UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: INTERACTIVE SYSTEMS DESIGN
Code: 42347
Type: CORE COURSE
ECTS credits: 6
Degree: 347 - DEGREE PROGRAMME IN COMPUTER SCIENCE ENGINEERING (CR)
Academic year: 2021-22
Center: 108 - SCHOOL OF COMPUTER SCIENCE OF C. REAL
Group(s): 20
Year: 4
Duration: First semester
Main language: Spanish
Second language:
Use of additional languages:
English Friendly: Y
Web site: https://campusvirtual.uclm.es
Bilingual: N

Lecturer: **JOSE BRAVO RODRIGUEZ** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
Fermín Caballero/A1.7	TECNOLOGÍAS Y SISTEMAS DE INFORMACIÓN	3713	jose.bravo@uclm.es	Available at: https://esi.uclm.es/categories/profesorado-y-tutorias

2. Pre-Requisites

In order to take the course of Interactive Systems Design it is recommended that the student has passed the course of Human-Computer Interaction I (third year). As it is a fourth year subject, the practices and problems that will be carried out presuppose some basic computer knowledge as far as programming and modeling is concerned.

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

Subject: Specific Technology "Computación"

Module III-CO

7th Semester (1st of the 4th year)

Descriptors:

Methodologies and techniques for the design of interactive systems. Collection and specification of interaction requirements. Conceptual modeling of the interactive system. Design of prototypes. Design documentation. Development and evaluation of the interactive system.

Character: Obligatory

Area: LSI

This subject is integrated into the Computer Specific Technology subject of the curriculum and serves as a foundation and complement to the subjects of that specific technology.

The constant emergence of new interaction devices and paradigms are changing the way systems interact and opening new domains of computer application that require careful interaction design. The competences acquired in this subject will allow the student to develop a series of fundamental capacities for the profession of Computer Science Engineer, when knowing better the operation of the interactive systems, their types, the methodologies and design techniques or the methods used for their evaluation.

The student of Interactive Systems Design, will develop a series of fundamental skills for his profession by knowing better the functioning of interactive systems, their types or design methodologies and techniques. In addition, they will be able to develop systems of a higher quality since aspects that improve their quality are considered such as usability, accessibility or prototyping, which can help the end user or the client actively participate in the product to be implemented.

4. Degree competences achieved in this course

Course competences

Code	Description
CM06	Ability to develop and assess interactive systems, and present complex information and its application in the solution of problems with the design of person-computer interaction.
INS05	Argumentative skills to logically justify and explain decisions and opinions.
SIS01	Critical thinking.
SIS03	Autonomous learning.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Development of prototypes of software applications and, especially, graphical user interfaces, based on previous designs of interaction and collaboration.
Knowledge of what a programming language consists of and an integrated vision of the functioning and structure of a language processor.

Application of the main methods and techniques for gathering requirements and modeling related to the interactive and collaborative aspects of software applications.

6. Units / Contents

Unit 1: Introduction to Interactive Systems Design

Unit 2: New Tendencies on Interactive Systems

Unit 3: Methodologies and Interaction Technics

Unit 4: Conceptual models and design of prototipes

Unit 5: Development and Evaluation of Interactive Systems

ADDITIONAL COMMENTS, REMARKS

New interaction paradigms en areas such as Ubiquitous Computing, Ambient Intelligence, Ambient Assisted Living, Internet of Things, Urban areas, etc.

Explicit, implicit & embedded interactions. Context and Context Awareness

Mobile Computing and m-Health

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	CM06	0.6	15	N	-	Teaching of the subject matter by lecturer (MAG)
Progress test [ON-SITE]	Assessment tests	CM06 INS05 SIS01	0.1	2.5	Y	N	Progress test 1 of the first third of the syllabus of the subject (EVA)
Progress test [ON-SITE]	Assessment tests	CM06 INS05 SIS01	0.1	2.5	Y	N	Progress test 2 of the two first thirds of the syllabus of the subject (EVA)
Progress test [ON-SITE]	Assessment tests	CM06 INS05 SIS01	0.1	2.5	Y	N	Progress test 3 of the complete syllabus of the subject (EVA)
Writing of reports or projects [OFF-SITE]	Self-study	CM06 SIS01 SIS03	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	CM06 SIS03	0.72	18	N	-	Realization of practicals in laboratory /computing room (LAB)
Study and Exam Preparation [OFF-SITE]	Self-study	CM06 SIS01 SIS03	1.8	45	N	-	Self-study (EST)
Practicum and practical activities report writing or preparation [OFF-SITE]	project-based learning	CM06 SIS03	0.9	22.5	Y	Y	Lab practical preparation (PLAB)
Individual tutoring sessions [ON-SITE]	Collaborative on line international learning (COIL)	CM06 INS05 SIS01	0.18	4.5	N	-	Individual or small group tutoring in lecturer¿s office, classroom or laboratory (TUT)
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	CM06 SIS01	0.6	15	N	-	Worked example problems and cases resolution by the lecturer and the students (PRO)
		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
Progress Tests	7.50%	0.00%	Progress test 1. Non-compulsory activity that can be retaken (rescheduling). To be carried out at the end of the first third of the teaching period.
Progress Tests	15.00%	0.00%	Progress test 2 Non-compulsory activity that can be retaken. To be carried out at the end of the second third of the teaching period.
Progress Tests	27.50%	0.00%	Progress test 3. Non-compulsory activity that can be retaken. To be carried out during the non-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
Laboratory sessions	25.00%	25.00%	Non-compulsory activity that can be retaken. To be carried out in the theory/laboratory sessions for the students of the continuous modality. The students of non-continuous modality will be evaluated of this activity through an alternative system in the ordinary call
Oral presentations assessment	10.00%	10.00%	Non-compulsory activity that can be retaken. To be carried out in the theory/laboratory sessions for the students of the continuous modality. The students of non-continuous modality will be evaluated of this activity through an alternative system in

			the ordinary call
Final test	0.00%	50.00%	Mandatory and recoverable activity to be carried out on the date scheduled for the final exam of the ordinary call
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. The evaluation of the activities will be global and therefore must be quantified by means of a single mark. 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 progress 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 progress 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 progress 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 progress test 3 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 assessment 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 assessment mode.

Specifications for the resit/retake exam:

Evaluation tests shall be carried out for all recoverable activities. Due to the nature of the progress tests, in the resit/retake exam (convocatoria extraordinaria) there will be a single progress test that includes the three progress tests.

Specifications for the second resit / retake exam:

Same characteristics as in the extra ordinary 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 in 3 x 1,5 hour sessions per week.

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
A. Genco and S. Sorce	Pervasive Systems and Ubiquitous Computing	WIT Press		978-1-84564-482-6	2010	
Benyon, D., Turner, P. & Turner, S.	Designing Interactive Systems: People, Activities, Contexts, Technologies	Addison Wesley		0-321-11629-1	2005	
David Benyon	Designing Interactive Systems: A comprehensive Guide to HCI and Interaction Design	Pearson		978-0-321-43533-0	2005	
Kuniavsky, Mike	Smart things : ubiquitous computing user experience design	Morgan Kaufmann Elsevier		978-0-12-374899-7 (r	2010	
Tom Lovett, Eamonn O'Neill	Mobile Context-Awareness	Springer		978-0-85729-624-4	2012	
	Handbook of ambient intelligence and smart environments	Springer		978-0-387-93807-3	2009	