

# Department Master Syllabus

**Camden County College**

**Blackwood, New Jersey**

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| **Course Number:**  CIS-238 | | **Course Title:**  Database Security and Protection | | | |
| **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: None | | | | | |
| Co-requisites: None | | | | | |
| Course Description: In the database environment, there are two realms of protection concerns (1) database (storage unit) and (2) the server (where the storage unit sits). This course emphasis is that students have an effective understanding to the importance of the business investments to protect its data. The course will cover hardware, software and human innovations to protect database environments. This course is taught in a room with computers to allow the students benefit by being able to interact with the material, however, there are no graded or mandatory student computer exercises required during the lecture. It is recommended that prior to taking this course students have some experience in using a computer through work experience or course work. | | | | | |
| **Student Learning Outcomes (SLOs)**  Course specific student learning outcomes  Upon completion of this course the student will be able to:   1. **Explain the impact of costs and loss** of data as assessed by tests, class participation and homework assignments 2. **Understand hardware, software and human methods** of data protection as assessed by tests, class participation and homework assignments 3. **Identify areas of vulnerabilities** of a database as assessed by tests, class participation, and homework assignments 4. **Recognize compromise of protection** as assessed by tests, class participation, and homework assignments   As assessed by:  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.   1. **Explain the impact of costs and loss** of data as assessed by tests, class participation and homework assignments 2. **Understand hardware, software and human methods** of data protection as assessed by tests, class participation and homework assignments 3. **Identify areas of vulnerabilities** of a database as assessed by tests, class participation, and homework assignments 4. **Recognize compromise of protection** as assessed by tests, class participation, and homework assignments   Describe the assessment of the interconnected program learning outcome(s).  All of the Student Learning Outcomes of this course are a catalyst to meeting the Computer Information program learning objectives of:   1. Perform fundamental skills of business, programming, and   application software in a business/organizational computing   environment. 2. Analyze and design information systems and database  solutions to achieve business/organizational goals. 3. Implement a designed solution to solve business/organization  information systems problems using state of the art  programming techniques and applications software. 4. Present technical solutions effectively   . | | | | | |
| **Course Outline:**  Week 1 ............. Lesson 1 .......... Security and Information Technology  Week 2 ............. Lesson 2 .......... Database Review  Week 3 ............. Lesson 3 ......... Database Installation: MySQL  Week 4 ............. Lesson 4 .......... Database Installation: SQL Server  Week 5 ............. Lesson 5 .......... Database Installation: Oracle  Week 6 ............. Lesson 6 .........Passwords, Profiles, Privileges, and Roles Week 7 ............. Lesson 7 ........ SQL Injection I: Identification.  **Week 8 ...................................... Midterm Exam**  Week 9 ............. Lesson 9 ........ SQL Injection II: Exploitation and Defense  Week 10 ........... Lesson 10 ...... Database Security Auditing  Week 11 ........... Lesson 11 ...... Database Security Testing  Week 12 ........... Lesson 12 .......Database Security Checklists  Week 13 ........... Lesson 13 .......Database Auditing Checklist  Week 14 ........... Lesson 14 .......Summary  **Week 15 ................................... Final Exam** | | | | | |
| **Course Activities:**    The classroom activities will include formal and informal lectures where new material and assigned problems will 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: N/A  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. | | | | | |