

# Sybase Advanced Transact-SQL (5 Days) CTI 204

*This course provides a variety of topics to help participants develop efficient code and incorporate more advanced functionality. Participants will learn to apply case logic, utilize bcp (bulkcopy) and apply a methodology for stored procedure development. Exercises and lab sessions reinforce the learning objectives and provide participants the opportunity to gain practical hands-on experience.*

Required Prerequisites: Familiarity with Relational Database Management Systems (RDBMS) concepts, proficiency in standard SQL.

Minimum hardware requirements (per student): 500 MHz Pentiums (or comparable), OR Sun Solaris workstations with 512 MB RAM and 2 GB free hard disk space. Internet access.

Software requirements: Sybase ASE 12.5 or later. Sun's Java Development Kit (JDK) 1.2 or later. Windows NT or later, or Solaris 2.8 or later.

Microsoft PowerPoint and Internet access on Instructor's workstation for presentation purposes.

## **Module 1: Formatting Results**

- Formatting Numbers and Characters
- Using Column Format Options
- Dividing a Report into Subdivisions
- Using Temporary Views for Reporting
- Understanding and Using Variables in Reports
- Customizing Headers and Footers
- Interactively Defining Variables

## **Module 2: Dates and Functions**

- Date Formats
- Storing and Retrieving Dates
- Creating and Invoking Functions
- Date Functions

## **Module 3: Locking**

- Implicit Locking
- Explicit Locking
- Row and Table Locking
- Statements that Implicitly Implement Locking
- How Locking Affects Transaction Management

## **Module 4: Case Logic**

- Overview of the Case Statement
- Using the Case Statement to Simplify Queries
- Using the Case Statement to Optimize Code
- Using the Case Statement to Convert Data among Different Formats

## **Module 5: Cursors**

- Implicit and Explicit Cursors
- Cursors and Iterative Loops
- Cursors and Parameters
- Cursors that Lock Records for Update

## **Module 6: Joins and Subqueries**

- Simple Inner Joins
- Complex Outer Joins
- Creating Custom Subqueries
- Correlated Subqueries
- Multiple-Column Subqueries

## **Module 7: Working with Numbers**

- Numeric Data Types
- Numeric Functions
- Converting Data To and From Numeric Formats

## **Module 8: Planning Stored**

### **Procedures**

- Structure of Stored Procedures
- Benefits of Stored Procedures
- Architecture and Invocation of Stored Procedures

## **Module 9: Building Stored**

### **Procedures**

- Stored Procedures and Arguments
- Handling Expected Errors
- Trapping Unexpected Errors

## **Module 10: Optimizations**

- Optimizing SELECT Statements
- Optimizing Procedures
- Other Optimizations

## **Module 11: Bulk Copy Utility (BCP)**

- Overview of BCP
- BCP Options
- Interactive Mode vs. Batch Mode
- Copying Data Out to an Operating System File
- Copying Data In from an Operating System File
- Using Format Files
- Using Error Files
- Interactions with a Network
- BCP and Data Integrity

## **Module 12: Review and Summary**