**CS303 Software Engineering**

**Instructor Information**

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**TA Information**

Name: Talha Chattha

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Location: CS-8 (THU); CS-9 (FRI)

Hours: THU & FRI 08:00 – 09:00

**Course Information**

Prerequisite: CS313 OO Analysis and Design

Level: BS

Category: Core

Credit Hours: 3

Semester: Fall 2016

Class Venue: CS-A (CS-8 THU; CS-9 FRI); CS-B (CS-7)

Class Hours: THU & FRI

CS-A (09:30 – 10:50); CS-B (14:00 – 15:20)

Office Hours: FRI 15:30 – 16:30

**Course Objectives**

This project-based course introduces the basic concepts, principles, and techniques of software engineering in a hands-on setting. After studying this course, the students will be able to:

* Perform the various activities included in each phase of the software development life cycle
* Engineer high-quality software in a team setting

**Reference Material**

1. Software Engineering: A Practitioner’s Approach, Roger S. Pressman, 6thEdition, McGraw-Hill, 2005.
2. Object-Oriented and Classical Software Engineering, Stephen R. Schach, 5thEdition, McGraw-Hill, 2002.
3. Software Engineering, Ian Sommerville, 8thEdition, Pearson Education, 2007.

**Course Grading (Tentative)**

* Quizzes: 10%
* Project: 20%
* Midterm Exams: 30%
* Final Exam: 40%

**[[1]](#footnote-2)Course Schedule**

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| **S#** | **Topic** | **Week** | **[[2]](#footnote-3)Readings** |
| 1 | Introduction to Software Engineering | 1 | [1] Chapter 1  [3] Chapter 1 |
| 2 | Process Models | 2 | [1] Chapters 3 and 4  [3] Chapters 4 and 17 |
| 3 | Project Management | 3 | [1] Chapters 21 and 24  [3] Chapter 5 |
| 4 | Requirements Engineering | 4 | [1] Chapter 7  [3] Chapters 6 and 7 |
| 5 | Analysis Modeling | 5 | [1] Chapter 8 |
|  | MIDTERM EXAM 1 | 6 |  |
|  | PROJECT PRESENTATIONS: SRS V1 (REQUIREMENTS) | 7 |  |
| 6 | Design Engineering | 8 | [1] Chapter 9 |
| 7 | Architectural Design | 9 | [1] Chapter 10  [3] Chapter 11 |
| 8 | Component-Level Design | 10 | [1] Chapter 11 |
| 9 | Implementation Phase | 11 | [2] Chapter 14 |
|  | PROJECT PRESENTATIONS: SRS V2 (ANALYSIS & DESIGN) | 12 |  |
|  | MIDTERM EXAM 2 | 13 |  |
| 10 | Testing Strategies | 14 | [1] Chapter 13 |
| 11 | Testing Tactics | 15, 16 | [1] Chapter 14 |
|  | PROJECT PRESENTATIONS: SRS V3 (TEST CASES) & WORKING PRODUCT | 17 |  |
|  | FINAL EXAM |  |  |

**Important Information**

**Announcements**

Announcements related to different aspects of this course (e.g. lectures, quizzes, exams, etc.) may be posted on SLATE (<http://slate.nu.edu.pk/portal>). Students are expected to view the announcements section of SLATE regularly.

**Attendance**

All students are expected to attend all lectures from beginning to end. Partial or full absence from a lecture without a valid reason may hamper chances for securing good grades.

**Exams**

Exams will be closed-book and closed-notes. However, students will be allowed to use a single-sided, A-4 size, hand-written help sheet for the midterm exams and a double-sided, A-4 size, hand-written help sheet for the final exam. Syllabus for the final exam will be comprehensive.

**Late-Submission**

Late submission of project deliverables is NOT allowed. Teams that do not meet the submission deadline of a deliverable will not get any credit in that particular deliverable.

**Office Hours**

Students are encouraged to take full advantage of instructor’s office hours. Any doubts regarding concepts covered in class or any questions regarding quizzes, projects, etc. may be clarified during office hours. In case a student is not able to make it during office hours, he/she may schedule an appointment with the instructor for another time slot.

**Project**

Project teams will be formed by the instructor himself. Projects can be chosen from any domain. However, each team MUST work on a real-life project i.e. the project must have a real-client[[3]](#footnote-4). Client representatives[[4]](#footnote-5) will be required to participate in project presentations. Project grades will be partially dependent upon feedback from the client representatives. Further details regarding the project will be conveyed later.

**Quizzes**

Quizzes may be announced or unannounced. A quiz will usually be about 5 – 10 minutes long and it may be given anytime during the lecture. Students missing a quiz will NOT be given a make-up quiz.

**Reading Material**

Students are encouraged to finish the assigned readings BEFORE the lecture. This is likely to improve lecture comprehension and class participation.

**Revision of Grades**

Students can contest their grades on quizzes and project deliverables ONLY within a week of the release of grades. Exams will be available for review according to university policies.

**Unfair Means**

Students are expected to demonstrate the highest degree of moral and ethical conduct. Any student caught cheating, copying, plagiarizing, or using any other unfair means will be strictly dealt-with in accordance with university policies.

1. Course schedule is subject to change. [↑](#footnote-ref-2)
2. Numbers in square brackets correspond to books numbered in “Reference Material” section. [↑](#footnote-ref-3)
3. The client must be a registered organization. Freelance individuals cannot act as clients. [↑](#footnote-ref-4)
4. A client representative must be a full-time permanent employee of the client organization. FAST-NU students cannot be used as client representatives. [↑](#footnote-ref-5)