers.

Suggested Subsequent Courses

EHX101, EHY130, EHX1041, EHX131

AGENDA

- LNG liquefaction process flows with Plate-fin heat exchanger design
- Design and rating modes with thermal / hydraulic design
- Review cryogenic challenges and constraints (materials, allowable pressure drop, approach, duty, fouling, ...)
- Identify and explain the basic concepts of heat transfer in association with plate fin exchangers
- Recognize how thermal calculations are used by the Aspen Plate Fin Exchanger™ application
- Recognize the features and functional capability of the Aspen Plate Fin Exchanger application
- Efficiently use the Aspen Plate Fin Heat Exchanger application to evaluate:
  - Single-phase exchangers
  - Cryogenic condensers
  - Cryogenic reboilers/vaporisers
  - Multi stream/layers exchangers
- Demonstration using Activated EDR integrated heat exchanger software in conjunction with Aspen HYSYS and/or Aspen Plus® to improve the performance of heat exchangers in the overall process

Improve Model Accuracy using AI-Driven Process Simulation with AI Model Builder | **EHM026**

Understand the power of first principles-driven hybrid models in industrial applications. Learn the advantages of integrating mechanistic principles with AI and machine learning techniques to create accurate, predictive models. Use real-time plant data to enhance model accuracy to replace modeled relationships not fully captured by traditional engineering models.

COURSE BENEFITS

- Gain the practical skills and knowledge to begin using Aspen Hybrid Models™
- Learn differences between various workflows and information needed to create Aspen Hybrid Models
- Review and work through examples of different types of Aspen Hybrid Models to get hands-on experience

Who Should Attend?

- Control Engineers who are interested in using machine learning/AI to improve quality control
- Process Engineers who are interested in using machine learning/AI to build complex models* today that are accurate and run quickly
- Engineers and Managers involved in digitalization strategies for their companies
- Anyone interested in Aspen Hybrid Models

*Complex models – Simulations models for equipment that cannot be modeled today through first principles, Building digital twins for online deployment:

Prerequisites

For Control Engineers:

- APC105 Model and Build Aspen DMC3 controllers using Aspen DMC3 Builder

For Process Engineers:

- EAP101 Introduction to Process Modeling using Aspen Plus OR
- EHY101 Introduction to Process Modeling using Aspen HYSYS

Suggested Subsequent Courses

EHM101, EHM102

AGENDA

Introduction to Aspen Hybrid Models

- Understand Aspen Hybrid Models and their applications
- Review different types of modeling approaches and their advantages and disadvantages
- Recognize the importance of using hybrid modeling and how it can help solve complex problems

Creating Aspen Hybrid Models

- Understand Aspen AI Model Builder
- Identify the workflow of Aspen AI Model Builder
- Discuss how to access Aspen AI Model Builder
- Understand how to create a new project in Aspen AI Model Builder
- **Workshop 1:** Create an AI Driven Hybrid model for a membrane using plant data

Continued

Improve Model Accuracy using AI-Driven Process Simulation with AI Model Builder | **EHM026**

Understand the power of first principles-driven hybrid models in industrial applications. Learn the advantages of integrating mechanistic principles with AI and machine learning techniques to create accurate, predictive models. Use real-time plant data to enhance model accuracy to replace modeled relationships not fully captured by traditional engineering models.

Data Importing and Configuration

- Review data format required for building the hybrid models
- Understand how to import data from external sources to the Aspen AI Model Builder
- Discuss how to configure the imported variables
- **Workshop 2:** Configure the project to build the hybrid model

Analyzing and Cleaning Raw Data

- Understand the tools to analyze raw data
- Discuss different options available for data cleaning
- Learn how to apply different conditioning techniques to raw data

Building the Hybrid Model

- Build a hybrid model from conditioned plant data
- Select dependent and independent variables to be used in the hybrid model
- Identify Machine Learning methods
- **Workshop 3:** Conditioning the raw data and building the hybrid model

Analyzing and Deploying the Hybrid Model

- Analyze results for the model built using parity and coefficient plots as well as accuracy and predictability values
- Learn how to deploy hybrid models in the process simulator
- Explore the automatic changes made to the simulation interface once the model has been deployed
- **Workshop 4:** Analyzing and Deploying Hybrid Model

Introduction to Aspen Multi-Case

- Review of what is Aspen Multi-Case
- Discuss the advantages of using Aspen Multi-Case for building Reduced Order Models
- Demonstrate steps involved in using Aspen Multi-Case
- **Workshop 5:** Use simulation data to build a Reduced Order Sensor to improve quality control in a distillation column for Aspen DMC3™
- **Workshop 6:** Create simulation data for a Cumene Production Process using Aspen Plus® or Natural Gas Dehydration with TEG using Aspen HYSYS®

Optimize Plant Utilities to Reduce Energy Consumption using Aspen Utilities Planner™ | **EAU026**

Develop the skills and techniques required to create a utilities system flowsheet with Aspen Utilities Planner. Learn methods of minimizing total utilities operating cost by accounting for economic, operation and environmental constraints simultaneously. Gain knowledge on methods of analyzing and optimizing typical business processes within the energy management domain.

COURSE BENEFITS

- Optimize utility variability by adopting a consistent methodology to model, simulate and analyze energy management business processes

Who Should Attend?

Process and Design Engineers

Prerequisites

None

Suggested Subsequent Courses

SUS-U101

AGENDA

Workshop 1: Introduction to Aspen Utilities Planner

- Demonstrate how to access and navigate through Aspen Utilities Planner graphical interface.
- Explain how to set up feeds, components and degrees of freedom.

Workshop 2: Build a Simple Utilities Flowsheet with AUP

- Demonstrate how to use the different library blocks and streams connection.

Workshop 3: Define Utilities Optimization Problem

- Define the optimization problem using the Aspen Utilities Excel Add-In for Data Editors (demands, availabilities, tariffs)
- Demonstrate how to use the wind turbine and solar panel.

Workshop 4: Advanced Topics of Optimization

- Setup multiperiod optimization.
- Define environmental and custom constraints to modify the objective function.

Workshop 5: Online Optimization of Utilities Flowsheet

- Demonstrate how to define online set up for monitoring real-time optimization.

Design, Optimize and Monitor Your Process Using Aspen HYSYS® Digital Twins | **EAO026**

Learn how to integrate existing Aspen HYSYS process simulation models with real-time plant data to build and deploy a dynamic online digital twin. This course guides you through the end-to-end workflow for creating a live, data-driven replica of your plant, enabling continuous monitoring, performance optimization and smarter operational decisions.

ENG Courses

COURSE BENEFITS

- Get hands-on experiencing building a Digital Twin for carbon capture

Who Should Attend?

Process Engineers/Process Control Engineers

Prerequisites

Basic knowledge of Aspen HYSYS recommended

Suggested Subsequent Courses

SUS-H101, EAP3021, EAP3022, EAP301

Getting Started

- Recognize the digital twin concept
- Learn about the salient features of the Aspen HYSYS Carbon Capture Model
- Introduce the Data Fit and Optimization tools in Aspen HYSYS

Workshop 1: Review key features of the Aspen HYSYS Carbon Capture Model

Aspen Online® Review

- Review the Aspen OnLine software
- Learn the steps for model execution under Aspen OnLine

Workshop 2: Create an Aspen OnLine Project and prepare a model for use under

Aspen OnLine GUI

- Overview on the Aspen OnLine graphical user interface
- Learn about the use of the Aspen OnLine Run-Time display and the Navigation Pane forms
- Learn the configuration of tags and connecting them to model variables

Workshop 3: Configure a model with input and output tags, schedule and run the model in Aspen OnLine

Aspen OnLine Case History

- Learn the configuration of the case history system that is embedded in the Aspen OnLine software

Workshop 4: Use a case history directory to repeat an online case execution

Driving Asset Reliability with AI-powered KPI Insights and Predictive Maintenance using Aspen Mtell® | **MPM026**

Harness AI-powered, user-configurable dashboards to monitor asset health and performance in real time. Leverage KPI-driven insights and predictive analytics to quickly identify opportunities, mitigate risks and prevent financial or safety impacts. Optimize workflows by integrating AI-driven predictive maintenance with your existing practices—empowering teams to act proactively, improve decision-making and drive long-term equipment reliability.

COURSE BENEFITS

- Monitor plant performance and asset health
- Develop dashboards customized to your specific work processes
- Learn how to optimize existing maintenance practices
- Synergize cross-functional team operations

Who Should Attend?

Reliability/Maintenance/Process Engineers
Plant/Facilities Supervisors

Prerequisites

Introductory knowledge of Aspen Mtell is recommended

Suggested Subsequent Courses

MPM101, MPM111, MPM121, MPM131, MPM221

AGENDA

AspenTech Operational Insights™ Overview

Navigate the Dashboard as a Standard Operator

- Check tag data for an online asset
- View current efficiency metrics for an asset
- View open Aspen Mtell alerts for one asset
- Triage and close an existing Aspen Mtell alert
- Redirect alert triaging to Aspen Mtell Alert Manager

Workshop 1: Learn how to navigate the dashboard as a Standard Operator

Navigate the Dashboard as an Operations Manager

- View high-level KPIs of your operations
- Visualize general asset health by site
- Review summary report of overall site health
- View current efficiency metrics for an asset

Workshop 2: Learn how to navigate the dashboard as an Operations Manager

Build Your Own Dashboards for Integration with Aspen Mtell

- Add references to existing hierarchical elements in Aspen Mtell
- Create elements for reporting Aspen Mtell agent alert data
- Generate KPIs and summaries for overall site health
- Import custom information such as historical efficiency metrics
- Create a custom link to access external pages

Future-Proofing Plant Performance and Strategic Capital Asset Decisions with Aspen Fidelis™ | **AFR026**

Use Aspen Fidelis to accurately quantify future plant performance and uncover which unplanned equipment failures or events are limiting operational outcomes. Compare the benefits and costs of different improvement options to make smarter, data-driven capital asset management decisions. Gain the skills to initiate new sustainability projects and evaluate their value potential, ensuring long-term reliability and business impact.

COURSE BENEFITS

- Gain the practical skills and knowledge to begin modeling new and existing processes
- Learn how to use the software to reduce plant costs by increasing predictability
- Learn how to make better plant decisions based on System Reliability results
- Gain an understanding of the Asset Management Model by learning how reliability and maintainability affect cost and decision making

Who Should Attend?

Process/Project Engineers Working on Capital Projects
Reliability/Facilities/Industrial Engineers Focused on System Reliability

Prerequisites

None

Suggested Subsequent Courses

AFR101

AGENDA

Introduction to Aspen Fidelis
Overview of Aspen Fidelis Functionalities

- Model inputs and outputs
- Understand the modeling approach
- Explain how Aspen Fidelis simulation runs are performed

How to Interpret Outputs from an Aspen Fidelis Run

- Navigate through the results from the simulation environment pane
- Understand histograms, probability curves and pareto charts generated by a model

Workshop 1: Interpret Aspen Fidelis Results (H2 Production, Revenue, Levelized Cost of H2)

Navigate the Aspen Fidelis User Interface

- Simulation environment
- Model data environment

Workshop 2: Import Asset Register and Build a Green Hydrogen Model

Continued

Future-Proofing Plant Performance and Strategic Capital Asset Decisions with Aspen Fidelis™ | **AFR026**

Use Aspen Fidelis to accurately quantify future plant performance and uncover which unplanned equipment failures or events are limiting operational outcomes. Compare the benefits and costs of different improvement options to make smarter, data-driven capital asset management decisions. Gain the skills to initiate new sustainability projects and evaluate their value potential, ensuring long-term reliability and business impact.

Customize Your Aspen Fidelis Model to Incorporate Your Unique Business Logic

- Overview of Aspen Fidelis integration with Visual Studio Tools for Applications (VSTA)
- Understand how custom logic is executed during a simulation
- Explain which elements from a model are available in VS Interface
- Write an example of custom logic

Workshop 3: Custom Coding (Financial KPIs, Performance Degradation)

Perform What-If Analysis to Help Drive Decisions

- Modify model inputs
- Compare results from multiple runs
- Understand options to automate multiple runs

Optimize and Unlock Process Insights Through Batch Data Analysis Aspen ProMV® | **PMV026**

Use Aspen ProMV to gain actionable insights from industrial batch data for improved process optimization and faster troubleshooting. Discover how to connect time-varying process data, raw material properties and initial conditions to final product quality and overall productivity—enabling smarter decisions and more consistent outcomes.

COURSE BENEFITS

- Gain the practical skills and knowledge to begin modeling new and existing batch processes
- Learn how to use the software to reduce plant costs by optimizing quality
- Discover underlying latent variables correlated with your batch operations

Who Should Attend?

- Process Engineers/Control Systems
- Engineers/Quality Control Engineers

Prerequisites

None

Suggested Subsequent Courses

PMV101

AGENDA

Introduction to Batch Processes

Overview of Aspen ProMV Functionalities

- Understand batch processes and the use cases
- Visualize batch data
- Understand what batch process problems can be resolved using latent variable modeling

Review Algorithms and Models

- Explain Principal Component Analysis (PCA)
- Explain Partial Least Squares (PLS)

Model and Analyze Historical Batch Data

- Understand approaches to modeling batch data

Workshop 1: PCA and PLS Modeling for Batch Process

Workshop 2: PPCA Modeling for batch Process

Workshop 3: Batch Alignment for PCA and PLS Modeling

Workshop 4: Batch Analysis of FMC Dataset to Diagnose Bad Batches

Continued

Optimize and Unlock Process Insights Through Batch Data Analysis Aspen ProMV® | **PMV026**

Use Aspen ProMV to gain actionable insights from industrial batch data for improved process optimization and faster troubleshooting. Discover how to connect time-varying process data, raw material properties, and initial conditions to final product quality and overall productivity—enabling smarter decisions and more consistent outcomes.

Online Monitoring of Batch Processes (MSPC)

- Use shewhart charts to identify the common and special causes of variation
- Use online monitoring to view current trajectory and forecast using extrapolation
- Implement online monitoring to landmark models
- Use online monitoring to view instantaneous and evolving SPE values

Optimization of Batch Processes

- Use Model Explorer to explore the operation space of your batch process
- Use Model Optimizer to optimize batch recipes and obtain desired results
- Implement optimization to develop new products
- Understand the latent variable approach for process optimization

Workshop 5: Deploy Online Batch Model

Augment Reliability by Monitoring Equipment Health in Aspen Mtell Studio™ | **MPM126**

This course is an introduction to the next generation of equipment health monitoring in Aspen Mtell Studio. Learn how asset templates can help you quickly unlock insights on your assets' health through Key Performance Indicators (KPIs) and Failure Modes. Use Aspen Mtell Alert Manager to quickly identify likely root causes of equipment issues and mitigate risks.

COURSE BENEFITS

- Monitor plant performance and asset health KPIs
- Develop machine learning agents with asset templates
- Manage agent alerts and integrate them into your maintenance workflow
- Learn how to optimize existing maintenance practices
- Synergize cross-functional team operations

Who Should Attend?

- Reliability/Maintenance/Process Engineers
- Plant/Facilities Supervisors

Prerequisites

Introductory knowledge to Aspen Mtell® is recommended

Suggested Subsequent Courses

MPM127 - Build Agents and KPIs with Asset Templates in Aspen Mtell Studio

AGENDA

Aspen Mtell Builder Overview and User Interface

- Navigate the Aspen Mtell Builder user interface
- Understand the different ways that equipment can be monitored within Aspen Mtell
- Explain the purpose and benefits of each type of monitoring

Manage Assets and Templates

- Understand and explain asset hierarchy
- Fill out asset templates
- Explain the purpose and use for sensor roles
- Review KPIs

Workshop 1: Define Asset with a Template

Strategy and Rule Agents

- Explain condition-based monitoring
- Describe an offline condition
- Understand and display failure modes

Workshop 2: Review a Failure Mode

Machine Learning Agents

- Understand the purpose of a machine learning agent
- Define the prerequisites and evaluate the benefits of a machine learning agent
- Build a machine learning agent

Continued

Augment Reliability by Monitoring Equipment Health in Aspen Mtell Studio™ | **MPM126**

This course is an introduction to the next generation of equipment health monitoring in Aspen Mtell Studio. Learn how asset templates can help you quickly unlock insights on your assets' health through Key Performance Indicators (KPIs) and Failure Modes. Use Aspen Mtell Alert Manager to quickly identify likely root causes of equipment issues and mitigate risks.

Workshop 3: Create a Machine Learning Agent

View Alerts in Aspen Mtell Alert Manager

- Explain the purpose of Aspen Mtell Alert Manager
- Navigate Aspen Mtell Alert Manager to view alerts
- Learn how to properly respond to open alerts
- Identify the likely cause of open alerts

Workshop 4: View Agent Results in Aspen Mtell Alert Manager

Boost and Sustain DMC3 Controller Performance with Remote Monitoring and Aspen Virtual Advisor™ (AVA) | **APC026**

Discover how Aspen APC Remote Monitoring enables enterprise-wide visibility and performance optimization for your DMC3 applications. Learn how to activate Aspen Virtual Advisor (AVA) to enhance application engagement, maximize uptime and drive continuous improvement across your operations.

COURSE BENEFITS

- Acquire and apply skills related to the latest features of AspenTech Advanced Process Control (APC).
- Explore the new Remote Monitoring feature introduced in AspenTech APC V15.
- Learn how to use Aspen Virtual Advisor (AVA) for DMC3™ to evaluate operating scenarios and provide actionable guidance.

Who Should Attend?

Advanced Process Control Engineers/Process Control Engineers/Engineers designing, implementing, or maintaining APC controllers

Prerequisites

Basic knowledge of APC concepts and software recommended

Suggested Subsequent Courses

APC105

AGENDA

Reduce Controller Deployment and Maintenance Efforts with New Aspen DMC3 Features

- Discover new features and capabilities in the latest version of Aspen DMC3 Builder and APC Web Viewer
- Learn about Aspen Virtual Advisor (AVA) and explore its latest features to enhance operational decision making with actionable guidance & realtime augmented intelligence.
- Review Calibrate enhancements for improved model accuracy.

Aspen APC Remote Monitoring for monitoring DMC3 and IQ applications

- Explore the latest functionality APC Remote Monitoring which allows data from DMC3 and IQ applications to be securely pushed from L3 to L4, being visible in a natively read-only APC Web Viewer, and consumable by a L4-Aspen Watch.
- Learn how to install and configure Aspen APC Remote Monitoring for DMC3 and IQ applications.
- Understand certificate configuration and enabling secure communication.

Continued

Boost and Sustain DMC3 Controller Performance with Remote Monitoring and Aspen Virtual Advisor™ (AVA) | **APC026**

Discover how Aspen APC Remote Monitoring enables enterprise-wide visibility and performance optimization for your DMC3 applications. Learn how to activate Aspen Virtual Advisor (AVA) to enhance application engagement, maximize uptime, and drive continuous improvement across your operations.

Workshop 1: Establish communication between Level 3 and Level 4 machines, install certificates, and verify application accessibility in Level 4.

Using Aspen Virtual Advisor to Evaluate Changes, Scenarios and Objectives

- Deep dive into AVA to evaluate real-time operating scenarios and provide actionable guidance
- Learn how to deploy AVA, train operators and experiment with different scenarios using a representative application.

Workshop 2: Enable and deploy an application with AVA, explore AVA features, and run practical scenarios for performance improvement.

Closing the Gap: Optimize Plant Performance with Aspen GDOT™ | GDOT026

Learn how you can close the gap between planning and actual operations with Aspen Generic Dynamic Optimization Technology (GDOT). Improve margins and achieve plant performance objectives by integrating planning, scheduling and advanced process control in closed loop to minimize product giveaway, increase throughput and improve yields.

COURSE BENEFITS

- Gain understanding of Aspen GDOT and its role in dynamic optimization
- Become familiar with the latest developments and capabilities in Aspen GDOT
- Understand the workflow for building and configuring GDOT models in Aspen Unified GDOT
- Learn the key steps involved in deploying GDOT applications online and connecting them with Aspen APC controller
- Get an overview of tools used for monitoring and troubleshooting, like GDOT Watch and GDOT Web.
- Understand how GDOT supports improved unit performance and alignment between planning, scheduling and APC strategies

Who Should Attend?

Advanced Process Control Engineers/Process Control Engineers/Planners/Schedulers

Prerequisites

Basic knowledge of advanced process control, planning and scheduling

Suggested Subsequent Courses

GDOT101

Introduction to Dynamic Optimization using Aspen GDOT

- Leverage Aspen GDOT for streamlined planning and APC alignment to optimize margins
- Learn how Aspen GDOT helps refineries and olefin units achieve production and sustainability goals
- Explore the latest developments and feature enhancements in Aspen GDOT.

Model Building using Aspen Unified GDOT

- Explore the Aspen Unified GDOT workflow, including the use of the latest templates
- Utilize APC model import feature, configure custom calculations, map measurements, and compile/export GDOT applications

Workshop 1: Build GDOT Models for a Crude Unit Using the Latest GDOT Model Templates

Continued

Closing the Gap: Optimize Plant Performance with Aspen GDOT™ | GDOT026

Learn how you can close the gap between planning and actual operations with Aspen Generic Dynamic Optimization Technology (GDOT). Improve margins and achieve plant performance objectives by integrating planning, scheduling and advanced process control in closed loop to minimize product giveaway, increase throughput and improve yields.

Deploying GDOT Applications Online

- Understand the steps involved in deploying GDOT applications
- Deep dive into GDOT-to-DMC3 controller connectivity using APC Gateway

Workshop 2: Deploy a GDOT Crude Unit Application Online

Monitoring and Troubleshooting GDOT Applications

- Gain insights into application monitoring and troubleshooting using GDOT Watch and GDOT Web
- Explore GDOT Watch capabilities and create GDOT Web diagrams

Workshop 3: Deploy GDOT Applications on GDOT Web and Build Web Diagrams

Take Production Planning to the Next Level with Aspen Unified PIMS™: An AI-Augmented Solution | **AUP026**

Dive into Aspen Unified PIMS AI-augmented production-planning solution. In this hands-on training, we will walk you through seamless model setup, scenario generation and closed-loop optimization. Discover how to leverage hybrid first-principles and data-driven models, embed AI-based guidance and integrate planning, scheduling and reconciliation into one collaborative environment.

COURSE BENEFITS

- Gain hands-on experience with the AUP user interface and its key features.
- Explore cutting-edge AI capabilities to boost efficiency and innovation.
- Enhance your day-to-day planning and decision-making with AI-driven insights.

Who Should Attend?

Refinery and Petrochemical Planners. Beginner and Intermediate users of PIMS/Beginner users of AUP

Prerequisites

Basic knowledge of Refinery Planning concepts and petrochemical operations recommended

Suggested Subsequent Courses

AUP101

AGENDA

Introduction to Aspen Unified Planning

- Overview of Aspen Unified -learn about the new functionalities and features (AUP and Workflow)
- Manage user roles and permissions
- Explore PIMS-AO model to AUP model migration process

AUP Flowsheet and Process Submodels

- Introduction to the flowsheet interface
- Explain Data Panels and Sub-flowsheets
- Overview of basic workflows such as updating cases, running cases and visualizing results
- Overview of various AUP submodels types

Workshop 1: Learn how to create a submodel

Overview of Planner's Work Area

- Introduction to Planner's Work Area Configuration

Workshop 2: Create a Planner's Work Area and visualize the results

Troubleshoot AUP Models with Infeasibility Diagnostics

- Learn about Planning analysis tools to efficiently diagnose and validate model structure and solutions

Introduction to Aspen Virtual Advisor™ (AVA)

- Learn how to use AVA, the AI Driven Planning Tool for deeper understanding of Model Results and enhanced profitability.

Continued

Take Production Planning to the Next Level with Aspen Unified PIMS™: An AI-Augmented Solution | **AUP026**

Dive into Aspen Unified PIMS AI-augmented production-planning solution. In this hands-on training, we will walk you through seamless model setup, scenario generation and closed-loop optimization. Discover how to leverage hybrid first-principles and data-driven models, embed AI-based guidance and integrate planning, scheduling and reconciliation into one collaborative environment.

- Discover non-intuitive constraints and Sensitivity analysis to identify the real bottlenecks allowing engineers to make changes that will optimize the right things, safely and with confidence.

Workshop 3: Enable and deploy AVA for your model, leverage AI capability to better understand your results.

AUP Excel Add-In and GraphQL Automation

Streamline and Simplify Refinery Scheduling with Aspen Unified Scheduling™ | AUSO26

Unlock the full power of Aspen Unified Scheduling for integrated planning and scheduling. This training will guide you through automating routine tasks like data reconciliation, first-pass feasible schedule creation and schedule "what-if" analyses. Utilize the latest innovations to streamline refinery operations.

COURSE BENEFITS

- Gain a comprehensive understanding of refinery scheduling from robust model development and flowsheet navigation to real-time event management with Gantt charts. Enhance decision-making through reconciled data, case management, multisite and primary distribution scheduling and leverage AVA for rapid post-optimization insights and sensitivity diagnostics, culminating in fully optimized blend scheduling across the refinery value chain.

Who Should Attend?

Refinery Schedulers

Prerequisites

Experience in refinery and petrochemical operations coupled with a fundamental grasp of refinery scheduling and product blending

Suggested Subsequent Courses

AUS101

AGENDA

Overview of Aspen Unified Scheduling (AUS):

- Introduction to AUS & Workflow- Understanding the new interface and capabilities that improve usability and adoption
- Explore benefits of Integrating Planning & Scheduling – Leveraging integrated planning and scheduling to improve feasibility and reduce rework. Integrating AUP and AUS models to enable consistent, executable schedules
- Using the Catalog feature to standardize models and accelerate deployment across sites

AUS Model Development:

- Designing flowsheets that accurately represent operational constraints
- Configuring multisite models to reflect interdependencies and material flows
- Managing work areas, model data, and settings to support scalable scheduling
- Applying role-based settings to enable collaboration while maintaining governance

Workshop 1: Create and configure an AUS flowsheet aligned with real operating scenarios

Event Creation & Scheduling

- Defining event types and details to drive realistic scheduling outcomes
- Learn about Scheduling process such as process unit scheduling, blend scheduling, single segment pipeline scheduling, etc

Continued

Streamline and Simplify Refinery Scheduling with Aspen Unified Scheduling™ | **AUSO26**

Unlock the full power of Aspen Unified Scheduling for integrated planning and scheduling. This training will guide you through automating routine tasks like data reconciliation, first-pass feasible schedule creation and schedule "what-if" analyses. Utilize the latest innovations to streamline refinery operations.

- Explore latest feature 'Inventory grid work area' to monitor availability and constraints
- Learn how to interpret AUS trends to understand schedule behavior and bottlenecks
- Leveraging case management to compare scenarios and respond to change

Workshop 2: Import and create events, apply scheduling techniques, and evaluate results

Introduction to Aspen Virtual Advisor (AVA)

- Explore use and benefits of AVA to analyze scheduling results and identify improvement opportunities

Maximize Margins with Aspen Unified™ Solutions | **AUO026**

Learn how to maximize margins by integrating planning, scheduling, dynamic optimization and advanced process control (APC) using the Aspen Unified platform. This course focuses on how to achieve operational excellence by aligning plans, schedules and actual outcomes to drive faster and more optimized business results. Explore how Aspen Unified streamlines workflows through automation and simplification, reducing time to value for your organization. Real-world case studies on successful Aspen Unified implementations will provide practical insights into its impact on operations.

COURSE BENEFITS

- Gain awareness and foundational knowledge on using Aspen Unified platform
- Understand how you can efficiently integrate planning, scheduling, production accounting, dynamic optimization, and advanced process control (APC) to achieve optimal operations
- Know how to bring schedule and actual results closer to the optimal plan to drive better business performance.
- Decrease time to value with simplified workflows that are intuitive and efficient for all users

Who Should Attend?

- Planners, Schedulers, Control Engineers, Plant/ Production Managers
- Engineers, and anyone who is involved to drive Operational excellence

Prerequisites

Basic understanding of refinery operations. Understanding of operating LP models is beneficial

Suggested Subsequent Courses

AUP101, AUS101, AURA101, GDOT101

AGENDA

Challenges to improving Production Performance

AspenTech Production Optimization solution

Overview of Aspen Unified

- Key Capabilities
- Homepage Functionalities
- **Demo:** Explore Aspen Unified Homepage
- Industrial AI in Aspen Unified
- Aspen Virtual Advisor™ (AVA)
- Aspen Verify for Planning™

Aspen Unified Planning

- AUP Model Management
- AUP Case Management
- Report & Solution
- Improved Planning workflows

Workshop: Run the cases in AUP and analyze the reports using inbuilt AUP capabilities

Aspen Unified Reconciliation and Accounting (AURA)

- Integrate AURA with Aspen Unified for effective & reconciled production data
- AUP to AURA synergyy

Case Studies and Industry Applications

Drive Business Decision-Making Through Actionable Insights with AspenTech Inmation™ Industrial Data Fabric | **INM026**

Learn how to deploy and configure AspenTech Inmation as a high-performance industrial data-fabric. Understand how AspenTech Inmation underpins reliable, scalable and secure data flows for advanced digital initiatives. Easily connect to diverse data sources, access real-time and historical data.

COURSE BENEFITS

- An introduction to the essential components of AspenTech Inmation and how they work together
- Learn how to connect to external datasources to bring real-time and historical data into your AspenTech Inmation environment
- Learn how to access AspenTech Inmation data from your applications, and how to generate insights with web dashboards

Who Should Attend?

IT/Data Integration Specialists

Prerequisites

None

Suggested Subsequent Courses

• INM101 — AspenTech Inmation: System Administration

• INMW101 — AspenTech Inmation: WebStudio Basic

• INM121 — AspenTech Inmation: Using the Aspentech Inmation IP.21 Server

AGENDA

Introduction to AspenTech Inmation

- Overview of the components and their functions
- Explore possible solutions by combining distributed components
- Installation and Configuration
- Explore various options for installing the component services
- Introduction to AspenTech Inmation DataStudio
- Using AspenTech Inmation DataStudio to create and configure component objects

Workshop 1:

- Install and Configure the Main Components of AspenTech Inmation

Key Concepts

- reating objects to produce data and make calculations using Lua script
- Viewing real-time and historized data
- Monitoring the system with performance counters and the system log

Workshop 2:

Visualize Historized Calculations with the History Trend and History Grid

- Explore Different Connection Options
- Learn about the datasource object and connection options

Continued

Drive Business Decision-Making Through Actionable Insights with AspenTech Inmation™ Industrial Data Fabric | **INM026**

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Workshop 2:

- Visualize Historized Calculations with the History Trend and History Grid
- Explore Different Connection Options
- Learn about the datasource object and connection options

Workshop 3:

- Connect to a Third-Party OPC UA Server with the Datasource Object Consumer Interfaces
- Configuring and connecting to the AspenTech Inmation OPC Server

Workshop 4:

- Set-Up AspenTech Inmation OPC UA Server and Connect with a Third-Party Client
- Connecting with the AspenTech Inmation Web API
- Introduction to AspenTech Inmation WebStudio

Workshop 5:

- Use Simple WebStudio Widgets to Visualize Real-Time and Historical Data

About Aspen Technology

Aspen Technology, now part of Emerson, is a global software leader helping industries at the forefront of the world's dual challenge meet the increasing demand for resources from a rapidly growing population in a profitable and sustainable manner. AspenTech solutions address complex environments where it is critical to optimize the asset design, operation and maintenance lifecycle. Through our unique combination of deep domain expertise and innovation, customers in asset-intensive industries can run their assets safer, greener, longer and faster to improve their operational excellence.

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