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|  | https://upload.wikimedia.org/wikipedia/en/thumb/e/e4/National_University_of_Computer_and_Emerging_Sciences_logo.png/250px-National_University_of_Computer_and_Emerging_Sciences_logo.pngNational University  of Computer & Emerging Sciences |

**Department of Computer Science**

**CS 303 – Software Engineering**

**FALL 2019**

**Instructor Name:** Muhammad Kamran Lodhi **TA Name:** Fatima Fayyaz

**Email address:** mkamran.lodhi@nu.edu.pk **Email address:** L176183@lhr.nu.edu.pk

**Office Location/Number:** Room 105, above library **Office Location/Number:**

**Office Hours:** W, Th 2 – 4 PM  **Office Hours:**

**Course Information**

**Program:** BS **Credit Hours:** 3 **Type:** Core

**Pre-requisites:** CS309 OO Analysis and Design

**Course Website**: piazza.com/nu.edu.pk/fall2019/cs303/home

**Class Meeting Time:** M, W 9.30 – 11 (Section C), 11 – 12.30 (Section B)

**Class Venue: CS-15**

**Course Goals**

The course’s approach is project-based which would provide students with the opportunity to develop skills in software development process in a hands-on setting on real world projects. During this course students would learn:

* Development of software deliverables produced during phase of the SDLC .
* Team and project management
* Cost and Effort Estimation
* Requirements Engineering
* Analysis , Design and Testing etc.

**Tentative Grading Criteria**

1. Class Participation (5%)
2. Quizzes (10%)
3. Project (15%)
4. 2 Midterm Exams (30%)
5. Final Exam (40%)

**Course Textbooks**

1. Software Engineering: A Practitioner’s Approach, Roger S. Pressman, 7thEdition, McGraw-Hill, 2010.
2. Object-Oriented and Classical Software Engineering, Stephen R. Schach, 5thEdition, McGraw-Hill, 2002.
3. Software Engineering, Ian Sommerville, 9th Edition, Pearson Education, 2011.

**Tentative Weekly Schedule**

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| **Week** | **Topics to be covered** | **Readings** | **Project Deadlines** |
| 1 | Introduction to Software Engineering  Systems Engineering Introduction | [1] Chapter 1  [3] Chapter 1 | Group Formation |
| 2 | Software Process Models | [1] Chapters 3 and 4  [3] Chapters 4 and 17 |
| 3 | Project Management | [1] Chapters 21 and 24  [3] Chapter 5 |  |
| 4 | Requirements Engineering | [1] Chapter 7  [3] Chapters 6 and 7 |  |
| 5 | Analysis Modeling | [1] Chapter 8 |  |
| 6 | Midterm 1 | | |
| 7 | PRESENTATIONS |  | Requirements document due  (5 points)  Monday 8 AM (online submission)  Class Presentations  (10 points)  **Full attendance mandatory** |
| 8 | Design Engineering | [1] Chapter 9 |  |
| 9 | Architectural Design | [1] Chapter 10  [3] Chapter 11 | Scenario-I Due  (10 points) |
| 10 | Component-Level Design | [1] Chapter 11 |  |
| 11 | Implementation Phase | [2] Chapter 14 | Design Document Due  (10 points) |
| 12 | Midterm 2 | | |
| 13 | Testing Strategies | [1] Chapter 13 | Demo-I + Scenario-II due  (10 + 10 points) |
| 14,15 | Testing Tactics | [1] Chapter 14 |  |
| 16 | PRESENTATIONS |  | Full Report due  Tuesday, 11th December  (10 points)  Class Presentations  (15 points)  Demo-II due  (15 points)  **Full attendance mandatory** |

**Course Policies**

1. All students are expected to attend all lectures from beginning to end.
2. Attendance will be marked at the start of the class. Late comers will be marked LATE. Habitual late comers may not be allowed to enter the classroom.
3. Students can contest their grades on quizzes and assignments ONLY within a week of the release of grades. Exams will be available for review according to the policies of university.
4. To pass this course, students should get at least 50% marks and 80% attendance. Students should also pass AT LEAST one exam. This means that if the student has failed to get 50% marks in both the midterms and final exam, s/he will not be given a passing grade.
5. Please note, getting 50% marks does not automatically guarantee a passing grade.
6. Quizzes may be unannounced, covering the contents of last two lectures.
7. There is no make-up for a missed quiz.
8. Project-related assignments should be submitted on due date and time. The students can submit assignments within 48 hours with a 30% penalty. The assignment may not be accepted after 48 hours.
9. Cheating is strictly not allowed. If first instance is caught, you will be awarded negative marks. If the practice continues, the case will be referred to DC Committee for further action.
10. There may be multiple in class project related activities, therefore you are only allowed to form groups with students in the same section.
11. You are only allowed to attend class with your section, so students registered in section B will not be allowed to take class in section C and vice versa. The quizzes taken with different sections will not be checked and attendance may not be marked.