REQUIREMENTS ENGINEERING (CS 525) – FAST NU Lahore
Spring 2019

Course Outline

Instructor: Dr. Ghulam Ahmad Farrukh
Office Hours: After class or through e-mail (ghulam.ahmad@nu.edu.pk)

Semester Week	Topics covered	Book
Week 1		
1.	**Software Requirements** ▪ Introduction ▪ Kinds of Requirements ▪ Functional Requirements	Chapter 1 of [Davis] Chapter 1 of [Kotonya] Chapter 4 of [Sommerville]
2.	**Software Requirements - 2** ▪ Non-Functional Requirements	Chapter 4 of [Sommerville] Chapter 5 of [Davis]
3.	**Software Requirements - 3** ▪ Metrics for NFRs ▪ Other Kinds of Requirements	Chapter 4 of [Sommerville]
Week 2		
4.	**Software Requirements – 4** ▪ User/Customer ▪ System/Contract **Problems with Requirements**	Chapter 4 of [Sommerville]
5.	**Process and Process Models**	Chapter 2 of [Kotonya] Chapter 2 of [Sommerville]
Week 3		
6.	**RE Processes - 1**	Chapter 2 of [Kotonya] Chapter 4 of [Sommerville]
7.	**RE Processes - 2**	Chapter 2 of [Kotonya] Chapter 4 of [Sommerville]
8.	**Social Issues in RE**	Paper by Goguen
Week 4		
9.	**Writing Requirements**	Section 1.3.1 of [Kotonya]
10.	**Requirements Document**	Section 1.3 of [Kotonya], Chapter 4 of [Laplante]
Week 5		
MID TERM EXAM		
Week 6		
11.	**Requirements Elicitation - 1**	Chapter 3 of [Kotonya]

12.	**Requirements Elicitation -2**	Chapter 3 of [Kotonya]
Week 7		
13.	**Requirements Elicitation -3**	Chapter 3 of [Kotonya] Chapter 3 of [Laplante]
Week 8		
14.	**Requirements Analysis**	Chapter 3 of [Kotonya]
15.	**Requirements Analysis & Negotiation**	Chapter 3 of [Kotonya]
Week 9		
16.	**Requirements Errors – 1**	Handouts
17.	**Requirements Errors - 2**	PBR Paper
Week 10		
18.	**Quality Attributes of SRS**	Chapter 3 of [Davis]
Week 11		
19.	**Requirements Validation - 1**	Chapter 4 of [Kotonya], Chapter 5 of [Laplante]
20.	**Requirements Validation - 2**	Chapter 4 of [Kotonya], Chapter 5 of [Laplante]
Week 12		
21.	**Requirements Management - 1**	Chapter 5 of [Kotonya]
22.	**Requirements Management - 2**	Chapter 5 of [Kotonya]
Week 13		
23.	**Requirements Traceability**	Section 5.4 of [Kotonya]
24.	**Prototyping**	Section 3.3 of [Kotonya]
Week 14		
	Project Presentations	
Week 15		
25.	**Requirements Engineering and Agile Methods**	Paper by Alam
FINAL TERM EXAM		

Reading/Instruction References

- Requirements Engineering: Processes and Techniques by Gerald Kotonya and Ian Sommerville, John Wiley & Sons, 1998 **[Kotonya]**
- Software Requirements: Objects, States, and Functions by Alan Davis, Addison-Wesley, 1993 **[Davis]**
- Software Engineering, 9th Ed., by Ian Sommerville, Addison-Wesley, 2011 **[Sommerville]**
- Requirements Engineering for Software and Systems, Phillip A. Laplante, 2nd Edition, Auerbach Publications, 2014 **[Laplante]**

- "Impact and Challenges of Requirements Engineering in Agile Methodologies: A Systematic Review", Alam et. al., International Journal of Advanced Computer Science and Applications, Vol. 8, No. 4, 2017 [**Alam**]

Evaluation Categories	Points
Mid-Term	20
Project	25
Quizzes	10
Final	45