

Training Course Data Sheet	
<h1>Aspen Orion XT™ Essentials</h1>	Course Number: SP875
	Duration: 5 days
	CEUs Awarded: 3.5
	Level: Introductory

<p>Objectives</p> <p>The course is divided into two parts:</p> <ul style="list-style-type: none"> • PART I leads you step-by-step through building a model of a medium conversion refinery and scheduling the refinery operations in Aspen Orion • PART II provides instruction on modeling solutions for both common and unique configuration and scheduling logic problems <p>Course Benefits</p> <ul style="list-style-type: none"> • Set up your processes in Aspen Orion and observe the following benefits: <ul style="list-style-type: none"> - Increased throughput - Improved block switching - Reduction of quality giveaway - Elimination of crisis decision making - Better control over inventories - Reduced demurrage - Ability to evaluate special opportunities 	<p>Who Should Attend</p> <ul style="list-style-type: none"> • Course is designed for Aspen Orion model administrators and/or schedulers supporting the system <p>Approach</p> <ul style="list-style-type: none"> • Instruction on basic topics • Instructor-guided demonstrations of features • Hands-on exercises • A comprehensive training manual <p>Prerequisites</p> <ul style="list-style-type: none"> • Microsoft Excel proficiency • General knowledge of Microsoft Access • Awareness of the interaction between refining technology operations and planning is strongly recommended
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Aspen Orion XT™ Essentials Course Agenda

Part I – Essential Aspen Orion XT

Day 1

- Introduce Aspen Orion and review how it uses data and variables
- Introduce model elements, including crudes, assays, properties, streams, tanks, pipelines units
- Understand how the Aspen Orion Simulator simulates refinery behavior over a set period of time
- Learn the model settings in Aspen Orion
- Learn about cases and states
- Look at the graphical representation of the material balance for an Aspen Orion model through the Flowsheet Interface and Editor
- Use the Flowsheet Editor to graphically build and modify an Aspen Orion model

Day 2

- Create user-defined units to define calculations through Microsoft Excel
- Create Calc Units with programmable logic written in the AspenCalc programming language
- Practice building and simulating a refinery model
- Use the Events Interface for scheduling the refinery, displaying events in a Gantt chart format and displaying inventories and properties on a Trend chart

PART II – Aspen Orion XT Modeling and Logic Techniques

Day 3

- Perform exercises in scheduling a variety of event types
- Optimize individual blends based upon an assigned component prices or based upon target property values
- Learn how to publish a schedule to the results database
- Learn how Aspen Orion facilitates the overall planning and scheduling work process

Day 4

- Advanced Modeling and Logic Techniques
 - Model complex assays and property data
 - Set up crude unit operations logic
 - Configure complex process unit modeling, including multi-stage units, integrated units, reversible-order units
 - Implement feed and rundown control logic
 - Set up inventory representation and control, including tank services and switches and inventory control methods
 - Implement User Calcs for event scheduling

Day 5

- Orion Excel Emulator (OXE)
- User Calc
- Automation and LP COM
- PIMS Orion Integration
- SQL Server and Oracle Database
- Reporting with Report Writer
- Model Management and Maintenance

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