

**1. General information****Course:** HUMAN-COMPUTER INTERACTION II**Code:** 42351**Type:** CORE COURSE**ECTS credits:** 6**Degree:** 347 - DEGREE PROGRAMME IN COMPUTER SCIENCE ENGINEERING (CR)**Academic year:** 2022-23**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:** N**Web site:****Bilingual:** N

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2. Pre-Requisites

This subject is based on the skills and knowledge acquired in the subjects:

- Human-Computer Interaction I
- Programming Fundamentals I and II
- Software Engineering I

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

This subject is integrated into the subject of SPECIFIC TECHNOLOGY "INFORMATION TECHNOLOGIES" of the curriculum.

Application usability involves creating user interfaces for applications that are easy to learn, use and user-friendly. A usable user interface is a key factor for the success of any application. The aim of this subject is to deepen the development of user interfaces that fulfill high quality standards, serving as a complement to other subjects such as Software Engineering, Databases, and extending the issues presented in the subject Human-Computer Interaction I, so that the student is trained as a professional in the development and evaluation of user interfaces.

4. Degree competences achieved in this course**Course competences**

Code	Description
INS01	Analysis, synthesis, and assessment skills.
INS02	Organising and planning skills.
INS04	Problem solving skills by the application of engineering techniques.
INS05	Argumentative skills to logically justify and explain decisions and opinions.
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.
TI03	Ability to use methodologies focused on users and organisations for the development, assessment, and management of applications and systems based on information technologies which could guarantee accessibility, ergonomics, and usability of systems.

5. Objectives or Learning Outcomes**Course learning outcomes****Description**

Design of web interfaces that meet established standards, following design patterns and criteria of accessibility, ergonomics, usability and quality.

Development and assessment of user interfaces following a methodological approach, making use of models, using techniques such as task analysis, and involving the user in their own development.

6. Units / Contents

Unit 1: User-centered design (UCD)

Unit 2: Web Usability

Unit 3: Mobile User Interfaces. Case Study: Android

Unit 4: Accessibility

Unit 5: Usability Evaluation

Unit 6:

Unit 7:

ADDITIONAL COMMENTS, REMARKS

The practical sessions will focus on the development of an interactive application with a graphic user interface.
The order in which the theory is taught can be modified.

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	TI03	0.6	15	N		Teaching of the subject matter by lecturer (MAG)
Individual tutoring sessions [ON-SITE]		TI03	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	TI03	1.8	45	N		Self-study (EST)
Other off-site activity [OFF-SITE]	Practical or hands-on activities	INS01 INS02 INS04 INS05 PER02 PER04 PER05 SIS01 SIS03 SIS04 SIS05 TI03	0.9	22.5	Y	Y	Lab practical preparation (PLAB)
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	INS04 INS05 PER02 PER04 PER05 SIS01 SIS03 SIS04 SIS05 TI03	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 PER02 PER04 PER05 SIS01 SIS03 SIS04 SIS05 TI03	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	INS04 INS05 PER02 PER04 PER05 SIS01 SIS03 SIS04 SIS05 TI03	0.72	18	Y	Y	Realization of practicals in laboratory /computing room (LAB)
Final test [ON-SITE]	Assessment tests	INS04 INS05 SIS01 SIS05 TI03	0.3	7.5	Y	Y	According to the evaluation modality (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
Final test	50.00%	50.00%	Final test of the complete syllabus of the subject (EVA)
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 that can be retaken. To be carried out during lab sessions
Assessment of active participation	10.00%	0.00%	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 non-continuous assessment mode will be evaluated of this activity through an alternative system in the ordinary call
Total:	100.00%	90.00%	

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 non-delivery of the final practical project 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 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
B. Shneiderman, C. Plaisant	Designing the User Interface: Strategies for Effective Human-Computer Interaction	Pearson			2017	
H. Sharp, Y. Rogers, J. Preece	Interaction Design: Beyond Human-Computer Interaction	Wiley			2019	
M.O. Leavitt, B. Shneiderman	Research-Based Web Design & Usability Guidelines https://www.usability.gov				2005	
W3C	Web Accessibility Initiative, WAI https://www.w3.org/WAI					
S. Baidachnyi	Developing Windows 10 Applications with C#			978-1522894919	2016	
T. Brinck	Usability for the Web. Designing web sites that work	Morgan Kaufmann Publishers		1-55860-658-0	2002	
Flutter	Flutter documentation https://docs.flutter.dev/					