UNIVERSIDAD DE CASTILLA - LA MANCHA
GUÍA DOCENTE

1. General information

Course: REQUIREMENTS ENGINEERING	**Code:** 42326
Type: CORE COURSE	**ECTS credits:** 6
Degree: 347 - DEGREE PROGRAMME IN COMPUTER SCIENCE ENGINEERING (CR)	**Academic year:** 2023-24
Center: 108 - SCHOOL OF COMPUTER SCIENCE OF C. REAL	**Group(s):** 20
Year: 3	**Duration:** C2
Main language: Spanish	**Second language:**
Use of additional languages:	**English Friendly:** Y
Web site: https://campusvirtual.uclm.es	**Bilingual:** N

Lecturer: **EDUARDO FERNANDEZ MEDINA PATON** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
3.24	TECNOLOGÍAS Y SISTEMAS DE INFORMACIÓN	926295485	eduardo.fdezmedina@uclm.es	Disponible en https://esi.uclm.es/index.php/grado-en-ingenieria-informatica/profesorado/

2. Pre-Requisites

This subject is based on the competences and content acquired in the subjects of the "Formación Básica" and the "Común" modules of Computer Science, and especially in the following subjects:

• Software Engineering I.
• Software Engineering II.
• Databases.

3. Justification in the curriculum, relation to other subjects and to the profession

This subject is integrated into the module corresponding to the Specific Technology identified in the syllabus as Software Engineering, and it is the foundation and complement of all the subjects of such Specific Technology, and especially of the following:

• Software design.
• Software Engineering Processes.
• Quality of Software Systems.

The competences acquired with this subject are fundamental for the profession of Computer Science Engineer. Requirements engineering is an activity on which the quality of the information systems developed by professionals depends to a great extent, since it provides the basis for the needs of the new systems to be developed. It is demonstrated that bad management in the main requirements engineering processes (elicitation, documentation, negotiation and validation of requirements) causes great damage, mainly in economic terms, image, delays and quality, although in many cases, it also impacts on losses of human lives.

4. Degree competences achieved in this course

Course competences

Code	Description
INS01	Analysis, synthesis, and assessment skills.
INS02	Organising and planning skills.
INS03	Ability to manage information and data.
INS04	Problem solving skills by the application of engineering techniques.
INS05	Argumentative skills to logically justify and explain decisions and opinions.
IS02	Ability to assess the user's needs and specify those software requirements so as to comply with such needs, combining goals which may originally be in conflict, throughout the search for acceptable compromise within the budget limits, time possibilities, and the availability of developed systems and organisations.
PER01	Team work abilities.
PER02	Ability to work in multidisciplinary teams.
PER04	Interpersonal relationship skills.
PER05	Acknowledgement of human diversity, equal rights, and cultural variety.
SIS01	Critical thinking.
SIS03	Autonomous learning.
SIS04	Adaptation to new scenarios.
SIS05	Creativity.
SIS06	Leadership skills.

SIS08	Initiative and entrepreneurial abilities.
SIS09	Care for quality.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Knowledge of and experience in applying the techniques of engineering requirements software to obtain, analyze, model, specify and validate requirements software and broad knowledge of the main notations for modeling.

Knowledge and understanding of the application of tools and methods for the management of requirements of software.

6. Units / Contents

Unit 1: Requirements Engineering Introduction.

Unit 2: Requirements Elicitation.

Unit 3: Requirements Documentation.

Unit 4: Requirements Negotiation.

Unit 5: Requirements Verification and Validation.

Unit 6: Requirements Artifacts.

ADDITIONAL COMMENTS, REMARKS

In the lab sessions, it is planned to practice with several requirements management tools, acquire skills in their use and integration with other tools used for analyzing and designing information systems, and several case studies will be proposed on which to work with the tools.

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures	INS01 INS02 INS04 INS05 IS02 SIS01 SIS09	0.6	15	N	-	Teaching of the subject matter by lecturer (MAG)
Individual tutoring sessions [ON-SITE]		INS01 INS02 INS04 INS05 IS02 SIS09	0.18	4.5	N	-	Individual or small group tutoring in lecturer¿s office, classroom or laboratory (TUT)
Study and Exam Preparation [OFF-SITE]	Self-study	INS01 INS02 INS04 INS05 IS02 SIS03 SIS08 SIS09	1.8	45	N	-	Self-study (EST)
Other off-site activity [OFF-SITE]	Practical or hands-on activities	INS01 INS02 INS03 INS04 INS05 IS02 PER01 PER02 PER04 PER05 SIS03 SIS04 SIS05 SIS06 SIS08 SIS09	0.9	22.5	N	-	Lab practical preparation (PLAB)
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	INS01 INS02 INS04 INS05 IS02 PER01 PER02 PER04 PER05 SIS04 SIS05 SIS06 SIS08 SIS09	0.6	15	Y	N	Worked example problems and cases resolution by the lecturer and the students (PRO)
Writing of reports or projects [OFF-SITE]	Self-study	INS01 INS02 INS04 INS05 IS02 PER01 PER02 PER04 PER05 SIS01 SIS03 SIS04 SIS05 SIS06 SIS08 SIS09	0.9	22.5	Y	N	Preparation of essays on topics proposed by lecturer (RES)
Laboratory practice or sessions [ON-SITE]	Practical or hands-on activities	INS01 INS02 INS03 INS04 INS05 IS02 PER01 PER02 PER04 PER05 SIS04 SIS05 SIS06 SIS08 SIS09	0.72	18	Y	Y	Realization of practicals in laboratory /computing room (LAB)
Mid-term test [ON-SITE]	Assessment tests	INS01 INS02 INS04 INS05 IS02	0.15	3.75	Y	Y	Partial test 1 of the first half of the syllabus of the subject (EVA)
Mid-term test [ON-SITE]	Assessment tests	INS01 INS02 INS04 INS05 IS02	0.15	3.75	Y	Y	Partial test 2 of the second half of the syllabus of the subject (EVA)
		Total:	**6**	**150**			
Total credits of in-class work: 2.4				**Total class time hours: 60**			
Total credits of out of class work: 3.6				**Total hours of out of class work: 90**			

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Mid-term tests	25.00%	0.00%	Partial Test 1. Compulsory activity that can be retaken (rescheduling). To be carried out at the end of the first half of the teaching period
Theoretical papers assessment	15.00%	15.00%	Non-compulsory activity that can be retaken. To be carried out before end of teaching period
Mid-term tests	25.00%	0.00%	Partial Test 2. Compulsory activity that can be retaken. To be carried out within the planned dates of the final exam call. The

			Partial Test 1 retake will be performed at this date
Laboratory sessions	25.00%	25.00%	Compulsory activity that can be retaken. To be carried out during lab sessions
Oral presentations assessment	10.00%	10.00%	Non-compulsory activity that can be retaken. To be carried out during the theory/lab sessions in the case of continuous evaluation students. The non-continuous evaluation students will have an alternative evaluation system for this activity.
Final test	0.00%	50.00%	Compulsory activity that can be retaken (rescheduling) to be carried out within the planned exam dates of the final exam call (convocatoria ordinaria).
Total:	**100.00%**	**100.00%**	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).

Evaluation criteria for the final exam:

Continuous assessment:

In compulsory activities, a minimum mark of 40% is required in order to pass that activity and have the possibility to therefore pass the entire subject. A compulsory activity cannot be divided into eliminatory parts, nor can minimum marks be established for each of its parts. In the case of the activities that may be retaken (i.e., rescheduling), an alternative activity or test will be offered in the resit/retake exam call (convocatoria extraordinaria).

The partial tests will be common for all the theory/laboratory groups of the subject and will be evaluated by the lecturers of the subject in a serial way, i.e., each part of the partial tests will be evaluated by the same lecturer for all the students.

A student is considered to pass the subject if she/he obtains a minimum of 50 points out of 100, taking into account the points obtained in all the evaluable activities, and also has passed all the compulsory activities.

For students who do not pass the subject in the final exam call (convocatoria ordinaria), the marks of activities already passed will be conserved for the resit/retake exam call (convocatoria extraordinaria). If an activity is not recoverable, its assessment will be preserved for the resit/retake exam call (convocatoria extraordinaria) even if it has not been passed. In the case of the passed recoverable activities, the student will have the opportunity to receive an alternative evaluation of those activities in the resit/retake exam call and, in that case, the final grade of the activity will correspond to the latter grade obtained.

The mark of the passed activities in any call, except for the partial tests, will be conserved for the subsequent academic year at the request of the student, provided that mark is equal or greater than 50% and that the activities and evaluation criteria of the subject remain unchanged prior to the beginning of that academic year.

The failure of a student to attend the partial 1 and partial 2 tests will automatically result in her/him receiving a "Failure to attend" (no presentado). If the student has not passed any compulsory evaluation activity, the maximum final grade will be 40%.

Non-continuous evaluation:

Students may apply at the beginning of the semester for the non-continuous evaluation mode. In the same way, the student may change to the non-continuous evaluation mode as long as she/he has not participated during the teaching period in evaluable activities that together account for at least 50% of the total mark of the subject. If a student has reached this 50% of the total obtainable mark or the teaching period is over, she/he will be considered in continuous assessment without the possibility of changing to non-continuous evaluation mode.

Students who take the non-continuous evaluation mode will be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences), through the assessment systems indicated in the column "Non-continuous evaluation".

In the "non-continuous evaluation" mode, it is not compulsory to keep the mark obtained by the student in the activities or tests (progress test or partial test) taken in the continuous evaluation mode.

Specifications for the resit/retake exam:

Evaluation tests will be conducted for all recoverable activities. The failure of a student to attend the partial 1 and partial 2 tests will automatically result in her/him receiving a "Failure to attend" (no presentado), except in the case that the student conserves the mark for partial 1 and partial 2 from the final exam call (convocatoria ordinaria). In the latter case, the student's carrying out of any other evaluable activity in the resit/retake exam call (convocatoria extraordinaria) will result in a numerical mark.

Specifications for the second resit / retake exam:

Same characteristics as the resit/retake exam call.

9. Assignments, course calendar and important dates

Not related to the syllabus/contents

Hours	hours

General comments about the planning: The subject is taught through three 1,5 hours sessions per week

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	City	ISBN	Year	Description
Klaus Pohl	Requirements Engineering	Springer			2010	
Phillip A. Laplante	Requirements Engineering for Software and Systems	CRC Press Auerback		978-1420064674	2009	