

|  |  |  |
| --- | --- | --- |
| **Bloomsburg University** | http://facstaff.bloomu.edu/mdarwich/index.html | |
| 400 E 2nd St, Bloomsburg, PA 17815 | Tel: (570) 389-4500 | FAX: (570) 389-3599 |

**Syllabus**

**Course Title: Principles of Database Design – COMPSCI 357**

**Credit Hours: 3**

### Department: Mathematical and Digital Sciences

**Faculty**: Dr. Mahmoud Darwich, Ph.D. **E-mail**: mdarwich@bloomu.edu

**Offic**e: Ben Franklin Hall 204 **Office Phone**: (570) 389-3108

**Office Hours**: MW: 1:00 – 2:00 TR: 12:30 - 1:00 Friday: 10:00 - 11:00 or by appointment

**Class Location**: MCHS 3234 and MCHS 3225

**Class Meeting Times**: TR 9:30 – 10:45 AM & 11:00 AM – 12:15 PM and MWF 9:00 – 9:50 AM

### Prerequisites: Any COMPSCI course numbered at or above COMPSCI 115

**Textbook**: Database Systems Design, Implementation, & Management, 13th Edition

Author: Carlos Coronel, Steven Morris

Publisher: Cengage

ISBN-13: 978-1-337-62790-0

#### Inclusive Access

This class is participating in a new course materials program at Bloomsburg University called “Inclusive Access”.  Inclusive Access significantly lowers the cost of course materials for students and allows access on the first day of class.  This means that you are already enrolled and will have automatic access to your content directly through a link in BOLT.  The cost of the textbook/lab will be automatically charged to your BU student account. If you have any questions, please contact [inclusiveaccess@bloomu.edu](mailto:inclusiveaccess@bloomu.edu).

**Software Tool**

For this course, the students need to use MySQL Workbench software tool to design database. The lab computers are provided with MySQL Workbench. Students who use personal laptops or desktops, they can download the software from this website (Free Download).

<https://dev.mysql.com/downloads/workbench/>

**Course Description**

This course provides a comprehensive understanding of the key concepts and terminology in the

theory and design of relational databases. Students learn to create Entity Relationship Diagrams

(ERD), normalize database tables, and use Structured Query Language (SQL) and PL/SQL

programming to create database structures, access and manipulate data.

##### The following schedule of the course content is tentative and subjected to change

***\*\*I reserve the rights to change the contents of the course\*\****

|  |  |  |
| --- | --- | --- |
| **Chapters** | **Assignments** | **Quizzes** |
| Chapter 1  Database Systems | Chapter 1 Assignment | Quiz 1 |
| Chapter 2  Data Models | Chapter 2 Assignment – A  Chapter 2 Assignment – B | Quiz 2 |
| Chapter 7  Introduction to Structured Query Language (SQL) | Chapter 7 Assignment – A  Chapter 7 Assignment – B  Chapter 7 Assignment – C | Quiz 3 |
| Chapter 8 Advanced SQL  Midterm Exam | Chapter 8 Assignment – A  Chapter 8 Assignment – B | Quiz 4 |
| Chapter 3  The Relational Database Model | Chapter 3 Assignment – A  Chapter 3 Assignment – B | Quiz 5 |
| Chapter 4  Entity Relationship (ER) Modeling | Chapter 4 Assignment | Quiz 6 |
| Chapter 6  Normalization of Database Tables | Chapter 6 Assignment | Quiz 7 |
| Final Exam |  |  |

|  |  |
| --- | --- |
| **COURSE OUTCOMES** | **COURSE MEASUREMENTS** |
| Students will earn depth understanding of relational database design. | Complete reading assignments, homework assignments, exams, and quizzes |
| Students will learn database development process starting from conceptual design and ER modeling to the normalization of database tables. |
| Students will understand the structure and relationships between tables and the significance of entity and relational integrity rules. |
| Using SQL students will be able to create tables and views, and query and manipulate data in tables. |

### Grading Plan

Assignments 40%

Midterm Exam 20%

### Final Exam 20%

### Quizzes 20%

### 

Grading Scale

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A Range | B Range | C Range | D Range | F Range |
| A 94 – 100% | B+ 87-89% | C+ 77-79% | D+ 67-69% | F 0-59% |
| A- 90 – 93% | B 84-86% | C 74-76% | D 60-66% |  |
|  | B- 80-83% | C- 70-73% |  |  |

### 

**Grading Policy**

Each student must do his or her homework and case studies. Discussion among students on homework and cases is encouraged for clarification of assignments, technical details of using the software, and structuring major steps of solutions. Students must do their own work on the homework and exam. Cheating and Plagiarism are strictly forbidden. Cheating includes but is not limited to plagiarism, submission of work that is not the student's own, copying a code’s part from other students, submission or use of falsified data, unauthorized access to exam or assignment, use of unauthorized material during an exam, supplying or communicating unauthorized information for an assignment or exam.

**Missing Work**

It is expected every student to turn the assignments in **ON** time and do online quizzes and exams on the date that it is specified. Failing to comply with the policy results in automatically earning **0 points**. If classwork is missed as a result of extenuating circumstances beyond the student's control, the student communicates the need for special arrangements as soon as the need for an absence is known. The official documentation is provided to verify the reason for absence if requested by the instructor.

Extenuating circumstances may be but are not limited to: personal illness, death or critical illness in the immediate family, participation in a university-sponsored activity, participation in a short-term, obligatory military or military reserve activity, observation of a religious holiday, or civic and legal mandatory obligations.

The instructor is not required to give makeup examinations or review other class work missed as a result of unauthorized absences.

**Attendance Policy**

Students are expected to regularly attend all classes for which they are registered. A percentage of the student’s grade will be based on class attendance and participation. Absence from class, regardless of the reason, does not relieve the student of his/her responsibility to complete all course work by the required deadlines. Furthermore, it is the student’s responsibility to obtain notes, handouts, and any other information covered when absent from class and to arrange to make up any in-class assignments or tests if permitted by me.