

Training Course Data Sheet		
PME201 <b>Aspen SQLplus for Aspen InfoPlus.21:            Using and Configuring for Power Users</b>	Course Number:	<b>PME201</b>
	Duration:	<b>5 days</b>
	CEUs Awarded:	<b>3.5</b>
	Level:	<b>Intermediate</b>

<p><b>Former Course Title/Number</b></p> <p>This course was previously known as Essential Aspen SQLplus® for Aspen InfoPlus.21® Power Users, MM436</p> <p><b>Objective</b></p> <ul style="list-style-type: none"> <li>• Be able to write and execute SQL queries to maintain, view, or manipulate Aspen InfoPlus.21 data in a flexible way</li> <li>• Integrate real-time or historic data from Aspen InfoPlus.21 with other data sources efficiently</li> <li>• Be able to configure versatile reports, including custom client-side reports using the Aspen SQLplus Reporting Tool</li> <li>• Become able to develop or maintain a SQL-based application for Aspen InfoPlus.21</li> <li>• Optimize the way in which SQL is used for processing within AspenTech real-time databases</li> <li>• Understand the benefit of using Aspen SQLplus to automate many mundane tasks</li> <li>• Organize data more effectively for users of desktop clients such as Excel</li> <li>• Be able to utilize COM enabling features</li> <li>• Learn how to use the debug tools effectively</li> </ul> <p><b>Course Benefits</b></p> <ul style="list-style-type: none"> <li>• Reduce the time and effort required to implement and maintain Aspen InfoPlus.21 applications</li> <li>• Using SQL to populate your database saves time and effort – this course shows you how</li> <li>• Improve the performance of your existing system by using SQLplus efficiently</li> <li>• Versatile reporting means better informed decision making by integrating many data sources</li> <li>• Easily transfer your skills to other SQL vendors and organizations</li> </ul>	<p><b>Who Should Attend</b></p> <ul style="list-style-type: none"> <li>• Users who have no SQL skills yet, but who want to learn what it has to offer and how it can help them to access InfoPlus.21 data</li> <li>• Users who already have a basic understanding of SQLplus and who want to extend their knowledge to include more advanced topics and features</li> <li>• Users who understand the basics of Aspen SQLplus and who want to create simple applications or to configure reports</li> <li>• Engineers who are very familiar with SQL, but have not used it within the context of an InfoPlus.21 database</li> <li>• Existing or prospective system integrators and database system administrators</li> </ul> <p><b>Approach</b></p> <ul style="list-style-type: none"> <li>• Interesting and relevant course material taught by knowledgeable and friendly instructors; covers all versions including v2006.5</li> <li>• In-depth discussion on the most important Aspen InfoPlus.21 specific extensions to the SQL language</li> <li>• Frequent hands-on exercises, featuring examples relevant to a plant information environment, used throughout the course to illustrate language features, useful utilities, and application ideas</li> <li>• Access to other remote databases using ODBC also is covered in this course</li> </ul> <p><b>Prerequisites</b></p> <ul style="list-style-type: none"> <li>• Some knowledge of InfoPlus.21 database concepts is expected. Prior completion of the PME101 Aspen InfoPlus.21 Aspen InfoPlus.21: Real Time Information Management Foundation Course will greatly enhance the value of this course</li> </ul>
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## PME201 Aspen SQLplus for Aspen InfoPlus.21: Using and Configuring for Power Users Course Agenda

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### Day 1

- Introduction and Overview, Architecture
- Use Aspen SQLplus Query Writer to construct simple queries
- Construct SQL SELECT queries: syntax rules; output formatting, including sorting
- Filtering data with WHERE clause: specify conditions and time periods to search; use wildcards for “fuzzy” search characters
- SQL Functions and Expressions: perform calculations and use SQL functions
- Text Manipulation: read a text file as a SQL table; extract data from text files
- Creating reports: formatting options, group data by category, web-based reporting tool
- Calculate column or section statistics

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### Day 2

- Working with data sets: Group functions
  - Record based SQL
    - Integrate SQL tightly with the database
    - Schedule queries or execute them upon database event triggers
    - Improve execution speed using compressed queries
  - Modify database values using INSERT, DELETE, UPDATE, and SELECT INTO
  - Protecting the database from unauthorized modification
  - Create and modify Aspen InfoPlus.21 role based security; view existing security permissions
  - Read and extract data from text files
  - Explore the SYSTEM command
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### Day 3

- Write simple programs using Aspen SQLplus programming language extensions
- Advanced Procedural SQLplus: user-defined functions; stored procedures and exception handling
- Summative Lab combining skills learned in previous sessions
- Uses of temporary tables

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### Day 4

- Working with the Debug tools to find errors
- Aspen InfoPlus.21 extensions to SELECT statements : Record and Field Indirection; Pseudo columns and Pseudo tables
- Using Parameters and Macros
  - Create generic queries
  - Use Macro feature for text substitution
- Subquery conditions and Tables
- Joins and Combined Queries
- Basics of creating Views; creating new views, benefits of Views

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### Day 5

- Accessing Remote Databases
    - Configure/use Open Access Modules
    - ODBC server and client configuration
  - Examples including from Microsoft Access and from Visual Basic
  - Extended Summative Lab 2
  - Accessing the COM Interface
  - Hints and Tips
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