# CS157B Course Assessment Report

**Author: Semester:**

## Part 1: Course Summary

### 1. Course Catalog Description:

|  |  |
| --- | --- |
|  | **Course Catalog Description** |
| **Course Description** | Survey course. Object-oriented data model, definition language, query language. Object relational database systems. Database trends like active, temporal, multimedia, deductive databases. Web database topics, namely, architectures, introduction to interface languages. Team projects. |
| **Prerequisites** | CS 157A |

### 2. Course Learning Objectives:

|  |  |
| --- | --- |
| **Item** | **Objective Description** |
| CLO1 | Know common database record formats |
| CLO2 | Given an index structure based on a B-tree or extensible hashing be able to figure out the effect of performing an insert or a delete |
| CLO3 | Create a simple query transaction with an Oracle system. |
| CLO4 | Tune queries and know how to perform performance evaluations |
| CLO5 | Know the ARIES recovery algorithm |
| CLO6 | Be able to use Oracle Isolation Levels for concurrency control |
| CLO7 | Be able to use the object-oriented features of Oracle, DB2, or PostgreSQL |
| CLO8 | Be able to use a more advanced feature of a DBMS system such as a trigger in an active database or the XML features of Oracle |

### 3. Course Details:

See the course syllabus: <https://www.cs.sjsu.edu/private/pse/syllabi/CS157B.html>

### 4. Program Outcomes Enabled/Assessed:

|  |  |
| --- | --- |
|   | **BSCS (BSSE) Outcomes Enabled** |
| **Course** | **a (1)** | **b (5)** | **c (3)** | **d (4)** | **e (6)** | **f (7)** | **g (8)** | **h (9)** | **i (11)** | **j** | **k** |
| CS157B | 2 | 2 | 3 |   |   |   |   |   | 3 |   |   |

An entry in a cell indicates that the course enables the corresponding outcome. The number (1, 2 or 3) indicates the level of achievement expected in the Course, 1 indicating Beginner, 2 Intermediate, and 3 Advanced.

Outcomes in parentheses indicate the corresponding BSSE program outcome. A complete list of BSCS outcomes can be found at: <http://www.sjsu.edu/cs/assessment/bscs/outcomes/>. A list of BSSE outcomes can be found at: <http://cmpe.sjsu.edu/bsse/outcomes/GEOutcomes/>

Bold face entries indicate the corresponding BSCS outcome is assessed for the course. Underlined entries indicate the corresponding BSSE outcome is assessed for the course.

Outcomes are assessed according to the following two year schedule:

|  |  |
| --- | --- |
| Semester | Outcomes Assessed |
| Spring 1 | a (1), j |
| Fall 1 | b (5), c (3), d (4) |
| Spring 2 | e (6), f (7), g (8) |
| Fall 2 | h (9), i (11), k |

## Part 2: Assessment Results

### BSSE Outcome c: An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

### (BSCS Outcome c: An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs)

|  |  |  |  |
| --- | --- | --- | --- |
| **Performance Indicator** | **1** | **2** | **3** |
| **beginning** | **satisfactory** | **exemplary** |
| **Given software specifications, produce a design document to implement a data management component or technique (assessed with a group or individual project)** | Design document does not contain clear steps to produce required features | Design document has steps to achieve goals, but contains flaws | Design document correctly and clearly states functionality of sub-components, and how to construct the required working component |
| Number of Students |   |   |   |
|   |   |   |   |
| **Given software specifications, implement a data management component or technique (assessed with a group or individual project)** | implemented system does not meet product specifications | implemented system mostly meets product specifications | implemented system able to correctly perform all functions required by project specifications |
| Number of Students |   |   |   |
|  |  |  |  |
| **Given software specifications, evaluate a data management component or technique to determine if it meets the specifications (assessed with a group or individual project)** | unable to perform tests | able to design and perform test cases on the component, but tests are not exhaustive | able to design and perform exhaustive test cases on the system |
| Number of Students |   |   |   |

### BSSE Outcome k: An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

### (BSCS Outcome i: An ability to use current techniques, skills, and tools necessary for computing practice)

|  |  |  |  |
| --- | --- | --- | --- |
| **Performance Indicator** | **1** | **2** | **3** |
| **beginning** | **satisfactory** | **exemplary** |
| **Use a current tool (such as MySQL, Hibernate, Netbeans XML) to perform a data management task (such as storing, managing, modeling, processing, mining, or retrieving data). Assessed with an individual or group project.** | unable to use tool to perform the required task | uses basic knowledge of the tool to partially perform required task, but lacks mastery of key features of the tool | uses extensive knowledge of tool to completely perform required task |
| Number of Students |   |   |   |

## Part 3: Assessment Conclusions, Findings, and Recommendations

### Outcome c conclusions

### Outcome i conclusions

### Findings and Recommendations