

# **Training Course Catalog**

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# **PROCESS ENGINEERING**

#### EAP101: Aspen Plus Process Modeling

Learn steady-state process simulation, process analysis and optimization using Aspen Plus (3 Days, Basic). Prereauisites: None

#### Learning Outcomes:

- Build flowsheet models and summarize basic unit operations.
- Define facilities, materials, utilities and chemical reactions.
- Summarize physical properties.

#### EAP121: Building MS Excel User Interfaces

Learn how to embed and link MS Excel using Aspen Plus (1 Day, Basic). Prerequisites: None

#### Learning Outcomes:

- Integrate Aspen Simulation Workbook with add in tools in MS Excel®.
- Use features of the Aspen Simulation Workbook and publish and deploy models.

#### EAP150: Rigorous Design and Rating of Distillation Columns (New)

Learn how interactively design and rate distillation columns in Aspen Plus (1 Day, Basic). Prereauisites: None

#### Learning Outcomes:

- Discuss column design and rating.
- Do column designing and perform rating studies of a column.
- Use detailed rate-based modeling to understand and improve column performance.

#### EAP2311: Custom Modeler

Learn how to develop equation models with excel using Custom Modeler (3 Days, Basic). Prerequisites: None

## Learning Outcomes:

- Summarize Equation Oriented modeling, steady state / dynamic modes, and stream types.
- Build flowsheet and create sub models along with hierarchy blocks.
- Script, automate, and customize models.

#### EAP2611: Heat Transfer Modeling Using Aspen Plus

Improve performance of heat exchangers in the overall process using Aspen Plus (1 Day, Basic). Prerequisites: Attended EAP101

#### Learning Outcomes:

- Summarize Heat Exchanger Unit Operations.
- Distinguish between the different types of heat exchangers that can be used in Aspen Plus.
- Perform rigorous heat changer design calculations using Aspen EDR.

#### EAP901: Aspen Plus – Dryer Optimization: Minimize Energy Demand of Belt Dryers

Learn how to reduce energy demand using Aspen Plus (0.5 days, Basic).

## Prerequisites: None

- Model a multi-stage bed dryer.
- Optimize the dryer demand to reduce cost.



#### EAP902: Aspen Plus – Improving Product Recovery in Distillation Column

Learn how to perform maximum product recovery using Aspen Plus (0.5 days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Model distillation units and analyze potential process changes.
- Optimize distillation units for maximum product recovery.

#### EAP201: Aspen Plus: Physical Properties for Process Engineers

Learn how to specify and use physical properties using Aspen Plus (2 Days, Intermediate). **Prerequisites:** Attended EAP101

#### Learning Outcomes:

- Specify and use properties in steady-state and dynamic flowsheet simulations.
- Apply Physical Properties, Henrys Law, and Electrolyte Property Methods.
- Use regression and analyze data.

#### EAP208: Aspen Plus: Migration to V8

Learn new engineering features in version 8 using Aspen Plus (1 Day, Intermediate).

#### Prerequisites: None Learning Outcomes:

- \_earning Outcomes:
  - Create simulations in the new user interface.
  - Use activated economics analysis, activated energy analysis, and activated energy analysis.
  - Model solids.

#### EAP250: Distillation Modeling

Learn how to simulate and evaluate model quality using Aspen Plus (2 Days, Intermediate). **Prerequisites:** Attended EAP101

#### Learning Outcomes:

- Use RadFrac models for rating and design and for reporting features.
- Use column analysis and NQ curves for optimization.
- Use reactive distillation, three-phase distillation, and rate-based distillation.

#### EAP251: Aspen-Rate Distillation

Learn how to create accurate simulations of column separations. (1 Day, Intermediate).

#### Prerequisites: Attended EAP101

#### Learning Outcomes:

- Compare the operation of the equilibrium RadFrac model to Aspen Rate Based Distillation.
- Use a Calculator Block to make corrections for tuning parameter adjustments.
- Apply different convergence strategies.

#### EAP252: Pressure Relief Analysis Using Aspen Plus

Learn how to define overpressure systems using Aspen Plus (1 Day, Intermediate).

#### Prerequisites: Attended EAP101

- Define overpressure systems in accordance with API 520, 521, 2000.
- Document the full overpressure analysis.
- Design single or multiple relief valves.



#### EAP281: Aspen Plus: Process Simulation with Aspen Polymers

Learn how to use Aspen Polymers to model polymerization process (3 Days, Intermediate).

Prerequisites: Attended EAP101

#### Learning Outcomes:

- Define complete polymer process flowsheet models.
- Estimate polymer properties and perform regression from experimental data.
- Apply engineering studies and plant data fitting.

#### EAP288: Introduction to Aspen Adsorption

Learn how to build and execute simulations rapidly using Aspen Adsorption (2 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Build simple to advanced flowsheets and run simulations.
- Apply cyclic steady state models to flowsheet.
- Use parameter estimation.

#### EAP289: Aspen Chromatography

Learn how to build and execute simulations rapidly using Aspen Chromatography (2 Days, Intermediate). **Prerequisites:** Attended EAP2311

#### Learning Outcomes:

- Build flowsheets using the batch column and other supporting models.
- Create cyclic processes.
- Create and execute Chromatography.

#### EAP2121: Process Flowsheet Convergence in Aspen Plus

Learn how to develop robust and efficient models using Aspen Plus (1 Day, Intermediate). **Prerequisites:** Attended EAP101

#### Learning Outcomes:

- Discuss sequential module strategy.
- Create simulations to handle tear stream convergence and specify calculation sequence.
- Summarize calculator blocks.

#### EAP2211: Modeling Processes with Equation Oriented Method using Aspen Plus

Learn how to configure, manipulate and solve flows in EO solution using Aspen Plus (2 Days, Intermediate). **Prerequisites:** Attended EAP101

#### Learning Outcomes:

- Manipulate a flowsheet and run simulations.
- Heat integrate your process using the Heater / HX Flux combination.
- Use parameter estimation and data reconciliation for model tuning.

#### EAP2411: Improved Process Operability and Control through Aspen Plus Dynamic Models

Learn how to solve process design and plant operation using Aspen Plus Dynamics (3 Days, Intermediate). **Prerequisites:** Attended EAP101

- Create a flowsheet and run simulations.
- Discuss and create models including: RadFrac, heat exchanger, and reactor models.
- Script, automate, and customize custom models.



EAP2510: C02 Removal Path Using Aspen Plus

#### Learn the steps involved in properly modeling C02 removal processes using Aspen Plus (3 Days, Intermediate). Prerequisites: Attended EAP101 Learning Outcomes: Describe approach for modeling C02 removal using physical solvents. Determine property parameters using data regression and property estimation. • Use electrolyte system modeling. Build and tune rate based distillation models, sensitivity analysis, and flowsheets. EAP2711: Reaction Analysis and Reactor Design using Aspen Plus Learn how to model various reactors and analyze results using Aspen Plus (2 Days, Intermediate). Prerequisites: Attended EAP101 Learning Outcomes: · Model reactors. Calculate reaction rates. Use the Aspen Plus Data Fit tool to estimate and reconcile plant or lab data. EAP2911: Solids Modeling Using Aspen Plus Learn how to model processes containing solids handing equipment using Aspen Plus (2 Days, Intermediate). Prerequisites: Attended EAP101 Learning Outcomes: Model processes containing solids. Determine optimal process conditions for new or existing solids processes. • EAP2980: Modeling of Processes with Aqueous Ionic Solutions Electrolytes and Salts Learn how set up simulations for electrolyte systems using Aspen Plus (2 Days, Intermediate). Prerequisites: Attended EAP101 Learning Outcomes: • Summarize electrolyte capabilities in Aspen Plus and types of components present. Use appropriate reporting options. Use equilibrium based and rate-based distillation modeling along with liquid-liquid equilibrium. EAP301: Real Time Modeling and Optimization Learn how to do real time optimization using the EO strategy in Aspen Plus (4 Days, Advanced). Prerequisites: Attended EAP101 Learning Outcomes: Manipulate a flowsheet and run simulations. Use parameter estimation and data reconciliation for model tuning. ٠ Optimize to maximize plant profit. EPD101: Aspen Batch Process Developer Learn how to model batch data and interpret results using Aspen Batch Process Developer (2 Days, Basic). Prerequisites: None Learning Outcomes: • Use route selection and cost analysis in early development stage. Define facilities, materials, utilities, and chemical reactions,

• Create production plans and recipe.



#### EPD201: Aspen Batch Modeler

Learn how to simulate batch distillation processes using Aspen Batch Modeler (2 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Set up batch distillation for physical properties.
- Use batch distillation in multiple scenarios.
- Use reactor data and models for data fitting and modeling batch reactor with fitted kinetics.

#### EPD213: Aspen Properties: Introduction to Aspen Solubility Modeler

Learn how to evaluate solubility in various solvents using Aspen Solubility Modeler (0.5 Days, Intermediate). **Prerequisites:** Attended EAP201

#### Learning Outcomes:

- Describe NRTL-SAC and electrolyte NRTL-SAC activity coefficient models.
- Summarize how the data regression run type drives Aspen Solubility Modeler.
- Calculate solubility in various solvent types quickly and efficiently.

#### EOP171: Develop and Implement Operator Training Simulator (OTS) using Aspen OTS

Learn Aspen OTS Framework using Aspen Plus Dynamics or Aspen HYSYS Dynamics (2 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Use, configure, and implement Aspen OTS to design operator training simulator.
- Explain the concepts of OPC Server and OPC Client.
- Use plant view resources.

#### EHY101: Aspen HYSYS Process Modeling

Learn how to build and troubleshoot flowsheet simulation models using Aspen HYSYS (3 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Build flowsheet models and summarize basic unit operations.
- Define facilities, materials, utilities and chemical reactions.
- Summarize physical properties.

#### EHY102: Modeling and Troubleshoot Refinery using Aspen HYSYS

Learn how to build and optimize simulations using Aspen HYSYS Petroleum Refining (3 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Build, run, analyze, and optimize process simulations using Aspen.
- HYSYS and Aspen HYSYS Petroleum Refining.
- Summarize refinery reactor capabilities in Aspen HYSYS.

## EHY105: Refining: Operations & Troubleshooting of the Crude Unit & Preheat Train (New)

Learn how to solve common engineering problems using Aspen HYSYS (1 Day, Basic).

## Prerequisites: None

## Learning Outcomes:

• Use specific applications to troubleshoot and perform engineering studies.



#### EHY106: Optimize from the Wellhead to a Gas Processing Facility with Aspen HYSYS (New)

Learn how to optimize using Aspen HYSYS Upstream and Aspen HYSYS (1 Day, Basic). **Prerequisites:** None

#### Learning Outcomes:

• Use the latest features in Aspen HYSY and Aspen HYSYS Upstream for optimization.

#### EHY107: Process Safety with BLOWDOWN Technology and PSV Sizing in Aspen HYSYS (New)

Learn how various simulator functionalities support the process safety using Aspen HYSYS (1 Day, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Use PRF Design & Rating.
- Use Blowdown Valve Design & Rating.

#### EHY121: Building MS Excel User Interfaces

Learn how to embed and link MS Excel using Aspen HYSYS (1 Day, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Integrate Aspen Simulation Workbook with add in tools in MS Excel®.
- Use features of the Aspen Simulation Workbook and publish and deploy models.
- Link models to plant process data.

EHY150: Refinery Process Modeling using Aspen HYSYS and Aspen HYSYS Petroleum Refining

Learn how to embed and link MS Excel using Aspen HYSYS (1 Day, Basic).

## Prerequisites: None

#### Learning Outcomes:

- Use flowsheet models to build models and analyze flowsheet convergence issues.
- Use the following models: Catalytic Reformer, Delayed Cooker, and Visbreaker.
- Use Aspen PIMS for refinery planning and scheduling with Aspen HYSYS.

#### EHY2314: Developing Dynamic Unit Operation Extensions for Aspen HYSYS using VB.NET

Learn VB.NET to implement Dynamic Unit Operation Extension model using Aspen HYSYS (1 Day, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Describe the fundamentals of creating the base code for Dynamic Unit Operation Extension.
- Use the VB.NET environment and implement Dynamic Unit Operation Extension model.
- Optimize the implemented code.

#### EHY2511: Flare Network Design and Rating

Learn how to reduce capital cost and assure the safety of the plant using Aspen HYSYS (2 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

• Identify potential process bottlenecks, and validate the capacity of the flare network.



#### EHY2611: Heat Transfer Modeling Using Aspen HYSYS – EHY2611

Learn how to integrate Aspen HYSYS with heat exchanger modeling software (1 Day, Basic).

Prerequisites: None

Learning Outcomes:

- Compare the different types of heat exchangers with focus on shell & tube and air cooled.
- Embed a rigorous heat exchanger model using the Activated EDR feature.
- Generate physical properties to use in Aspen Exchanger and Rating programs.

#### EHY901: Multi-Stage Compressors – Conducting Operational Safety Studies Using Dynamic Analysis

Learn how to use Aspen HYSYS Dynamics to evaluate scenarios software using Aspen HYSYS (0.5 Days, Basic).

## Prerequisites: None

#### Learning Outcomes:

• Evaluate several scenarios to ensure the compressor is protected in an emergency shutdown.

#### EHY902: Crude Unit Optimization – Debottlenecking Options using Aspen HYSYS

Compare options for increasing crude unit throughput capacity using Aspen HYSYS (0.5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

• Evaluate scenarios to reduce costs or improve the likely outcomes.

#### EHY903: Characterization, Manipulation and Utilization of Petroleum Assays

Learn the modeling techniques for petroleum characterization using Aspen HYSYS (0.5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

Use Petroleum Assay Management tools.

## EHY904: PSV – Improve Pressure Relief Analysis Workflow using Aspen HYSYS

Learn how to use HYSYS Dynamics, HYSYS Safety Environment, and Flare System Analyzer (0.5 Days, Basic).

## Prerequisites: None

#### Learning Outcomes:

 Use Dynamics, Safety Environment, and Flare System Analysis to complete the pressure relief analysis.

#### EHY905: Aspen HYSYS Sulsim – Modeling and Optimizing Sulfur Recovery Process

Learn how to optimize overall Sulfur recovery, and build a tail gas treating section (0.5 Days. Basic). **Prerequisites:** None

- Use Aspen HYSYS and the Sulsim Sulfar Recovery functionality.
- Optimize overall Sulfar recovery.
- Evaluate new process configurations.



EHY130: Modeling Liquefied Natural Gas Plant Using Aspen HYSYS - Upstream

Learn how to use Aspen HYSYS Upstream for Liquefied Natural Gas plant modeling (2 Days, Intermediate). **Prerequisites:** Attended EHY101

#### Learning Outcomes:

- Build a Sulfur Recovery Unit.
- Calculate hydrate formation temperatures and pressures.
- Use the LNG Exchanger operation to simulate multi-pass heat exchangers.

#### EHY202: Aspen HYSYS Advanced Process Modeling Topics

Learn how to apply advanced modeling techniques to enhance flowsheets (2 Days, Intermediate). **Prerequisites:** Attended EHY101

## Learning Outcomes:

- Build a plant model and use LNG Exchanger operation to simulate multi-pass heat exchangers.
- Simulate vessel depressurization and complex relief scenarios.
- Define reaction sets and utilize different types of reactor models.

#### EHY208: Aspen HYSYS: Migration to V8 Topics – EHY208

Become familiar with version 8 using Aspen HYSYS (1 Day, Intermediate). **Prerequisites:** Attended EHY101 **Learning Outcomes:** 

- Discuss improved workflow, plotting capabilities, and new features.
- Use safety analysis environment.
- cUse Assay Management.

## EHY223: Aspen HYSYS Dynamics: Introduction to Dynamic Modeling

Build dynamic models and discovery shortcuts using Aspen HYSYS Dynamics (3 Days, Intermediate). **Prerequisites:** Attended EHY121

#### Learning Outcomes:

- Create dynamic simulations to model real equipment.
- Use PID controllers and Strip Charts.
- Use pipeline modeling options in Aspen HYSYS.

## EHY250: Determine Rapid Depressurization Safety Limits for Design and Rating

Learn how to use the Blowdown Technology to model depressurization (0.5 Days, Intermediate). **Prerequisites:** Attended EHY101

#### Learning Outcomes:

- Discuss the industrial importance of accurate depressurizing simulations.
- Add BLOWDOWN analysis to an existing Aspen HYSY simulation.
- Perform design and rating calculations.

## EHY251: Flare Network Design and Rating

Solve Complex problems using Aspen Flare System Analyzer (2 Days, Intermediate). **Prerequisites:** None

- Summarize the capabilities and Aspen Flare System Analyzer.
- Perform process safety studies.



#### EHY252: Pressure Relief Analysis Using Aspen HYSYS

Learn how to define overpressure systems using Aspen HYSYS (1 Day, Intermediate). **Prerequisites:** Attended EHY101

## Learning Outcomes:

- Define overpressure systems using Aspen HYSYS in accordance with API 250, 251, 2000.
- Document the full overpressure analysis with Aspen HYSYS.

#### EHY2102: Aspen HYSYS Petroleum Refining: Process Modeling and Optimization for Refinery Unit Operations

Learn to build, evaluate, and optimize models using Aspen HYSYS Petroleum Refining (3 Days, Intermediate).

#### Prerequisites: Attended EHY101

#### Learning Outcomes:

- Summarize the capabilities of Aspen HYSYS and Activated Analysis tools.
- Integrate reactors with flowsheet: Reactors, Fluidized Catalytic Cracking (FCC) Reactor, Hydrocracker Reactor.
- Use Aspen PIMS.

#### EHY2311: Developing Automation Solutions for Aspen HYSYS

Use Visual Basic and Excel to create solutions for Aspen HYSYS simulation models (2 Days, Intermediate). **Prerequisites:** Attended EHY101

#### Learning Outcomes:

- Describe capabilities of Aspen HYSYS and User Unit Operation.
- Develop programming style using VS Syntax.
- Use tools such as the HYSYS Type Library, automation objects, VB Debugger, and Macro Language Editor.

#### EHY2312: Create Custom Unit Operations and Kinetic Model Extensions with VB.net for Aspen HYSYS

Learn how to develop custom unit operations using Aspen HYSYS (2 Days, Intermediate).

Prerequisites: Attended EHY2311

#### Learning Outcomes:

- Develop programming style using VB Syntax.
- Use tools such as the HYSYS Type Library, automation objects, and user unit operations.
- Use extensions definition file (EDF) for building kinetic reaction extension and unit operation extensions.

#### EHY2351: Modeling Heavy Oil & Gas Production and facilities using Aspen HYSYS Upstream

Learn new advanced capabilities of Aspen HYSYS Upstream (2 Days, Intermediate).

#### Prerequisites: None Learning Outcomes:

- Summarize the Aspen HYSYS Upstream concepts.
- Use Heavy Oil Characterization.
- Convert steady state into dynamics.

## EAU2831: Introduction to Energy Optimization Using Aspen Utilities Planner

Reduce risk and optimize utility variability using Aspen Utilities Planner (2 Days, Basic).

## Prerequisites: None

- Develop and optimize utilities flowsheet with Excel Interface.
- Minimize the total utilities cost by considering economic, operational and environmental constraints.
- Run multi-period optimization to establish the optimum loads on utility equipment.



## EAU901: Energy Management – Optimizing Site Utilities to Save Energy using Aspen Utilities Planner Learn Energy and Utilities optimization (0.5 Days, Basic). Prerequisites: None Learning Outcomes: Use a pre-built model make decisions to optimize tariff evaluation, manage contracts, and plan investments. EHX101: Design and Rate Shell and Tube Heat Exchangers Learn how to integrate Heat Exchangers with Aspen HYSYS or Aspen Plus (2 Days, Basic). Prerequisites: None Learning Outcomes: Summarize Shell and Tube Heat Exchanger features, calculation modes and geometry. Identify best practices for choosing physical properties for heat exchanger modeling. Rigorously rate a variety of heat exchanger types. EHX131: Heat Exchanger Mechanical Design using Aspen Shell & Tube Mechanical Learn optimizing techniques to save design time and cost using Aspen Shell & Tube Mechanical (1 Day, Basic). Prerequisites: None Learning Outcomes: Summarize Shell and Tube Mechanical features and capabilities. Identify input requirements needed to design a heat exchanger. • Perform the mechanical calculations, and interpret the results. EHX1021: Design and Rate Air Cooled Heat Exchangers Learn the general considerations of Air Cooled Exchangers (1 Day, Basic). Prerequisites: None Learning Outcomes: Summarize Aspen Air Cooled Exchanger features, calculation modes, and capabilities. Discuss the characteristics and applicability of tubular crossflow exchangers. Practice by using the Aspen Air Cooled Exchanger features and capabilities. EHX1031: Design and Simulation of Fired Heaters Using Aspen Fired Heater Learn the fundamentals of rating and simulating a fired heater (1 Day, Basic). Prerequisites: None Learning Outcomes: • Summarize Aspen Fired Heater features and capabilities. Practice by using the Aspen Fired Heater features and capabilities. EHX1041: Introduction to Aspen Plate Fin Exchanger Learn the fundamentals of simulating a plate fin heat exchanger (1 Day, Basic). Prerequisites: None Learning Outcomes: Summarize Aspen Plate Fin Exchanger features and capabilities. Practice by using the Aspen Plate Fin Exchanger features and capabilities.



## EHX1100: Modeling Heat Exchangers Using the Exchanger Design and Rating Suite

Learn how to integrate Heat Exchangers with Aspen HYSYS or Aspen Plus (3 Days, Basic).

## Prerequisites: None

## Learning Outcomes:

- Summarize Shell and Tube Heat Exchanger features, calculation modes and geometry.
- Discuss the characteristics and applicability of tubular crossflow exchangers.
- Practice by using suite features and functionality: Aspen Air Cooled Exchanger, Plate Fin Exchanger, and Fired Heater.

#### EHX2911: Improved Energy Efficiency through Heat Integration

Design better and more efficient heat exchanger networks (2 Days, Basic). **Prerequisites:** EHY101

## Learning Outcomes:

- Summarize Aspen Energy Analyzer features and capabilities.
- Simulate heat exchanger networks.

## EHX901: LNG – Designing and Evaluating the Performance of Air Coolers and LNG Heat Exchangers

Learn how to perform design and rating calculations of air-cooled and LNG heat exchanger (0.5 Days, Basic).

## Prerequisites: None

#### Learning Outcomes:

- Use design and rating calculations of air-cooled and LNG heat exchangers.
- Implement parametric studies using Aspen Simulation Workbook.

## EHX902: LNG – Refinery Exchangers – Designing and Evaluating the Performance of a Preheat Train

Learn Aspen Exchanger Design & Rating with Aspen HYSYS (0.5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

• Overcome the challenges in the design and simulation of CDU heat exchangers.

## EHX903: Reboilers – Designing and Troubleshooting Thermosiphon Reboilers

Perform design and rating calculations using Aspen Simulation Workbook (0.5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Use Aspen Exchanger Design & Rating and its integration with Aspen Plus Simulation Workbook.
- Explore the impact of changing operating conditions.
- Use Reboiler Wizard and its ability to simplify more detailed modeling of reboilers in RadFrac models.

#### EEE901: Develop Comparisons using Aspen Capital Cost Estimator

Learn how to accelerate the decision-making process for evaluating a construction project (0.5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

Improve and accelerate the decision-making process for evaluating the construction methodology for a project.



#### EEE101: Introduction to Capital Cost Estimator

Use capital Cost Estimator to evaluate your company's projects (4 Days, Basic).

#### Prerequisites: None

## Learning Outcomes:

- Define project scope, material, labor costs, buildings, site development, and piping specifications.
- Make detailed adjustments to a project per local area conditions.
- Apply your project knowledge to topics for Contracts, Engineering, Construction, and project schedule.

#### EEE102: Introduction to Aspen Process Economic Analyzer

Learn to develop an economic evaluation and design using Aspen Process Economic Analyzer (3 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Use existing simulation models to evaluate project economics and maximize your return on investment.
- Gather detailed design results by integrating operating cost, capital cost, and schedule.
- Analyze different process alternatives in simulation and determine the most profitable approach.

#### EE201: Aspen Capital Cost Estimator: Advanced Topics

Learn how to build detailed project estimates using Aspen Capital Cost Estimator (5 Days, Advanced). **Prerequisites:** Attended EEE101, EEE103

#### Learning Outcomes:

- Use existing simulation models to evaluate equipment costs and labor requirements.
- Define Contracts Work Scope, unit rates, and user piping envelope.
- Use system documentation for consistent cost estimations.

#### EBE101: Aspen Basic Engineering: End User Basics

Learn how to conduct engineering studies and projects using Aspen Basic Engineering (2 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Create process flow diagram using the Drawing Editor.
- Integrate tools to perform cost calculations and perform detailed heat exchanger design.
- Create P&IDs.

#### EBE201: Aspen Basic Engineering: Project and Administrator Configuration

Learn how to configure ABE to create a customized knowledge base (2 Days, Intermediate). **Prerequisites:** Attended EBE101

#### Learning Outcomes:

- Discuss features, capability, and architecture implementation options of Aspen Basic Engineering (ABE).
- Create class libraries, define datasheets, and create symbols and labels.
- Integrate tools such as the Bridge Application.

# **ADVANCED PROCESS CONTROL**

#### APC100: AspenOne Advanced Process Control – Installation and Configuration

Learn how to deploy the Advanced Control Product suite (2 Days, Basic).

## Prerequisites: None

- Access various functions of Production Control Web Server (PCWS) and Install the AspenWatch Server.
- Migrate APC Software.



## APC101: Intro to Aspen DMCplus for APC Engineers

Learn how Aspen DMCplus and Aspen DMC3 models are developed through step testing (5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Identify characteristics of linear versus nonlinear, dynamic, and empirical models.
- Use DMCplus and DMC3 Models.

#### APC105: Introduction to Aspen Process Controller Builder for APC Engineers

Learn how to troubleshoot typical problems with an Aspen DMCplus or Aspen DMC3 online controller (5 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Identify characteristics of linear versus nonlinear, dynamic, and empirical models.
- Use DMCplus and DMC3 Mode.
- Use Production Control Web Server (PCWS) to interact w / controller.

#### APC120: Intro to aspenOne – Operating and Maintaining Controllers Online

Learn how to model test methods and procedures using DMCplus and DMC3 controller (2 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Identify characteristics of linear versus nonlinear, dynamic, and empirical models.
- Use DMCplus and DMC3 Mode.
- Use Production Control Web Server (PCWS) to interact w/ controller.

#### APC121: Intro to Aspen DMCplus Modeling and Building Controllers for Industrial Processes

Learn how to build applications and calculation modules using DMCplus controllers (3 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Identify characteristics of linear, dynamic, and empirical models.
- Use DMCplus and DMC3 Models.
- Connect online controller to operate a plant.

#### APC125: Modeling and Building Controllers for Industrial Processes

Learn how to model test methods and procedures using DMCplus and DMC3 controller (3 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Identify characteristics of linear versus nonlinear, dynamic, and empirical models.
- Use DMCplus and DMC3 Model.
- Connect online controller to operate a plant.

#### APC150: Achievable Sustainable APC Benefits Using Adaptive Process Control (New)

Learn how to reduce maintenance workload by using Aspen DMC3 (2 Days, Basic).

#### Prerequisites: None

- Run Aspen DMC3 Calibration mode to collect plant step test data.
- Evaluate controller performance using Aspen Watch performance monitoring.
- Improve models through the Adaptive Workflow.



#### APC160: Recipe Management and Process Sequencing

Learn how to create recipes and download to InfoPlus.21 (2 Days, Basic).

## Prerequisites: None

## Learning Outcomes:

- Create Control Recipe from scratch and existing templates.
- Administer Aspen Process Recipe System security.
- Use Production Control Web Server (PCWS).

#### APC170: Intro to Aspen Inferential Qualities

Learn how to use Aspen IQmodel to develop linear steady state inferential predictors (3 Days, Intermediate). **Prerequisites:** Attended APC101

#### Learning Outcomes:

- Develop Aspen IQ models.
- Use PCWS to interact w / controller.

#### APC185: Introduction to Nonlinear Controllers Using Aspen Process Controller Builder

Simulate and tune a nonlinear controller using Aspen Process Controller Builder (3 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Use Aspen Watch support for plant testing.
- Simulate a controller using Production Control Web Server (PCWS).

#### APC210: Aspen Watch Performance Monitor – Real Time Monitoring Controllers Online

Learn to use Aspen Watch to monitor the performance of DMCplus Controllers (3 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Use Aspen Watch support for plant testing.
- Evaluate controller performance using Aspen Watch performance monitoring.

#### APC220: APC Best Practices – Adaptive Processes Control

Become familiar with Aspen DMC3 for APC maintenance and deployment workflows (0.5 Days, Intermediate).

#### Prerequisites: None

#### Learning Outcomes:

- Run Aspen DMC3 Calibration mode to collect plant step test data.
- Evaluate controller performance using Aspen Watch performance monitoring.

#### APC221: APC Best Practices – Controller Tuning and Robustness

Learn Smart Tune and Robustness features using Aspen DMC3 (0.5 Days, Intermediate). **Prerequisites:** None

- Run Aspen DMC3 Calibration mode to collect plant step test data.
- Use Smart Tune to setup pre-defined controller LP strategy.



#### APC230: Aspen DMCplus – APC Project Pretesting Using a Virtual Plant

Learn how to use a virtual plant to execute the pre-testing phase of an APC Project (2 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Discuss APC Project Pretesting.
- Complete an APC pre-testing project.

## APC240: Aspen DMCplus – APC Project Step Testing and Commissioning Using a Virtual Plant

Configure DMCplus Online, Aspen Watch and APC Web Server software (3 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Conduct preliminary plant testing as you would execute the pre-testing phase of an APC project.
- Collect and Extract Data.

#### APC250: Aspen DMC3 – APC Calibrate and Aspen Adaptive Modeling

Learn the fundamentals of Calibrate mode for APC applications (3 Days, Intermediate) **Prerequisites:** Attended APC101, APC105 and APC240

#### Learning Outcomes:

- Configure and tune controllers on the APC builder platform.
- Complete adaptive modeling and commission a DMC3 controller.

# MANUFACTURING EXECUTION SYSTEMS

MES021: Process Analysis Using aspenOne Process Explorer (New)

Learn how to use analytical tools to identify reasons for performance shortfalls (0.5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Incorporate context in analysis to improve problem solving.
- Use ad-hoc events for analyzing continuous processes and performance issues.
- Use assessment tools to monitor production records and equipment performance.

#### MES101: Aspen InfoPlus.21 Real Time Information Management Foundation

Learn how to deploy the Advanced Control Product suite (5 Days, Basic). **Prerequisites:** None

- Summarize Aspen InfoPlus.21 features and capabilities to effectively monitor critical plant data.
- Implement and configure an Aspen InfoPlus.21 system.



#### MES121: AspenOne Process Explorer: Using and Configuring

Learn how to use aspenONE Process Explorer interface to trend process data (3 days, Basic).

#### Prerequisites: None Learning Outcomes:

- Summarize features and capability of aspenOne Process Explorer.
- Customize tend plots to suit your application.
- Specify plots based on statistical analysis of process data.

#### **MES122: Aspen Process Explorer: Using and Configuring**

Learn how to view data from your process using Aspen Process Explorer (1 Day, Basic). **Prerequisites:** None

## Learning Outcomes:

- Customize tend plots to suit your application.
- Specify plots based on statistical analysis of process data.
- Integrate real-time or historic data from your process into Windows desktop programs.

#### MES123: Aspen Calc: Using and Configuring

Learn how to use Aspen InfoPlus.21 without programming (1.5 Days, Basic). **Prerequisites:** Attended MES122

#### Learning Outcomes:

- Build simple and complex calculations that use formulas, Excel, and VB Script.
- Create ad-hoc and share calculations.
- Create and view reports.

#### MES151: Aspen Operations Reconciliation and Accounting (AORA)

Learn how to supervise and maintain an AORA system (3 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Build the AORA model using vessels, pipes, and instruments.
- Import Data and perform AORA database administration.
- Generate reports and automate AORA processes.

#### MES171: Aspen Production Record Manager: Retrieving Batch Data Using the Reporting Tools

Learn the Reporting tools of Aspen Production Record Manager using Aspen InfoPlus.21 (1 Day, Basic). **Prerequisites:** Attended MES122

#### Learning Outcomes:

- Build simple and complex calculations that use formulas, Excel, and VB Script.
- Create ad-hoc and share calculations.
- Create and view reports.

#### MES1200: Calculations and Data Analysis for Engineers

Learn how to make decisions based on the process data stored using Aspen InfoPlus.21 (3 Days, Basic). **Prerequisites:** Attended MES122

- Build simple and complex calculations integrated with Aspen InfoPLus.21 without programming.
- Analyze historic data.
- Configure key performance indicator (KPIs) to monitor unit performance and retrieve plant data into Microsoft Excel.



#### MES201: Aspen SQLplus for Aspen InfoPlus.21: Using and Configuring for Power Users

Learn how to write and run SQL queries using Aspen InfoPlus.21 data (5 Days, Intermediate). **Prerequisites:** Attended MES101

#### Learning Outcomes:

- Use intermediate to advanced SQL statements to view or manipulate data.
- Integrate real-time or historic data.
- Create customized reports.

#### MES205: Aspen InfoPlus.21: System Administration

Learn the best practices for performing an Aspen InfoPlus.21 system upgrade (2 Days, Intermediate). **Prerequisites:** Attended MES101

#### Learning Outcomes:

- Use intermediate to advanced SQL statements to view or manipulate data.
- Create customized reports.
- Optimize the way in which SQL is used for processing.

#### MES222: Building Content for Aspen Roles Based Visualization (RBV)

Enable real-time quality control using RBV (3 Days, Intermediate). **Prerequisites:** None

## Learning Outcomes:

- Discuss RBV capabilities.
- Build RBV content.
- Review security requirements.

#### MES231: Building Content for Aspen Roles Based Visualization (RBV)

Learn how to improve users access to critical information using Aspen RBV (3 Days, Intermediate). **Prerequisites:** Attended MES201

#### Learning Outcomes:

- Create and modify records that support SPC product.
- Implement an SPC system.
- Monitor and report on variables that influence product quality.

#### MES235: AspenOne Process Explorer: Aspen Real-Time SPC: Using and Configuring in aspenOne Process Explorer

# Learn how to reduce manufacturing costs using aspenONE Process Explorer (2 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Use the SPC tools to monitor and improve process quality, as well as reduce manufacturing costs.
- Implement an SPC system.
- Monitor and report on variables that influence product quality.

#### MES261: Aspen Product Execution Manager: Programing Concepts

Learn how to develop an application using an Aspen Production Execution Manager (3 Days, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

• Develop an Aspen Product Execution Manager application.



#### MES271: Aspen Production Record Manager: Configuring the Batch Area and Feed Application

Learn how to prepare and configure a Batch system (2 Days, Intermediate).

#### Prerequisites: Attended MES171

#### Learning Outcomes:

- Describe the functional design, architecture and main features of Aspen Production Record Manager (APRM).
- Configure Batch Feed Application.
- Use Aspen Process Explorer to examine both Ad Hoc and Online Batch Real-time SPC chart.

#### MES275: Aspen Batch and Event Extractor: Transferring Data from Batch Execution Systems

Learn how to populate tables from your batch execution system (1 Day, Intermediate).

## Prerequisites: None

#### Learning Outcomes:

- Populate Aspen Production Record Manager tables with data from your batch execution systems.
- Create, schedule, test, and deploy configuration rules.
- Monitor execution progress and verify that batches have been created.

#### MES311: Aspen InfoPlus.21 Applications Development

Learn how to tailor Aspen InfoPus.21 records to fit your process (5 Days, Advanced). **Prerequisites:** Attended MES201

#### Learning Outcomes:

- Summarize how the historian works.
- Implement advanced features and implement role based security for Aspen InfoPlus.21 and client applications.

#### MES361: Aspen Production Execution Manager - Administration

Learn how to use the Production Execution Manager Web Server (2 Days, Advanced).

#### Prerequisites: None

- Create and assign roles, permissions, workstations, and workstation roles.
- Use appropriate Aspen Production Execution Manger modules to create and track orders.
- Use the Production Execution Manager Web Server.



# **PETROLEUM SUPPLY CHAIN**

RPA100: Essential PIMS Concepts and Economic Analysis for Managers & Economists

Learn how to use the report data to perform economic evaluations using Aspen PIMS (4 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Analyze and interpret information for an executed model and develop Linear Programming structure.
- Perform economic evaluations.
- Use PIMS Assay Management.

#### **RPA101: Aspen PIMS: Introduction to Refinery Planning**

Learn to build refinery planning models in PIMS to generate optimum plans (5 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Develop Linear Programming (LP) structure.
- Use data tables, case stacking, and product blending required to build and maintain a model.
- Use PIMS Assay Management, PIMS Miscellaneous Tables, and Aspen PIMS Analytics.

#### **RPA102: Introduction to Aspen PIMS for Petrochemical Planning**

Learn to build petrochemical planning models in PIMS to generate optimum plans (3.5 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Build petrochemical planning models to generate optimum plans.
- Develop Linear Programming (LP) structure.
- Use structures for developing typical petrochemical process units.

#### RPA135: Economic Optimization of Distribution Networks using Aspen Petroleum Supply Planner

Learn how to use Aspen MPIMS to solve planning problems using Aspen MPIMS (4 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Summarize the functionality of Aspen Petroleum Supply Planner and basic Linear Concepts.
- Solve problems using Aspen Petroleum Supply Planner.

RPA150: Deliver Refinery Planning Results through Industry Best Practices (New)

Learn PIMS / PIMS-AO best practices (1 Day, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Learning Outcomes:
  - Troubleshoot common modeling mistakes
  - Solve problems using PIMS-AO

#### **RPA153: Aspen Report Writer for Aspen PIMS**

Build reports using PIMS, Aspen Petroleum Scheduler and Aspen Multi-Blend Optimizer (1 Day, Basic). **Prerequisites:** None

- Use the data functions using different data sets.
- Build Report Writer templates to generate reports in Excel format.



#### RPA206: Multi-Period Refinery Modeling with Aspen PPIMS

Learn how to build and analyze a multi-period LP models using Aspen PIMS (2 Days, Basic) **Prerequisites:** None

## Learning Outcomes:

- Explain the differences between non-periodic and periodic models.
- Transfer inventory from period-to-period.
- Control blending recipes across multiple periods.

#### **RPA207: Multiple Plant Planning with Aspen MPIMS Users**

Learn how to use Aspen MPIMS to solve planning problems using Aspen MPIMS (2 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Discuss how Aspen MPIMS is used to link multiple single plant Aspen PIMS models.
- Use various tables to evaluate models and transfer materials into local plants.
- Summarize global and local reports.

#### RPA201: Aspen PIMS: Solving Refinery Planning Problems

Learn how to model and interpret sophisticated plant relationships using Aspen PIMS (5 Days, Intermediate).

#### Prerequisites: Attended RPA101

#### Learning Outcomes:

- Implement real-world plant into your Aspen PIMS planning model.
- Identify & resolve problems that may hinder a planner's productivity.
- Perform common economic evaluations.

#### RPA208: Aspen PIMS platinum and Assay Manager for Experienced Aspen PIMS Users

Learn how to customize Aspen PIMS Platinum and modify assay data (1 Day, Intermediate). **Prerequisites:** None

#### Learning Outcomes:

- Run a case using Aspen PIMS Platinum Case Runner.
- Execute a Spot Crude Evaluation using Aspen Assay Management.
- Modify assay data using Aspen Assay Management.

#### **RPA221: Aspen PIMS: Advanced Optimization Features**

Learn to troubleshoot solutions inherent to non-linear optimization problems (2 Days, Intermediate). **Prerequisites:** Attended RPA101

#### Learning Outcomes:

- Execute different Global Optimization procedures.
- Set Up and run High Performance Computing architecture.
- Add and edit non-linear formulas to model.

#### RPA301: Aspen PIMS: Advanced Refinery Planning

Learn how to troubleshoot problems and use PIM's non-linear functionalities (5 Days, Advanced). **Prerequisites:** Attended RPA201

- Model rigorous blending.
- Use non-linear functionalities.
- Perform Solution Analysis using Aspen PIMS-Advanced Optimization tool.



#### RBS101: Aspen Petroleum Scheduler: Using Models for Daily Scheduling

Learn how to use Aspen Petroleum Scheduler effectively for daily scheduling operations (2 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Discuss refinery scheduling management issues.
- Build a process flowsheet and simulate a refinery model.
- Integrate products such as Aspen Report Writer, Refinery Report Wizard, and Excel Integration (EIU).

#### RBS121: Aspen Petroleum Scheduler: Building and Using Models

Learn how to setup processes using Aspen Petroleum Scheduler (5 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Part 1: Use Petroleum Scheduler to build a model and schedule the refinery operations.
- Part 2: Model solutions for both common and unique configuration and schedule logic problems.

#### RBS131: Aspen Refinery Multi-Blend Optimizer: Blend Planning and Scheduling

Learn how to build a model for seamless scheduling and optimization of daily blend activities (2 Days, Basic).

## Prerequisites: None

#### Learning Outcomes:

- Identify the planning, scheduling and blending integrated work process.
- Configure and build an MBO model with all the necessary components to run the optimizer.

#### RBS901: Using Aspen Petroleum Scheduler for Crude & Process Unit Scheduling

Learn how to use Aspen Petroleum Scheduler in this hands-on workshop (0.5 Days, Basic).

## Prerequisites: None

## Learning Outcomes:

- Perform crude and process unit scheduling.
- Import daily inventories and events for the "Roll Forward" process.
- Generate reports using customizable report wizard templates.

# SUPPLY CHAIN MANAGEMENT

#### SCM121: Using Aspen Petroleum Scheduler for Crude & Process Unit Scheduling

Learn how to build or modify a new scheduling model for plants using Aspen Plant Scheduler (3 Days, Basic)

#### Prerequisites: None

#### Learning Outcomes:

- Build models that manufactures or packages basic chemicals or polymers.
- Configure an Aspen Plant Scheduler model by following the steps.

#### SCM201: Introduction to aspenOne Supply Chain Management V8 for Modelers

Learn the new configuration steps using aspenONE Supply Chain Management (Aspen SCM) (4 Days, Basic).

#### Prerequisites: None

- Use XML programming.
- Use Trace functionality
- Review best practices to upgrade



#### SM905: Building a Planning Model

Learn the new configuration steps using aspenONE Supply Chain Management (Aspen SCM) (3 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Use a business problem through this course to: build and solve an LP model and build reports.
- Automate model maintenance and execution.
- Create and execute macros, solve mixed integer programming, and use scenario-based planning.

#### SM906: Configuring aspenOne Supply Chain Management Applications

Learn the basics of aspenONE Supply Chain Management (Aspen SCM) (4 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Manipulate data via commands, macros, and rules.
- Design user interfaces via dialogs, graphs, menus, workspaces and reports.
- Use application basics such as utility programs, case size management, and security.

#### SM908: Configuring the Aspen Demand Manager CAP

Learn the basics of Aspen Demand Manger CAP (3 Days, Basic). **Prerequisites:** None

## Learning Outcomes:

- Discuss business issues and how demand and supply planning process can solve the issues.
- Run reports.
- Configure forecast metrics and collaborate forecasting.

#### SCM912: Implementing Aspen Supply Planner

Learn the basics of Aspen Supply Chain Planner (2 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Define time periods and specify correct optimizer.
- Set up data maintenance, model generation, model optimization, scenario creation, and analysis.
- Discuss how changes to the LP formulation impact other Supply Planner structures.

#### SM913: Using Aspen Supply Planner

Learn how to use Supply Planner efficiently for business planning (2 Days, Basic)

#### Prerequisites: None

#### Learning Outcomes:

- Discuss examples of how Aspen Supply Planner can help with planning issues.
- Generate and publish a plan.
- Discuss plan analysis including bottleneck analysis and "what if" analysis.

#### SM915: Implementing Aspen Collaborative Forecasting

Learn the basics of Aspen Collaborative Forecasting application (2 Days, Basic)

#### Prerequisites: Attended SM908

#### Learning Outcomes:

- Discuss business issues and how Collaborate Forecasting can solve the issues.
- Use the Aspen Collaborative Forecasting Web Based Application.
- Discuss main stages of implementation and how to manage security along with operation.

# **ASSET PERFORMANCE MANAGEMENT**



#### AAA101: Monitor Distillation Column Operation to Predict and Prevent Failures (New)

Learn to predict and prevent column failures using Aspen Column Analytic (1 Day, Basic). **Prerequisites:** Attended SM908

#### Learning Outcomes:

- Describe RadFrac.
- Model a C2 splitter.
- Use Aspen Asset and Aspen Column Analytics.

#### AAA102: Early Failure Detection using Pattern Matching, Root Cause Analysis and Empirical Modeling (New)

Learn how to monitor and optimize asset performance using Aspen Column Analytic (1 Day, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Identify Data Trends with Aspen Pattern Matching.
- Build a distillation model based on empirical data.

#### AFR101: Introduction to Aspen Fidelis Reliability

Learn how to generate predictions of future performance using Aspen Fidelis Reliability (3 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Discuss the fundamentals of asset management, system engineering, reliability modeling.
- Build simple to medium complexity models.
- Change basic inputs, view results and customize any model for specific requirements.

#### AFR150: Maximize Plant Performance using Reliability Analysis (New)

Learn how to generate predictions of future performance using Aspen Fidelis Reliability (3 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Discuss the fundamentals of making economic cases to drive decisions.
- Identify system limitations.

#### APR101: Aspen Mtell Previse: Deploy & Use

Learn how to stop machines from breaking down and to last longer using Aspen Mtell Previse (3 Days, Basic).

#### Prerequisites: None

#### Learning Outcomes:

- Perform conditioning and analysis of time-series sensor data.
- Build and deploy advanced condition monitoring strategies.
- Implement Operator Maintenance Advisory capabilities enabling operators to track open work orders.

#### PMV101: Optimize Plant Performance using multivariate data analysis

Learn how to use Aspen ProMV to improve understanding of key process relationships (2 Days, Basic). **Prerequisites:** None

- Use multi-block modelling to model your process.
- Identify key contributors to poor process performance.
- Optimize process performance.



## PMV121: Optimize Batch Process Performance using multivariate data analysis

Learn how to relate time-varying process data using Aspen ProMV (1 Day, Basic). **Prerequisites:** None

Learning Outcomes:

#### Learning Outcomes:

- Use multi-block modelling to model your batch process.
- Identify key contributors to poor process performance for batch processes.
- Optimize process performance for batch processes.

# LICENSE MANAGEMENT

#### SLM101: Aspen Software License Management and Deployment

Learn the installation and configuration process (2 Days, Basic). **Prerequisites:** None

#### Learning Outcomes:

- Explain the purpose and requirements of Software License Manager.
- Install and configure a license server along with the SLM client tools.

## **Aspen Dynamic Optimization**

GDOT101: Fundamentals of Aspen Generic Dynamic Optimization Technology

Learn the fundamentals of GDOT (3 Days, Basic). **Prerequisites:** None

- Use typical Aspen GDOT applications in petroleum refining and bulk chemicals
- Configure applications using standard templates and connect to OPC server (online)
- Use best practices for implementing Aspen GDOT applications as well as sustaining benefits