ESSEX COUNTY COLLEGE
Mathematics ,Engineering Technologies and Computer Sciences Division
CSC 231 – Database Design
Course Syllabus

Instructor: George Effah   **Email:**geffah@essex.edu   **Office Tel & Room:** 973 877 1893 : T218
Credit Hours: 4.0   **Contact Hours:** 4.0   **Lecture:** 4.0   **Lab:** N/A   **Other:** N/A
Prerequisites: Grade of "C" or better in CSC 122

Course Description: This course introduces the concepts and techniques associated with the manipulation of mass storage based files. Topics explored include various file processing environments, access methods ,typical data structures, and file design and implementation. Students must be prepared for extensive individual work in the computer laboratory.

Course Goals :
Upon successful completion of this course, students should be able to do the following:

1. discus the impact that database designs have on user interfaces and application program structures;

2. design and implement a data dictionary for a relational database; and

3. design and implement a relational database and supporting applications;

4. explain multi-user database processing on LANs in client-server systems

Methods of Instruction:
Instruction will consist of lectures, laboratory demonstrations and assignments, and programming examples.

Course Requirements: All students are required to:
1. Maintain regular attendance and take part in class discussions.
2.Complete assigned homework and programming projects on time.
3. Take all exams as scheduled.

Methods of Evaluation: Final course grades will be computed as follows:

Grading Components	% of final course grade
• Attendance and class participation	5%
• Homework Assignments (Late-homework policy: 10% penalty per day)	20%
• Quizzes & Tests	15 %
• Labs & Projects(Late-homework policy: 10% penalty per day) The course emphasizes "learning by doing", and requires students to conduct a series of lab exercises . Through these labs, students can enhance their understanding of the principles, and be able to apply those principles to solve real problems.	30%
• Final Exam	30%

Academic Integrity:

"Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the college. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the ECC community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at
http://www. essex. edu/ academic-policies/
Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Student Affairs. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade ofF, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Student Life & Development at slade@essex.edu"

Student Code of Conduct:

"The ECC Code of Student Conduct serves to protect the college community and its property from inappropriate behavior(s) that could result in physical or emotional harm. The college outlines inappropriate behavior(s) and provides steps of disciplinary action for students whose acts violate the standards of conduct set by the institution. It is our expectation that students will abide by the Code of Conduct that is found at
http://www.essex.edu/wp-content/uploads/2019/0l/LifeLine-2019-2020.pdf
For more information, please contact the Student Life and Activities Office located in
the Clara E. Dasher Student Center, Room 101, (973) 877-3208."

Differently-Abled Support Services:

"Essex County College welcomes students with disabilities into all of the college's educational programs. It is the policy and practice of Essex County College to promote inclusive learning environments. If you have a documented disability, you may be eligible for reasonable accommodations in compliance with college policy, the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and/or the New Jersey Law Against Discrimination. Please note, students are not permitted to negotiate accommodations directly with Professors, Academic Chairpersons, and Deans. To request accommodations or assistance, please self-identify with the

"Remember that procrastination as they say is the thief of time. Therefore, don't shift your assignment till tomorrow what you must do today. Do it now! "

Textbook:

Database Systems Design, Implementation, and Management, 13th edition, by Coronel and Morris

(3 meetings @ 80 minutes)	Topic/Chapter
1	Chapter 1 File Systems and Databases
	1.1 File Systems
	1.2 Database Systems
	1.3 Database Mode
2	Chapter 2 The Relational Model
	2.1 Logical View of Data
	2.2 Integrity Rules
	2.3 Relational Database Operators
	2.4 Relational Database Software Classification
	2.5 Data Redundancy
3	Chapter 3 E-R Modeling
	3.1 Data Models
	3.2 The E-R Model
	3.3 Developing an E-R Diagram
4 – 6	Chapter 4 Normalization of Database Tables
	4.1 Normalization
	4.2 First Normal Form
	4.3 Second Normal Form
	4.4 Third Normal Form
	4.5 Boyce-Code Normal Form
7 – 9	Chapter 5 Introduction to SQL
	5.1 Data Definition Commands
	5.2 Data Management
	5.3 Queries
	5.4 Advanced Data Management Commands
10 – 12	Chapter 6 Database Design
	6.1 Systems Development Life Cycle
	6.2 Database Life Cycle
13	Chapter 12 Client Server Systems
	12.1 Client/Server Environment
	12.2 Client/Server Architecture
	12.3 Managerial Expectation

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