**CIS 69.54B Course Outline as of Fall 2002**

# CATALOG INFORMATION

Dept and Nbr: CIS 69.54B Title: ORACLE SQL, ADVANCED
Full Title: Oracle SQL, Advanced
Last Reviewed: 6/10/2002

| Units | | Course Hours per Week | | Nbr of Weeks | Course Hours Total | |
|---|---|---|---|---|---|---|
| Maximum | 1.50 | Lecture Scheduled | 2.00 | 8 | Lecture Scheduled | 16.00 |
| Minimum | 1.50 | Lab Scheduled | 0 | 8 | Lab Scheduled | 0 |
| | | Contact DHR | 3.50 | | Contact DHR | 28.00 |
| | | Contact Total | 5.50 | | Contact Total | 44.00 |
| | | Non-contact DHR | 0 | | Non-contact DHR | 0 |

Total Out of Class Hours: 32.00 Total Student Learning Hours: 76.00

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|---|---|
| Title 5 Category: | AA Degree Applicable |
| Grading: | Grade or P/NP |
| Repeatability: | 00 - Two Repeats if Grade was D, F, NC, or NP |
| Also Listed As: | |
| Formerly: | |

**Catalog Description:**
This class will provide students with a thorough understanding of advanced features of Oracle database structure, administration and PL/SQL programming access and manipulation. Topics will include advanced features of packages, cursors, extended interface methods, Oracle-supplied packages, tuning considerations, forms, and advanced object types.

**Prerequisites/Corequisites:**
Course Completion or Current Enrollment in CIS 69.54A ( or CIS 69.54)

**Recommended Preparation:**
Eligibility for ENGL 100 or ESL 100

**Limits on Enrollment:**

**Schedule of Classes Information:**
Description: This class will provide students with a thorough understanding of advanced features of Oracle database structure, administration and PL/SQL programming access and manipulation. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion or Current Enrollment in CIS 69.54A ( or CIS 69.54)

Recommended: Eligibility for ENGL 100 or ESL 100
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

## ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

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|---|---|---|---|---|---|
| **AS Degree:** | **Area** | | | Effective: | Inactive: |
| **CSU GE:** | **Transfer Area** | | | Effective: | Inactive: |
| **IGETC:** | **Transfer Area** | | | Effective: | Inactive: |
| **CSU Transfer:** | Transferable | Effective: | Fall 2002 | Inactive: | Spring 2011 |
| **UC Transfer:** | | Effective: | | Inactive: | |

**CID:**

**Certificate/Major Applicable:**
Certificate Applicable Course

## COURSE CONTENT

**Outcomes and Objectives:**
Students will:
1. Create server-side stored procedures and functions in Procedure Builder.
2. Design and implement two program unit libraries.
3. View, insert, update, and delete data records using a data block form.
4. Describe the use of Object Navigator within Form Builder to access form components.
5. Create and test a custom PL/SQL trigger and corresponding program unit.
6. Evaluate and test the functions of lists of value (LOVs).
7. Analyze the creation and use of static and dynamic graphics and sound objects.
8. Using Report Builder, develop multi-table report with master-detail relationships.
9. Analyze use of timers in Form Builder to create interface screens.
10. Develop model for opening, navigating and closing integrated multi-form applications.
11. Critique object oriented principles and their use in creating property classes.
12. Create an object library of reusable database objects.

**Topics and Scope:**

1. Advanced PL/SQL Programming
   a. Constructing named program units

b. Calling program units and passing parameter values
c. Using procedure builder to create named program units
d. Executing a procedure in procedure builder
e. Using dynamic SQL to create an anonymous PL/SQL block
f. Using the PL/SQL interpreter to find runtime errors

2. Database Triggers
a. Identifying types of triggers
b. Creating new triggers
c. Debugging and testing form triggers
d. Using INSTEAD-OF triggers
e. Disabling and dropping triggers

3. Data Block Forms
a. Inserting, updating, and deleting-Records
b. Using a form to view table records
c. Closing a form and committing changes
d. Using form components and the object navigator
e. Changing object names in the object navigator
f. Modifying a form using the data block wizard and layout wizard
g. Creating a multiple-table form

4. List of Values
a. Creating a list of values (LOV)
b. Creating an LOV using the LOV wizard
c. Creating an LOV with static values
d. Creating text item editors
e. Creating form radio buttons
f. Creating form list items

5. Advanced Form Builder
a. Creating image items to display graphic images
b. Displaying sound and video data
c. Defining alternate data block sources
d. Programming form function keys
e. Redefining existing key sequence operations
f. Using form transaction processing
g. Analyzing data block relation properties

6. Report Builder
a. Creating a single/multi-table report using report wizard
b. Describing the Report Builder Object navigator window
c. Creating a master-detail report
d. Designing master-detail data model

7. Integrated Database Applications
a. Designing an integrated database application
b. Configuring the splash screen window
c. Creating and using form timers
d. Opening, closing, and navigating to forms in multiple-form applications
e. Constructing objects and object-oriented programming
h. Using property classes to subclass form objects
k. Creating a PL/SQL library in form builder

**Assignment:**

1. Reading approximately 25 pages per week from textbook.

2. Weekly lab assignments practicing the concepts discussed that week.
3. Weekly quizzes on concepts discussed the previous week.
4. Final project to demonstrate understanding of concepts and skills developed.

**Methods of Evaluation/Basis of Grade:**

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

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| None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course. | Writing<br>0 - 0% |

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

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| Homework problems | Problem solving<br>20 - 40% |

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

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| Class performances, Performance exams | Skill Demonstrations<br>20 - 40% |

**Exams:** All forms of formal testing, other than skill performance exams.

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|---|---|
| Multiple choice, True/false, Matching items, Completion | Exams<br>20 - 40% |

**Other:** Includes any assessment tools that do not logically fit into the above categories.

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|---|---|
| None | Other Category<br>0 - 0% |

**Representative Textbooks and Materials:**

1. "Oracle 8i: A Beginner's Guide", by Abbey, Abramson & Corey - McGraw-Hill Professional Book Group 1999
2. "Learn Oracle 8i", by Jose A. Ramahlo - Wordware Publishing, Inc. 2000
3. "Enhances Guide to Oracle 8i", by Joline and Mike Morrison - Course Technology, 2002