UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: HUMAN-COMPUTER INTERACTION I
Code: 42320
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): 21 22 20
Year: 3
Duration: First semester
Main language: Spanish
Second language:
Use of additional languages:
English Friendly: N
Web site:
Bilingual: N

Lecturer: **JOSE BRAVO RODRIGUEZ** - Group(s): **22**

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Lecturer: **MARIA DEL CARMEN LACAVE RODERO** - Group(s): **21 22**

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Lecturer: **ANA ISABEL MOLINA DIAZ** - Group(s): **21 20**

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Lecturer: **MANUEL ORTEGA CANTERO** - Group(s): **21 20**

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2. Pre-Requisites

For this course it is necessary to have basic knowledge of programming, computer structures, software engineering, etc; knowledge that, on the other hand, is acquired in the first two years of the degree.

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

This subject is integrated into the subject of SOFTWARE ENGINEERING, INFORMATION SYSTEMS AND INTELLIGENT SYSTEMS of the curriculum and serves as the basis for the following subject: Human-Computer Interaction II.

The user interface is the visible part of the computer applications. In the discipline of human-computer interaction, the need to achieve an adequate user interface is mandatory, allowing the users do the tasks in an easy way. Obviously, the interface should be aesthetically pleasing, but always with the maximum of facilitating user interaction with the application. With the study and application of this subject, the student will develop applications taking into account fundamental, basic and previous considerations such as the person, interaction mechanisms or some design rules.

4. Degree competences achieved in this course

Course competences

Code	Description
CO01	Ability to design, develop, select, and assess, applications and digital systems, guaranteeing their reliability, security, and quality, according to ethical principles and the current and common laws.
CO13	Knowledge and application of the required tools for the storage, process, and access to informational systems, even web based ones.
CO16	Knowledge and application of principles, methodologies, and life spans of software engineering.
CO17	Ability to design, and assess person-computer interfaces that could guarantee the accessibility of systems, services, and digital applications.
INS01	Analysis, synthesis, and assessment 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.
PER01	Team work abilities.
SIS01	Critical thinking.
SIS03	Autonomous learning.
SIS04	Adaptation to new scenarios.
SIS05	Creativity.
SIS09	Care for quality.

UCLM02 Ability to use Information and Communication Technologies.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Knowledge about the basic aspects of human-computer interaction and the methodologies for user-centered software development.

Consideration of the aspects of quality in software development such as usability, accessibility, security, reliability, etc.

6. Units / Contents

Unit 1: Introduction to Human-Computer Interaction

Unit 2: Human factors

Unit 3: Tools for development of user interfaces.: GUI development in JAVA

- **Unit 3.1**
- **Unit 3.2**

Unit 4: Methods for development of interactive systems: Prototyping

Unit 5: Metaphors

Unit 6: Interaction Styles

Unit 7: Interaction Paradigms

Unit 8:

ADDITIONAL COMMENTS, REMARKS

The order in which the theoretical topics are taught may be slightly modified.
In parallel to the theoretical topics, the practical block of the subject will be developed, in which the theoretical concepts will be consolidated, applying them to the particular case of creation of graphic user interfaces in a specific programming language.

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	CO01 CO13 CO16 CO17 SIS01 SIS09 UCLM02	0.72	18	N	-	Teaching of the subject matter by lecturer (MAG)
Individual tutoring sessions [ON-SITE]	Collaborative on line international learning (COIL)	CO01 CO13 CO16 CO17 UCLM02	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	CO01 CO13 CO16 CO17 SIS01 SIS09 UCLM02	2.1	52.5	N	-	Self-study (EST)
Other off-site activity [OFF-SITE]	Practical or hands-on activities	CO01 CO13 CO16 CO17 INS03 INS04 INS05 PER01 SIS03 SIS04 SIS05 UCLM02	0.6	15	N	-	Lab practical preparation (PLAB)
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	CO01 CO13 CO16 CO17 INS01 INS04 PER01 SIS03 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	CO01 CO13 CO16 CO17 INS01 INS04 INS05 PER01 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	CO01 CO13 CO16 CO17 INS03 INS04 INS05 PER01 SIS03 SIS05 SIS09 UCLM02	0.6	15	Y	Y	Realization of practicals in laboratory /computing room (LAB)
Final test [ON-SITE]	Assessment tests	CO01 CO13 CO16 CO17 INS01 INS04 INS05 UCLM02	0.3	7.5	Y	Y	Final test of the complete 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
Test	50.00%	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).
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%	Compulsory activity than can be retaken. To be carried out during lab sessions

Assessment of active participation	10.00%	10.00%	Non-compulsory activity that can be retaken. To be carried out during the theory/lab sessions for the students who take the continuous assessment mode. The students who take noncontinuous assessment mode will be evaluated of this activity through an alternative system in 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. If the activity consists of several sections, each section may be evaluated separately provided students are informed in writing of this evaluation criterion at the beginning of the academic year. 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 final exam 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 final exam 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). 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 final exam, 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 final exam and the non-delivery of the final practical project will 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 who are unable to attend training activities on a regular basis may apply at the beginning of the semester for the non-continuous assessment mode. Similarly, if a student who is undergoing continuous assessment incurs any circumstance that prevents her/him from regularly attending the classroom-based training activities, she/he may renounce the accumulated mark in continuous assessment and apply for the non-continuous assessment mode. In this case, a notification by the student must be given before the date scheduled for the tests in the ordinary call, in accordance with a deadline that will be informed at the beginning of the semester.
Students who take the non-continuous assessment 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 assessment".
In the "non-continuous assessment" 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 will be conducted for all recoverable activities.

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 in 3 x 1,5 hour sessions per week.

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Steve Krug	Haz fácil lo imposible: la guía práctica para detectar y determinar los problemas de usabilidad	Anaya Multimedia			2010	
Shailey Minocha, Debbie Stone, Mark Woodroffe, Caroline Jarrett	User Interface Design and Evaluation	The Morgan Kaufman Series			2005	
Bill Albert, Tom Tullis	Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics	Newnes			2013	
Ben Shneiderman, Catherine Plaisant	Designing the User Interface. Techniques for Effective Human-Computer Interaction	Pearson			2017	
Jeff Johnson	Designing with the Mind in Mind. Simple Guide to Understanding User Interface Design Rules	Morgan Kaufman			2014	
Jenny Preece, Yvonne Rogers, Helen Sharp	Interaction Design: Beyond Human-Computer Interaction	John Wiley&Sons			2019	
Wilbert O. Galitz	The Essential Guide to User Interface Design: An Introduction to GUI Design Principles and Techniques	Wiley			2007	
Jon Yablonski	Laws of UX: Using Psychology to Design Better Products & Services	O'Really			2020	
Jeff Sauro, James R. Lewis	Quantifying the User Experience: Practical Statistics for User	Morgan			2016	

	Research	Kaufmann	
	Handbook of Usability Testing.		
Jeffrey Rubin, Dana Chisnell	How to Plan, Design and Conduct Effective Tests	Wiley	2008