Faculty: Information Technology	
Department: Software Engineering	Program: Bachelor
Academic year:	Semester:

Course Plan

Course No.: 1503271	Course Title: Software System Requirements Engineering	Credit Hours:3	Theoretical:3	Practical:0
Prerequisite No. and Title: 1503270, Introduction to software engineering		Section No.:	Lecture Time:	
Level in JNQF	7			
Type Of Course:	☐ Obligatory University Requirement ☐ Elective University Requirement ■ Obligatory Faculty Requirement ☐ Elective Faculty Requirement ☐ Obligatory Specialization Requirement ☐ Elective Specialization Requirement ☐ Ancillary course			
Type of Learning:	■ Face-to-Face Learning ☐ Blended Learning (2 Face-to-Face + 1 Asynchronous) ☐ Online Learning (2 Synchronous+ 1 Asynchronous)			

Second: Instructor's Information

Course Coordinator:		
Name:	Academic Rank:	
Office Number:	Extension Number:	Email:
Course Instructor:		
Name:	Academic Rank:	
Office Number:	Extension Number:	Email:
Office Hours:	Sunday Monday Tuesday Wednesday Thursday	

Third: Course Description

Material presented in software project management. Techniques for software development projects, plans, and programs to support the quality of plans and risk management plans. Topics covered also include project management issues: customer management, and management and technical teams, project planning, schedule, and risk management, configuration management, quality assurance and accreditation, and legal issues. It also includes training on the tools used in the management of software projects.

Fourth: Course Objectives

1. Introducing the students of the fundamental concepts of requirement engineering including functional, non-functional requirements, user and system requirement.
2. Guiding the student to realize that requirements from the base for the project success.
3. Developing the student's ability to distinguish between most requirements elicitation technique.
4. Expanding the student's skills to select the appropriate elicitation technique.
5. Providing the student with skills for writing (modeling) the requirements using standard model such as IEEE – 830.
6. Providing the student with skill of validating the system requirements specification (SRS) using different techniques.

Fifth: Learning Outcomes

Level descriptor according to (JNQF)	CILOs Code	CILOs If any CLO will not be assessed in the course, mark NA.	Associated PILOs Code *Choose one PILO for each CILO**	Assessment method *Choose at least two methods*
Knowledge	**K1**	Define the basic Req. Eng. Standards and structures.	**PK1**	• Assignment • Quiz • Mid-term Exam • Final Exam
	K2	Explain the concept of requirement, Req. Process, and main req. models.	**PK2**	• Assignment • Quiz • Mid-term Exam • Final Exam
	K3	Arrange advanced concepts of Req. modeling, risk analysis, documentation, prototyping, req. change management etc.	**PK2**	• Assignment • Quiz • Mid-term Exam • Final Exam
Skills	**S1**	Distinguish req. Eng process.	**PS3**	• Assignment • Mid-term Exam • Final Exam
	S2	Analyze and compare different req. models.	**PS3**	• Assignment • Mid-term Exam • Final Exam
Competencies	**C1**	Develop effective communication skills for group collaboration.	**PC2**	• Participating • Presentation
	C2	Discuss and work in a group in order to design and implement solutions of several req. resources	**PC3**	• Participating • Presentation

*CILOs: Course Intended Learning Outcomes; PILOs: Program Intended Learning Outcomes; For each CILO, the PILO could be the same or different.

Sixth: Learning Resources

Main Reference:	*Requirements Engineering for Software and Systems*

Author: Phillip A. Laplante	*Issue No.:* *Second edition*	*Print:*	*Publication Year: 2018*

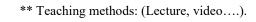|	
Additional Sources and Websites:	● *Lecture Notes* ● *Projects, Tasks, and Quizzes* ● *Self-learning materials* ● *Moodle* ● *Engineering Software Products: An Introduction to Modern Software* ● *Engineering 1st Edition*
Teaching Type:	■ *Classroom* □ *Laboratory* □ *Workshop* ■ *MS Teams* ■ *Moodle*

Seventh: Course Structure

Week	Course Intended Teaching Outcomes (CILOs)	Topics	Teaching Procedures*	Teaching Methods**	References***
Week 1	K1	- Course Syllabus discussion -Introduction to Requirements Engineering. Project failure factors Project success factors	Face-to-face	Lecture, In class questions	Textbook
Week 2	K1	Definition of requirements Definition of Requirements Engineering Classification of requirements	Face-to-face	Lecture, Assignments	Textbook
Week 3	K1	What customer wants Problems with traditional requirements engineering Brainstorming Card sorting Design as a prentice	Face-to-face	Lecture, In class questions	Textbook
Week 4	K1, K2, K3	Domain analysis Ethnographic observation	Face-to-face	Lecture, Assignments	Textbook

		Goal based approach. Group work			
Week 5	K2, K3, S1	Interview Introspection Join application design. Laddering Protocol analysis	Face-to-face	Lecture, Quiz	Textbook
Week 6	S1, S2, C1	Prototyping Questionnaire/ survey Repertory grid	Face-to-face	Lecture, In class questions	Textbook
Week 7	S2, C1	Scenarios Task analysis Viewpoint	Face-to-face	Lecture, In class questions.	Textbook
Midterm Exam					
Week 8	K1, K2, S1, C1	Workshop Elicitation summary	Face-to-face	Lecture, In class questions	Textbook
Week 9	K2, S1, C1	Elicitation summary Writing requirements Documents	Face-to-face	Lecture, Assignments	Textbook
Week 10	K3, S2, C1	Requirements representation approaches IEEE standard 830	Face-to-face	Lecture, Assignments	Textbook
Week 11	C1, K1, K2	ISO standard 25030 Use case. Requirements format	Face-to-face	Lecture, In class questions	Textbook
Week 12	K1, K2, C1, C2	Final recommendation Requirements Risk Management Validation and Verification	Face-to-face	Lecture, In class questions	Textbook
Week 13	K1, K2, C1, C2	Requirements Risk Management Validation and Verification Benefits of V &V Formal Methods and Requirements (Management).	Face-to-face	Lecture, In class questions	Textbook
Week 14	K1, K2, C1, C2, S2	Formal Methods and Requirements (Management) Z language Z language	Face-to-face	Lecture, Presentation	Textbook
Final Exam					

*Teaching procedures: (Face-to-Face, synchronous, asynchronous).   ** Teaching methods: (Lecture, video….).
*** Reference: (Pages of the book, recorded lecture, video….)

Eighth: Assessment Methods

Methods	Online Learning	Blended Learning	Face-To-Face Learning	Specific Course Output to be assessed **If any CILO will not be assessed in the course, mark NA.						
				K1	K2	K3	S1	S2	C1	C2
First Exam										
Second Exam										
Mid-term Exam			30	✓	✓	✓	✓	✓		
Participation			5	✓	✓	✓			✓	✓
Asynchronous Activities										
Quizzes			6	✓	✓	✓				
Assignments			4	✓	✓					
Group presentation			5	✓	✓			✓	✓	✓
Final Exam			50	✓	✓	✓	✓	✓		
Total out of 100										

Ninth: Course Policies

- All course policies are applied to all teaching patterns (online, blended, and face-to-face Learning) as follows:
  a. Punctuality.
  b. Participation and interaction.
  c. Attendance and exams.
- Academic integrity: (cheating and plagiarism are prohibited).