

**Course Description:** This course introduces students to the new features in Oracle Database 10g Release 2. Students learn how to use new features to increase database availability, simplify database performance monitoring and tuning through the use of Oracle Database 10g Advisors, and offer simplified database manageability. The course also covers security changes.

**Who Should Attend:** This course is for Database Administrators, Data Warehouse Administrators, Database Designers, Project Managers, Sales Consultants, Support Engineers, and Technical Consultants.

**Prerequisites:** Students should have taken 9i DBA Fundamentals, Oracle9i Database Administration Fundamentals I, Oracle9i Database Administration Fundamentals II, and Oracle9i Database: New Features for Administrators.

**Benefits of Attendance:** Upon completion of this course, students will be able to:

- Use Database Control
- Proactively monitor the database
- Increase data availability
- Implement Automatic Storage Management
- Manage Metric Baselines
- Simplify Instance Configuration
- Use Data Pump Export and Import
- Configure the Scheduler
- Use the Automatic Workload Repository
- Manage Services
- Create Bigfile and SYSAUX Tablespaces
- Create Hash-Partitioned Global Indexes
- Create Compressed Backup sets in RMAN
- Configure Flashback Database

## Course Outline:

### Installation

#### Server Configuration

SYSAUX and DBCA  
Enterprise Manager: - Command line interfaces: emctl/emca  
Database Cloning  
Database Feature Usage  
Managing Policies  
Response File Improvements  
Policy Framework  
Blackouts

#### Data Pump, SQL\*Loader, and External Tables

Data Pump: General Architecture  
Data Pump Direct Path Considerations  
Data Pump Utility: Interfaces and Modes  
Data Pump Job Monitoring Views  
Data Pump Import Transformations  
Using EM to Monitor Data Pump Jobs  
Loading Data From Flat Files Using EM  
External Table Parallel Populate Operation

#### Database and Tablespace Data

**Movements**  
Cross-Platform Transportable Tablespaces  
Minimum Compatibility Level  
Transportable Tablespace Procedure  
Dynamic Performance View Changes  
Using Enterprise Manager to Transport Tablespaces  
Transportable Database  
Tablespace Repository

#### Automatic Management

Automatic Database Diagnostic Monitor  
Retrieving ADDM Reports Using SQL and EM  
Automatic Shared Memory Management (including streams pool)  
SGA Advisor  
Automatic Optimizer Statistics Collection  
Locking Statistics  
Automatic Undo Retention Tuning  
Automatically Tuned Multiblock Reads

#### Manageability Infrastructure

Automatic Workload Repository Data  
Active Session History  
AWR Snapshot Baselines and Purging Policy  
Server-Generated Alerts  
Metric and Alert Views

Job Scheduler Concepts  
DBCA and Automated Tasks  
Dictionary Changes

#### Managing Metric Baselines

The Cyclic Nature of Workloads  
Thresholds and Metric Baselines  
Enable Metric Baselineing  
Set Adaptive Alert Thresholds  
Create Static Metric Baselines  
Classification of Eligible Metrics  
Configure Normalization Metrics

#### Application Tuning

Automatic Statistics Gathering  
Enhanced Query Optimization  
Using Enterprise Manager to Gather Dictionary Statistics  
Automatic SQL Tuning  
SQL Tuning Loop and Advisor  
Concurrency Wait Class: Drill Down  
Duplicate SQL page

#### System Resource Management

Database Resource Manager  
Setting Idle Timeouts  
Switching Back to the Initial Consumer Group at End of Call  
Creating a Mapping Using Database Control  
Using the RATIO Allocation Method  
Monitoring the Resource Manager Using EM  
Switching Plans at Scheduler Window Boundaries

#### Automating Tasks with the Scheduler

Privileges for Scheduler Components  
Creating a Scheduler Job, Job Class, and Window  
Managing Jobs, Programs, Schedules, Windows, and Priority  
Job chains  
Using events

#### Space Management

Tablespace Space Usage Monitoring  
Shrinking Segments  
Automatic Segment Advisor  
Fast Ramp-Up  
Sorted Hash Cluster  
Segment Metadata Dump and Verification

#### Improved VLDB Support

Create and maintain bigfile tablespaces  
Interpret ROWIDs referencing bigfile

tablespaces  
Create temporary tablespace groups  
Create list-partitioned index-organized tables  
Create hash-partitioned global indexes  
Partitioned IOT Enhancements  
Skipping Unusable Indexes  
Bitmap Index Storage Enhancements

#### Backup and Recovery Enhancements

New Backup and Recovery Strategy  
Flash Backup and Recovery  
Best Practices for the Database and Flash Recovery Area  
Backup Maintenance  
Implementing Fast Recovery  
Automated Instance Creation and TSPITR  
RMAN Command Changes  
Setting Duration and Throttling Option

#### Oracle Backup

Installation  
Implement the Oracle suggested strategy  
RMAN and Oracle Backup  
Database Backup/restore to tape  
Install Oracle Backup (CLI)

#### Flashback Any Error

Flashback Database and Drop  
Recycle Bin  
Resource optimized DROP TABLE...PURGE for partitioned tables  
Guaranteed Undo Retention  
SCN and Time Mapping Enhancements  
Restore Point Usage

#### General Storage Enhancements

SYSAUX Tablespace and Occupants  
Tablespace Rename  
Default Permanent Tablespace  
Designating a Default Permanent Tablespace  
Copying Files Using the Database Server  
Redo Logfile Size Advisor

#### Automatic Storage Management

ASM: Key Features and Benefits  
ASM Instance Creation  
Accessing an ASM Instance  
Starting Up and Shutting Down an ASM Instance  
ASM Disk Group and Files  
Migrate Your Database to ASM  
ASM and XML DB

#### Maintaining Software

Oracle Database 10g Upgrade Paths  
Pre-Upgrade Utility Enhancements  
DBUA Advantages  
New Post-Upgrade Status Utility  
Recompiling Invalid Objects  
Performing the Manual Upgrade  
OPatch Utility  
Support for ASM only upgrade

#### Security

Virtual Private Database enhancements  
Policy Types  
Enhanced Enterprise User Auditing  
Transparent Data Encryption  
Enhanced Proxy Capabilities  
Username and Password in Wallet  
OS Audit in XML format  
Connect role change

#### Services

#### Miscellaneous New Features