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Basic Information

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Faculty | Satyaki Das, (Room PC-315) | | | | | | | |
| Office Hour | **Sunday:** 1:00 pm - 2:30 pm (Permanent Campus: Room: PC-315)  **Tuesday:** 1:00 pm - 2:30 pm (Permanent Campus: Room: PC-315)  **Monday:** 11:30 am - 12:50 pm & 2:30 pm - 4:00 pm (Permanent Campus: Room: PC-315)  **Wednesday:** 11:30 am - 12:50 pm & 2:30 pm - 4:00 pm (Permanent Campus: Room: PC-315)  **Thursday:** 9:30 am – 12:30 pm (Permanent Campus: Room: PC-315)  Note: Also available by Email Appointment at other times  satyaki.das@ulab.edu.bd | | | | | | | |
| Contact Details | **Room:** PC315  satyaki.das@ulab.edu.bd | | | | | | | |
| Course Pre-requisites | CSE 103, CSE 201 | | | | | | | |
| Department offering the course | Computer Science and Engineering | | | | | | | |
| Course Title | Database Lab | | | | | | | |
| Course Code | CSE 304 | | Sec | 2 | Credit | 1 | Term | Spring 2021 |
| Number of Lectures | 0 | Number of Tutorials | | 0 | Number of Practical | 24 | Total | 24 |

Course Details

1. **Course Description**

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| This course will familiar the students with the concepts of Database Management Systems and they will learn how to use this concept in application level. At the end of the class, we expect the students to be able to design database structure and implement the structure in computer program. |

**2. Course Objectives (COs)**

1. To explain secure basic and complex SQL queries.

2. To emphasis on implementing relational database and learn to manage DBMS product.

**3. Intended learning outcomes of the course (ILOs)**

1. Learn secured basic and complex data manipulative SQL statements.
2. Design, analyze, and implement a database for a real-world system.

**4. Mapping of Course LO and PLO:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Learning Outcome (LO) of the Course** | **Program Learning Outcome (PLO)** | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **ILO1** | MJ |  |  |  | MN |  |  |  |  |  |  |  |
| **ILO2** | MJ | MJ |  |  | MJ |  |  |  | MJ | MJ |  |  |

**5. Contents**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ILO** | **Topic** | **Teaching Strategy** | **Assessment Strategy** | **Number of Sessions** |
| 1 | Introduction to relational databases. Environment to work with relational databases | Lecture | Q/A | 3 |
| 1 | Basic Data types in MySQL and Table creation | Lecture  Exercise | Q/A, Test  Quiz, Project | 4 |
| 1 | Basic database query | Lecture  Exercise | Q/A, Test  Quiz, Project | 5 |
| 2 | Project Idea submission | Exercise | Q/A, Project Presentation | 1 |
| 1 | Complex database query | Lecture  Exercise | Q/A, Test  Quiz, Project | 4 |
| 1 | Evaluation of ERD of the project | Exercise | Q/A, Test, Project | 2 |
| 1, 2 | Prepared statement and protection against SQL injection | Lecture  Exercise | Q/A, Test, Project | 3 |
| 2 | Project submission and presentation |  | Presentation | 2 |
|  | **Total** |  |  | 24 |

**5. Teaching & Learning Method**

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| Students are expected coming to the class prepared for the course material covered in the previous class. |
| Assignments and presentations must be submitted on time. |
| It is highly encouraged to actively participate in the classroom. |
| Project must be submitted on time |

**6. A. Assessment Schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| Assessment 1 | Continuous Assessment in lab | Session | Weekly |
| Assessment 2 | Quiz | Session | Week-3 |
| Assessment 5 | Assignment | Session | Week-9 |
| Assessment 6 | Final Project submission and Presentation | Session | Week-12 |

**7. Weights of Assessments**

|  |  |
| --- | --- |
| Assessments | **%** |
| Final Examination | 25 |
| Attendance | 15 |
| Continuous Assessment | 40 |
| Project | 20 |
| **Total** | **100** |

**8. Grading Policy**

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| --- | --- | --- | --- |
| Policy | Letter Grade | Grade Point | Assessments |
| 95% and above | A+ | 4.00 | Outstanding |
| 85% to below 94% | A | 4.00 | Superlative |
| 80% to below 84% | A- | 3.80 | Excellent |
| 75% to below 79% | B+ | 3.30 | Very Good |
| 70% to below 74% | B | 3.00 | Good |
| 65% to below 69% | B- | 2.80 | Average |
| 60% to below 64% | C+ | 2.50 | Below Average |
| 55% to below 59% | C | 2.20 | Passing |
| 50% to below 54% | D | 1.50 | Probationary |
| below 50% | F | 0.00 | Fail |
| -- | I | 0.00 | Incomplete |
| -- | W | 0.00 | Withdrawn |
| -- | AW | 0.00 | Administrative Withdrawal |

**9. List of References**

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| Course Materials | During class, Course Materials will be provided. |
| Reference Books | 1. Database System Concepts (6th Edition) by Abraham Silberschatz, Henry F. Korth and S. Sudarshan 2. Oracle-SQL-PL-SQL - A Brief Introduction, by Sukarna Barua |
| Online Resources | SQL Tutorial, w3schools.com  https://www.w3schools.com/sql/ |

**10. Facilities Required for Teaching and Learning**

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| Classroom with whiteboard, multimedia projector and marker. In classroom Internet connection is required for all computers. It is required for the students to use XAMPP. |

**11. Course Policies and Procedures**

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| * Failing to attend more than 5 classes will result in an automatic fail * It is expected that students keep their cell phones into silent mode * Mid-term and final examinations will be held according ULAB schedules * Cheating and plagiarism are strictly prohibited * There will be No makeup exam/quiz * ULAB regulations will be followed in conducting exams and evaluating answer scripts and grading  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **Appendix-1: Program Learning Outcome (PLO)**   |  |  | | --- | --- | | **No.** | **PLO** | | 1. | **Engineering Knowledge** | | 2. | **Problem Analysis** | | 3. | **Design/Development of Solutions** | | 4. | **Investigation** | | 5. | **Modern Tool Usage** | | 6. | **The Engineer and Society** | | 7. | **Environment and Sustainability** | | 8. | **Ethics** | | 9. | **Communication** | | 10. | **Individual and Team Work** | | 11. | **Life Long Learning** | | 12. | **Project Management and Finance** |   **Generic Skills (Detailed):**   1. **Engineering Knowledge (T)** -Apply knowledge of mathematics, sciences, engineering fundamentals and manufacturing engineering to the solution of complex engineering problems; 2. **Problem Analysis (T)** – Identify, formulate, research relevant literature and analyze complex engineering problems, and reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences; 3. **Design/Development of Solutions (A)** –Design solutions,  exhibiting innovativeness, for complex engineering problems and design systems, components or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, economical, ethical, environmental  and sustainability issues. 4. **Investigation (D)** Conduct investigation into complex problems, displaying creativeness, using research-based knowledge, and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions; 5. **Modern Tool Usage (A & D)** -Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex engineering activities, with an understanding of the limitations; 6. **The Engineer and Society (ESSE)** -Apply reasoning based on contextual knowledge to assess societal, health, safety, legal, cultural, contemporary issues, and the consequent responsibilities relevant to professional engineering practices. 7. **Environment and Sustainability (ESSE)** -Understand the impact of professional engineering solutions in societal, global, and environmental contexts and demonstrate knowledge of and need for sustainable development; 8. **Ethics (ESSE)** –Apply professional ethics with Islamic values and commit to responsibilities and norms of professional engineering code of practices. 9. **Communication (S)** -Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions; 10. **Individual and Team Work (S)** -Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings. 11. **Life Long Learning (S)** -Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. 12. **Project Management and Finance (S)** -Demonstrate knowledge and understanding of engineering management and financial principles and apply these to one’s own work, as a member and/or leader in a team, to manage projects in multidisciplinary settings, and identify opportunities of entrepreneurship | | | | |
| ........................................................................  *Course Coordinator/ Teacher*  *Date: 27/10/2020* |  | .................................................................................................  *Head of the Department* |