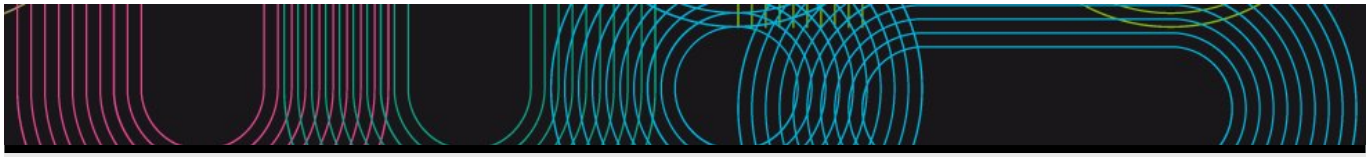

IDENTIFYING DATA				
User Interfaces				
Subject	User Interfaces			
Code	O06G150V01503			
Study programme	(*)Grao en Enxeñaría Informática			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Mandatory	3rd	1st
Teaching language	Spanish Galician English			
Department				
Coordinator	Rodeiro Iglesias, Javier			
Lecturers	Martínez Orge, José Luis Rodeiro Iglesias, Javier			
E-mail	jrodeiro@uvigo.es			
Web	http://moovi.uvigo.gal			
General description	This subject is compulsory in the first semester of the third course. In this subject pretend enter the necessary concepts for the design, building and evaluation of interfaces of user. It has to serve like base to the subjects of programming and engineering of software for the correct interaction with the user.In this subject include essential basic competitions for the future professional exercise of the Engineer/to Technician/to in Computing, and also competitions that are instrumental for the acquisition of other professional competitions, especially the related with the Work End of Degree.			

Competencies	
Code	
A2	Students will be able to apply their knowledge and skills in their professional practice or vocation and they will show they have the required expertise through the construction and discussion of arguments and the resolution of problems within the relevant area of study.
A4	Students will be able to present information, ideas, problems and solutions both to specialist and non-specialist audiences.
B3	Ability to design, develop, assess and ensure accessibility, ergonomics, usability and safety of computing systems, services and applications, as well as the information managed by them.
B8	Knowledge of the essential subjects and technologies that will allow students to learn and develop new methods and technologies, as well as those that will endow them with versatility to adapt to new situations.
B9	Ability to solve problems by taking the initiative, making decisions and acting independently and creatively. Ability to communicate the knowledge contents, skills and abilities of the Computer Science Engineer profession.
C4	Essential knowledge of use and programming of computers, operating systems, data bases and computer programs with application in engineering.
C23	Ability to design and assess human-computer interfaces to guarantee accessibility and usability of computer systems, services and applications.
C25	Ability to develop, maintain and assess software systems and services that satisfy all the demands of users and work reliably and efficiently, are easy to develop and maintain, and meet the quality standards, applying the theories, principles, methods and practices of Software Engineering.
C26	Ability to assess clients needs and determine the software requirements to satisfy these needs, reconciling conflicting goals through attempts to reach acceptable compromises within the limits imposed by costs, available times, existing developed systems and organizations themselves.
C28	Ability to identify and analyze problems and design, develop, implement, verify and document software solutions on the basis of sound knowledge of the theories, models and techniques available nowadays.
C33	Ability to employ user- and organization-oriented methodologies for the development, assessment and management of applications and systems based on information technologies to guarantee accessibility, ergonomics and usability of systems.
D4	Analysis, synthesis and evaluation capacity
D5	Organizational and planning skills
D6	Ability to abstract: ability to create and use models that reflect real situations

D8	Ability to work in situations of lack of information and / or under pressure
D9	Ability to quickly integrate and work efficiently in unidisciplinary teams and to collaborate in a multidisciplinary environment
D10	Interpersonal relationship skills.
D11	Critical thinking
D12	Leadership

Learning outcomes

Expected results from this subject	Training and Learning Results			
RA1. User Interface evaluation using user observation techniques and heuristic evaluation	A2	B3	C23 C33	D8 D10 D11
RA2. Design and manage formal tests to evaluate usability hypotesis.		B3	C23 C26	D4 D5 D6
RA3. Apply the principles of the advances communication technologies and the human computer interactions (HCI) to the design and implementation of solutions based in Information Technologies, integrating these solutions in the user context.			C4 C25	D9
RA4. Define, describe and specify user interfaces and relate them with the specific characteristics of the processes and the computer systems	A4	B8 B9	C4	D12
RA5. Comprise, specify and apply the mental processes of the users to the definition of human computer interfaces		B3	C23	D11
RA6. Recognize, identify and define physical and cognitive characteristics of the users of software systems.			C28	D5 D10

Contents

Topic	
Motivation of the interaction man-machine Psicology and cognitive science	Motivations. Cognitive human process.
Psicologic and perceptual factors of the interaction	Paradoxs The perceptual channels
Conceptual models and metaphors	Conceptualization of the interface. Identification of metaphors.
Analysis of tasks	Hierarchical model. Representative model.
Design centered in the user	Characterization of the users. Interaction and technology.
Internationalization and architectures of interface	multilingual and cultural support Independence of the interface and process.
Subjective evaluation techniques	Paper prototyping States diagram Transitions diagram

Planning

	Class hours	Hours outside the classroom	Total hours
Mentored work	21	3.5	24.5
Laboratory practical	10.5	0	10.5
Seminars	4	4	8
Problem solving	17	90	107

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Mentored work	Work on theory concepts in classroom
Laboratory practical	Work on practical concepts in laboratory
Seminars	Supervision of proposed assessments
Problem solving	Resolution of exercises proposed by the professor

Personalized assistance

Methodologies	Description
Laboratory practical	The estudent works in the tasks following the practical bulletin published along the course, taking advantage of the presence of the professor.

Mentored work	The student works in the tasks following the theoretical bulletin published along the course,taking advantage of the presence of the professor.
Problem solving	The student works of autonomous form in the exercises and problems proposed by the professor to achieve the solution that considers correct to be evaluated by the professor.
Seminars	The student realizes questions that considers relevant related with the subject or the learning process.

Assessment

	Description	Qualification	Training and Learning Results			
Mentored work	Technical and progress reports to be presented in classroom. RA2 RA4 RA6	20	A4	B3 B8 B9	C23 C26 C28	D4 D5 D6 D10 D12
Problem solving	One or more tasks proposed by the instructor of the subject. All tasks are mandatory. The percentage of the task mark will be proportional to the amount of hours used in the task. RA1 RA2 RA3 RA4 RA5 RA6	80	A2	B3 B8 B9	C4 C23 C25 C26 C33	D4 D5 D6 D8 D9 D11 D12

Other comments on the Evaluation

CRITERIA OF EVALUATION FOR ASSISTANTS 1ª EDITION

The evaluation of the subject will realize by means of works proposed pole professor to the students, so much stop his realization of individual form how in group. All they owe to obtain a minimum note of 5 on 10 to approve the subject.

CRITERIA OF EVALUATION FOR NO ASSISTANTS

Methodology 1: Reports / memories of practiceDescription: Reports proposed by the instructor to the students, to realize so individually or in group.Mark: 20% . To approve this part of the subject, the student will owe to obtain a mark equal or above to 5 points (over 10).Evaluated competences :CB4, CG8, CE28, CT1, CT3, CT4, CT10 Results of learning evaluated: RA2, RA4, RA6

Methodology 2: Resolution of problems and/or exercises of autonomous form

Descripción: Works proposed by the instructor to the students, to realize so individually or in group.

Mark: 80% . To approve this part of the subject, the student will owe to obtain a mark equal or above to 5 points (over 10).

Evaluated competences : CB2, CG3, CG8, CG9, CE4, CE23, CE25, CE26, CE33, CT4, CT5, CT6, CT8, CT9, CT11, CT12
Results of learning evaluated: RA1, RA2, RA3, RA4, RA5, RA6

CRITERIA OF EVALUATION FOR 2ª EDITION And END OF CAREER

It will use the same system of evaluation applied for them no assistants.

PROCESS OF MARK

In the case of not surpassing any of the proofs proposed the note will correspond with the average pondered of the works in function of the used time, except that this half note surpass the 5, that will correspond then with a 4,9. All proofs proposed are mandatory.

DATES OF EVALUATION

The deadlines for assigments are the following:

ET1: 9/10/2020

ET2: 6/11/2020

ET3: 11/12/2020

ET5: 22/1/2021

QA1: 18/10/2020

QA2: 15/11/2020

QA3: 20/12/2020

QA5: 29/1/2021

The calendar of proofs of evaluation approved officially by the ESEI finds published in the page web.

Sources of information

Basic Bibliography

Dan R. Olsen Jr, **Developing user interfaces (Interactive Technologies)**, 1, Morgan Kaufmann, 1998

Readings in Human-Computer Interaction: Toward the Year 2000 (Interactive Technologies), 2nd Revised edition, Morgan Kaufmann, 1995

Hugh Beyer and Karen Holtzblatt, **Contextual Design, Defining Customer-Centered Systems**, Morgan kaufmann, 1997

Donald A. Norman, **Design of Everyday Things**, 2nd revised and expanded, Zone Books, 2013

Jakob Nielsen, **Usability Engineering**, Academic Press, 1993

Complementary Bibliography

William Albert and Thomas Tullis, **Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics (Interactive Technologies)**, 2, Morgan Jauffmann, 2013

Recommendations

Subjects that are recommended to be taken simultaneously

Databases II/O06G150V01501

Subjects that it is recommended to have taken before

Databases I/O06G150V01402
Software engineering I/O06G150V01304
Software engineering 2/O06G150V01403
Mathematics: Statistics/O06G150V01301

Contingency plan

Description

=== EXCEPTIONAL PLANNING ===
Given the uncertain and unpredictable evolution of the health alert caused by COVID-19, the University of Vigo establishes an extraordinary planning that will be activated when the administrations and the institution itself determine it, considering safety, health and responsibility criteria both in distance and blended learning. These already planned measures guarantee, at the required time, the development of teaching in a more agile and effective way, as it is known in advance (or well in advance) by the students and teachers through the standardized tool.

=== ADAPTATION OF THE METHODOLOGIES ===

Due the exceptional situation, if it is not possible to teach face-to-face classes, virtual tools will be used to teach the classes.

=== ADAPTATION OF THE TESTS ===

The evaluation remains the same as in presential stage, with telematic delivery of the assigments

=== ADAPTATION OF THE ATTENTION TO THE STUDENTS ===

For de attention to the studens, it will be used the tool "Remote Campus"