Syrian Arab Republic		الجمهورية العربية السورية
Ministry of Higher Education		وزارة التعليم العالـــــي
Syrian Virtual University		الجامعة الافتراضية السورية

Course Description: Requirements Engineering

1- Basic Information:

Course Name	**Requirements Engineering**
Course ID	**RQE**
Contact Hours (Registered Sessions)	**16**
Contact Hours (Synchronized Sessions)	**16**
Mid Term Exam	**-**
Exam	**75 min**
Registered Sessions Work Load	**16**
Synchronized Session Work Load	**16**
Credit Hours	**3**

2- Pre-Requisites:

Course	ID
System Analysis and Design	IS
Software Engineering	SE

3- Course General Objectives:

Education of the basic principles in requirements engineering which is considered the first stage of system analysis, and the methods and techniques of information system requirements elicitation and modeling. Defining and explaining the different types and levels of requirements and modeling the conceptual, structural, and behavioral aspects, and the verification of the resulting models.

4- Intended Learning Outcomes (ILO):

Code	Intended Learning Outcomes
ILO1	Learning how to write requirements for typical project categories. Knowing the contents of requirement specification document. Determining the different types and levels of requirements.
ILO2	Knowledge of many requirement elicitation techniques, with convenience and uses in different project types
ILO3	Modeling concepts and information with different techniques convenience and usability
ILO4	Modeling functional structural an behavioral aspects in information systems using many techniques depending on specific cases and development circumstances
ILO5	Learning how to verify the different models and requirement engineering deliveries
ILO6	
ILO7	
ILO8	

5- **Course Syllabus** (18 hours of total synchronized sessions;18 hours of total Recorded Sessions)

- **RS:** Recorded Sessions**; SS:** Synchronized Sessions**;**

ILO	Course Syllabus	RS	SS	Type	Additional Notes
ILO1	Introduction to requirement engineering: basics concepts, specification document contents, requirement types and levels, project types and contracts	3	3	☐ Exercises ✓ Assignments ✓ Seminars ☐ Projects ☐ Practices ☐ Others	
ILO2	Requirements elicitation and modeling techniques: detailed description, usability, a case study and application of techniques	4.5	4.5	✓ Exercises ✓ Assignments ✓ Seminars ✓ Projects ☐ Practices	

				☐ Others	
ILO3	Conceptual modeling: basics, entity relationship model, data dictionary, data expressions, virtual windows.	3	3	✓ Exercises ✓ Assignments ☐ Seminars ☐ Projects ☐ Practices ✓ Others	
ILO4	Functional structural and behavioral modeling: pros and cons, usability, tasks description, detailed design techniques	4.5	4.5	✓ Exercises ✓ Assignments ☐ Seminars ☐ Projects ☐ Practices ☐ Others	
ILO5	Model qualities evaluation: quality standards, potential problems, checking, reviewing, risk assessments, and testing	3	3	✓ Exercises ✓ Assignments ☐ Seminars ☐ Projects ☐ Practices ☐ Others	
ILO6				☐ Exercises ☐ Assignments ☐ Seminars ☐ Projects ☐ Practices ☐ Others	
ILO7				☐ Exercises ☐ Assignments ☐ Seminars ☐ Projects ☐ Practices ☐ Others	
ILO8				☐ Exercises ☐ Assignments ☐ Seminars ☐ Projects ☐ Practices ☐ Others	

6- Assessment Criteria (Related to ILOs)

ISC	Interactive Synchronized Collaboration		Ex	Exams		Rpt	Reports
PF2F	Presentations and Face-to-Face Assessments		PW	Practice Work			

ILO Code	ILO	Intended Results	Assessment Type				
			ISC	PW	Ex	PF2F	Rpt
ILO1	Learning how to write requirements for typical project categories. Knowing the contents of requirement specification document. Determining the different types and levels of requirements.	**Writing an information system specification document**	✓	✓	☐		☐
ILO2	Knowledge of many requirement elicitation techniques, with convenience and uses in different project types	**Elicitation of requirements of an information system** **Comparing the different techniques of elicitation and determining its usability**	✓	✓	✓		☐
ILO3	Modeling concepts and information with different techniques convenience and usability	**Building a conceptual model with the right technique**	✓	✓	✓		☐
ILO4	Modeling functional structural an behavioral aspects in information systems using many techniques depending on specific cases and development circumstances	**Building a functional structural behavioral model with the right technique**	☐	✓	✓		☐

ILO5	Learning how to verify the different models and requirement engineering deliveries	**Verifying the quality of requirement specifications, conceptual models, and functional models**	☐	✓	✓		☐
ILO6			☐	☐	☐		☐
ILO7			☐	☐	☐		☐
ILO8			☐	☐	☐		☐

7-Practice Tools:

Tool Name	Description
Course Name	

8-Main References

Requirements engineering course content, Syrian virtual university, 2008.
Software Requirements Styles and Techniques, Soren Lauesen, Addison Wesley, 2002.

9-Additional References

An Introduction To Requirements Engineering, Ian K. Bray, Addison Wesley, 2002.

Systems Analysis and Design, 3rd Edition, Alan Dennis, Barbara Haley Wixom, Roberta M. Roth, John Wiley and Sons, 2006.

Software Engineering, 8th edition, Ian Sommerville, Addison Wesley, 2007.

Software Engineering course content, Syrian virtual university, 2008.

System analysis and design course content, Syrian virtual university, 2008.