

# Department Master Syllabus

**Camden County College**

**Blackwood, New Jersey**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Number:**  CIS-236 | | **Course Title:**  Advanced SQL | | | |
| **Department/Program:** Computer Information Systems | | | | | |
| **Date of Review:** Click here to select a month. | | Click here to select a year. | | | |
| (This Department Master Syllabus has been examined by the program/department faculty members and it is decided that no revision is necessary at this time.) | | | | | |
| **Date of Revision:** November | | | | 2021 | |
| (This Department Master Syllabus has been examined by the program/department faculty members and it is decided a change requiring a revision is necessary at this time.) | | | | | |
| N.B. A change to the course materials alone (textbooks and/or supplementary materials) may not constitute a revision. Any other change to the items listed below on this form is considered a revision and requires approval by the department/program faculty at a department/program meeting and by the division at a Chairs and Coordinator meeting. | | | | | |
| **Credits:** 3 | | | | | |
| **Contact Hours** | **Lecture:** 3 | | **Lab:** 0 | | **Other:** 0 |
| Prerequisites: CIS-234 SQL Server on Linux | | | | | |
| Co-requisites: N/A | | | | | |
| Course Description: This course is a continuation of the first course CIS-234 SQL Server on Linux and is intended to provide the student with the detailed study of SQL data manipulations. It presents an in-depth hands-on study of the Structured Query Language (SQL) with some integration into Visual Basic. The main emphasis will be data management using Transaction SQL, stored procedures, triggers, and scripting using MS Sequel Server Tools. This course is taught in a room with computers running MS Sequel Server System. | | | | | |
| **Student Learning Outcomes (SLOs)**  Course specific student learning outcomes  Upon completion of this course the student will be able to:   1. **Use SQL to manage database objects** as assessed by tests and homework assignments. 2. **Integrate SQL into programming** code as assessed by class participation. 3. **Resolve complex database** problems with SQL code as assessed by tests, class participation, and homework assignments. 4. **Effective use of SQL Server Tools** specifics for analyzing data as assessed by class participation, and homework assignments. 5. **Understand SQL commands differences** between DML, DDL, DCL TCL statements as assessed by tests. 6. **Understand SQL Security statements** Grant, Revoke as assessed by tests.   As assessed by:  Computer laboratory assignments, tests, class participation, projects, homework assignments, etc. | | | | | |
| **General Education Student Learning Outcomes**  If this course has applied for General Education Elective Status the general education student learning outcomes listed below must exactly match those the sponsor has identified on the General Education Request form.  General Education SLOs:  N/A  As assessed by:  N/A | | | | | |
| **Program Learning Outcomes**  List all course level student learning outcomes that interconnect to a particular program learning outcome.  The course student learning objectives of:   * Use SQL to manage database objects   + Integrate SQL into programming code.   + Resolve complex database problems with SQL code   + Effective use of SQL Server Tools specifics for analyzing data   + Understand SQL commands differences between DML, DDL, DCL TCL statements   + Understand SQL Security statements Grant, Revoke   Interconnect with these program learning outcomes of the certificate :   * Design and develop SQL for handling tasks such extracting information, trends, insights and metrics from data stored in the database * Design, develop, create and run the queries and reports needed by end users or management teams * Monitor, investigate, correct, and prevent data quality problems   Describe the assessment of the interconnected program learning outcome(s).  Consistent with the College’s assessment methods in place, the interconnected program learning outcomes will be assessed on a rotating schedule with other courses in the Computer Systems Information Systems Programs. Students will be evaluated on the degree to which the student learning outcomes are achieved. A variety of methods may be used such as class participation, problem solving assignments, projects, homework, quizzes, research activities, and/or discussions. | | | | | |
| **Course Outline:**   1. Understanding SQL Commands 2. SQL Server Tools 3. Examples of DML, DDL, DCL TCL statements 4. Tables: writing joining, retrieving and action queries 5. Security and SQL: Grant, Revoke 6. Executing SQL statements in Visual Basics   7 Understanding Transaction SQL  8. T-SQL Language  9. Writing T-SQL Stored Procedures  10. Writing SQL scripts  11. Writing Triggers  12. Writing Transactions: Begin, Commit, Rollback  13. Implementing Business Rules into Store procedures | | | | | |
| **Course Activities:**    The classroom activities will include formal and informal lectures where new material and assigned problems ill be explained. Techniques will be demonstrated with use of a projection system. Students will have the opportunity to contribute to the discussion and to ask questions about the material. In addition to tutorials, students are expected to complete case studies relating to the covered material outside of the regularly scheduled classroom hours. | | | | | |
| **Course Materials:**  Textbook(s): This information will be provided by the instructor.  Supplemental Materials: This information will be provided by the instructor.  Software Licenses: Free through student email  Computers: Existing Computer classrooms will be used provided through Perkins. | | | | | |
| **Course Assessment Plan**  How often and by what means will the effectiveness of this course as part of the curriculum be assessed?    Consistent with the College’s assessment methods in place, the course will be assessed on a rotating schedule with other courses in the Computer Systems Information Systems Programs. Students will be evaluated on the degree to which the student learning outcomes are achieved. A variety of methods may be used such as class participation, problem solving assignments, projects, homework, quizzes, research activities, and/or discussions. | | | | | |